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CLASSIFICATION

PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-447

1. PROJECT TITLE Environmental Training and Resources Management in Africa			2. PROJECT NUMBER 698-0427	3. MISSION/AID/W OFFICE AFR/RA
5. KEY PROJECT IMPLEMENTATION DATES A. First PRO-AG or Equivalent FY <u>80</u> B. Final Obligation Expected FY <u>84</u> C. Final Input Delivery FY <u>85</u>			6. ESTIMATED PROJECT FUNDING A. Total \$ <u>11.3 M</u> B. U.S. \$ <u>8.5 M</u>	4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) <u>098-83-01</u> <input type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION
7. PERIOD COVERED BY EVALUATION From (month/yr.) <u>10/80</u> To (month/yr.) <u>6/82</u> Date of Evaluation Review <u>August 10, 1982</u>				

B. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues, cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. SECID has proposed strategies in response to a recommendation of the evaluation. These country/regional strategies must be reviewed and the FY 1983 work plan agreed upon with SECID.	V. Mahan	November 1982
2. Completion of the review of the FY 1983 budget and the draft language for the revision of the contract with SECID to assure appropriate reorganization of the management of the project.	V. Mahan	November 82
3. Issuance of a PIO/T to reflect new SECID management arrangements.	V. Mahan	December 82

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9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS			10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT	
<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input type="checkbox"/> Other (Specify)	A. <input checked="" type="checkbox"/> Continue Project Without Change	
<input type="checkbox"/> Financial Plan	<input checked="" type="checkbox"/> PIO/T		B. <input type="checkbox"/> Change Project Description	
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	<input type="checkbox"/> Other (Specify)	C. <input type="checkbox"/> Change Implementation Plan	
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P		D. <input type="checkbox"/> Discontinue Project	

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PART COUNTRY AS APPROPRIATE (Names and Titles)		12. Mission/AID/W Office Director Approval	
<i>[Signature]</i> Project Officer	<i>[Signature]</i> C. Huback Project Officer	<i>[Signature]</i> W. Sherman Deputy Director	<i>[Signature]</i> M. H. Naylor, Jr. Director

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EXECUTIVE SUMMARY  
EVALUATION OF ENVIRONMENTAL TRAINING  
AND MANAGEMENT IN AFRICA  
(Project No. 698-0427)

Prepared for:

Bureau For Africa  
Agency for International Development  
Washington, D.C.

(IQC No. AID/SOD/PDC-C-0251, Work Order No. 12)

Prepared by:

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June 1982

EXECUTIVE SUMMARY

## GENERAL

This Executive Summary presents the results of a mid-term evaluation of the Africa Bureau's project for Environmental Training and Management (ETMA). ETMA is a regional grant project started in October 1980. It has a projected life of five years at a total estimated cost of \$11.3 million, with an AID share of \$8.5 million. As of December 31, 1981, U.S. fund obligations were \$2,932,000 and expenditures were \$894,106.

The project is being implemented through a prime contract with the South-East Consortium for International Development (SECID) and subcontracts with the University of North Carolina (UNC), and Clark University (Clark).

The evaluation was conducted by a team from the International Science and Technology Institute, Inc. (ISTI). The team members were: Fred R. Weber, Environmentalist, and William R. Thomas 3d, Management Specialist and Team Leader.

## THE PROJECT CONCEPT

The ETMA project was designed in the collaborative technical assistance mode. The goal of the project is an improved African capacity to deal with the 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, (2) identify priority environmental problems, and (3) monitor environmental tasks.

The ETMA project consists of two inter-related sets of activities, environmental training and resource management. A work plan for each set was specified in detail for the first two years of the project, with work in subsequent years to be determined by experience during the first two.

Environmental training was to include short seminars for policy personnel; medium-term courses for technical personnel, and longer term individual training, primarily in Africa.

Resource management is an extension of prior work done by Clark in the Sudan, Tanzania, Kenya, and Botswana. The purpose was to provide technical assistance and training in order to initiate or support specific environmental programs or activities. Two additional countries were to be added in the third or fourth years of the project.

In addition, the PP provided for two representatives to be posted overseas. The representative in Nairobi was to devote one half of his time to assisting and coordinating the training program, and the other half to working as a resource management advisor to the National Environmental Secretariat. The representative in Abidjan was to coordinate training and resource management full time.

#### THE NEED FOR THE PROJECT

Those Missions in Africa which are engaged in environmental work generally focus on immediate environmental action programs, either directly or as an integral part of broader projects. The EIMA project provides a necessary balance by addressing the longer range environmental problems. This balance is needed because, while immediate action cannot be postponed, long run institutional solutions must be found. We believe that the EIMA project should be continued, provided that the project implementation process can be restructured so that there is a reasonable likelihood that it will achieve its purpose and goal.

### THE MANAGEMENT HIATUS

There are two management problems which pervade the ETMA Project. They are:

- the lack of effective management within the contractor organization and within AID.
- the lack of specific, articulated plans which define individual project activities and link them to the project's goals and purposes.

The results have been:

- Project activities which do not contribute meaningfully to the project.
- Activities which have been less successful than they should have been.
- An inability at all levels of project management to evaluate the progress or success of any given activity, or of the project as a whole.
- Management by default rather than by decision.

These problems are so severe that, in our judgement, the ETMA project, as it is currently being implemented, will not achieve its goals and purposes. If the project is to continue its management and implementation must be redesigned. If this cannot be done, the project should be cancelled.

### THE LACK OF EFFECTIVE MANAGEMENT

Inadequate management within the contractor structure is the result of two factors:

- SECID is not staffed to manage the contract properly and this type of management requires a departure from its past style of operations.
- The contract stipulates a fragmentation of responsibility that precludes effective management.

The major management difficulties in the prime contract are that:

- It does not charge SECID with overall responsibility for contract performance.
- It assigns responsibility for coordination of training and resource management to UNC and Clark, with no provision for SECID to supervise them.

- It provides that the two regional contract representatives stationed in Africa "will be responsible to and receive guidance from the Contract Management Committee," not SECID.

The SECID subcontracts with UNC and Clark are in keeping with this pattern. They are funding documents, not effective contracts. All they contain are a budget and administrative provisions. UNC and Clark are entitled to payment within the budget limit if they certify that the costs have been incurred. Whether anything has been accomplished, let alone anything worthwhile, is moot.

AID's management problem is one of execution, not structure. Virtually all of the effective AID management of the project has come from Africa Bureau's Office of Regional Affairs, but its ability to do this is clearly limited, and it has not received adequate support from the Missions.

#### THE IMPLEMENTATION PROCESS

The prime contract requires that an annual work plan be submitted for AID approval for each of the last three years of the project, but there is no requirement to seek approval for changes in the first two years, and no recognition that this might be necessary. This was an unreasonable expectation, and it has not occurred.

The rigid implementation plan is exacerbated by the inadequacy of the basic implementing documents - the annual memoranda of understanding with the host governments and the working agreements covering individual project activities.

These documents contain much that is useful, but they are inadequate because:

- They are narratives. They describe what is to be done, how, by whom and when, and who is to pay for it. But they don't say why. What inherent purpose does the activity serve, and how does it contribute to the objectives of the project?
- They do not identify the internal elements that are essential to an activity's success.

In short, the present implementing documents lack the basic analytic framework that is the foundation of the AID project preparation process. The framework need not be elaborate, but it is essential.

#### ENVIRONMENTAL TRAINING - PROGRESS TO DATE

During the first project year the environmental training element has been characterized by:

- Major changes in the structure of the training.
- A slow start and consequent slippage in planned training activities.
- Resultant increased unit costs.

Two structural changes have taken place. The first is a major reduction in planned and actual short seminars. These were a central element in the original project plan. The second is a basic change in duration of the medium term courses, from a planned 4 to 6 weeks to 2 to 3 weeks.

The result has been increased training costs for medium term courses. During the first project year, the actual cost per trainee week was 144% of that originally planned. And costs per week were a specific issue in the project paper. (If overhead costs are added the picture becomes much worse. During the first project year, overhead costs at UNC, which is engaged solely in training, totaled \$73,767. This is 76% of the direct costs of the two seminars UNC conducted.)

Outputs of these courses in terms of persons trained still leave the basic question of, so what? What will happen in terms of changed job performance or effective environmental work as a result of the training? If nothing happens the training will have largely been a waste. Too little consideration has been given to this question in the design of the courses or potential follow-up action.

## RESOURCE MANAGEMENT

Outputs for resource management are difficult to quantify, but our overall assessment is:

- Sudan: The work with the Institute for Environmental Studies is productive and should continue.
- Tanzania: The work to date has had limited utility, but the Bureau for Resource Allocation and Land Use Planning deserves continued support.
- Kenya: The National Environmental Secretariat is a unique African institution which should be supported above all others. On balance, this is ETMA's best opportunity in resource management and the most productive so far.
- Botswana: Nothing happened in Botswana, for internal reasons.

Judged against the project paper, project outputs in resource management have fallen short. This is an inherent risk in any institution building activity. Yet inputs have not lagged significantly and the gap between inputs and outputs in resource management parallels that in training. In the first year, personnel costs were 93% of planned levels, 122% if Botswana is excluded.

At Clark, only 26% of the total resource management costs for U.S. personnel were for services performed overseas. We do not believe that this ratio of 3 dollars spent in the U.S. for every dollar spent overseas is consistent with the project's goal of strengthening African institutions, and much of the work being done in the United States appears to have been academic and detached from reality.

## A RECAP OF OUR OVERVIEW

The comments above are largely negative, but they should not obscure our firm conviction that the project deserves continued support. It is a professional judgement, which we can support but not prove, but it is firm. The problems are in the management and implementation of the project. They can be remedied, and the effort to do so would be worthwhile.

Given all of the above, there are three apparent overall alternatives for the future of the the ETMA project:

- The first alternative is to cancel the project. The main advantage of this is that it would be relatively simple and overall savings in project costs would be considerable.
- The second alternative is to continue the project with a sharply reduced set of activities. Likely candidates for continuation would be the resource management work. The project might then be reduced to a single direct contract with Clark. But this restructuring would not be as easy as it might appear. Even a more limited set of activities would require that an analytic framework be designed and put to use, and considerable pre-project and in-project preparatory work would have been wasted.
- The third alternative is to continue the project with a restructured management and management system. This alternative offers a reasonable prospect of achieving all or most of the original project's goals and purposes. There is a risk that the proposed analytic framework will not be as effective as we think it will, or that SECID cannot become an effective manager. We believe these risks are acceptable. It is also our judgement that the project's ends justify the effort to redesign the management of project implementation.

(Africa Bureau has established a requirement that certain questions be answered in the executive summary of all evaluations. The questions are aimed at the transfer of technology, and ETMA's purpose is institution building, so we doubt their relevancy to this project. However, our answers to the questions, in the context of this project, are contained in the attachment to this Executive Summary.)

#### LIFE OF PROJECT COSTS

At this stage it appears likely that life of project costs will fall short of the originally projected \$8.5 million. There has been considerable project slippage to date, and redesign and restricted activity criteria will cause more.

#### RECOMMENDATIONS

Based on the above analysis, our recommendations for the ETMA project are:

Recommendation 1: We recommend that the ETMA project continue basically as it was originally conceived, but with management, and the management structure, redesigned to provide a reasonable prospect that the project will achieve its overall goals and purposes.

Recommendation 2: We recommend that if the management and implementation of the ETMA project cannot be effectively restructured, the project be cancelled.

Recommendation 3: We recommend that separate documentation or the memoranda of understanding and working agreements (preferably the latter) require the preparation of an analytic framework for each discrete project activity. The essential elements that should be included in such a framework are described in more detail in Chapter II.

Recommendation 4: We recommend that the prime contract be revised to create a contractor structure appropriate for the implementation of an \$8.5 million project. Necessary prime contract changes include the following:

- Make SECID directly responsible for the success of the project, give it the authority to do so, and hold it accountable for results.
- Have the regional representatives report to SECID, not to the Management Committee.
- Limit the role of the Management Committee to one of providing advice to SECID.
- Make Clark's coordination of environmental management (and UNC's coordination of training, if it is continued) clearly subordinated to SECID's overall management and control.

Recommendation 5: We recommend that AID look to SECID for overall project management and that SECID be staffed to do the job. What is required is a full-time professional manager who is provided with adequate administrative and clerical support and thus is free to manage.

Recommendation 6: We recommend that the subcontract with UNC be ended and that SECID be assigned responsibility for the coordination of environmental training. As training courses are identified SECID should job them out to the most appropriate member school in the consortium.

Recommendation 7: We recommend that the subcontract with Clark University be revised in accord with the prime contract revisions recommended above. The revision should:

- Make Clark clearly subordinate to SECID.
- Charge Clark with accomplishing specific tasks.
- Assign resources to each specific task.
- Impose stricter reporting requirements on accomplishments, and
- Base invoices on work done, not money spent.

Recommendation 8: We recommend that AFR/RA continue to be responsible for overall monitoring; that the Missions be more specifically charged with review of proposed activities against stipulated criteria; and that the REDSO's continue to serve in an advisory role to the Missions.

Recommendation 9: We recommend that the activity at Clark be reviewed with a view toward sharply reducing the amount done in the U.S.; that any research in the U.S. be explicitly justified in the future; and that AID and the contractor seek ways to use more EIMA funds for relevant work done in Africa by Africans.

Recommendation 10: We recommend that AID and the contractor review the overhead establishment at Clark with the intent of reducing the share of environmental management funds that are spent on overhead; and that strict controls on overhead costs be built into the revised subcontract with Clark.

Recommendation 11: We recommend that the position of coordinator in East Africa be continued, but that the need for a resident coordinator in West Africa be reexamined at the end of the present incumbent's two year tour.

Recommendation 12: We recommend that a special effort be made to use more local case studies. Ways should be found to involve Africans more in course preparation and U.S. faculty should spend more of the course preparation time in Africa, even if this involves extra per diem.

Recommendation 13: We recommend that all current resource management activities be carefully reviewed when the proposed analytic frameworks have been prepared for them. Particular attention should be paid to the extent of host country involvement.

ATTACHMENTEvaluation of Information Needed by AFR

This attachment attempts to answer the questions posed in State 081077. The answers pertain to the project for Environmental Training and Management in Africa (ETMA). The goal of the ETMA project is to build the capability of African governmental institutions to deal with environmental problems on a national level. What is being transferred is "technology" in a very sophisticated sense. Our answers are heavily qualified by this fact.

Our answers to the questions are as follows:

I. What constraint does this project attempt to overcome and who does it constrain?

The constraint is the severity of environmental problems in Africa. It constrains the rural people and the continent's future. In the long-term, if soil and vegetation and water are exhausted, the prospect for ever increasing future generations is bleak. The project attempts to help African nations find a balance between current development and its long-range ecological consequences.

II. What technology does the project promote to relieve this constraint?

The capability of selected African governments to make a rational choice between immediately productive development activities and the ecological future, and the capability to mount long range programs to deal with known environmental problems.

III. What technology does the project attempt to replace?

None, it does not exist now.

IV. Why do project planners believe that intended beneficiaries will adopt the proposed technology?

The intended beneficiaries - the rural populace - do not have to adopt the proposed technology. It needs to be adopted at the central governmental level.

V. What characteristics do intended beneficiaries exhibit that have relevance to their adopting the proposed technology?

The ultimate beneficiaries have none. The intermediaries - the government officials who are the direct recipients of the technology - have demonstrated their ability to adopt it. The staff members at Khartoum University, for example, are trained professionals who have devoted considerable personal energy to the project. They are highly motivated and competent.

VI. What adoption rate has this project or previous projects achieved in transferring the proposed technology?

We know of no precedent previous project. The adoption rate in the first project year of this project was low, but we believe that this is a function of poor implementation and the inherent difficulties of institution building. With proper management longer run prospects should be better.

VII. Will the project set in motion forces that will:

- Induce further exploration of the constraint and improvements to the technology package to overcome it?

Yes. The whole purpose is to enhance the ability of African governments to deal, on their own, with pervading environmental problems.

VIII. Do private input suppliers have an incentive to examine the constraint addressed by the project and come up with solutions?

This is not applicable to the project, which is designed to strengthen the capability of government institutions to deal with environmental problems. Any private sector involvement will come later.

IX. What delivery system does the project employ to:

- transfer the technology to intended beneficiaries
- does the project provide training in the use of new technology to extension agents who will in turn train groups of farmers? What entities...

This project is not aimed directly at farmers although they would be ultimately involved. It does have a basic purpose of creating a continuing training capability, and this has not been done as well as it should have been.

X. What training techniques does the project use to develop the delivery system?

The conduct of courses under African direction and relying heavily on African instructors. In the future this should be supplemented by explicit plans for the local conduct of follow-on courses.

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ATTACHMENT A: Evaluation Scope of Work

## INTRODUCTION

### General

This report presents the results of a mid-term evaluation of the Agency for International Development's regional project for Environmental Training and Management. (A more appropriate title would have been, "Environmental Training and Resource Management in Africa".) The project's acronym is ETMA. ETMA is a grant project started in October 1980. It has a projected life of five years at a total estimated cost of \$11.3 million, with an AID share of \$8.5 million. As of December 31, 1981, U.S. fund obligations were \$2,932,000 and expenditures were \$894,106.

The project is being implemented through a prime contract with the South-East Consortium for International Development (SECID), a university consortium based in Chapel Hill, N.C., and through SECID sub-contracts with the University of North Carolina (UNC), and Clark University (Clark)

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, (2) identify priority environmental problems, and (3) monitor environmental tasks.

This evaluation has been conducted under an indefinite quantity contract for Environmental Protection and Natural Resources Development between the International Science and Technology Institute, Inc. (ISTI) and the Agency for International Development (AID) - Contract No. AID/SOD/PDC-C-0251, Work Order No. 12, PIO/T 689-0427-3-6124802.

The evaluation was carried out by a two person evaluation team from ISTI. The team members were: Fred R. Weber, Environmentalist, and William R. Thomas 3d, Management Specialist and Team Leader. The evaluation was conducted under the general supervision of James W. Dawson, Senior Project Officer in the Office of Regional Affairs, Bureau for Africa (AFR/RA). The scope of work for the evaluation is attached as Appendix A.

### Objectives

The objectives of the evaluation were:

- to re-examine the original project design;
- to assess progress toward meeting the planned outputs, purposes and goals of the project;
- to identify significant issues or problems; and
- to recommend any changes that would assist in the achievement of the project's purposes.

The evaluation was also intended to determine whether the project's purposes continue to be valid and whether the current project approach is the most effective and appropriate method of achieving those objectives.

### Methodology

The methodology used in the evaluation was essentially identical with that set forth in the scope of work. It was primarily empirical. Inputs and outputs were analyzed and quantified where possible, but accomplishment in terms of the major goals cannot be quantified at this stage in the project's life, if indeed they ever can be.

The evaluation is based on interviews with individuals involved in the project and the review of relevant documents at various locations in the U.S. and Africa. Individuals interviewed ranged from AID and foreign government officials to

seminar participants. Documents reviewed ranged from basic program documents to training and reference materials produced by the project. In addition, the team observed the actual conduct of a seminar in Tanzania.

Site visits, in terms of locations and working days were:

- U.S.: AID Washington, 2 days; SECID and UNC, 2 1/2 days; Clark 2 days.
- Africa: Sudan, 2 days; Tanzania, 5 days; Kenya, 5 days; Abidjan, 1 day.

## I. PROJECT BACKGROUND

### The Origins of the Project

The ETMA project was designed in the collaborative technical assistance mode. It was both designed, and is being implemented, by SECID and its two subcontractors, UNC and Clark. The project had its genesis in environmental activities conducted between 1977 and 1979 by UNC and Clark using AID project support and development funds. These efforts culminated in the preparation of two separate Project Identification Documents: one on environmental training in Africa prepared by UNC, and one on resource management in East and Southern Africa prepared by Clark. During the review process, because of the obvious inter-relationship between the two projects, a decision was made to combine them into one. Apparently, neither Clark nor UNC wanted to assume primary responsibility, so SECID was brought in to perform this role and to make the capabilities of its 32 member institutions available to the project.

The process of development of the combined project involved field visits to 12 countries in Africa which had expressed interest in environmental training. A PID for the combined project was then drafted. It was reviewed at a meeting in Dakar in March 1979, which was attended by representatives from interested African countries, regional organizations, and the U.S. The meeting produced recommendations that were incorporated into the final PID, which was approved by AID in July. The Dakar meeting also resulted in the creation of a Steering Committee, with U.S. and African representatives, to provide advice and guidance on the design and conduct of the project. The Steering Committee has met three times, in August 1979, October 1980 and May 1982. The 1979 meeting developed recommendations for the design of the project and the type of training and other project activities

that should be included. These recommendations were substantially incorporated into the project paper (PP), which was approved on August 5, 1980. The contract with SECID was signed on September 30, 1980, and subcontracts with UNC and Clark, were signed in November. These dates are four months later than the projected dates in the original implementation schedule.

### The Project Concept

As might be expected from its origins, the ETMA project consists of two relatively discreet, although inter-related sets of activities - environmental training and resource management. A work plan for each set was specified in detail for the first two years of the project, with work in subsequent years to be determined by experience during the first two.

### Environmental training was planned to take place at three levels:

- Short (3-5 days) seminars for middle to upper level planning and policy personnel, intended primarily to sensitize them to environmental concerns and to stimulate them to include such concerns in their planning and management. Six seminar topics were identified in the PP and 13 seminars were planned for the first project year at a total cost of \$292,000.
- Medium term (4-6 weeks) courses for technical personnel, policy implementors and extension personnel. Three seminar topics (two of which are the same as short seminar topics) were identified in the PP, and five courses were planned for the first project year at a total cost of \$313,500.
- Longer term (2-12 months) individual training, to be conducted primarily at African institutions. No long term training was planned for the first fiscal year, because of the lead times involved. Fifteen trainees were planned for the second fiscal year at a total cost of \$90,000.

Resource management is an extension of prior work done by Clark in four East and Southern African countries to provide technical assistance and training to initiate or support specific environmental programs or activities. Two additional unidentified countries were potentially to be added in the third or fourth years of the project. The four original country activities were:

- Kenya: Local environmental planning to include development of district resource profiles, establishment of a district monitoring systems, soil erosion analysis, and the development of a national resource plan. U.S. support was to 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 government, and environmental and resource mapping. U.S. support was to 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 was to consist primarily of 46 person months of technical assistance, cartography, satellite imagery, and data processing at a LOP cost of approximately \$655,000. (This activity has been postponed because Botswana is currently fully engaged in dealing with an existing drought condition.)
- 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 was to consist primarily of 35 person months of technical assistance, cartography, satellite imagery and data processing at a LOP cost of approximately \$611,000.

In addition, to support these two sets of activities, the PP provided for two representatives to be posted full time overseas. The representative in East Africa was to devote one half of his time to assisting and coordinating the training program, and the other half to working as an advisor to the National Environmental Secretariat in support of the resource management activity in Kenya. The East Africa representative arrived in Kenya in January 1981. The second representative, to be stationed in Abidjan, was intended to perform the training assistance and coordination work in West Africa on a full-time basis. He was not scheduled to be posted during the first year of the project, and he actually arrived in Abidjan in November 1981.

## II. THE MANAGEMENT HIATUS

There are two interrelated management problems which pervade the ETMA Project.

They are:

- the lack of effective management within the contractor organization and within AID.
- the lack of specific articulated plans which define individual project activities and link them to the project's goals and purposes.

The results have been:

- Project activities which do not contribute meaningfully to the project.
- Project activities which have been less successful than they should have been because of inadequate planning.
- An inability at all levels of project management to effectively evaluate the progress or success of any given project activity or the project as a whole.
- Management by default rather than by decision.

These problems are so severe that, in our judgement, the ETMA project as it is currently being implemented will not achieve its goals and purposes. If the project is to continue it's management and implementation must be redesigned. If this cannot be done, the project should be cancelled.

### The Contractor Organization -

The present contractor organization and its deficiencies stem partly from the origins of the project and partly from the nature of the organization and operations of SECID itself. The decision to name SECID as prime contractor, with the University of North Carolina and Clark University as subcontractors did not bring together equal parties in an arms length contractual relationship.

- By the time SECID became involved, UNC and Clark were well entrenched in East Africa in their respective areas of interest - environmental training

and environmental management. SECID itself (as opposed to its member institutions) had virtually no experience in the subject or the area.

- UNC and Clark were represented at the Dakar meeting in August 1979. SECID was not.
- A Washington based representative of SECID, who was not a professional environmentalist, was a member of the PP preparation committee, but Clark did the bulk of the work.
- The UNC and Clark managers have been associated with the project from the beginning. The SECID project manager was not even hired until several months after the contract was signed.

The potential effect on contractual relationships is obvious, and they are reflected in the contract staffing. UNC has a half time professional manager who is supported by a half time administrative assistant. Clark has five individuals in its project administration structure who work an equivalent of more than three full time person months per month, and are supported by substantial clerical and graduate student assistance. SECID has one professional environmentalist who is responsible for both project management and contract administration, and he has had virtually no assistance. (He prepares the backup data for the invoices, for example.)

The nature of SECID operations is also a factor. All, or almost all, of its past contracts have been ones where long term advisory groups are stationed overseas. In these contracts, management is the responsibility of the team leader in the field. The SECID contract managers in North Carolina have been administrators, whose function has been to provide administrative support for the contract team. We are not being critical, this is a sensible arrangement. But it did not provide a precedent for the continuing, substantive management that the ETMA project requires.

These background forces are reflected in the contracts themselves. (The contracts are consonant with the management structure in the project paper.) The prime contract states that, in order to achieve the project goal, the contractor will work with and assist African governments, regional African organizations and African educational institutions to develop and carry out the activities for the first two years that are listed in the project paper. It requires that an annual work plan be submitted for AID approval for each of the last three years of the project, but there is no requirement to seek approval for changes in the first two years from the planned activities, and no recognition that this may be necessary. As a result, the first annual report briefly mentions that the short seminars have been virtually abandoned and that the duration of the medium term courses has been cut in half, but it contains no discussion or justification for these major revisions.

Moreover, the organization and management section of the contract formally establishes the unbalanced contractual relationship described above.

- It does not charge SECID with overall responsibility for contract performance.
- It provides for a Contract Management Committee consisting of SECID, UNC and Clark, "to guide SECID in the execution of contract coordination and implementation."
- It assigns responsibility for coordination of the training element to UNC.
- It assigns responsibility for coordination of the resource management element to Clark.
- It assigns only coordination of the long term training element to SECID.
- It provides that the two regional contract representatives stationed in Africa "will be responsible to and receive guidance from the Contract Management Committee," not SECID.

The SECID sub-contracts with UNC and Clark are in keeping with this pattern. They are funding documents, not effective contracts. The entire scopes of work for the two sub-contracts are as follows:

- (UNC) "The University will be responsible for managing the organization and administration of short seminars and medium length courses for training purposes. The seminars and courses will be tailored to deal with specific country or regional environmental issues."
- (Clark) "The University will be responsible for coordination 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."

Neither sub-contract mentions quantity of work to be accomplished or even the level of effort to be provided. All they contain are a budget broken down into cost components, such as salary, fringe benefits overhead, etc; and administrative provisions for invoicing, record keeping, and similar activities. UNC and Clark are entitled to payment, within the budget limit, provided only that they submit invoices certifying that the costs have been incurred. Whether anything has been accomplished, let alone anything worthwhile, is moot.

Thus, SECID, as the prime contractor, does not have the responsibility, the authority, the tools, or the manpower to effectively manage the contract to see that the project's objectives are achieved. This is compounded by the fact, discussed in the last section of this chapter, that there is presently no effective means for designing or analyzing individual project activities to insure that they will contribute meaningfully to the accomplishment of the project's goals and purposes.

In this situation, the results are hardly surprising. As discussed in Chapter III, we conclude that outputs during the first project year fell far short of planned levels, that inappropriate activities were carried out, and that expenditures were excessive.

that AID's management of the ETMA project has not been adequate. In theory, the AID structure as is true of problems are in execution, and, primarily, in the lack of a the worth of individual project activities.

per assigns overall responsibility for project monitoring to the Regional Affairs (RA), Africa Bureau. Virtually all of the effective nt of the project has come from that office. But the ability of RA is clearly restricted. Management of the \$8.5 million ETMA project is e responsibility for one RA project officer. He is geographically rom the contractors, and, more importantly, from the project activities. compounded by the lack of design documentation which would lend itself to pective analysis of the effectiveness of individual project activities.

project paper charges the respective AID Missions with responsibility for roving the country Memoranda of Understanding which are presently the principal ols for managing project implementation. In our judgement this approval res- onsibility has not been effective from the viewpoint of project management and t has not provided RA with the more detailed field analysis and support that it needs. There are several reasons for this. ETMA is a regional project and thus peripheral to the missions' main areas of interest and activity. Within the mis- sions, responsibility is assigned to the mission environmental officer, often a junior member of the staff or someone for whom the environment is a secondary responsibility. Perhaps the most important reason is the fact that the present Memoranda of Understanding are simply not an effective means of project management.

During project design the REDSO's took the position that they did not have the staff time to assume direct responsibility for managing the ETMA project. As a result, the project paper provided that the Regional AID Environmental Officers, upon request of AFR/RA or the Principal AID Country Officer, would be responsible for reviewing and clearing ETMA country or regional programs; evaluating training programs; and for monitoring resource management programs on an ad hoc basis. In response to an inquiry from REDSO West, RA reaffirmed this decision to not directly involve the REDSO's and charged them with a liaison responsibility instead. As far as we are aware, the Missions have not explicitly exercised this option either, although mission environmental officers have certainly consulted with the Regional Environmental Officers about ETMA activities.

Our judgement that AID has not effectively managed or overseen the project as it is presently being implemented is all the more serious in view of our concomitant judgement that the contractor has not done so either.

#### Control of Project Implementation Activities

The design of the ETMA project was a long and elaborate process. It covered a period of several years of direct involvement by Clark and UNC in environmental activities in East Africa. The resulting project documentation includes environmental profiles on four countries, records of environmental priorities drawn from interviews with 140 individuals in 10 countries, the two original PIDs and the ETMA PID and Project Paper. But the resulting project design is such that it is almost as though this elaborate project planning process obviated the need for further planning or for analytic management of implementation; as though the originally scheduled project activities would proceed without change. These were unreasonable expectations, and they have not occurred.

Beyond AID/Washington approval of the annual program and budget, the principal means for control of project implementation are the annual individual Memoranda of Understanding between the contractor, the participating government and the sponsoring host country institution. The project paper provides that:

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.

In practice these Memoranda have been supplemented by individual working agreements covering each specific training course. The working agreements follow the format of the Memoranda and are intended to serve the same basic purpose. They have evolved because actual courses are often ones that were either not provided

for in the Memorandum of Understanding or are being conducted with a different sponsoring host country institution.

These two documents share the same strengths and weakness. Their strengths include:

- A commitment by the government and a host country institution, both generally and in terms of a specific contribution to the activity.
- A plan of action, including a definition of what is to be done, when and by whom. This is necessary to insure that the essential actions occur and to avoid later conflict over who is responsible for what.
- A definition of the financial arrangements, a potential trouble spot if left unspecified.

The basic weakness is that the Memoranda of Understanding and working agreements are narrative in nature. They describe what is to be done and how, but not why. Nor do they identify those elements that are essential to an activity's success. In short, they lack the basic analytical framework that is the foundation of the AID project preparation process. We believe this is a fatal flaw that must be corrected if the ETMA project is to succeed; that the Memoranda of Understanding and working agreements, or other documentation, must set forth the basic analytic framework for each project activity. As a minimum the framework should include:

- The purpose of the activity. What is it intended to achieve, when, and how will it do so. This should specifically address what African institution will be strengthened by the activity, and how this will come about. (It is not enough to say that the purpose of a course is to train 30 people in environmental planning. The questions are: To train them to what end? How will this be achieved? and; When and how will the host institution develop the capacity to conduct such training on its own?)
- The priority of the activity. Why does this activity merit the use of limited ETMA resources? (It is anomalous that, having attempted to identify environmental priorities in 10 countries during the project preparation stage, priorities are not even discussed in the implementation stage.)
- The relevance of the activity to the project. Specifically how does it relate to and contribute to the achievement of the project's basic purpose and goals? (Failure to do this has resulted in activities, such as two seminars in Tanzania, that we believe are irrelevant.)

- The linkage to other project activities. What other ETMA activities does this activity relate to or support, and how and why? (Without the identification of this linkage, at least one activity - a seminar in Sudan - was held for a different purpose than originally intended without anyone associated with the project making a deliberate decision to do so.)
- The follow-up activities that are essential if the activity is to achieve its purpose, and who will be responsible for them. (As a Kenya official said, without the necessary follow-up, "nothing has happened" as a result of the preparation of the district environmental profiles. He suggested that perhaps the number of additional profiles to be prepared in 1982 should be reduced and the savings used to finance follow-up activities. It is precisely this kind of management decision that our proposed analytic framework is intended to facilitate and to force.)

While we believe that such a framework is essential, we do not believe that it needs to be elaborate. We are not proposing a PID and PP for each \$50,000 activity. It should be possible to cover the proposed analytic framework in no more than five pages, usually less. The result would be a document that would make rational management decisions and management oversight possible, within the sub-contractor organizations, at SECID and within AID. This is not possible now. Installation of such a management framework is a prerequisite to the management changes described below. Without the framework the changes will be merely cosmetic.

#### Alternative Management Arrangements

If the ETMA project is to continue, we believe the logical course is to look to SECID for overall project management. There are four reasons for this:

- We are at mid project and SECID is established as the prime contractor. There appears to be little advantage in searching for a new one.
- Although Clark is responsible for training directly related to resource management, there is an inter-relationship with other ETMA training. There should be a coherent ETMA approach to a given country and the alternative of separate direct contracts with UNC and Clark will not provide it.
- The resident regional representatives should report to one boss on training coordination matters.
- Separate contracts with Clark and UNC would place an undue management burden on AID.

If SECID is to manage the project effectively there are two basic things which need to be done:

- Staff SECID to do the job. This need not add significantly to what is already an extremely high level of project overhead costs. We believe that effective overall project management could be accomplished by one full time professional who has adequate administrative and clerical support. Indeed, there would be no additional cost if the present sub-contract with UNC is not extended. We can see little justification for SECID sub-contracting with one of its member institutions. As a training course is identified it should be jobbed out to the member institution best qualified to handle it. (The possibility of a diminution in UNC's role was postulated in the project paper.)
- Place SECID in charge and hold it accountable. The contract should be rewritten to make SECID directly responsible for the success of the project and to give it the authority to do so. The regional representatives in Africa should report to SECID, not to the Management Committee, and the Management Committee should advise SECID, not "guide" it. Coordination of training should be assigned to SECID and coordination of the environmental resource management component should be assigned to Clark, but clearly under SECID's overall management and control. The sub-contract with Clark should be rewritten to charge Clark with accomplishing specific tasks and to assign resources to those tasks. Stricter reporting requirements on accomplishments should be imposed and invoice payments should be based on the work done, not the amount of money spent. (If this had been done originally, we believe that the resources originally intended for Botswana would not have been diverted when that program fell through.)

The actions needed to strengthen AID management are simple. AID has the necessary structure and it's responsibility is to oversee the contractor, not to directly manage the implementation of the project. AFR/RA should continue to have overall responsibility for project monitoring. To assist RA, the Missions should be specifically charged with review of proposed ETMA activities to insure that they meet minimum standards in terms of such things as priority, relevance to the project and African participation. These should be specified and the AID Principal Officers should be informed that their signature on memoranda of understanding and working agreements certifies that these standards have been met. This should not place an undue burden on the Missions if they have an analytic framework to review. The number of ETMA activities in any one country will be relatively few in number - perhaps three or four documents a year.

We would not assign management responsibility to the Regional Environmental Officers. We are persuaded that they are fully occupied and that this would come at the expense of providing assistance to the Missions. Their role should be to provide assistance and advice on ETMA activities, on request, just as they do now for direct Mission activities.

### The role of the Regional Coordinators

We take the basic role of the regional coordinators as given. Someone must organize project activities, especially training, and at least start the process of putting them in place. The question is whether this can better be done by coordinators stationed in Africa or from the United States.

While we have not done a precise cost analysis, it seems certain that the cheapest way to do this would be from the U.S. Per diem allowances would be the same, and the extra travel costs would be more than offset by the savings in such things as the cost of living, post and education allowances.

Since it would be cheaper, the question is from where the responsibility for coordinating and assisting the training program might best be done. The issues are:

- Does a resident coordinator have better local knowledge than someone coming in from the U.S.? Yes but only marginally so. A person stationed in Nairobi has a very limited outside perception of what is happening in the Sudan.
- Will there be continuity? This is crucial. Visitors from the U.S. can only be successful in developing new activities if they visit the same institutions repeatedly. Someone has to work the beat.

We are convinced that the half time of the East Africa coordinator that is spent working with the NES is one of the most productive ETMA activities to date. This dictates the extension of this position. It should be continued, and the replace-

ment for the present incumbent should be selected on the basis of his ability to do the advisory job. This must be reconciled with the person's responsibility as a coordinator (and thus a manager) of the project's activities. Our proposed solution is that the choice be ultimately up to SECID and that, contractually, the replacement report to SECID.

If the decision on the East African coordinator is proscribed, the continuation of the West African coordinator is in doubt. If persons can be found who will assume the role of coordinator for a given group of ETMA countries in West Africa, then the current coordinator should not be replaced. But the "if" above is critical: Operating without a resident coordinator absolutely requires replacements who are committed to doing the job by travelling from the U.S., and doing it for several years.

#### The Role of the Steering Committee

The role of the Steering Committee was an issue at the Committee's recent meeting in Nairobi. Because of difficulties in arranging meetings and minimal African attendance at the last two that have been held, the group concluded that the committee as a whole should meet perhaps only one more time, near the end of the project. As an alternative, Regional Steering Committees were proposed, with the African representatives being primarily persons associated with the project. The question is whether such a group can provide sufficiently independent direction and guidance to the training component to be worthwhile. We are skeptical. While we are not adamant about it, given the past experience we doubt that future general or regional steering committee meetings will be worth the cost. They certainly will not be if African participation does not increase. In any case they are no substitute for aggressive line management of the project.

### The Overall Project Alternatives

Given all of the above, there are three apparent overall alternatives for the future of the ETMA project:

- The first alternative is to cancel the project. The main advantages of this are that it would be relatively simple and overall savings in project costs would be considerable. It would also clear the decks for the creation of a new re-designed successor project with similar objectives. But we are virtually certain that this would not happen. Our overriding concern is that cancellation would eliminate the possibility of achieving the present project's goals and purposes, which we believe are clearly worth striving for. Our reasons for this are set forth in Chapter III. In short, they are: the pressing nature of environmental problems in Africa and the fact that ETMA is addressing those problems at a level and perspective not generally found elsewhere in AID.
- The second alternative is to continue the project with a sharply reduced set of activities. Likely candidates for continuation would be the resource management work with the Institute for Environmental Studies in Khartoum, the National Environmental Secretariat in Nairobi, and possibly the Bureau for Resource Allocation and Land Use Planning in Dar-es-Salaam; future work with the Forestry/Ecology Unit of CILSS in Ouagadougou; and directly related training. The project might then be reduced to a single direct contract with Clark. There would be the possibility of new follow-on projects, but again, we think this unlikely. The main advantage of this alternative is that, by focussing on a limited set of activities that are progressing well, it enhances the chance of success; or rather, reduces the risk of failure. The limited set of activities would require that an analytic framework be designed and put to use, and considerable pre-project and in-project preparatory work would have been wasted. (The work of the West African Representative, for example.) And we would be settling for something less than the desirable original objectives of the project.
- The third alternative is to continue the project with a restructured management and management system. This alternative offers a reasonable prospect of achieving all or most of the original project's goals and purposes. There is a risk that this will not happen; that the proposed analytic framework will not be as effective as we think it will, or that SECID cannot become an effective manager. We believe these risks are small enough to be acceptable. There is also the effort involved in re-design. But we are proposing re-design of the management of project implementation, not the project as a whole. And once the design has been prepared, installing it is primarily a contractual effort. It is our judgement that the project's ends justify the effort to create the means.

### Life of Project Costs

At this stage we cannot forecast life of project costs, but it appears likely that they will fall short of the originally projected \$8.5 million. There has already

been considerable project slippage, and re-design will cause more. With more restricted activity criteria, the number of activities, already obviously hard to set into motion, will probably be reduced. This does not trouble us. We favor a lesser number of well-planned activities over a larger number that are not well designed.

### III. PROGRESS TO DATE

#### General

Although the project officially started on 1 October 1980, project management and reporting treats the period 1 October 1980 through 31 December 1981 as the first project year. This arrangement, which was agreed to with AFR/RA, matches project planning more nearly with the timing of fund availabilities. For comparison purposes the first project year has been compared with the planned activities for the first two fiscal years - a sixteen month period. We have followed this practice in this evaluation, recognizing that it slightly understates first year accomplishments and slightly overstates planned first year inputs and outputs.

#### Environmental Training

Table 1 shows planned vs. actual outputs of the environmental training element of the project for the first project year and for the first five months of the second project year. Table 2 shows planned vs. actual inputs and outputs for the medium course part of the training - the only significant training activity during the first project year. A review of these tables shows that the environmental training element to date has been characterized by:

- Major changes in the structure of the training.
- A slow start and consequent slippage in planned training activities.
- Resultant increased unit costs.

TABLE 1

Environmental Training Activities-Planned vs. Actual Outputs

PROJECT YEAR 1

	<u>Planned</u>		<u>Actual</u>	<u>Actual as Percent of Plan</u>	
	<u>Project Paper</u>	<u>June 1981 Work Plan</u>	<u>(Oct. 1, 1980 to Dec. 31, 1981)</u>	<u>Project Paper</u>	<u>June 1981 Work Plan</u>
<u>COURSES CONDUCTED</u>					
Short Seminars	13	4	0	0	0
Medium Courses	5	6	4	80	67
<u>INDIVIDUALS TRAINED</u>					
Short Seminars	130	120	0	0	0
Medium Courses	150	180	126	84	70
Long-Term Training	15	15	1	7	7
<u>INSTITUTIONS STRENGTHENED</u>					
Short Seminars	13	4	0	0	0
Medium Courses	5	6	4	80	67
Long-Term Training	3	2	1	33	50

PROJECT YEAR 2

	<u>Planned</u>			<u>Actual</u>	<u>Actual as Percent of Jan. 1982 Work Plan</u>
	<u>Project Paper</u>	<u>June 1981 Work Plan</u>	<u>Jan. 1982 Work Plan</u>	<u>Thru May</u>	<u>Thru May</u>
<u>COURSES CONDUCTED</u>					
Short Seminars	4	10	3	1	67
Medium Courses	8	10	10	1	10
<u>INDIVIDUALS TRAINED</u>					
Short Seminars	120	300	90	120	133
Medium Courses	240	300	300	28	9
Long-Term Training	30	30	30	4	13
<u>INSTITUTIONS STRENGTHENED</u>					
Short Seminars	4	10	3	2	67
Medium Courses	8	10	10	1	10
Long-Term Training	5	5	5	3	60

Sources: Project Paper  
 Project Year One Annual Report  
 Project Work Plan Jan. 1 - Dec. 31, 1982  
 Field Data

TABLE 2

Environmental Training - Medium Courses - Planned vs. Actual  
First Year (Oct. 1, 1980 - Dec. 31, 1981)

	<u>Planned Project Paper</u>	<u>Actual</u>	<u>Actual as % of Planned</u>
Courses Conducted	5	4	80
Individuals Trained	150	126	84
Course Weeks	25	10	40
Trainee Weeks	750	348	46
Cost Per Trainee Week	\$418.0	\$601.4	144
Faculty Man Months	25.7	13.3*	52

\*Adjusted from annual report based on data supplied by Clark .

Sources: Project Paper, and Project Year One Annual Report.

Two Structural Changes have taken place. The first, which is obvious in Table 1, is the major reduction in planned and actual short seminars. These seminars - intended to sensitize policy level government officials on major environmental problems, issues and solutions - were a central element in the original project plan. They constituted 21 of the 49 seminars planned and 33% of the training costs. Thirteen were scheduled for the first year, but none were conducted. Four were scheduled during the second project year and two have been conducted through May. They are discussed in the section titled Short Term Seminars, below.

The reduction in short-term seminars results in part from the difficulty of finding an appropriate sponsor, and of getting the appropriate number and mix of policy level officials to attend. It also results partly from the perception by host country and ETMA personnel that policy level officials in some countries are already sensitized to overall environmental problems. Because of this, it seems unlikely that the original number of seminars will or should be held. Moreover, given the relatively high cost of this type of training, we believe that future seminars should meet strict tests in terms of need, potential benefits and planned follow-up.

The second structural change that has occurred is a basic change in duration of the medium term courses, from a planned 4 to 6 weeks to a 2 to 3 weeks duration. The five medium term courses held to date are discussed in the section titled Medium Term Courses, below.

Outputs of these courses in terms of persons trained still leaves the basic question of, so what? What will happen in terms of changed job performance or effective environmental work as a result of the training? If nothing happens the training will have largely been a waste. There appears to have been little

consideration given to this question in the design of the courses or potential follow-up action.

Each course has had an evaluation element built into it. This is a commendable practice that should be continued, particularly to provide information to improve the design and conduct of subsequent courses. We have reviewed these evaluations and have drawn on them, but they cannot assess the future impact of a given course on a participant, other than his or her judgement as to the future utility or practicality of the course. We interviewed government officials and past course participants\* in an effort to assess this longer term effect of the training. The consensus was that the long term effect is probably very limited. We found two clear exceptions to this. One was a plant manager who got a practical answer to an important operating problem. The second was a young official in Kenya's Ministry of Water Development whose supervisor was involved in the course. He stated, with concrete examples, that he had been given new responsibilities that he would not have had if he had not received the training. This bears directly on the problem most frequently cited, that middle level personnel were unlikely to be able to utilize their training if their bosses or their peers (on a planning committee, for example) had not been similarly exposed. As one participant put it, "the course gave me new ideas, but my boss turned them down".

One approach to this problem may be that proposed for West Africa, where supervisors will be involved in the closing sessions of the course. In any case, we are convinced that the potential long range utility of the training must receive much more serious attention in the planning of future ETMA training efforts.

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\*For logistic reasons we were only able to contact former participants in Kenya.

The slow start in project activities is clearly reflected in Table 1. The Annual Report states that the slow start was due to a delay in starting the project and a reduction in the first year funding level. The delayed start was a factor, but the reduced funding level seems to have played little part. Expenditures for the first 15 months have totalled \$894,106. This compares with funds obligated and thus available totaling \$1,408,000 as of November 1980, and \$1,788,000 by June 1981.

The actual reasons for the slow start appear to be:

- The problems in setting up short-term seminars cited above.
- Delays in the posting of the permanent representatives in East and West Africa.
- The unstructured management style of the project, in which seminar identification has been more a product of personal relationships than a planned activity.

We believe that the short seminars are not likely to reach their planned levels, even over the life of the project. While medium term courses, in terms of numbers of courses, nearly met the first year target, the numbers are running behind this year. Only one course out of a planned 10 has been conducted during the first five months of the year. Twelve additional courses are in varying stages of planning or consideration. But, given the lead times involved, we doubt that the second year's planned output of 10 courses will be achieved.

Long-term training was planned at a very low level during the first project year, but it has not accelerated in the second year, as expected. At the end of five months only four persons out of a planned 30 were actually in long-term training. This reflects the inherent difficulty in identifying the right individuals in terms of training needs, future employment in appropriate organizations, and available training opportunities. In the present unstructured project approach,

long-term training is likely to fall short of the life of project goals. Even if a more structured approach can be found, we doubt that the goals will be met. (We have noted at least one instance where project funds are to be used to send a highly qualified government official to the U.S. for training. We question whether such training is in keeping with original project purposes for long term training.)

The resultant increased training costs for medium term courses can be seen in part in Table 2. During the first project year, the percent of funds spent against planned costs compared favorably with the percent of courses completed and individuals trained. However, this masks the reduction in the length of the training courses. The percentages of course weeks and training weeks are significantly below the rate of expenditure. As a result, the actual cost per trainee week is 144% of that originally planned. And, costs per week were a specific issue in the project paper. (If the UNC water seminar, with its high number of participants, is excluded, the cost for the three remaining seminars was \$893, per student week, more than twice the originally planned cost.)

But these are only direct training costs. If overhead costs are added the picture becomes much worse. During the first project year, overhead costs at UNC, which is engaged solely in training, totaled \$73,767. This is 76% of the direct costs of the two seminars UNC conducted. Some of these overhead costs can properly be attributed to planning and preparation for courses in the second project year. But even if allowance is made for this, the rate is unacceptably high. A similar comparison is more difficult to make for Clark, because reports do not disaggregate overhead costs between training and resource management. If such a disaggregation were made we would expect the ratio of overhead to training at Clark to be more favorable, but still very high.

### The Short Term Seminars to Date

Although short term seminars have been sharply reduced in number, they can make a useful contribution to the objective of the project, provided that:

- The main result is a more comprehensive understanding of the trade-offs between development and conservation - i.e. more rational management of existing or potential natural resources.
- They catalyze the determination of environmental priorities and a commitment by decision makers to them and toward more rational resource management.
- They are followed up.

The two short term seminars held to date do not precisely meet these provisions, but we judge them to have been productive ETMA activities. They are:

1. A three day seminar on Energy and Environmental Management in Somalia attended by approximately 70 persons from Somalia, the U.S. and International Organizations. (Cost not available.)

The principal immediate product of this seminar is a 19 page paper identifying priority problems and recommendations for follow-up action. Although the list suffers from length - it is more a laundry list of problems and potential actions than an identification of priorities - it is a productive first step in turbulent Somalia. We have been advised that a shorter priority list is being distilled from the initial one to be forwarded to the President. If this happens it will be an excellent example of the type of follow-up that we consider essential.

An unplanned, but very positive, result of this seminar has been provided to us by an informed outside African observer. He states categorically that many of the attendees at the seminar, both Somalians and expatriats became aware for the first time of development activities in Somalia that duplicated or overlapped work that they were doing. It was his judgement that the seminar was justified even if this was its only accomplishment. We tend to agree.

We should also note that this was apparently a relatively low cost activity for ETMA. Because of an accident, the direct ETMA participation in Somalia was handled by the regional coordinator. But even if one person had come out from the U.S., as originally planned, the cost would have been commensurate with the results.

2. A four day seminar on Environmental Enhancement and Resource Management in the Eastern Province of Kenya attended by approximately 50 persons from Kenya. (There were 74 people on the final roster including 42 from outside Nairobi.) February 1982. The attendees included representatives from

six District Commissioners' offices for whom it provided an opportunity for district people to compare successes. Ministry people from Nairobi also attended.

This was a valuable first step in creating awareness and dialogue between agents and officials from different fields. However, it should be followed up by NES through either additional meetings, (if the District Commissioners have other occasions to get together with the regional and district staffs, that would be an excellent opportunity to reserve a couple of hours to talk about specific environmental issues or cases) or some sort of nation-wide bulletin out of NES to programmers and administrators.

Eventually, another Region could be organized the same way: first a seminar of this kind, followed up by creating a network.

There is however, some question as to why the University of Tennessee, rather than Clark with its extensive experience in Kenya, was chosen to conduct this seminar. It appears to have been the result of an arbitrary division of work rather than the selection of the best qualified university on a case by case basis.

#### The Medium Term Courses to Date

There are two general observations about the five medium term courses that have been conducted to date.

The first is relatively negative. The courses suffer, to varying degrees, from the lack of management structure discussed in Chapter II. In the words of one ETMA official, they have been "targets of opportunity". In other words, seminars have been held whenever an African institution could be found that wanted to sponsor a course concerned with the environment. The result has been two courses which we believe should not have been held, and, with better planning the other three could have been better. Better meaning that they were worthwhile.

The second observation is definitely positive. The seminars to date have been characterized by a heavy African involvement. In four of the five courses, Africans have been appointed as Course Directors. In four of the five, Africans have carried a major share of the teaching load. In the water quality seminar in

Kenya, for example, over half of the teaching was done by Africans. This is not chance. It is the result of deliberate efforts on the part of ETMA personnel, and it goes to the heart of the goals of the project. We applaud the intent and accomplishment of this effort, and believe it could be enhanced. More of the funds used for preparation of course materials could be used to pay Africans to develop specific country case studies. The mix of the course materials to date has been too much general materials, and not enough of the local case studies postulated in the project paper. We also believe that U.S. course instructors should be given more preparatory time in country. The time should come from the total time allowed for course preparation, but extra per diem costs may be involved. If so, we think they will be justified.

The five medium term courses held to date, and our assessment of them are as follows:

1. A two week course on "Heavy Metals and Pesticides in the Environment," conducted by UNC and the Tanzanian Government Chemical Laboratory in Dar-es-Salaam. Twenty-seven participants from 6 countries. Costs: \$2,100 per student, \$1,050 per student week. March 1981.

The issues here are ones of relevancy:

- How much can a two week effort of skill upgrading of 20 laboratory technicians contribute to strengthened institutions? The pre-existing problems of inadequately maintained equipment and limited operating and maintenance funds are likely to remain bottlenecks in spite of improved skill levels.
- How important is the general problem of heavy metal and pesticide pollution in the overall spectrum of major environmental problems in Africa? The pre-project survey of 10 countries produced some 450 separate identifications of priority environmental problems. In this list, pesticides are mentioned only seven times and heavy metals do not appear even once.
- Assuming pesticides are a problem, is the training of laboratory technicians the best place to start?

Experience everywhere (not just in Africa) has shown that management of chemicals is a prerequisite to all other precautionary measures. That is: obtain, store and use only as much as needed; control transport, storage, distribution and application to insure that the chemicals do not reach uninformed or anti-social hands; and, ideally, be sure that emergency procedures and equipment are available to promptly reduce damage to a minimum if something goes wrong.

The sequence of attention thus should be: Education of the potential users, the government, and the general public; proper handling; and then monitoring.

Thus, we question whether this seminar addressed an environmental problem of reasonable priority in Tanzania. If it did, it addressed the problem at the wrong level, even if Tanzania had a pesticide monitoring program - and it does not. We believe this is a clear case of an unplanned target of opportunity which turned out to be the wrong target.

2. A two week course on "Environmental Considerations in Regional Planning", conducted by Clark and the Bureau of Resource Assessment and Land Use Planning (BRALUP) in Dar-es-Salaam. Twenty-seven participants, primarily district planning officers, from Tanzania. Costs: \$2,300 per student, \$1,150 per student week. November 1981.

The course was implemented by BRALUP. A very informative and meaningful evaluation report was prepared by a representative from the office of the Vice-President. Follow-up interviews were scheduled for April 1982. The course was conducted at the written request of the Office of the Prime Minister.

Emphasis was placed on analysis of significant environmental issues, data needed for planning decisions and presentation of integrative planning techniques, including environmental considerations.

A mixture of lectures, discussion groups and field trips were provided.

On the whole, this is one of the more meaningful and successful ETMA activities carried out so far, but there are some improvements that might be made in future:

- We agree with the evaluation that a greater participant mix might more effectively spread the message on environmental concerns. Ideally, each group should combine planning officers (the present target group) with representatives from other government technical and administrative services as well as politicians. In fairness however, the attendees were those designated by the Prime Minister's office, not ETMA.
- Using pertinent and above all local examples and exercises should be stressed more. Participants could be asked, in preparing for the course, to bring files and records of work-problems with them to the course, for example.

The seminar has proven it's potential as a mechanism to bring about a common perception, to serve as a forum for ideas and exchange, and as an opportunity to bring together representatives from different sections and departments to deal with environmental concerns more effectively and on a wider inter-disciplinary basis.

3. A three week course on "Water Supply and Water Pollution Control", conducted by UNC and the National Environmental Secretariat (NES) in Nairobi. Fifty participants from Kenya, two from Tanzania. Costs: \$850 per student, \$283 per student week. July-August 1981.

Most participants were technicians from the Ministry of Water Development. Others were from the Office of the Government Chemist, the NES, and the Nairobi City Council.

The course's impact was to provide a forum for exchange of views and exploring environmental problems on a multi-disciplinary basis. The course stimulated awareness and generated some understanding of problems related to water quality, pollution, and waste water treatment (largely connected to urban or industrial, as opposed to rural development).

Reviewing the relevance of the subject matter, it should be kept in mind that though rural by location and dispersion, agricultural based processing facilities (coffee, hides, etc.) have been installed throughout intensively farmed areas. Pollution from these sources, though industrial by nature, is beginning to become region wide in some parts of the country.

As noted earlier, this seminar directly benefitted some attendees in terms of improved job performance. There are also benefits from introducing participants to a multi-disciplinary approach to problems.

4. A three week course on the "Environmental Impact of Development," conducted by Clark and the Institute of Environmental Studies (IES) in Khartoum. Twenty-five participants from the Sudan and one each from Botswana and Somalia. Costs: \$1,900 per student, \$950 per student week.

Attendees were managers from ministries, regional or district government offices, para-statal organizations, and educational institutions. The course was divided into four sections: An overview into environmental problems and relations was presented at the beginning; impact evaluation methods and procedures, including classroom exercises followed; and special techniques for environmental assessments were covered. The remaining eight days focussed on a problem solving exercise.

A three day field trip was included, reports were prepared by small task groups. The seminar evaluation conducted at the end of the course indicates that objectives were reached, the subject matter was relevant and new ways of analysing and resolving problems were presented effectively.

Our own inquiry revealed that the most novel and the most meaningful aspect was the introduction of a broad-based, multi-disciplinary approach

to analysing and resolving environmental problems. The idea that environmental problems must be treated by different technical and administrative services together is a concept new and different to most participants and beyond the limits most government agents and officials have been used to and comfortable with so far.

Relevancy: Important resource management and training aspects were included. The course lent itself well to identification of environmental priorities, collection of necessary data such as field information, acquisition of existing data, supplemental information from satellite imagery, etc.

5. A two week course on "Environmental Protection in Low Cost Urban Sanitation" (in fact on ventilated improved pit latrines) conducted by UNC and the Ministry of Lands, Housing and Urban Development (ARDHI) in Dar-es-Salaam. Approximately 28 participants from Tanzania. Costs: not available. April-May 1982. (Major impetus for the seminar came from the World Bank.)

This is the course we observed directly. In our judgement the course, which was beset with other problems, is outside the purpose of the ETMA project. Nor does it fit the course themes listed in the project paper. Except in the most picayune sense, it is not concerned with the environmental aspects of urban development, and it certainly does not deal with rural health. It should never have been conducted by ETMA.

The level of training was also inappropriate for ETMA. The majority of the participants were first year college students being trained to promote the installation of VIP latrines in two squatter areas in Dar-es-Salaam. No effort to create an African training capability was discernible.

In our judgement the course had the following additional problems:

- A sanitary engineer should not have been sent from the U.S. The ARDHI Institute and the company consulting on this project both have professional expatriate engineers versed in the country and the project.
- Course management was sub-standard. The U.S. input was ill defined and it was managed too loosely. Appointing a UNDP expatriate as Course Director raises serious questions about the intent to build African institutions. The training plan was vague and not adhered to. The field visit to the project site largely excluded the students.
- There is a serious question about the latrine design that the course is intended to promote. The design would cost the equivalent of a year's income for 1/3 of the squatters who are to be persuaded to install it.

One very positive note was the inclusion in the ETMA group of a specialist in VIP latrines from Zimbabwe. This kind of cross fertilization is a very positive part of many ETMA activities. In this case it was especially so because Zimbabwe's VIP latrine technology is more appropriate than that proposed for Tanzania. (About 1/10 the cost.)

### Resource Management

As noted earlier, the resource management of the ETMA project in the initial years was to consist of relatively discrete technical assistance activities in four countries: Sudan, Tanzania, Kenya and Botswana. Outputs for these are difficult to quantify and lend themselves more readily to narrative description. However, the project paper did attempt to quantify outputs by country. A few are specific, such as the completion of 25 district environmental profiles in Kenya. Most are broader and more qualitative, such as "strengthened capability of the Environmental Studies Unit at the University of Khartoum in the applied aspects of environmental analysis and evaluation." For Sudan, Tanzania and Kenya, the PP listed 15 life of project resource management outputs, four of which were to occur in the first project year. None of the four objectives has been wholly achieved, and one has shown almost no progress. The most nearly accomplished is the completion of district profiles in Kenya. Six were scheduled for the first project year. By December 31, four had been completed and data gathering had been finished on two more.

This assessment of progress is necessarily subjective. One expected Tanzanian output was the planning version of a tested program for the incorporation of environmental health design principles into village planning and village operation. A plan has been prepared, but it was done in cooperation with a PVO project that has been cancelled. Tanzanian government participation was so minimal that the plan will apparently not be used in its present form. We do not believe this can be judged as an accomplished output in the context of the project purposes and goals. (Consideration is now being given to conversion of this plan to a semi-urban plan. This activity should not be undertaken without a firm host country involvement and commitment and the decision that departing from rural health is justified.)

In addition to the outputs planned for the first project year, there has been progress toward outputs which are scheduled for completion in later years. This progress is very difficult to judge and impossible to quantify. An example is the projected output of an established working relationship between the Kenya National Environmental Secretariat and other ministries. Clark faculty time has been devoted to this, but it is impossible to judge progress in the absence of a plan which would lead to the achievement of the objective.

The lag in project outputs in resource management is in part an inherent risk in any institution building activity. But inputs have not lagged significantly and the gap between inputs and outputs in resource management parallels that in training. Table 3 shows planned and actual person months of professional technical assistance for resource management for the first project year. The the total is only 64% of the planned level, but the result is skewed by the fact that there was no resource management activity in Botswana during the first project year. If Botswana is excluded, actual professional months were 145% of planned levels. It is this level of input that must be measured against our assesement that outputs have fallen below planned levels. In the absence of adequate management and activity planning, there is a real danger that the inputs represent a level of effort, rather than rational resource allocation.

This impression of a level of effort is supported by an analysis of the personnel costs for resource management. Table 4 compares planned and actual personnel costs for the first project year. While overhead costs were essentially at planned levels, they may be understated. During the first eight months of the project, overhead personnel costs averaged \$6,000 per month. During the next eight months they averaged \$1,870 per month. The difference does not reflect a change in

TABLE 3

Planned vs. Actual Professional Months - Resource Management

<u>COUNTRY ACTIVITY</u>	<u>PLANNED PROJECT PAPER</u>	<u>ACTUAL</u>	<u>DIFFERENCE</u>	<u>ACTUAL AS % OF PLANNED</u>
<u>BOTSWANA</u>				
Core Staff	7	0	-7	
District Data System	6	0	-6	
Research Coordinators	0	0	0	
Short-Term Assistance	2	0	-2	
TOTAL	<u>15</u>	<u>0</u>	<u>-15</u>	-100%
<u>KENYA</u>				
Land Degradation	1	3	+2	
Short-Term District Profiles and National Resource Planning	3	8	+5	
TOTAL	<u>4</u>	<u>11</u>	<u>+7</u>	275%
<u>SUDAN</u>				
Core Staff	6	5	-1	
Assessment:				
Kordofan	1	3	+2	
Darfur				
Technical Support	1	3	+2	
TOTAL	<u>8</u>	<u>11</u>	<u>+3</u>	138%
<u>TANZANIA</u>				
Project Director	5	2	-3	
Information System	1	3	+2	
Environmental Monitoring	2	0	-2	
Short-term Assistance	0	2	+2	
TOTAL	<u>8</u>	<u>7</u>	<u>-1</u>	88%
<hr/>				
GRAND TOTAL	35	29	-6	84%
<hr/>				
TOTAL EXCLUDING BOTSWANA	20	29	+9	145%

TABLE 4

Planned vs. Actual Personnel Costs - Resource Management  
First Project Year(\$000)

	Planned Project Paper	Actual			Actual as % of Planned	% of Actual Overseas
		U.S.	Overseas	Total		
Overhead	122.8	127.4	-	127.4	104	0
Nairobi Advisor	39.0	-	33.6	33.6	86	100
Resource Management						
U.S. Personnel	na	114.9	51.4	166.3	na	31
Foreign Personnel	<u>na</u>	<u>-</u>	<u>25.6</u>	<u>25.6</u>	<u>na</u>	<u>100</u>
Total	218.6	114.9	77.0	191.9	88	40
(Resource Management less Botswana)	<u>126.6</u>	<u>114.9</u>	<u>77.0</u>	<u>191.0</u>	<u>152</u>	<u>40</u>
Total	380.4	242.3	110.6	353.9	93	31
Total Less Botswana	288.4	242.3	110.6	352.9	122	31
Total U.S. Personnel only	na	242.3	85.0	327.3	na	26

- Notes: 1. Personnel Costs = Salary and fringe benefits and overhead  
2. Project Paper projected costs for personnel overseas  
calculated at \$6,000 per man month.

Sources: Clark University December, 1981 invoice to SICID  
Consultants' estimates (for overseas costs)

overhead activity, but rather a cosmetic shift of certain personnel costs from overhead to the resource management category. True overhead costs are probably somewhere between the two averages, since managerial personnel spend at least part of their time on direct, as opposed to supervisory, project work. In any case, overhead personnel costs are very high - 39% of total U.S. personnel costs-according to Clark's reporting, higher if you accept our estimate.

First year personnel costs also appear to be disproportionate to accomplishments.

Total actual costs were 93% of planned levels, 122% if Botswana is excluded. This disproportionate relationship of costs to accomplishments lends importance to the issue of where the personnel costs were incurred. As Table 4 shows, only 26% of the total resource management costs for U.S. personnel were for services performed overseas. (The figure is 18% if the resident advisor in Kenya is excluded.) We do not believe that this ratio of 3 dollars spent in the U.S. for every dollar spent overseas is consistent with the project's goal of strengthening African institutions.

Our doubt about the relevance of so much work being done in the United States was reinforced by a review of a sample of resource management documents that had been prepared at Clark. In many instances, they appeared to be academic and detached from reality - a graduate student's paper recommending major organizational changes in the Kenya Government, for example. In other instances they are based on secondary sources so out of date as to be useless - for example, a paper on rural environmental conditions in the Dodoma region of Tanzania contains a table of health units in the region as of 1967. (Compare this with the PP statement that, "local data must be up-to-date and reflect the nuances of recent revisions in national priorities". This is an example of work that should have been done

by an African professional. The information would have been more timely, accurate and useful, and the basic institution building purpose would have been better served.

There are other examples of resource management activities conducted partly in the U.S. and partly overseas, where the African involvement is so limited that they are likely to have little effect. The Tanzanian rural health activity is one, the preparation of a computer display for use at regional agriculture fairs in Kenya is another. There are other examples, but the basic point is that, without specific plans linking individual activities to the project and stating expected outcomes, the activities are likely to make a minor contribution to the project's goals and purposes. As a general rule, we believe project activity in the U.S. should be reduced to the minimum and that research in the U.S. should have to be explicitly justified.

#### A General Approach to Resource Management

Environmental concerns can be factored into future development activities only if we know what the situation is - where the crucial areas are, what the major problem is, etc. Concerns have been expressed - in general terms - over and over. We know that the general situation is serious. What is needed now is specific information pinpointing actual conditions and practical solutions. Three levels of information are involved:

- Basic data: Soils, rainfall, vegetation types data on population, livestock numbers, areas under cultivation and demographic data.
- Resource pressure (level of resource use): Resource use-patterns: Grazing and farming pressures, extent and reasons of use (or overuse), farm land, energy (fire wood), range land, etc. This can be done effectively with a series of maps and overlays. It would be most practical on a district or provincial level.

- Priority identification: Where are the hot spots? What are the basic problems? Most problems of underdevelopment in Africa can be regarded as being of an environmental nature. The problem is that people get lost by the fact that everything depends on everything else. The need is to establish a logical, ready-to-use list of first things first. Whatever the product, it must be targeted and packaged toward the decision-makers (the politicians, planners and programmers - host-country as well as donors). These people seldom have a technical, scientific background. Therefore the end product must be presented in basic, relevant terms, ready to use.

Region by region or country by country the first, basic need is information clearly describing:

- What are the most urgent environmental problems? Examples are: soil erosion, decrease of fertility of traditional farm soils, deterioration of natural vegetation and lack of land and water. Again, this can be displayed in overlays.
- Where are the problem areas? We know soil erosion is a problem. But where are the hot spots. A simple, country-wide map showing high, medium and low erosion hazards would be a good start.

These efforts will provide the data, the ammunition needed to sell a more balanced approach to development. What ETMA has accomplished thus far is collecting information mainly on the first and some of the second levels. Pulling together data on rainfall, geology and census figures is a good start. In addition, some basic information on resource pressures should be shown. But it is essential to have resource management activities fully extended to the second and third levels and they should be planned accordingly.

#### Specific Resource Management Activities

This section briefly summarizes the resource management activities during the first project year and provides our evaluation of them. More detail on the activities can be found in the Project Year One Annual Report.

Sudan - work with the Institute for Environmental Studies (IES), University of Khartoum. The project paper originally called for work with three universities

in the Sudan, but this has been postponed - perhaps indefinitely - because of logistic problems and inter-university rivalry. This was probably unavoidable, but to this extent the projected outputs will not be achieved. Within this constraint, our overall judgement is that the work with IES so far has been very good and that it should continue. But the inherent plan for this activity needs to be documented.

The working agreement with IES for the first year contained three objectives:

- A workshop to develop a matrix of indicators of environmental change to be tested in the field, and to help select specific field sites. The workshop, a precursor to the next objective, was held in March 1981 and was successful.
- A trend analysis based on existing historical, cartographic and remote sensing data. This work was done at Clark and focussed primarily on remote sensing. The outcome was essentially a determination that remote sensing data could not provide information at the level needed for resource management in the Sudan. This confirms our own experience. We also believe it was necessary to try to use this data, even if only to find out that it could not be done.
- Selection of indicators of environmental change and the initiation of field data collection. Under the sponsorship of IES, and supported by professional help from Clark, groups of university professors have been developing change indicators for seven specific sites in the Sudan; and data collection has been started for several of them. The professors are extremely competent and well motivated. The consensus, with which we agree, is that the most important aspect of the activity has been the introduction of a multi-disciplinary approach into a discipline-oriented university setting. It has taken a long time for some of the groups to hammer out an agreed set of common indicators, but the time and effort have been well spent.

Tanzanian - work with the Bureau of Resource Development and Land-Use Planning (BRALUP) and other institutions. The first year working agreement with BRALUP contained four objectives:

- An inter-ministerial workshop intended essentially to lead to a government decision to establish an overall environmental unit, and to determine where it should be placed in the government structure. It may have been overly ambitious to think that ETMA could effectively sponsor such a

workshop. In any case, it has been overtaken by events. The government sponsored its own workshop, which was attended by three professionals from Clark, and it is apparently proceeding on its own toward a decision on the need for and locus of an environmental unit.

- Work on land and crop suitability mapping and preparation of an atlas and user guide for the maps of the Rukwa district. The maps were drafted by BRALUP prior to the ETMA project. The preparation of the users guide has lagged considerably. Apparently the Director of BRALUP has had to spend considerable time editing the draft guide because much of it was prepared in the U.S. by persons not sufficiently familiar with Tanzania; and no Tanzanian is being trained to prepare the next guide. We believe this is an example of work that should have been done in country, and that ETMA funds would have been better spent to pay a Tanzanian to do it, if that was necessary.
- Development of documentation center for BRALUP. A professional from Clark has been working in the development of the Center, in the U.S., and on a field trip to Tanzania. We wonder whether this level of outside assistance is needed. It would appear that BRALUP staff should be able to prepare a list of the documents and research materials that they need, and that ETMA's role should be to receive the list and to secure the materials through purchase or donation. Again, the question is whether anyone in BRALUP is being trained to run the center. (Peace Corps assistance in this area is also available.)
- Development of a model for monitoring environmental health at the village level. As noted earlier, we give the work done on this activity a low value, primarily because host country participation has been negligible. It should not be continued unless it meets strict tests of relevance and local involvement. Nor should it depart from the original rural focus without good justification.

The above comments are mostly negative, but we should record our impression that BRALUP is an institution worth supporting. It has the nucleus of a competent staff, and, through its director, access to government decision makers. (The fact that the regional planning course was requested by the Office of the Prime Minister is evidence of this.) Thus, while the current activities need to be re-examined, we believe that the general concept of strengthening BRALUP is sound.

#### Kenya - work with the National Environmental Secretariat (NES)

Although it is not tied to a specific objective, the most important work being done with the NES is the half-time technical assistance being provided by the regional coordinator. Because of its environmental focus and its position in the

government, the NES is a unique African institution. It deserves support. The NES appreciates the technical assistance it has received and strongly desires that it continue. (When queried about this, the Director promptly reminded us that there was a continuing ETMA commitment to provide this assistance.) We believe the results to date, which admittedly are hard to measure, are in large part due to the sensitivity of the present coordinator. He is deliberately trying to help, train and support the members of the NES staff, and not to substitute for them. The position should be continued, and the replacement for the present coordinator should be selected with care.

The Working Agreement contains four first-year objectives for the environmental management work in Kenya:

- Completion of approximately four district source profiles. As noted, this work is proceeding on schedule and action is underway to focus succeeding profiles more on specific environmental problems and less on general data --the direction we would have recommended.
- Organization of follow-up seminars for completed district profiles. This is the weak spot in the district profile process to date. Only one seminar was held in Kajiado District, and it was largely unsuccessful. Because of its location and unusual combination of local personnel, some productive work has been done in the Ngong area, but nothing has happened in the rest of the district. Seminars need to be held in the other districts and an action plan to reinforce the seminars needs to be designed and put into effect.
- Preparation of a scope of work for soil erosion measurement at selected sites. This is essentially the measurement of actual soil loss at 28 locations to compare with empirically estimated losses. Reportedly, poor road design is a major cause of erosion. If specific data is needed to convince public works about the need for change, this activity may be worthwhile. But, with soil erosion a nationally recognized problem in Kenya, we wonder whether specific site measurements are the proper place to start. It may be that we just don't understand the long-range purpose of the activity. Here again, the empirical estimates were prepared in the U.S. and no Kenyans have been trained to do the next ones.
- Consideration of ways and means by which environmental considerations can be introduced into the next Five Year Plan and long-range planning generally. We have referred to this earlier. We doubt that a Clark professor visiting Kenya periodically can have a real impact on this issue, especially in the absence of a plan of action and specific counterparts to work with.

### Overall Utility

Given the serious nature of environmental problems in Africa, the designers of donor assisted projects are faced with the need to choose or to balance between immediate action programs to deal with the obvious problems and longer range programs to help African nations gain the capability to design and manage sustained national environmental protection activities. It is this latter need that the ETMA project is designed to meet. Its goal is, "to improve African capacity to deal with major environmental problems, particularly desertification, deforestation, soil erosion, water supply and environmental health". In a sense it represents a balance in overall AID environmental activities in Africa. The missions that are engaged in environmental work are generally engaged in immediate environmental action programs, either direct ones such as reforestation, or as an integral part of broader projects such as rural development. ETMA provides a balance by addressing the longer range problems. We approve of this balance, because, while immediate action cannot be postponed, long run institutional solutions must be found. Therefore, we believe that the ETMA project should be continued, provided that the project implementation process can be restructured so that there is a reasonable likelihood that it will achieve its purposes and goal.

Although the goal of the ETMA project is important, we do not believe that the country Missions will pick up ETMA activities now or later, and that the project should be operated on this basis. That is, it should be self-contained. None of the three Missions we visited would be willing to pick up ETMA activities within their current funding levels, although the Sudan and Kenya Missions believe they are important. The Mission in Sudan supports ETMA's efforts to strengthen the Institute for Environmental Studies and the Mission would like to use IES as

its capabilities grow. (The current involvement of IES in an AID supported CARE borehole project is a beginning.) In Kenya, degradation of the environment is a nationally recognized problem and the Mission believes that support for the National Environmental Secretariat is important.

Despite this, the fact is that ETMA project activities would not be picked up because they fall outside of the respective Country Development Strategies. We believe this would generally be true in other African countries and it is not surprising. A CDSS is not a strategy for the development of a country, it is a statement of the areas of priority or concentration for AID assistance, and strengthening African environmental institutions is generally not one of them. This fact supports the concept of ETMA as a regional project, although it is not regional in the integrative sense. It is a set of similar or interrelated activities that are carried out on a country by country basis. (There may be opportunities for truly regional ETMA activities in West Africa, but they should be selected with great care. Institution building is a difficult and chancy business at best, and the problems compound if the institution is supranational.)

#### The Project Goal and Country Coverage

Strengthening African Institutions presupposes that some exist in each country, at least in basic form. This unfortunately is still not the case everywhere. The potential success of ETMA's institution building, especially if the accent remains on staff or academic institutions, is limited to not more than perhaps 12 countries in all of Africa. (If technical line agencies and host country local administrative units were also included, the list would be longer.) If the institution building goal is pursued, the existing and already better functioning institutions

will get more assistance than the weaker ones, not to mention countries where none exist at all. Thus, the strong ones will be further strengthened by the project, the weak ones will fall further behind.

It is not practical to divide the project's resources among all countries in the region equally. In the first place there are some countries where inputs cannot be applied for legal or political reasons, such as Angola, Ethiopia and Nigeria. In the second place, there are some medium-size countries, such as Chad, Mauritania and the Central African Republic where, although AID has programs of varying magnitude, they simply do not have a starting base. This is not bad per se, but we should clearly identify (and by now can) what we really mean by a regional program: some countries are definitely in, others are not. This evaluation could, at least as a starting point, list those countries where project activities should be concentrated. For countries where the institutional base is too weak to begin in the country now, one possible approach would be to make special efforts to identify individuals who would profit from long term training or seminars or courses in neighboring countries, and to arrange for their training outside of their country.

#### Project Purpose - Environmental Training

The project purposes in environmental training is:

- To establish African Environmental Programs on themes related to environmental management and on themes related to environmental constraints, to strengthen the capacity of African [institutions to conduct] training on their own.

We have noted earlier the need to tie the courses more directly to the project purpose, and our judgement that two of the five held to date do not meet this test. As this is done, regardless of the main subject of a course, there are two needs which each should attempt to address. They are:

- to somehow reach planners and decision makers to get them more involved, especially in regard to concerns for the potential negative impacts of their actions.
- to raise awareness about the serious and complex nature of tradeoffs between development and resource conservation and protection. (Note that this is not the awareness of environmental problems articulated in the Project Paper. It is much more focused.)

#### Project Purpose - Environmental Management

The project purpose in environmental management is:

- .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.

Even if institutions are strengthened to the full extent described above (complete information base, priorities clearly identified, trends adequately monitored and qualified personnel available), no positive or corrective action will result until this information is used to make the necessary changes in the ways the renewable natural resources (mainly soil, water, natural vegetation and wildlife) are managed. This means by both the government and the people themselves (over 80% of whom live in strictly rural settings across the continent).

If the project is to reach its goal, we believe a fifth activity should have been added:

- to assist the host country governments to use this information to develop the necessary policies, management plans, and models to more effectively and more rationally manage the available natural resources and their development potential, and to better balance between short term positive gains like agricultural production and possible, but not inevitable, degradation of natural resources.

While it may not be necessary to rewrite the project paper or log frame to include this ultimate activity or sub-purpose, a means should be found to insure that it is considered in every activity plan.

### A Word About West Africa

ETMA work in West Africa is in the early planning stage, and we are not aware of a coherent ETMA strategy that has evolved for the area. We have some personal observations that might be considered as an ETMA approach to West Africa is developed and specific project activities are designed. They are:

- We would be very cautious about getting involved in regional river basin organizations. It is difficult enough to get something going within just one government. By nature environmental training and management requires a horizontal approach for which French oriented government structures are even less prepared than former English colonies. If one adds a superstructure of several countries working together in a river basin, a tremendous amount of pulling back and forth is encountered. We would be particularly careful in dealing with Lake Chad Basin Commission and the Niger Basin Commission where Nigerian involvement makes matters particularly difficult.
- One exception may be occasions where some environmental or ecologic activity has already been started, such as the AID sponsored environmental impact study in the Senegal River Basin Commission (OMVS). If a ready made opportunity to do some training or planning presents itself within these frameworks, ETMA could take advantage of it.
- Possibly the best ready made opportunity is the Ecologic Guidelines of CILSS. After some refinement, they would be ready to go and could be introduced on a country by country basis to forest services and other agencies involved in resource management and planning. The idea is a set of analyses and considerations that:
  - would predict with some degree of accuracy what possible negative environmental impacts any given development project may have, and
  - would guide the programmers and designers toward basic steps that can and should be incorporated into project design to mitigate or eliminate some of these adverse future situations.

However, before proceeding, ETMA should check on AID's current position with regard to CILSS. Because of past excessive concern with personal perquisites at the expense of substantial work, the Institute du Sahel should also be approached with caution.

- Across the Sahel AID has on-going bilateral projects in practically every country in forestry and/or resource management. They all have training components. They also all have good US technicians at the scene who

will have ideas on how ETMA possibly could blend some of their activities into these projects. Whatever ETMA does in the Sahel should draw on this available resident expertise, at least for advice on activity opportunities and design.

- The project should not compromise the standard of French fluency for work in the Francophone countries. It is a sine qua non.
- The Project Paper postulates two possible additional environment management activities in the later years of the project. Presumably they would be in West Africa. Certainly they should not be considered unless AID is convinced that the present environmental management activity has been focused and is proceeding reasonably toward project goals and purposes. Beyond this, we are not able to comment meaningfully in the abstract on whether these additional activities should be undertaken. That decision can only be made when the specific countries, institutions to be supported, and activity plans are known.

#### Future Training Activities

The following suggestions are offered for consideration in preparing future ETMA training activities:

- Each training effort must fit into a larger framework.
- If you train personnel for another project, make sure the project is viable.
- Train trainers more than individual participants.
- If the training director is from outside the project, make certain he or she is qualified.
- Each training effort should include the collection or production of a practical, field-oriented work manual or action plan.
- Package training programs so they can be repeated (other times, other places), preparing local staff as expeditiously as possible.
- U.S. trainers must meet minimum requirements in terms of technical qualifications and previous experience relative to the host country situation.

#### Future Resource Management Activities

The following suggestions are offered for consideration in preparing future resource management activities:

- Activities (reports, maps, plans, data, etc.) must reach the decision makers and be used by them. Multi-level followup is mandatory. Better

to do less and follow through than to start more initiatives and not have enough time to do a complete job.

- Analyses and reports (profiles, guides, etc.) must begin to go beyond collecting existing data and focus on resource management issues:
  - location, degree and nature of major environmental hazards and pressures.
  - location of areas over or under-used.
  - list of past mistakes.

Identifying the major problems (which are well-known locally) does not require expensive, time-consuming studies, research or outside inputs other than assistance in field-data gathering.

- Monitoring. Select indicators and get on with it. Concentrate on major factors. Having an overview (high, medium and low) over wider areas is more important than detailed measurements at a few specific locations.
- Get ETMA activities blended into ongoing projects in resource management (AID's to start with), especially in West Africa.

#### IV. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes the conclusions and recommendations which flow from the preceding discussion. While qualifiers, such as "we believe that," are not used, the conclusions and recommendations represent our best professional judgement and no more than that. They are presented in their general order of importance.

1. The ETMA project is intended to address an important, longer-range institutional aspect of environmental management in Africa that is not adequately addressed elsewhere in the AID program. Because of this and the overbearing nature of environmental problems in Africa, the project should be continued if it can succeed. The alternative of continuing with a greatly restricted project is not attractive. It would preclude achievement of the worthwhile overall goals and it would require much of the restructuring that is involved in continuation of the project as a whole.

Recommendation 1: We recommend that the ETMA project continue basically as it was originally conceived, but with management, and the management structure, redesigned to provide a reasonable prospect that the project will achieve its overall goals and purposes.

2. The ETMA project, as it is presently being implemented, will not achieve its goals or purposes.

Recommendation 2: We recommend that if the management and implementation of the ETMA project cannot be effectively restructured, the project be cancelled.

3. During the first project year, project outputs have fallen far short of planned levels and inputs and expenditures have been disproportionately high. Inappropriate and ill-planned activities have been carried out and essential follow-up actions have not been planned or executed. One reason for this is the fact that the basic documentation for project

implementation - the annual Memoranda of Understanding with host governments and the Working Agreements for specific activities - are essentially narrative in nature. They do not contain the information or the inherent analysis that are necessary if managers at all levels are to be able to evaluate individual project activities for coherence and their contribution to the project's objectives.

Recommendation 3: We recommend that separate documentation or the memoranda of understanding and working agreements (preferably the latter) require the preparation of an analytic framework for each discrete project activity. The essential elements that should be included in such a framework, described in more detail in Chapter II, are:

- the purpose of the activity,
  - the priority of the activity.
  - the relevance of the activity to the project,
  - the linkage to other project activities, and
  - the follow-up actions that are essential.
4. The second reason for the current implementation problems is the fact that the present contractor structure is ill-suited to the task. Responsibility and authority are fragmented and no one is in charge of the project. The prime contract, which reflects the management concept in the project paper, contains the following weaknesses from a management point of view:
- Neither SECID nor anyone else has the responsibility or authority for implementation of the project as a whole.
  - Separate coordinating authorities are assigned to UNC and Clark with no provision for overall supervision by SECID.
  - The regional representatives in Africa report to the Management Committee (SECID, UNC and Clark), not to SECID as prime contractor. The general function of the Management Committee is also overstated.

Recommendation 4: We recommend that the prime contract be revised to create a contractor structure appropriate for the implementation of an \$8.5 million project. Necessary prime contract changes include the following:

- Make SECID directly responsible for the success of the project, give it the authority to do so, and hold it accountable for results.
  - Have the regional representatives report to SECID, not to the Management Committee.
  - Limit the role of the Management Committee to one of providing advice to SECID.
  - Make Clark's coordination of environmental management (and UNC's coordination of training, if it is continued) clearly subordinated to SECID's overall management and control.
5. Largely for historical reasons, SECID, is not currently staffed to manage the contract effectively, even if it had the authority to do so; and this type of contract management is foreign to SECID's normal pattern of operations. Despite this AID should look to SECID for overall management, and see that it is adequately staffed to do the job. There are four reasons for this:

- At the mid point in the project there is little advantage in searching for a new contractor.
- The alternative of separate direct contracts with UNC and Clark would not provide essential overall coordination and direction, and it would place an undue management burden on AID.
- The additional staffing required at SECID would be minimal. The SECID project coordinator is dedicated and has the proper training. We believe that he could do the job if given the necessary responsibilities, authorities and means.
- The gamble that SECID can do the job is an acceptable risk.

Recommendation 5: We recommend that AID look to SECID for overall project management and that SECID be staffed to do the job. What is required is a full-time professional manager who is provided with adequate administrative and clerical support and thus is free to manage.

6. The subcontract with UNC grew out of its pre-project involvement. At this stage in the project there seems to be no valid reason why UNC, a SECID member, should have a separate subcontract with separate overhead.

Recommendation 6: We recommend that the subcontract with UNC be ended and that SECID be assigned responsibility for the coordination of environmental training. As training courses are identified SECID should job them out to the most appropriate member school.

7. The subcontracts with Clark and UNC are inadequate by any reasonable test. They are funding documents whose scope of work is so general as to be meaningless, and whose provisions require only certification that money has been spent, to justify reimbursement.

Recommendation 7: We recommend that the subcontract with Clark University be revised in accord with the prime contract revisions recommended above. The revision should:

- Make Clark clearly subordinate to SECID,
- Charge Clark with accomplishing specific tasks,
- Assign resources to each specific task,
- Impose stricter reporting requirements on accomplishments, and
- Base invoices on work done, not money spent.

8. AID's structure for contract oversight is adequate, but its performance has not been. AFR/RA is the proper location for overall project monitoring, but its resources and geographic knowledge are limited. It has not been adequately supported by the Missions, partly because project documentation has been weak from a management point of view. The Regional Environmental Officers are too fully occupied to assume responsibility for the management of ETMA activities.

Recommendation 8: We recommend that AFR/RA continue to be responsible for overall monitoring; that the Missions be more specifically charged with review of proposed activities against stipulated criteria; and that the REDSU's continue to serve in an advisory role to the Missions.

9. The level of effort on resource management that is being done in the U.S. by Clark (76% or 82%, depending on whether or not the East Africa Coordinator is included) is not compatible with the project's goal of an improved African capacity to deal with the environment; and much of the work done in the U.S. appears to have been academic and detached from reality.

Recommendation 9: We recommend that the activity at Clark be reviewed with a view toward sharply reducing the amount done in the U.S.; that any research in the U.S. be explicitly justified in the future; and that AID and the contractor seek ways to use more ETMA funds for relevant work done in Africa by Africans.

10. First year overhead costs at Clark appear to have been excessive, partly because of the shortfall in planned activities. Clark's invoices show 39% of personnel costs as overhead and this is probably understated, since overhead charges were shifted into the environmental management category at mid-year.

Recommendation 10: We recommend that AID and the contractor review the overhead establishment at Clark with the intent of reducing the share of environmental management funds that are spent on overhead; and that strict controls on overhead costs be built into the revised subcontract with Clark.

11. The role of the regional coordinators is essential, but it could be done more cheaply from the U.S. However, because of the importance of the advisory role with NES, the position of East Africa Coordinator should be continued. The incumbent in West Africa should not be replaced if continuity of contact can be assured.

Recommendation 11: We recommend that the position of coordinator in East Africa be contained, but that the need for a resident coordinator in West Africa be re-examined at the end of the present incumbent's two year tour.

12. The involvement of Africans in the conduct of training courses to date had been excellent. But course materials have not contained the amount of local studies envisioned in the project paper. Too many of the materials have been too general, and some have been too abstract to be relevant.

Recommendation 12: We recommend that a special effort be made to use more local case studies. Ways should be found to involve Africans more in course preparation and U. S. faculty should spend more of the course preparation time in Africa, even if this involves extra per diem.

13. Some activities in resource management appear to have limited utility and little prospects for success. (The Tanzania rural health plan and the integration of the environment into national planning in Kenya are examples.) Limited host country participation is an important reason for this.

Recommendation 13: We recommend that all current resource management activities be carefully reviewed when the proposed analytic frameworks have been prepared for them. Particular attention should be paid to the extent of host country involvement.

SCOPE OF WORK FOR THE EVALUATION OF THE  
ENVIRONMENTAL TRAINING AND MANAGEMENT PROJECT

I. BACKGROUND

AID regional project No. 698-0427, Environmental Training and Management, is designed to carry out training in environmental protection and resource management in Africa and to strengthen African institutional capabilities to (1) improve their environmental information base, (2) identify priority environmental problems, and (3) monitor environmental trends. To achieve these objectives, the project provides for training seminars and workshops in Africa, medium-term academic and technical training for Africans, and resource management programs in four East and South African countries. The project was designed and is being implemented under the collaborative technical assistance mode; i.e., it is being implemented by the same contractor that designed the project.

The project was initiated in October, 1980 and has been under way for approximately seventeen months. The contractor has been slow in the initial implementation of the project's training activities and only five of 49 planned seminars and workshops have been carried out to date. However, there has been a recent increase in the rate of accomplishment with respect to this aspect of the project. Resource Management programs are operational in three of the four planned countries. The first of two permanent contract field positions was filled in January, 1981 when a technician was assigned to Nairobi. The second position in Abidjan was filled in November, 1981. Project activities to date have focused on East Africa.

ARTICLE I - TITLE

Environmental Training and Resource Management (698-0427)

ARTICLE II - OBJECTIVE

The overall objective of this evaluation is to re-examine the original project design. The evaluation should assess progress towards meeting the planned outputs, purposes and goals of the project as set forth in the project paper and AID contract No. AID/afr-C-1697, identify significant issues or problems, and recommend any changes that would assist in the achievement of the project purposes. It should also determine if the project's original purposes continue to be valid and whether the approach being undertaken is the most effective and appropriate method of achieving these objectives.

ARTICLE III - STATEMENT OF WORK

The contractor will prepare an evaluation report consisting of the following:

1. A summary of major findings and recommendations.
2. A description of the evaluation methodology.

3. A project background section summarizing the project's objectives, the project's development/design process, and describing project activities to date.
4. An analysis of the accomplishments of the project to date in respect to the project's stated purposes. The analysis should cover, but not be limited to, such aspects of the project as planned vs. actual outputs of both the training and resource management programs, the contractor's compliance with the scope of their contract, planned vs. actual costs of project activities, the development objective of the project, the degree to which project related training is being utilized and the extent to which the project supports other AID development activities, particularly energy and food production.
5. Identification of significant problems or issues regarding project implementation or the achievement of the project issues.
6. Recommendations for improving project implementation or project design. Such recommendations should include, but not be limited to:
  - a. Whether the specific mix of training being carried out under the project remains relevant in the terms of the host government and AID mission requirements.
  - b. The degree of host country program involvement vs. contractor involvement in implementation of project activities.
  - c. Whether the project could be carried out in a more cost-effective manner; and if so, what the trade offs would be.
  - d. Whether the present contractual mode is the most appropriate and effective method of project implementation and/or achieving project objectives.
  - e. The point at which the resource management activities could be shifted from the regional program to mission bilateral programs.
  - f. Whether the project can reasonably be expected to achieve the original purposes and outputs within the remaining life of the project and within the original project budget. If not, what can the project be reasonably expected to accomplish within the established time framework and approved funding levels.

To carry out the evaluation, the evaluation team will:

1. Discuss the project with appropriate AID/W officials, review the Project Paper, project workplans/budgets, training documents, and other unclassified project correspondence and records.
2. Examine the contractor's arrangements for technical and administrative background of field operations through visits to SECID, University of North Carolina and Clark University.
3. Discuss the project and its implementation with (a) the Directors and appropriate USAID staff in Sudan, Kenya, and Tanzania; (b) the Directors and appropriate staff in the REDSO's; and (c) host-country personnel who have been instrumental in project implementation from the host country standpoint.

4. Conduct interviews in each of the above countries with a selected number (5-10) of training program participants.

5. If timing of the evaluation coincides with on-going training activities, the contractor should plan to spend one or two days observing an environmental training program in the field. One such program might be a workshop being planned for Tanzania between April 27 and May 8, 1982.

#### ARTICLE IV - REPORTS

The contractor will submit ten copies of the report to AFR/RA within 15 working days after the team returns to the United States. The report will be bound and typed on plain white bond paper.

#### ARTICLE V - RELATIONSHIPS AND RESPONSIBILITIES

The evaluation team will be composed of a project design/management specialist familiar with the AID project design/project management system and an environmental scientist with experience in environmental training programs and natural resource management programs. The environmental scientist should be familiar with African environmental/natural resource problems and prior African experience is considered mandatory. The project design/project management specialist will be designated as the team leader.

The evaluation team will work under the general direction of AFR/RA Project Officer. In Africa the team will work in close collaboration with the AID Regional Environmental Officer in REDSO/EA and the AID Mission Environmental Officers in the Missions to be visited by the evaluation team.

#### ARTICLE VI - TERMS OF PERFORMANCE

The services requested will be required for 38 calendar days beginning on/about April 19, 1982 in accordance with the following schedule:

Week No. 1	Three days AID/W and three days at SECID and University of North Carolina (both located in Chapel Hill, North Carolina).
Week No. 2	Sudan
Week No. 3	Tanzania
Week No. 4	Kenya
Week No. 5	Three days at Clark University and three days in AID/W for debriefing and report preparation.
Week No. 6	Three days in Washington to finalize report.

#### ARTICLE VII - WORK DAYS ORDERED

Each of the two evaluation team members are expected to work no more than thirty-three (33) work days. A six day work week with no premium pay is authorized.