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PROJECT DESIGN OPTIONS STUDY FOR THE NATURAL RESOURCE MANAGEMENT SUPPORT PROJECT

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LIST OF ABBREVIATIONS

A.I.D.	Agency For International Development
AFR	Africa Bureau, A.I.D.
AFR/TR/ANR	Africa Bureau, Office of Technical Resources, Agriculture and Natural Resources Division
AFR/TR	Africa Bureau, Office of Technical Resources
AFR/SWA	Africa Bureau, Office of Sahel and West Africa Affairs
AGRHYMET	Agro- Hydro- Meteorologie
ANE	Asia Near East Bureau
ANEN	Africa Network of Environmental NGO's
ANR	Agriculture and Natural Resources
ASDG	Agricultural Sector Development Grant
BSP	Biodiversity Support Project
CARE	Cooperative for American Relief Everywhere
CDIE	Center for Development Information and Evaluation, Bureau for Program and Policy Coordination, A.I.D.
CIDE	Center for International Development and Environment (WRI)
CODEL	Coordination in Development
CPSP	Country Program Strategic Plan
DAC	Development Assistance Committee
DFA	Development Fund For Africa
DH	Direct Hire
DIS	Development Information Systems
DP	Office of Development Planning
EAP	Environmental Action Plans
E/DI	Energy/Development International
EIA	Energy Initiatives for Africa Project
EIL	Experiment in International Living
ELC	Environment Liaison Centers
ENDA	Environment and Development in Africa
EPM	Environmental Planning and Management Project
EROS	EROS Data Center
ESA	East and Southern Africa
FENR	Office of Forestry, Energy and Natural Resources
FEWS	Famine Early Warning Systems
FLUP	Forestry and Land Use Planning Project
FSP	Forestry Support Program
FVA	Bureau for Food for Peace and Voluntary Assistance
FY	Fiscal Year
GIS	Geographic Information System
GRID	Global Resource Information Database
IBRD	International Bank for Reconstruction and Development (The World Bank)
IIR, Inc.	Institute for International Research, Inc.
ILO	International Labor Organization

INADES	Institut Africain pour le Developpement Economique et Social, Ivory Coast
ISPAN	Irrigation Support Project for Asia and Near East
IQC	Indefinite Quantity Contract
LAC	Latin American Countries
LOE	Level of Effort
NGO	Non-Governmental Organization
NOAA	National Oceanographic and Atmospheric Administration
NPA	Non Project Assistance
NR	Natural Resources
NRM	Natural Resources Management
NRMS	Natural Resources Management Support Project
OHV	Operation Haute Vallée
OICD	Office of International Coordination and Development
PAAD	Program Assistance Approval Document
PACT	Private Agencies Collaborating Together
PCV	Peace Corps Volunteers
PAIP	Program Assistance Initial Proposal
PID	Project Identification Document
PM/TD	Office of Personnel Management
PNRM	Plan for Supporting Natural Resources Management in Sub-Saharan Africa
PP	Project Paper
PPC	Bureau for Program and Policy Coordination, A.I.D.
PVO	Private Voluntary Organization
REDSO	Regional Economic Development Services Office, A.I.D.
RSSA	Resource Support Services Agreement
S&T/FENR	Bureau for Science & Technology, Office of Forestry, Environment, and Natural Resources
S&T/AGR	Bureau for Science & Technology, Office of Agriculture
S&T	Bureau for Science & Technology, A.I.D.
S&T/RD	Bureau for Science & Technology, Office of Rural & Institutional Development
SARSA	Human Settlement and Natural Resource Systems Analysis
STET	Short Term Technical and Executive Training Program
TA	Technical Assistance
TNC	The Nature Conservancy
TR	Office of Technical Resources
TR&D	Tropical Research and Development, Inc.
U.S.	United States
USAID	United States Agency For International Development Field Mission
USDA	United States Department of Agriculture
USGS	United States Geographical Society
WRI	World Resources Institute
WWF	World Wildlife Fund

Note: The text may contain some of the above abbreviations in combination; e.g., WRI/CIDE or REDSO/ESA.

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EXECUTIVE SUMMARY

1. Technical Assistance to USAIDs and to the Africa Bureau

AFR/TR/ANR contracted Tropical Research and Development, Inc. (TR&D) to perform an analysis of project design options for the Natural Resource Management Support Project under its Environmental and Natural Resources Related Services IQC. The team included John Blumgart, Team Leader; Peter H. Freeman, Geographer; Roy T. Hagen, Forestry and Natural Resources Management Specialist; and Joshua Dickinson, III, Geographer, as Project Manager.

The analysis was conducted during the period of October through December 1990 and included trips to Botswana, Kenya, Uganda and to EROS Data Center in Sioux Falls, South Dakota

1.1 NR Technical Emphasis

Based on the experience of Natural Resource Management Support Project I (NRMS I), it seems apparent that the technical emphasis of NRMS II will continue to be shaped by differing regional or geographic requirements. Technical areas that should receive increased or additional attention in West Africa include national Natural Resources (NR) strategy development/policy reform, natural forest management, village lands management (and related policy reforms), and range management. On the other hand, in East and Southern Africa there is a major emphasis on biodiversity although at this point there is limited project experience and successful models on which to develop strategies. There is also a need to further develop impact assessment techniques and guidelines concerning buffer zone strategy and management. In addition, increased attention should be given to soil conservation and soil fertility maintenance.

1.2 Biodiversity Strategy

The Bureau's strategy for biodiversity and the conservation of tropical forests needs to be updated and broadened to guide the expansion of biodiversity activities into lesser priority countries. The appropriate roles of the environmental and the development Private Volunteer Organizations (PVOs) need to be better defined. One should determine the best means of including PVOs in large bilateral biodiversity projects that, by A.I.D. contracting procedures, must be competed.

1.3 Emerging Technical Areas

NRMS II should include a number of new or expanded activities. Since inappropriate policies are a major constraint to sound Natural Resource Management

(NRM), NRMS II should actively seek to define the best strategies for achieving NR policy reform with a special emphasis on the use of non-project assistance (NPA). Sector reforms should also aim at moving governments toward more democratic forms of NR access and management. The PVO/Non-government organization (NGO) NRMS cooperative agreement may present a good model for both improving NRM and in supporting democratization. Where local governments are corrupt or "unreformable", this approach presents a means for A.I.D. to stimulate change.

While the relationship between population growth and NR degradation is apparent, a heavy handed attempt to effect changes may be self defeating. The issue is best taken up at the mission level; ANR/NR should also be on the lookout for other innovative approaches to link family planning with NRM initiatives.

The problem of global climate change is another area that may receive increased attention. If A.I.D. Africa Bureau (AFR) were to get involved in addressing the problem, it should concentrate on policies and alternatives that reduce the clearing of the humid lowland forest for agriculture. However, all of the Congo Basin countries are lesser priority countries under the PNRM and none presently have major NRM portfolios.

Management oriented research (as opposed to basic research) on various common constraints or knowledge gaps in natural resource management should receive increased attention in NRMS II. A review of on-going and proposed research should be undertaken as well as the design of a means to manage the selection and supervision of research grants.

Training, for both Africans and U.S. personnel, is an area which badly needs increased attention in NRMS II. This and other areas for expanded emphasis -- Geographic Information Systems (GIS) and regional/sub-regional NR monitoring are noted below.

1.4 Implementation Arrangements

The NRMS office during the project extension is likely to function in a more field-responsive mode while providing a guidance and leadership function with respect to NR program strategy, information needs, monitoring, training and dealing with new or emerging issues. With these considerations in mind, the Study Team examined a number of ways ANR/NR might best deal with the implementation tasks of NRMS II, given the technical resources currently within A.I.D., the time and effort needed to establish new implementation mechanisms, the probable needs of the NRMS office and cost factors. A Washington-based management support contract is recommended to increase the backstopping capability of the NRMS office and to deal with its growing analytical, information and training tasks. An initial contract staff of three professionals, an administrative assistant and a secretary is proposed, thereby permitting the NRMS office to more effectively draw on resources currently within A.I.D. -- Bureau of Science and Technology (S&T) buy-ins, Indefinite Quantity Contracts (IQCs) and Resource Support

Services Agreements (RSSAs) -- to serve the missions, Regional Economic Development Services Offices (REDSOs) and the Bureau itself. Implementation arrangements should also leave open the option of competing one or more IQCs for the delivery of technical services if it becomes apparent that existing sources of expertise within A.I.D. are inadequate or overburdened.

The Study Team also gave serious consideration to a second implementation option, the award of a "mega" contract with provision for subcontracts and buy-ins. However, it was not clear that the quality and range of service that could be offered through such an arrangement would constitute a substantial improvement over what can be obtained through presently available S&T buy-ins and IQCs. Another disadvantage would be the time and effort required to announce, compete and award such a contract.

Meanwhile, pending the award of a management support or "mega" contract, ANR/NR should adopt interim measures to cope with its expanding workload. The AFR/USDA RSSA should be drawn upon to enable the Office of International Coordination and Development (OICD) to provide under contract near term staff support to the NRMS Project officer, specifically an operations officer, a program analyst and a secretary. Such assistance would enable the NRMS Project Manager and his RSSA colleagues to devote more time to substantive issues, tracking program developments and facilitating the steps necessary to consummate the award of a new contract.

1.5 Biodiversity Grant Management

The growth and expanding geographic scope of the biodiversity program have outpaced the means of the NRMS office to monitor it and additional new activities are pending. After examining several alternatives, the buy-in to the S&T Biodiversity Support Program would appear to be the best choice. It has established a good record for grant management and a buy-in is a less management-intensive alternative than setting up a new mechanism.

2. NRMS Support to PVOs/NGOs

The involvement of PVOs in NR management and conservation is deserving of A.I.D. support because of their close relationship with rural people, their motivated staff, their cost efficiencies and their flexible, innovative approaches. These strengths generally outweigh their frequently lower level of technical expertise, their lack of clout with host country governments and weakness in management of information. Despite the shortcomings, PVOs can contribute much to African NGOs and indigenous NGOs could play a greatly expanded role as they increase their capabilities in management and technical expertise. PVOs are the best placed to provide such support to NGOs.

The NRMS I principal support to NGO capacity building was through the PVO/NGO NRMS cooperative agreement. Although this initiative looks very promising,

a formal evaluation needs to be carried out to determine how the extension of the project should be modified or expanded into additional countries.

In addition, if there is interest in expanding support for NR/NGOs in Africa, ANR/NR may wish to consider assisting several other organizations which are becoming increasingly active. Their work should be evaluated and NRMS II should explore such channels for reaching African NGOs. Among those brought to the attention of the Study Team were two consortia CODEL (Coordination in Development), and PACT (Private Agencies Collaborating Together) both of which wish to expand their African NR programs. Additional possibilities are CIDE (Center for International Development and Environment) and the African PVO Initiatives Project which is sponsored by AFR/DP.

If the PVO/NGO component of NRMS II expands and diversifies along the above lines, greater attention will need to be given to tracking and monitoring the work. The most efficacious way to accomplish this might be to include that function in the management support contract recommended above. In that case, consideration should be given to adding a person to the contractor's staff to backstop and monitor the activity. A second alternative would be to lodge the task with CIDE.

3. Training Activities in NRMS II

Given the major need to upgrade NR skills, training should be an important priority for NRMS II and a member of the contractors's staff charged with training as one major responsibility. Maximum use should be made of on-going and planned training projects offered through buy-ins to existing S&T projects and to the two new initiatives now being planned. Equally important, maximum advantage should be taken of the new environmental training program for A.I.D. personnel (including Foreign Service Nationals) sponsored by PM/TD. NRMS II should also support NGO and PVO training through (1) the PVO/NGO NRMS cooperative agreement and through (2) a buy-in to Environmental Planning and Management Project (EPM) to support CIDE's series of training sessions in Africa (From the Ground Up). Since training needs and resources assessments being planned under S&T projects are unlikely to be of sufficient depth and detail to meet ANR/NR needs, NRMS should fund an Africa-specific assessment early in the extension for use in developing a more coherent training strategy during Years 2 - 5.

4. Information Requirements and Management

Technical information concerning natural resources management and the environment and related development activities in Africa is needed to support work at the Africa Bureau level, at the USAID level and among PVOs and NGOs. Information can be considered a resource that is: compiled, organized and managed, analyzed or interpreted, and appropriately communicated.

4.1 Information Support Needs and Opportunities

Program management requires information to manage the NRMS project and information to report to Congress on the NRM portion of the Development Fund for Africa. The impacts of a wide range of actions, project or non-project, including those supported by NRMS and other AFR/TR projects, REDSOs, USAIDs and PVOs must be summed up. A focussed and well organized project activity tracking effort will be required to collect and organize information and prepare periodic reports. Special analysis and interpretations are also needed to deal with emerging issues or management needs.

Technical information support and guidance to missions is an on going need for assisting in programming and project design or management. Information to support environmental reviews and assessments is also needed. Various categories of technical information and databases are summarized in Chapter V, Section 2. PVOs and NGOs also require NRM information and could benefit from strengthening of existing sources. NRMS II could make support available on a flexible basis for doing so by various means: publications, videos, "south-south" exchanges, international field days and so on.

GIS developments have revolutionized resource mapping and spatial analysis in the past five years as a result of technological advances and falling prices. Work that once was limited to specialized cartographic laboratories and resource mapping agencies now can be done in any office with a minimal investment (approximately $20,000) and appropriate training. With NRMS support the development and spread of GIS applications could be influenced towards facilitation of PNRM goals and a coordination of efforts would be possible.

4.2 Recommendations and Options for Implementation

(1) Further development of an organizing framework and related database for explaining and monitoring progress in natural resources management should be undertaken. Work should be under the direct management of ANR/NR.

(2) Information management and reporting for NRM activities funded by TR/ANR (NRMS II and others) should be undertaken so as to facilitate yearly reporting to Congress, public reporting on Bureau-funded NRM activities in Africa as well as to foster integration of experiences and operations. Project inputs as well as outputs and interim progress should be tracked, organized on a database, cross referenced to hard copies of studies and reports and to related databases. Inputs and outputs should be linked to the Organizing Framework so as to facilitate later overall reporting.

(3) Overall natural resources management activity tracking and reporting or query response should be carried out by means of routine and periodic tracking of natural resources management activities in the region, supported by A.I.D. as well as other donors or multilateral agencies is recommended. Tracking, reporting and

responding to special queries could be internalized in AFR/ANR, through the inclusion of a Program Analyst/ Information Officer on the NRMS contract staff.

(4) Tracking and reporting on PVO/NGO activities is recommended so as to facilitate synthesis of A.I.D. funded PVO progress Africa-wide in (1) natural resources management and (2) conservation of biological diversity. This could be entrusted to the entity or entities that will manage the financing of PVO/NGO work in these two fields.

5. Program Management and Cost Estimates

See discussion of implementation arrangements in Sections 1.4, 1.5 and 2 above. Cost estimates are shown in Chapter VI, Section 2 and the attached Tables.

I. INTRODUCTION

1. The Program Context

The context for NRMS was the Plan for Natural Resources Management in Africa (PNRM, adopted in February 1987) and in particular Chapter 9 of that plan which laid out the priority technical and geographic areas and specific tasks to be undertaken. Shortly after NRMS design was completed, Congress established as 10% earmark for natural resources management funding and the Development Fund for Africa was created. Recently the DFA has been authorized by Congress at $800 million for Fiscal Year (FY) 91. Congress has also introduced language into the Foreign Assistance Act requiring that A.I.D. give attention to global warming. At the mission level there is increasing emphasis on strategic planning, with the institution of Country Program Strategic Plans (CPSPs) in lieu of country development strategy statements and program impact assessments. In the individual countries, other donors, with some A.I.D. support, have supported national level natural resources conservation strategies and environmental action plans.

As a consequence of this changing and essentially expanding programmatic context for natural resources management support, the scope of the NRM agenda has been broadened, the amounts to be expended have increased considerably, the reporting requirements have increased, and the geographic priorities have been widened by the blending of DFA and PNRM. Finally, a more recent internal Environmental Initiatives effort has generated the opportunity and the need for AFR/TR/ANR to respond with proposals for special environmental initiatives. AFR/TR/ANR is actively responding to this changing programmatic context, and the results of the analyses and options presented in this study will contribute to the on-going planning as well as preparation of the NRMS extension.

2. NRMS I

NRMS I was designed as a three year project to be the principal vehicle for ANR/NR to help the Africa Bureau to implement the PNRM. The project was designed to provide technical assistance (TA) to missions; to conduct NR training of Africans; to conduct special studies and special events as needed; to provide NR information support to the Bureau, PVOs/NGOs and others; to support PVOs/NGOs in NR and to support the preservation of biodiversity. There were three major activities under NRMS I -- 1) the Level Of Effort (LOE) NRMS contract with Energy/Development International, 2) the PVO/NGO NRMS Cooperative Agreement, and 3) biodiversity grants -- and a number of smaller activities. (This also led to confusion as to what "NRMS" was.) The content of NRMS I is dealt with further in Chapters II and III.

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[1] Adapted largely from "NRM DFA Funding Opportunities and Special Initiatives", Washington D.C.: AID/AFR/TR/ANR Oct. 22, 1990. 35 p. internal working document.

3. Role of the TR&D Options Study

The January 1990 review of the NRMS project, the March project evaluation and the completion of the LOE contract raised questions as to the directions Phase Two of the project should take and how it should be structured. Consequently, AFR/TR/ANR designed an "options study" and contracted with Tropical Research and Development, Inc. to carry out a series of analyses which would provide guidance on the following topics:

1. Analysis for the design of the information management elements of the Phase Two project for improving NRM analyses and technical networking;

2. Analysis for expansion of Bureau natural resources programming through PVOs in lower priority countries, focussing on biological diversity;

3. Analysis of alternatives for efficient provision of technical services to high priority countries for assessments, strategy development, and program design and evaluation; and

4. Analysis for design of mechanisms to assist the Bureau in addressing natural resources policy issues and to support the design of NPA programs in the natural resources and environment sector.

Material furnished by the foregoing analyses will, in turn, help to lay the basis for drafting a Project Paper Supplement for the purpose of funding an extension of the project [2].

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[2] For convenience sake in this paper, the existing project is referred to as "NRMS I" and activities to be carried out under the PP Supplement as "NRMS II" although both are parts of the same project, i.e. 698-0467.

II. TECHNICAL ASSISTANCE TO USAID MISSIONS AND TO THE AFRICA BUREAU

1. The Evolving Mission and Bureau Needs for Technical Assistance

1.1. Current NRM Technical Areas of Emphasis

The PNRM remains AFR's principal strategy document for supporting natural resources management in sub-Saharan Africa. NRMS I has been the ANR/NR's main vehicle for assisting the Bureau to implement the PNRM. One can assume that a major portion of the TA support needs under NRMS II will revolve around A.I.D.'s current NRM portfolio in Africa. One should first look, then, at what the major NRM activities currently are, and at what are emerging as new technical areas. Possible new initiatives that might be undertaken under NRMS II are discussed in section 1.3 below.

In looking at the current NRM portfolio, the most striking aspect is the great difference between West Africa on the one hand, and East and Southern Africa on the other.

1.1.1. West Africa

The principal thrust of AFR's involvement in NRM in all of Africa during the last two decades has been concentrated on Sahelian West Africa. This program grew out of the relief effort of the first great drought in the early 1970's. It attempted to address the problems of desertification and the perceived fuelwood crisis. Early emphasis was on forestry and fuelwood plantations, improved stoves, range management and national resource inventory mapping projects using Landsat imagery. Due to discouraging results and/or changing priorities, support for large scale fuelwood plantations, range management and resource mapping has dropped off substantially.

Much of A.I.D.'s program in the Sahel addresses two of the PNRM's technical foci, namely soil conservation/fertility maintenance and loss of vegetation. (Biodiversity has seen very little project activity in West Africa) Small scale farm forestry/agroforestry are important activities. The Senegal Reforestation Project puts a major emphasis on private sector forestry development. Another major technical area for A.I.D. and other donors in the Sahel has been and remains the development and extension of a wide variety of mostly small scale, on-farm, soil and water conservation techniques. The Operation Haute Vallée (OHV) Project in Mali is one of the few doing innovative work on soil fertility maintenance.

The USAID program in Niger has been a leader in NRM. It provided early support to CARE's Majjia Valley Windbreak Project. The Forestry and Land Use Planning (FLUP) project developed the first apparently viable approach to natural forest management in the Sahel. This success was based in large measure on one of the first

significant examples of NR policy reforms. While USAID/Niger has not continued its support for natural forest management, it is one of two missions in West Africa now moving into NR policy reform in a significant way through the Agricultural Sector Development Grant II (ASDG II). ASDG II will assist the Government of Niger to prepare two major national strategy/policy documents -- an Integrated Natural Resources Management Plan and the National Plan to Control Desertification.

The Niger, Burkina Faso, Senegal and Guinea Missions are all starting or planning new NRM initiatives; Mali and Senegal have significant ongoing activities. The geographic focus is consistent with the PNRM. Most activities remain concentrated in the semiarid agro-ecological zone. In summary, the principal NRM technical areas of ongoing A.I.D. involvement in West Africa are the following:

- Soil and water conservation;
- Soil fertility maintenance (includes some agroforestry techniques); and
- Small scale forestry/agroforestry interventions at the field, farm and village levels.

An emerging, cross-cutting field of involvement is the following:

- National NR strategy development/policy reform.

A technical area in which A.I.D. has considerable experience, little current involvement and which has wide potential applications in the Sahel is the following:

- Natural forest management.

New technical areas of wide interest in which A.I.D. has <u>not</u> been actively involved, but in which it could potentially play a role are:

- GIS applications to NRM, and
- Village lands management (and related policy reforms).

A major technical area which has not been adequately addressed by A.I.D. or other donors, which is consistent with the second technical focus area of the PNRM (loss of vegetation), and which remains one of the most vexing NR problems throughout the Sahel and the other arid/semiarid zones of Africa is the following:

- Range management.

Range management should be linked with natural resources policy reform natural forest management and village land management.

1.1.2. East and Southern Africa (ESA)

A.I.D.'s NRM portfolio in ESA is radically different from its West African program. NRM has never been as great a priority area of concern for A.I.D. in ESA. Most of the pre-1987 project activities (e.g., refugee reforestation in Somalia and the Sudan, Kenya Renewable Energy) have been phased out and are being replaced by initiatives with a completely different technical focus.

The ESA countries in which A.I.D. will undertake significant bilateral NRM s are the following:

- Madagascar
- Botswana
- Zambia
- Zimbabwe
- Rwanda
- Uganda
- Kenya

Strikingly, none of these projects are operational yet, although some or most will build upon smaller, ongoing activities.

The principal NRM technical areas covered by these ESA projects are the following:

- National park/protected area management
- Buffer zone development
- Biodiversity
- Wildlife management
- Low impact tourism/eco-tourism development

Not only are the ESA technical areas different from those in West Africa, they are all areas in which A.I.D. had virtually no experience prior to three years ago. [3] This poses a particular challenge to ANR/NR for the following reasons:

- Lack of project experience and successful models on which to develop strategies, guidelines and impact assessment techniques.

- Shortage of American expertise, in or out of ANR/NR, with relevant experience in both these technical and geographic areas.

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[3] PVOs, on the other hand, have been working in this field for some time and have accumulated considerable experience.

A further challenge stems from the fact that nearly all of these bilateral projects in ESA involve some form of buffer zone development around protected areas. The buffer zone development philosophy is based on the creation of economic incentives to local communities surrounding a park or other natural area, that will help insure the protection of the natural area. The buffer zone approach is a new, evolving development philosophy with many variants, and as such will demand ANR/NR's particular attention under NRMS II.

- NRMS II will need to closely monitor and evaluate the development of buffer zone initiatives in order to develop guidelines as early as possible as to what works best where.

One of the three technical foci of the PNRM, soil conservation/soil fertility maintenance, has received very little attention in ESA. Of the new bilateral projects, the one in Rwanda has soil conservation and agroforestry components and there are other small activities in other countries that address soil problems. Soil fertility maintenance remains a critical problem throughout Africa, and is directly linked to rural incomes, food self sufficiency and to the protection of natural areas and biodiversity. Farmers who cannot maintain the fertility of their soils will clear remaining natural areas for new cropland if they have the opportunity.

A major technical area not being adequately addressed by A.I.D. in ESA is:

- Soil fertility maintenance/soil conservation.

Some of the southern African countries have gone further than most other African countries in NR policy reform and in the empowerment of rural people in their control of natural resources. The new regionally designed bilateral NRM projects in Botswana, Zambia and Zimbabwe are building upon this favorable climate for NR policy reform.

- The potential for NR policy reform and the empowerment of rural people in the management of natural resources is particularly good in some of the southern African countries.

1.2 NRMS I Biodiversity Activities

Biodiversity protection and the conservation of tropical forests is the one PNRM technical focus area in which NRMS I played a significant direct implementation role. The NRMS Project took the initiative in biodiversity and began to fund activities in 1987 before there was any real bilateral involvement. NRMS I funding for biodiversity was done in the form of over 30 grants made directly with PVOs, mostly with the environmental PVOs that were already active in this field. Although mission involvement in biodiversity was minimal at the beginning, the situation has evolved very rapidly to the point where 96% of total funding in FY '90 was bilateral.

The PNRM and the NRMS I design were not very specific about how the Bureau should go about helping to preserve biodiversity in Africa. NRMS I biodiversity activities in 1987 and 1988 were started in advance of a formal Bureau strategy. A simple strategy statement was eventually developed and issued in cable form in April 1989 (State 101683). Key points of the strategy are the following:

- The geographic focus is on Madagascar and the afromontane forests of central East Africa.

- Funding for biodiversity/conservation of tropical forests should be integrated with the Agency's development goals, i.e., all activities should include a development component.

- Criteria for the selection of unsolicited proposals are the degree of human threat and the inherent fragility of ecosystems, the level of species endemism and habitat richness, the importance of the habitat for maintaining species diversity in other regions (migratory species) and the importance of ecosystems to human needs.

This strategy is in some ways already outdated or incomplete. Particular issues that need to be considered for NRMS II are the following:

- Geographic focus. Madagascar has been an entirely appropriate geographic focus, but with two large bilateral projects coming on line, it is now largely covered as are the afromontane highlands. The strategy gives no indication of what the future priority areas should be.

- The full range of biodiversity concerns includes genetic diversity, species diversity and habitat diversity. The strategy gives little indication where the Bureau's priorities lie. The greatest species diversity and endemism (outside of Madagascar) are found in the humid tropical lowlands, mostly in countries that are low priority for A.I.D. under the DFA. The humid lowlands of the Congo Basin is also the principal area of concern in Africa for global warming. A high percentage of the species in the humid lowlands, however, are plants, insects and small animals of relatively low publicity value compared to mountain gorillas and lemurs. The strategy should define whether A.I.D.'s focus is on species diversity or habitat diversity, whether or not primates and other higher animals like elephants and rhinos should receive special consideration, whether the publicity value of the species protected should be a special concern and whether or not A.I.D. should focus on the preservation of representative, intact habitats and foodwebs irrespective of their species diversity.

- The strategy does not define tropical forests; it is always a source of confusion whether the savannas and shrublands of the arid/semiarid zones are included.

An important aspect of biodiversity with direct economic consequences for man is the preservation of the genetic diversity of cultivated plants and domesticated animals. The Bureau's biodiversity strategy does not address this. The principal center of crop genetic diversity in Africa is in the Ethiopian Highlands (Reid and Miller, 1989). However, A.I.D. central funding supports genetic conservation activities at the International Board of Genetic Resources.

With interest and funding for biodiversity continuing to increase, and with the geographic focus areas of the present strategy already largely covered, there is a clear need to rethink and redefine the Bureau's strategy. As most of the expertise in biodiversity lies outside of A.I.D. and in universities and the environmental PVO community, it would only seem appropriate to solicit a strong input from those sources in rethinking the strategy. Although PVOs have frequently been consulted in the past, it would probably be advisable to formalize their input through the formation of a Bureau-specific biodiversity/tropical forests advisory group. Their first task could be to help redraft the Bureau's biodiversity strategy. The S&T/AGR/PA office should be consulted on organizations that might be represented on such a group.

In its review of the PNRM in January 1990, the Africa Bureau concluded that it should expand its NR activities in the lesser priority Group III countries through the PVO community. It has been proposed that the biodiversity/tropical forests program be the vehicle through which to do this. This would open up nearly all of sub-saharan Africa for biodiversity activities. If this is done without rethinking the strategy, the Bureau risks having a highly unfocused program.

1.3. Emerging and Potential New Initiatives under NRMS II

1.3.1 Unforeseen Developments under NRMS I

If the past three years are indicative of the future, then the PP supplement for NRMS II must allow for the flexibility to deal with the unforeseeable. Examples include the following:

- The biodiversity and the PVO/NGO components of the NRMS I design were added almost as afterthoughts. No one foresaw in 1987 how large the bilateral biodiversity programs in ESA would grow to be, or how important the role of the environmental PVOs would become to the Bureau's NRM portfolio.

- It was not foreseen how radically different the NRMS portfolio in ESA would become, or the extent to which the Bureau would become involved in new technical areas like buffer zone development, tourism and wildlife management.

- The DFA was created after NRMS I was designed, has changed A.I.D.'s overall priorities in Africa, and has made impact assessment a new preoccupation for ANR/NR.

- GIS systems and hardware advances have put this technology within the reach of ANR/NR, REDSOs and USAIDs as well as African institutions.

- Global issues, particularly global warming, must now be addressed by A.I.D..

1.3.2 Enhanced Strategy and Oversight Role of ANR/NR

NRMS I followed directly on the heels of the major background analyses/strategy development and planning effort that culminated in the adoption of the PNRM. During the course of NRMS I, the NR staff was intensely occupied with the letting of contracts and grants, fielding teams and, in general, with the implementation of Chapter 9 of the PNRM. There was very little time for the NR staff to reflect on the overall strategy, and, with the PNRM so new, relatively little need for reflection. Bilateral NRM activity had reached a low point, and ANR/NR was playing a vanguard role to rekindle mission involvement in NRM.

Three years after the start of NRMS I, the situation has changed dramatically. Some of the major unforeseen developments under NRMS I are noted above. The higher priority PNRM countries are largely "on board". The evolving bilateral programs, in ESA in particular, are breaking new technical ground for the Bureau and are testing new development philosophies. The Bureau's biodiversity strategy needs to be updated to guide the expansion of biodiversity activities into lesser priority countries.

In short, under NRMS II, ANR/NR needs to play much more of a strategic role for the Bureau than it did under NRMS I. This will mean more emphasis on the assessment of program impact, on special studies and events, on information management and on strategy and guideline development. It will mean decreased emphasis on direct technical assistance to missions and greater emphasis on helping missions to access the best technical assistance, wherever it may be found. The boat has left the harbor under a good pilot; now it needs a good captain.

1.3.3 Natural Resource Policy Reform

1.3.3.1 Background

Ill conceived or outdated policies are increasingly being identified as one of the principal constraints to NRM in sub-Saharan Africa. Conversely, NR policy reform is emerging as an area of great potential, but one for which there are few successful models on which to build. This is clearly one area in which ANR/NR needs to play a strategic role.

Much of the legislation, policies and institutional authority structures governing natural resource use rights in Africa find their origins in the colonial period and are often very poorly adapted to current conditions. They are typified by a highly centralized concentration of power in the central government, by little respect for the needs and wishes of local communities, land tenure systems that constrain investments in the NR base and by an institutional authority structure more adapted to European conditions where agricultural, livestock and forest production are generally distinct activities practiced on different land units.

Examples of policy/institutional constraints to sound NRM include:

- Fuelwood/charcoal marketing policies that deny local communities all control over their local woodlands upon which they depend for a multitude of products and other benefits.

- Policies that forbid the cutting of live trees (that would subsequently resprout), thereby creating an incentive for woodcutters to cause trees to die.

- Institutional structures that give the forest service the mandate for soil conservation on agricultural land.

- Institutional structures that make government forestry or agricultural agents responsible for both policing and extension functions.

- Policies that require someone who plants a tree to get permission from a government agent before he/she can cut the tree down.

- Unworkable policies that forbid all use of fire in tall grass savannas and that result in an increased incidence of catastrophic, late dry season burns.

- Policies of open access to rangelands and water points resulting in destructive overgrazing and decreased productivity.

Until very recently, the Bureau's involvement in NR policy reform has been very limited without any systematic approach. Policy reform was only confronted as a constraint to individual projects. A USAID funded forestry project in Mali's Fifth Region required that forestry agents assigned as extension agents not exercise their normal policing functions, but this policy reform has not been generalized. Pollarding of the CARE Majjia Valley windbreaks (which A.I.D. funded in its early years) was long delayed by a dispute over the disposition of the wood products to be harvested. CARE insisted that all the benefits should go to the local communities, and, about 15 years after the project started, was able to get this policy implemented locally through a prefectoral decree.

Perhaps the most significant example of project level policy change was achieved by the FLUP Project in Niger. A forest service ban on the cutting of live trees

precluded natural forest management development. A project specific exemption led to the first socio-economically viable natural forest management pilot intervention in the Sahel. This was quickly followed by a half dozen other donor projects, each with their own project specific policy exemptions. Finally, the overall national policy has just been changed under the USAID Ag Sector Development Grant II, which is discussed below.

1.3.3.2 NPA for Policy Reform

NPA refers to assistance given to a host country government in the form of local currency or hard currency. The use of NPA by the Bureau first became common in the early drought years as large amounts of local currency were generated through the monetization of food aid. NPA for sector specific policy reform began in the early 80's as a follow on to the structural readjustment programs of the IBRD. A.I.D.'s main use of NPA for policy reform has been in the agricultural sector. Agricultural sector reforms have involved the lifting of price controls and subsidies and the privatization of state controlled productive enterprises.

The use of NPA for policy reform generally rests upon an agreement between donor and host country government outlining a series of reforms to be instituted over time. Upon the successful implementation of each set of reforms, the donor transfers a "tranche" of money to the host country government. The money is intended to assist and encourage them in overcoming the additional costs due to dislocations and readjustments engendered by the new policy.

Although the impact of the use of NPA for policy reform has not been formally evaluated, it is assumed to be positive, and the Bureau would like to significantly expand its use of NPA for policy reform in the NR sector. Although several missions are interested in using NPA for NR policy reform, the greatest progress has been made in Niger. Grant agreements (Agricultural Sector Development Program Phase II and the Project Grant Agreement for the Policy Analysis and Monitoring Project) were just signed in August of this year with the government of Niger outlining a series of steps to progressively establish the legal and policy framework necessary for effective natural resource management and to support appropriate institutional development. The reforms are geared towards the empowerment of rural inhabitants over the use of their natural resources.

Even though A.I.D. has as much experience in NR in Niger as anywhere, many of the specific reforms to be instituted are not spelled out in the agreement. They will only be defined following special studies to be carried out jointly by the Government of Niger with the University of Wisconsin Land Tenure Center and others.

The program in Niger is a very ambitious one. Given the agro-ecological and legislative/policy similarities between Niger and the other Sahelian countries, success with the Niger initiative could serve as a model for these other countries. The process being undertaken in Niger needs to be monitored closely for even broader applications. The potential for success in Niger should be relatively high because of A.I.D.'s long

project experience in this country; it would seem difficult to embark upon such a comprehensive program of policy reform in the absence of such experience. The last thing one wants to do is to promote the wrong policy changes.

1.3.3.3 Other Means of Achieving NR Policy Reform

The World Bank has taken the lead in helping certain African countries to prepare national environmental action plans (EAPs) which have a strong NR component. These have been done for Madagascar, Lesotho and Rwanda with varying degrees of participation from the USAIDs, REDSO/ESA and NRMS I. The extent of donor technical assistance in preparing these plans has varied from very light to heavy handed. The EAPs are to serve as the overall strategy/policy documents to guide donor assistance in the sector. The EAP for Madagascar has influenced the development of the new bilateral NRM projects in that country. ANR/NR should review the EAP experience to date, and participate in future EAP's as appropriate.

Participation in the preparation of national conservation strategies with The World Conservation Union is another potential way to influence national policies.

1.3.4 Democratization and Governance Linkages with NRM

In the post Cold War political climate, there is considerable discussion of linking AID funding to third world countries more closely to the degree of democratization and respect for basic human rights in those countries. Such a move should be welcomed and reinforced. Many of the NRM problems in Africa are linked to the disempowerment of rural populations in their control on natural resources by the central governments. The Sahelian countries are a good case in point where the central governments maintain that all non-agricultural lands and natural trees belong to them and must be managed by government services. The fact that they completely lack the means to do so has led in many places to open access and "the tragedy of the commons." Traditional management systems have been overridden by government interference without the substitution of viable alternatives. Most NRM problems in Africa will not be solved as long as governments do not respect the basic rights of the natural resource users and as long as these users have no voice in deciding how the resources will be used.

The PVO/NGO NRMS cooperative agreement may present a good model for both improving NRM and in supporting democratization. Where local governments are corrupt or "unreformable", this approach presents a means for A.I.D. to circumvent government services. This is especially true for a project run out of Washington that does not enter into the bilateral agreements between the USAID and the host country government. Furthermore the management training and the NGO consortia building under the PVO/NGO NRMS project may create a new vehicle for people to confront common problems together and to create new political forces.

In Botswana, one of the more democratic countries in Africa, the Kalahari Conservation Society plays the healthy role of a "watchdog on the government".

1.3.5 Integration of Family Planning with NRM

In the long run, most NRM problems in Africa will remain insoluble wherever population growth continues at a faster pace than economic development. This is especially true where subsistence farmers with no other economic alternatives are forced onto marginal sites where agriculture is not sustainable or where they are forced to clear remaining natural areas because they have no alternatives. However, because of the sensitivity of family planning issues, it would probably be too risky to directly link family planning with individual NRM initiatives. At the mission level, nevertheless, the linkages between demography and NR degradation should be studied much more closely in determining NR and family planning strategies. ANR/NR should also be on the look out for other innovative approaches to link family planning with NRM initiatives.

1.3.6 Global Climate Change

Global climate change has become a major international political issue. The clearing of humid tropical forests remains a major contributor of CO_2 to the atmosphere. Most of the remaining humid tropical forests in Africa are in the Congo Basin, especially in Zaire. The main reason that extensive forests still exist in the Congo Basin is the low population levels in much of the area. Although logging of tropical hardwoods is practiced, it is mostly of low intensity. Because of the low population levels, many logged areas recover and are not converted to agriculture. All of the Congo Basin countries are low priority countries under the PNRM, and none presently have major NRM portfolios.

A.I.D.'s involvement in global warming in Africa to date has been through the Global Climate Reserve's buy-in to the S&T Conservation of Biological Diversity Program; Zaire was targeted as the only key country in Africa. AFR has only been peripherally involved to date. If the Bureau were to get involved in the future, it should concentrate first and foremost on policies and alternatives that would reduce the clearing of the humid lowland forests for agriculture. Debt for nature swaps should be explored. Improved timber harvesting and regeneration techniques to minimize disturbance could be secondary objectives, but A.I.D. has no experience in humid lowland forest management in Africa.

1.3.7 GIS and NRM

Although different A.I.D. bilateral projects have had GIS components, there was no Washington based initiative under NRMS I. There is widespread interest in GIS in Africa and many disparate activities. As follows, Chapter V discusses at greater length the potentials for the use of GIS for NRM.

A number of issues must be addressed in developing support through NRMS for GIS:

- Ability of A.I.D. staff to utilize the tools or their output.
- Ability of large institutions such as EROS and NASA to understand and tailor products to A.I.D. needs.
- Accessibility to missions of satellite or aerial photograph imagery.
- How to carry on digitization of larger scale maps and re-compilation at smaller sales where being used with satellite base mapping.

AFR/TR (ANR and PRO) should create a panel or advisory group of technical experts to advise it on current initiatives and help plan NRMS funded participation or initiatives for large area monitoring.

GIS capabilities should be included in NRM databases developed for AFR/TR. This could be done through the following activities:

- NRMS support should be extended for 1:1 million African soil mapping underway at USDA.
- Pilot or test project on monitoring soils trends with small scale maps (from satellite) GIS.
- Develop additional interpretive tools for mission use of GIS and databases.
- Add training support for USAIDs, via on-going PM/TD training for direct hires (DHs) or new S&T NR/Environment training course.

In brief, there are two general courses of action that could be taken: (1) develop a plan and strategy for supporting this area or (2) create a fund for supporting proposals and actions that may be presented to the Bureau or missions. The second course of action is the less desirable one because of lack of experience in GIS and remote sensing in TR/ANR and because the technology, its applications, and related initiatives are evolving so rapidly.

1.3.8 Regional and Sub-Regional Monitoring

Effective monitoring of NR degradation and trends over large portions of sub-Saharan Africa is a frequently discussed goal that has long eluded development agencies and environmental organizations. Advances in the integration of remote sensing and GIS, and in the integration of ground and remote sensed data, as well as increasing interest in large area monitoring -- partly the consequence of global warming concerns to which A.I.D. must now respond -- has led to renewed interest in regional and sub-

regional monitoring. The DFA requirement for assessment of program impact complements this interest, although impacts of A.I.D. funded activities would normally be much more localized.

Vegetative cover and quality, and state of soil resources - both of which are degrading in priority regions - should be monitored at a small scale to assess regional or sub-regional trends and serve as the basis for prioritizing and strategies. The status and condition of areas managed so as to protect biological diversity should also be monitored but is better carried out on a case by case basis than as a regional monitoring effect.

TR/ANR should foster and support international or multinational as well as national efforts to monitor trends, through an extension of NRMS.

TR/ANR should assess (1) current initiatives and (2) the potentials and constraints for monitoring natural resources and environmental trends with satisfactory accuracy. There are many available means -- small scale mapping, and satellite imagery, other remote sensing, area frame sampling, ground surveys and monitoring stations (see Weber's Preliminary Indicators for Monitoring Changes in the Natural Resource Base, Feb. 1990, A.I.D.), etc.

An assessment of how different methods could be technically and institutionally integrated is needed. Preference is recommended to locating monitoring activities in African universities or resource institutions, and coordination of data collection by African regional institutions.

With NRMS funding TR/ANR should undertake a six month or less planning effort to establish the scale and scope of NRMS support for monitoring over large areas. Coordination with TR/PRO should be sought.

1.3.9 NRM Research

Management-oriented research (as opposed to basic research) on various constraints or knowledge gaps in natural resources management (and development assistance for it) would be funded under this initiative. Grants could be made to African Ph.D. scholars in the U.S. to facilitate field research in their home countries on applied NRM problems, to U.S./African scientist joint research, and to individual scientists or researchers that are examining critical gaps in knowledge. Also buy-ins to promising applied research started by S&T projects such as TROPSOILS or to programs initiated by IBSRAM, the International Board for Soil Research and Management, or to PVOs who are collaborating with IARCs (such as was the case in the OXFAM/ILCA partnership on animal traction research).

A review of on-going and proposed research on the continent should precede decisions on the means to manage the solicitation and awarding and supervision of research grants.

1.3.10 Training

The potential for expanded training initiatives under NRMS II is explored in Chapter IV.

1.4 The Forms of Technical Assistance Needed under NRMS II

1.4.1 Technical Services to the Field

Missions may have need for outside NRM technical assistance to help them identify NR problems and appropriate NRM approaches for addressing these problems, to participate in sector assessments and the preparation of the sector attribution analyses, to help determine mission priorities, to develop the CPSP, to identify project opportunities, to develop concept papers, PIDs and PPs, Program Assistance Initial Proposals (PAIPs) and Project Assistance Approval Documents (PAADs) to implement projects and to evaluate projects. NRMS I and the REDSOs have been the principal sources of such technical assistance.

1.4.1.1 Country Specific Assessments

The bulk of the technical assistance supplied to missions under NRMS I was in the form of what were called NRM assessments, country action programs and country action plans for the PNRM priority I and II countries. The NRM country assessments sought primarily to identify and describe NRM interventions that were successfully addressing natural resources problems within the country. They were modelled after the four country Opportunities for Development studies done in the Sahel, but for one country only. They did not seek to define all of the NRM problems in country nor to identify all, or even the best, management solutions. They sought to identify NRM techniques that "worked" and, thereby, to identify NRM development opportunities for the missions.

The country action programs built upon the assessments, concentrated on one portion of the country and identified a fairly comprehensive range of NRM interventions appropriate for that region. An economic analysis of the proposed interventions made up part of the action program. The NRM assessment and action program documents were not A.I.D.-specific, but were meant to be useful for any donor.

The country action plans are documents produced for the USAIDs that identifies that portion of the action program that a USAID might undertake. The options are presented in an incrementally increasing fashion that would permit the USAID to choose among different levels of involvement.

These assessments, programs and plans were in large part imposed upon the missions by Washington. Not surprisingly, mission appreciation of these reviews was mixed. Under NRMS II, there should be less need for such reviews as most of the PNRM priority countries have been done. (Modification of the PNRM country ranking with the DFA's strategic criteria could increase the need for new country assessments.)

To the extent possible, NRM II programming and planning support to missions should be demand driven. This does not mean that NRMS staff should not perform a

program guidance function in line with PNRM priorities but to do so in a more responsive manner. Also, ANR/NR must decide if it will provide NRMS II support for lower priority countries like Cape Verde that, on their own initiative, wish to make NRM a priority. Furthermore, many ESA countries now have IBRD-initiated environmental action plans or national conservation strategies (World Conservation Union) unlike the Sahel-Sudanian countries.

There will certainly be a need for country specific NR assessments and planning documents for new countries where sizable NRM initiatives are undertaken. Technical considerations that need to be studied in scoping out such reviews include the following:

- NRM assessments that only concentrate on "what works" in-country may overlook major lessons learned in the same agro-ecological zones in other countries. A NRM assessment in Senegal that does not take into consideration what is being done in natural forest management in Niger and Burkina Faso, probably would not identify this as a promising NRM opportunity for Senegal. The Opportunities for Development was the only regional assessment done under NRMS I. It would seem an entirely appropriate role for NRMS II to perform more regional analyses from which both missions and the Bureau can benefit.

- The economic analyses performed as part of the action programs were recognized at the Lomé Conference as being particularly valuable exercises -- with the caveat that some NR costs and benefits remain unquantifiable.

- Assessments, action programs and plans under NRMS I were often done in about three weeks per exercise. This is probably too little time to do a good job in most countries.

1.4.1.2 Mission Priorities, Sector Attribution Analyses and CPSPs

It is critical that NRM issues be weighed and considered in the definition of each mission's priorities, in the Sector Attribution Analyses and in the preparation of its CPSP. NR concerns should permeate all or most of the major sectors and need to be made a part of normal A.I.D. programming. If NRM is not identified as a priority in the normal programming cycle, it will be very difficult to insert later. ANR/NR needs to monitor the programming cycle for priority NRM missions, and assure that NR issues receive the required technical assistance.

1.4.1.3 Project/Program Design, Monitoring and Evaluation

These are activities for which missions routinely require outside TA. NRMS I provided relatively little assistance for these functions. In the PNRM priority countries for which assessments, action programs and plans were prepared under the LOE

contract, there was almost no follow through into the next logical step of project design using the same people that had worked on the background analyses.

As discussed earlier, most of the NRM activities in ESA are new technical areas for the Bureau (eco-tourism, wildlife management), or rely on new development philosophies (buffer zone development). This creates a special need for ANR/NR to foster early project/program evaluations and to assure the dissemination of results among other missions within the region. Finally, the DFA requirement for impact evaluation will generate requests for assistance in design and interpretation of baseline and monitoring studies.

1.4.1.4 Strengthening Mission/REDSO Capacity in NR

NRM is becoming a priority in many of the bilateral programs at the missions, but very few missions have NR professionals on their staff. This will pose a growing constraint to the Bureau's overall program in NRM. NRMS II should attempt to address this constraint through (1.) short term NR training of existing mission and REDSO DH and FSN staff, and (2.) actually funding new NR staff positions at key missions or at the REDSO's.

Proposed NRMS II natural resources/environmental training of DH and FSN staff is analyzed in Chapter 4.

Mission direct hire staff has been cut substantially in recent years. It is extremely difficult for missions to add NR professionals to their staff at the same time that ADO and other positions are being eliminated. There seems to be broad, general agreement at both the A.I.D. and the field level of the desirability of funding long term NR positions in Africa under NRMS II. Advantages of doing so include the following:

- Increased mission and/or REDSO capacity to manage the growing NRM portfolios.

- Missions are traditionally suspicious that A.I.D./Washington is insensitive to mission priorities and needs and that it will exert pressure to advance its own agenda. The history of the NRMS I and the LOE contract reinforced this perception. Long term staff based in Africa are generally viewed as having a much stronger "field orientation".

- The NR/Environment positions at the REDSOs are not funded by NRMS, are not responsible to ANR/NR and their SOW's (at least at REDSO/ESA) do not directly link their work with PNRM. Yet these people are better placed to assure that the PNRM priorities are incorporated into portfolios than the D.C. staff. Funding these positions under NRMS II would increase ANR/NR influence at both the REDSO and the mission level.

- Given the novel directions that the ESA Missions' NRM portfolios are taking, and the uncertainties inherent in these new initiatives, it might be advantageous to have a full time staff person in Nairobi under NRMS II to focus on these issues.

Other needs for long term TA in NR that could be funded under NRMS II include:

- A soil scientist to be placed with ICRAF to focus on soil fertility maintenance/soil conservation through one or more of the AFRENA networks.

- Possible placement of a NR specialist in one of the SADCC countries to deal with regional NR issues, especially those related to the new regional NRM project assuming such a position is not already included in the regional project.

1.4.2 Technical Services to the Bureau

1.4.2.1 Special Studies and Events

Special studies and events are generally intended to benefit a much wider audience than a single mission and therefore fall under the heading of support to the AFR Bureau. A limited number of special studies were conducted under NRMS I through the LOE contract. These were: (1) the role of PVOs and NGOs in NR with three case studies; (3) the economic incentives for NRM; and (3) a study on natural forest management. All of these studies were just being completed at the end of the LOE contract. These special studies had been selected from a lengthy list of potential topics. Special studies on indicators for impact assessment and on the role of NGOs and the dynamics of self-help are also being done by World Resources Institute (WRI). A for-profit firm was contracted to do a study on the potential of low-impact tourism, and one of the national labs was funded to do a study on global warming and Zaire. The major special event under the LOE was the Lomé Sub-Saharan Natural Resources Management Workshop in May 1990.

Special studies and events can be of great utility to ANR/NR in fulfilling its analytical role of strategy and guideline development for the Bureau. A wide variety of mechanisms for special studies/events were used under NRMS I; NRMS II should maintain this flexibility.

1.4.2.2 Strategy/Guideline Development

Strategy and guideline development for the Bureau is a role that falls inherently on ANR/NR. As argued in Section 1.3.2. of this chapter, there is a growing need for an

expanded strategic role for ANR/NR as missions expand their NRM portfolios into new technical areas, as the buffer zone development philosophy is put to the test, as missions and the Bureau strive to develop techniques for assessing the impacts of their NRM programs and as a growing body of bilateral NRM experience is attained. NRMS II should provide ANR/NR with flexible mechanisms to conduct special studies and to organize special events (workshops, conferences) that will best support them in this analytical role.

2. Delivery Mechanisms

2.1 Analysis of Experience under NRMS I

2.1.1 The Level of Effort Contract

After its signature in August 1988, the $2.5 million LOE contract between A.I.D. and Energy/Development International and its five subcontractors became the main instrument for support to the missions to implement the NRMS project and the Bureau's NR Plan. The contract provided for a core staff of three full time professionals, a full time administrative assistant and 45 person months of short term consulting services. Although the work of the contractor was supplemented by other sources -- RSSAs, IQCs, PVO personnel and by the staff of ANR/NR itself -- the preponderance of the effort was performed by the contractor. Its draft final report summarizes the impressive amount of work carried out pursuant to the five tasks specified in the contract: (1) eight technical assistance missions, (2) twelve NR assessment/programming exercises, (3) ten training workshops, (4) four studies/events, and (5) an information support component. It is doubtful whether the volume and pace of work provided within the two year time frame could have been carried out under any other form of procurement available to A.I.D..

Criticisms of the contract, as noted in the midterm evaluation and by others, refer to the forced pace of activity, lack of adequate mission involvement and sense of ownership of contract products, dependence on a limited number of experts and the sacrifice of quality to meet deadlines. But such criticisms are a reflection of the design of the contract and its style of implementation (which in turn reflected A.I.D./W pressure to show progress in implementing the PNRM) rather than of the contract mechanism itself. More valid criticisms are:

- The lack of provision by which missions could buy into the contract and thereby directly influence the nature and timing of desired services,
- Lack of provision (or planning) for an extension to bridge the transition from NRMS I to NRMS II, and
- Lack of provision for backstopping support within ANR/NR to the NRMS Project Manager or, alternatively, adoption of simplified procedures which

gave the contractor greater latitude to communicate directly with missions for the purpose of planning and scheduling field visits once there was agreement on substance. Difficulties in effective contractor/Bureau/USAID communications were a continuing problem and increased the management burden of the Project Manager.

2.1.2 Indefinite Quantity Contracts (IQCs)

IQCs were not used frequently during NRMS I, once for a project design exercise and twice for project evaluations. Infrequency of utilization was not due to any inherent problems with the mechanism but rather the availability of more suitable and less costly means to obtain desired technical services. (It is to be noted that the Agency has just recently awarded three new 3-year IQCs for work in environment and natural resources. In addition, five additional IQC awards have recently been made for services in agriculture with scopes of work broad enough to include many natural resource topics).

2.1.3 ANR/NR Backstopping Support Mechanisms

Support by other public sector agencies and assistance obtained from the S&T Bureau were vital to ANR/NR's capacity to implement NRMS I. Such assistance has been furnished in a variety of ways, ranging from the provision of full time staff members to work in the ANR/NR office to the provision of specialized services to perform specific time limited assignments. In the former cases, such help was usually provided through an inter-agency RSSA. In the latter, acquisition of skills was often made through a Participating Agency Service Agreement (PASA) or through a "buy-in" to one of several S&T projects which provide access to the services of public, private and non-profit agencies. The buy-in mechanism is usually (but not always) one of the least management intensive methods of procuring services since it involves only an amendment to an existing agreement (RSSA or Cooperative Agreement) and a good deal of the administrative processing is handled by the appropriate S&T project officer.

2.1.3.1 Personnel and Logistic Support

The Africa Bureau's RSSA with the U.S. Department of Agriculture (through the latter's Office of International Cooperation and Development or OICD) has been the mainstay for providing the staff necessary to enable AFR/TR to carry out its core functions. This is particularly true of ANR/NR where the RSSA provides two of the three positions concerned directly with backstopping the NRMS Project and an administrative position as well. Another source of staff support is the detailing to ANR/NR of Fellows of the American Association for the Advancement of Science (through a buy-in to the S&T project "Program in Science and Technology Cooperation"). But dependence on other agencies for core personnel functions risks potential vulnerabilities or uncertainties (see discussion of RSSA arrangements below).

2.1.3.2 Technical Assistance

A number of specialized agencies provided vital support to implement NRMS I, pre-dating and later complementing the work of the LOE contractor. Of particular importance were buy-ins to finance forestry services (through the S&T Forestry Resources Management project) and the design, training and analytical tasks performed by WRI's Center for International Development and Environment (through the S&T Environmental Planning and Management project). Other agencies called upon to assist in the implementation of NRMS I through buy-ins to various S&T projects were the Peace Corps (to help carry out projects in Niger and Burundi), the World Wildlife Fund (biodiversity assessments in Niger and Madagascar), a soils survey in Uganda by the USDA Soil Conservation Service, and several studies carried out under the auspices of Oakridge Laboratories. In addition, the National Park Service provided services to ANR/NR under a RSSA with the Africa Bureau.

2.1.3.3 Other Mechanisms

In addition to the foregoing, ANR/NR also utilized other techniques for initiating NR activities or responding to perceived opportunities. In a number of instances in which a mission had presented a promising proposal and had the implementation capacity, ANR/NR would simply transfer the funds to the mission. Similarly, a broad range of biodiversity grants were funded on the basis of unsolicited proposals by PVOs. In addition, several policy studies were approved after a competitive selection process.

2.1.4 Evaluation of Mechanisms

The wide variety of mechanisms used to implement NRMS I, which is reflected in its design, is attributable to (1) continued attrition of A.I.D. staff relative to workload, (2) the diversity of the program itself, (3) lack of a buy-in mechanism in the LOE contract, and (4) the existence in the S&T Bureau of a range of access modalities that could usually be rapidly and effectively drawn upon. The somewhat ad hoc approach may have been appropriate for getting a new program started while operating under great pressure to demonstrate progress. The longer view and more systematic style likely to be offered by NRMS II may provide an opportunity to select mechanisms that are more appropriate for the future of the program. Such mechanisms should be compatible with a long term commitment to natural resource management and should encourage continuity, particularly for functions like monitoring, data management, policy analyses and evaluation. The likelihood of the emergence of unforeseen (and unforeseeable) new issues and requirements will demand a high degree of flexibility in the posture of NRMS II.

2.2 NR Workload Characteristics

2.2.1. Structural Considerations

The configuration and style of operations for implementing NRMS II will be shaped in part by the following factors:

2.2.1.1 Attenuation of A.I.D. Direct Hire Staff

This trend, if continued, will result in increasing dependence on contractors, RSSAs and other personnel arrangements to implement ANR/NR programs. A related problem is the present mix of A.I.D. staffing with its preponderance of Foreign Service Employees with a relatively high rate of turnover. NR programs and staffing by definition should emphasize continuity and longevity. The situation argues for more NR positions in Washington for GS and AD staffing by specialists.

Bilateral missions and the REDSOs confront much the same problems of workload in relation to staffing. As attrition proceeds, DH staff are increasingly preoccupied with management, operational and housekeeping tasks and must look to alternative means for providing technical functions. This has led to increased dependence on Foreign Service Nationals, personal service contractors, PASA personnel, local firms and PVOs.

2.2.1.2 NR Program Coordination

Recent years have seen a major growth in the magnitude and diversity of NR activities in Africa and the number of agencies involved. Even within the U.S. government there has been a proliferation of participants, e.g. EPA, the Department of Energy and its national laboratories (global warming), NPS (park management), USGS (GIS), Fish and Wildlife Service (endangered elephants), Department of Defense (anti-poaching) not to mention such long standing collaborators as USDA, its Forest Service and the Peace Corps. Thus, program coordinations and tracking have become an increasingly important and time consuming task for ANR/NR.

2.2.1.3 NR Policy Role

NR policy issues, policy analysis and the encouragement of policy changes have become an increasing preoccupation in the ANR/NR workload due in part to the growth of non-project assistance and to the realization that policy considerations play a critical role in determining the success or failure of NR programs. This implies:

- The need for a greater effort toward upgrading NR policy analysis capabilities in A.I.D., both in Washington and the field (this is discussed in Chapter IV), and

- Increased need for policy-related services accessed by S&T buy-ins (e.g. the Environmental Planning and Management Project, the Access Project (Land Tenure Center), the Agricultural Policy Analysis Project, the Decentralization Finance and Management Project and the forthcoming Environmental and Natural Resource Policy and Training Project) as well as policy-oriented services that can be procured from eight consulting firms with IQCs in (1) environment and natural resources, (2) rural and regional income generation and natural resources, and (3) agriculture.

2.2.1.4 Return of Direct Hires to Main State

The expected return of AFR/TR's direct hire staff to Main State next year, and space limitations there, is likely to result in a bifurcated structure in which the RSSA technical and support staff of ANR/NR will be separated from its direct hire managers. Communications between the two elements of the office and the lessening of day to day contact will be a serious problem even with greater use of fax and electronic mail. On the other hand, if ANR/NR can turn over its present space to an augmented RSSA and contract support staff, the move would enable the office to strengthen its capacity to service field needs and monitor the program.

2.2.1.5 RSSA Arrangements

As indicated earlier, the AFR/USDA RSSA has been a critical means by which ANR/NR has assembled much of its technical backstopping capacity. In its present form the RSSA is a convenient, cost effective mechanism for providing such skills. OICD is very service-oriented, eager to meet ANR/NR's needs. However, over reliance on the RSSA may be administratively risky; its use could be severely restricted if it became viewed as a means of circumventing hiring ceilings on direct hire staff or of by-passing private sector procurement. This happened in 1984/5 when accusations of such practices, including the use of RSSA personnel for direct hire functions, led to the abolition of the USDA Graduate School.

A second consideration relating to the AFR/USDA RSSA is the effectiveness of OICD as the mechanism for accessing USDA and other resources. OICD has been afflicted with a number of staff and management problems and is now reorganizing and seeking to turn the corner under new management. The foregoing issues are raised as potential warning flags that ANR/NR should evaluate in considering various means for accessing technical services.

2.2.1.6 Contracting Procedures

The A.I.D. Office of Procurement is revising its contracting methods for projects that involve buy-ins. In the future, all such projects are due to be implemented under two contracts -- a contract for the continuing "core" services and a parallel contract for buy-ins. Under this procedure PIO/Ts for mission or Bureau buy-ins to an S&T project will not go to the S&T contracts office as before but to the appropriate regional contracting officer, the aim being to make more manageable the former office's workload, accelerate the buy-in process and simplify accounting procedures. A second contracting change, effected by the FY'90 A.I.D. legislation, is that 10% of any contracts in excess of $500,000 must be subcontracted to a "disadvantaged enterprise". This requirement is apart from 8A and small business set asides.

2.2.1.7 Restrictions on Contract Personnel

While it is clear that contract personnel are excluded from exercising direct hire functions (e.g. signing documents on behalf of A.I.D., official representation or negotiation, supervising government employees, etc.) there appears to be lack of agreement within A.I.D. -- or at least differences in practices -- as to the nature and extent of support activities that contractors may legitimately engage in. Doing preparatory work (preparing drafts, conducting studies, rendering advice, etc.) appear to be legitimate functions but even these may be questioned if the contract staff occupies office space with direct hire employees and if they are supervised by direct hires. Contract services which are "stand alone" operations and, while operating under A.I.D. guidance and direction, do not involve employees working for direct hires on a day to day basis, appear to be the modality most likely to pass A.I.D. legal and contracting scrutiny. Of course, these restrictions place limitations on the kind of help ANR/NR needs most.

2.2.2 Program Configuration

Modalities for implementing NRMS II should be a function of the tasks to be performed. The style and approach of NRMS II should differ from NRMS I. In the former, ANR/NR performed a catalytic, vanguard, consciousness-raising function. Emphasis in NRMS II should be on consolidating earlier initiatives, encouraging and backstopping new starts, and servicing a growing need for assistance in strategy review and guideline development, program monitoring, impact assessment, information management, and on meeting NR training needs. Consistent with the above should be a change in the workload and style of the NRMS Project Manager, lessening that person's involvement in implementation operations and increasing his/her involvement in policy direction, coordination, monitoring program progress and reporting.

As indicated in earlier sections, major NRMS II tasks and approach ca. summarized as follows: (1) greater emphasis on analytical capacity to deal with NPA policy issues and NR policy choices, additional NR assessments, the measurement of

program impacts for DFA requirements, the development and utilization of information management systems, special studies and surveys including those on global warming, and greater attention to monitoring and evaluating the program and (2) an operational workload that may be nearly equal to that of NRMS I and characterized by additional project or sector grant start ups in larger program countries, expansion of PVO and biodiversity work in the smaller ones, action to address NR training needs, and, lastly, possible regional initiatives.

To perform these functions more effectively, the NRMS Project Manager and his immediate staff need three kinds of assistance: (1) direct support to strengthen the manager's capacity to perform his/her implementing, monitoring, reporting and liaison functions, (2) access to technical services tailored to African NR needs including services not readily available through existing mechanisms, and (3) a means of positioning long term NR personnel in the field. The options presented below discuss various ways these different types of needs might be met.

2.3 Modality Options for NRMS II

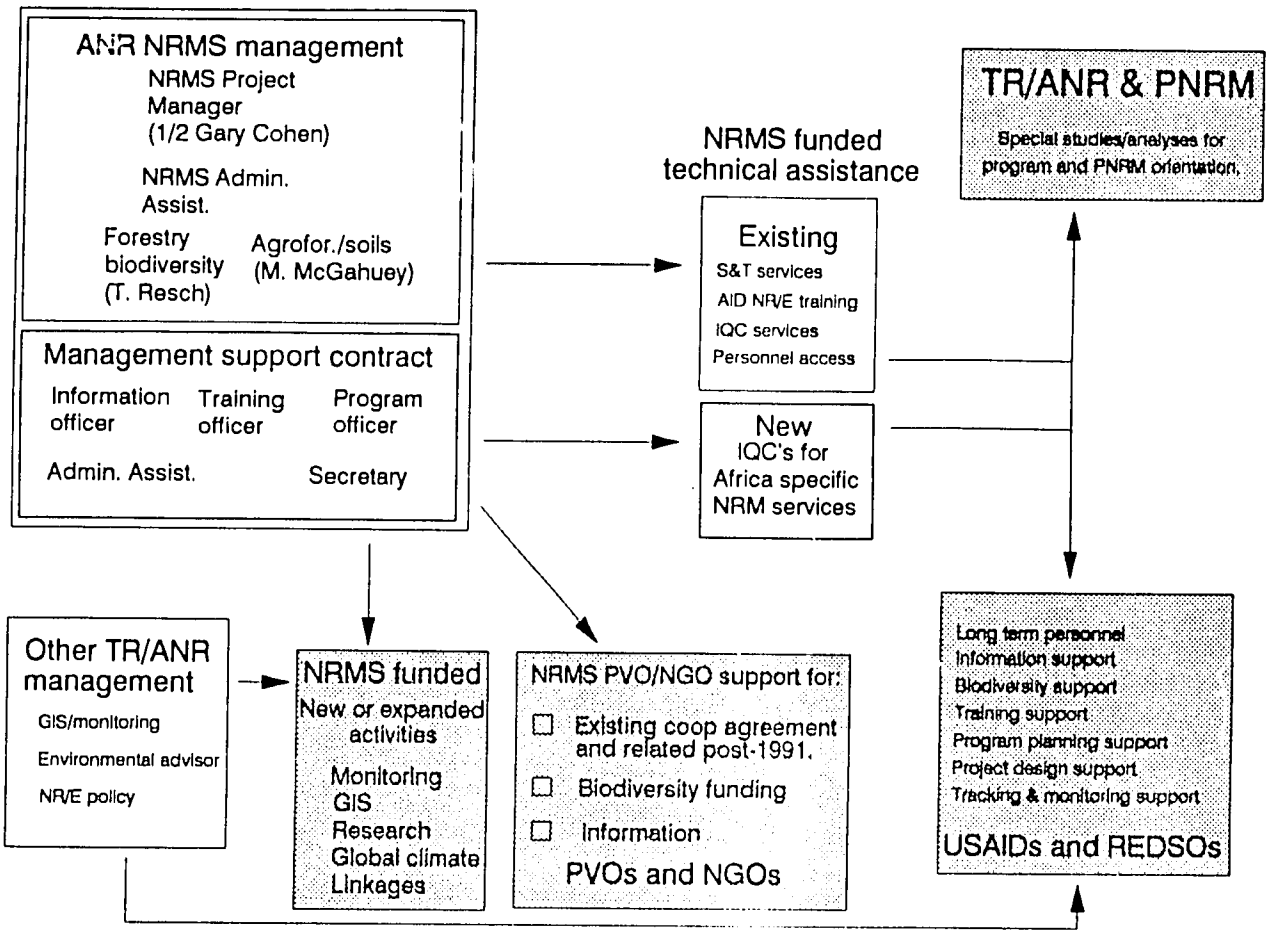
2.3.1 General Considerations

In considering alternative mechanisms for implementing NRMS II, the Study Team evaluated a series of plausible choices. Among the factors which influences the team's thinking were (1) the technical resources currently available to ANR/NR (or soon to be forthcoming) through existing S&T and IQC mechanisms and the ease/difficulty of accessing such resources, (2) the length of time and degree of effort required to put new implementation arrangements into place, (3) the strength and limitations of each choice in relation to the probable needs of ANR/NR and (d) relative costs. In the end, the team narrowed its recommendations to two broad alternatives. However, as will be noted below, there is considerable flexibility within each alternative for adding or subtracting particular components or management styles as NRMS II evolves and requirements change.

2.3.2 Option I - Management Support Contract and IQC Technical Service Contracts

This option envisages the letting of two types of contracts: first, a Washington based contract the principal task of which would be to support the NRMS II Project Manager, and second, as needed, one or more IQC technical contracts to supplement ANR/NR's capability to respond to mission and Bureau requests for services. (See Figure 1) The technical support contract would not itself be a source of technical services but would reinforce and enhance the capability of the NRMS Project Office to perform its functions.

Figure 1. Option I for NRMS II



The contract staff would include three mid-level NR professionals: an Operations Officer, a Program Analyst and Information Officer and a Liaison and Training Officer -- plus an administrative assistant and a secretary. The responsibilities of the NR professionals would be as follows:

2.3.2.1 Operations Officer

Responsibilities include processing, routing and follow up on implementation actions, e.g. PIO/Ts, status of contract amendments, status of actions taken on field requests for services, monitoring and drafting responses to requests, identifying bottlenecks within A.I.D. or A.I.D. intermediaries, tracking of reporting requirements, tracking status of cables or replies to the field, etc.

2.3.2.2 Program Analyst and Information Officer

Responsibilities include review of the substance and timeliness of all activity reports by NRMS grantees, contractors, PASAs, etc., comparison of actual activity progress with earlier plans, monitoring evaluation activities, attending activity debriefings, preparation of regular NRMS-wide status reports, identifying major problems, achievements or impacts. The reporting function would aim at providing the NRMS Project Manager and AFR management with a sense of the pace and direction the program is taking. His/her work would be tied into the data management system discussed in Chapter V and with the work of the Agronomist dealing with NR indicators.

2.3.2.3 Liaison and Training Officer

This officer provides a means of communications between the Project Manager and related activities by other offices in TR, within A.I.D. and with NR organizations both in the U.S. and Africa. He/she would screen NR activities and alert the Project Manager of new developments, research findings, upcoming conferences or briefings, etc. In addition, this person would participate in the design and execution of a NR training program (if reliance on S&T buy-ins is considered inadequate) and would monitor and facilitate NR training activities generally.

2.3.2.4 Operations and Secretarial Services

The three support officers would be assisted by a secretary and an administrative assistant. An administrative assistant will increase the effectiveness of the support officers, particularly after the ANR/NR direct hire staff moves back to Main State.

The support contract staff would be co-located with the RSSA staff. If possible, they would utilize the space and facilities now used by ANR/NR after its DH staff returns to Main State. It is proposed that a Gray Amendment or an 8-A firm be selected for the support contract, a practice being followed by other A.I.D. Bureaus. A number of such firms are qualified to perform such work and the contract selection process is much simpler and rapid, although a period of at least four months must be anticipated. The Bureau for Science and Technology, Office of Forestry, Energy and Natural Sciences (S&T/FENR) and ANE/PD/ENV offices have taken advantage of the authority included in the FY'90 Appropriations Act, carried forward in the FY'91 Act, to finance from program funds environmental personnel to augment their backstopping capability. It is important that the scopes of work for the employees of such contracts clearly show that their responsibilities are limited to subordinate support services and not those normally exercised by direct hire employees (e.g. project management, representing the office, dealing with policy), otherwise objections can be expected by the contract and GC offices.

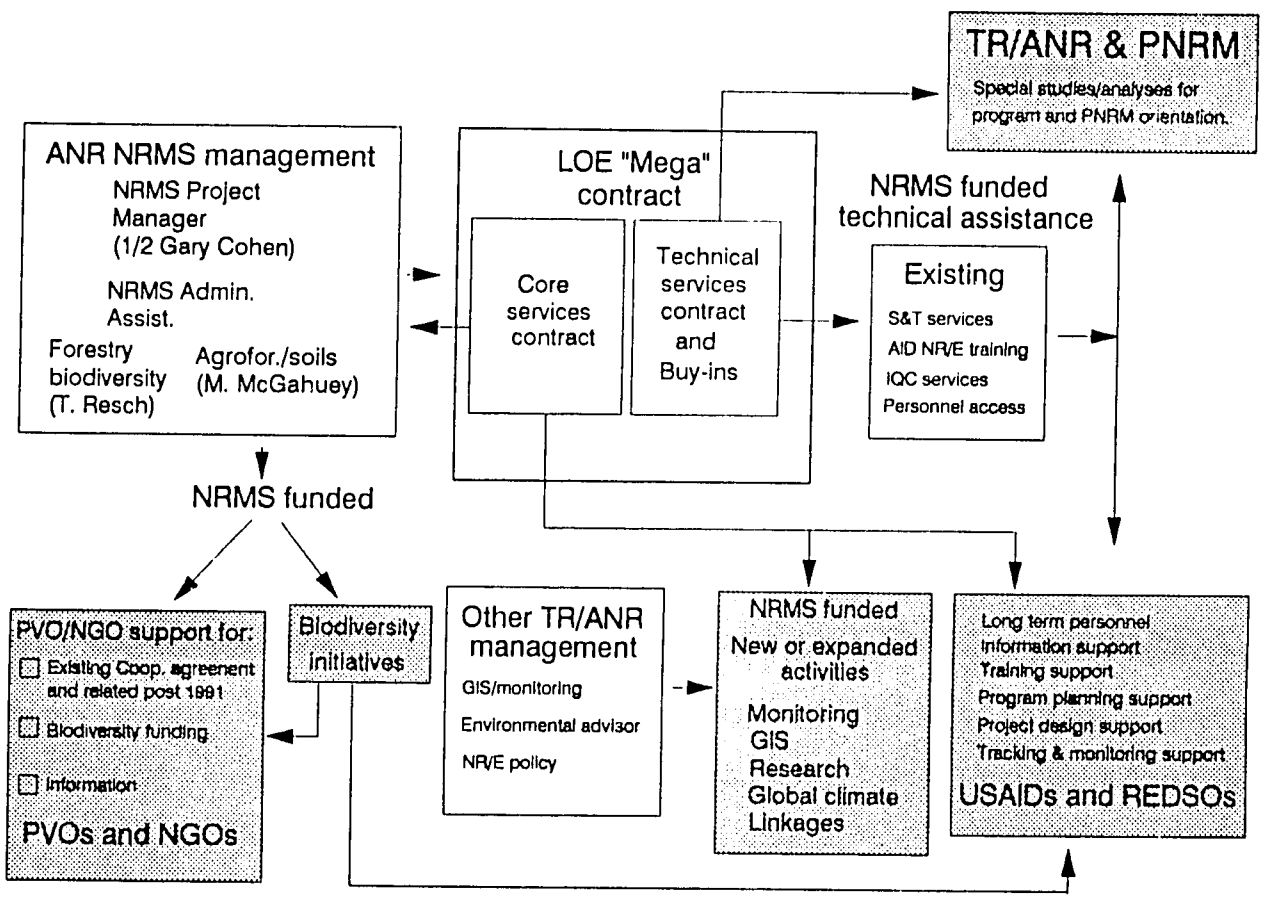
2.3.2.5 IQC Technical Support Contracts

As a means of achieving the necessary flexibility to respond to unforeseen requirements for services or to deal with gaps or inadequacies in existing sources of expertise, ANR/NR may wish to compete and award one or more IQCs for technical services to the missions and for the Bureau. Policy analyses and special studies are items where additional help may be needed. If more of the workload moves to the REDSOs, a possibility noted below, they may wish to let additional IQCs of their own. The PP Supplement should therefore authorize and include funding for the award and use of IQCs to meet this potential need.

2.3.3 Option II - "Mega" Contract with Provision for Subcontracts and Buy-Ins

Under this arrangement the contractor would provide both the Washington support function and offer specialized services to the field. (See Figure 2.) As indicated earlier, under A.I.D.'s new procurement procedures, projects which are to offer a buy-in mechanism will contain two contracts, one for core services and one for buy-ins.

Figure 2. Option II for NRMS II



The core services contract would provide the full range of management support services to the NRMS II Project Manager that are envisaged for the management support contract under Option I. It would include the data management system recommended in this report. It would also contain a range of support services to the field missions (project design, NR assessments, conferences and workshops, special studies) similar to those performed by the LOE contractor in NRMS I but in a more responsive, less "pioneering" mode.

An attractive aspect of this option is that it would package all of ANR/NR's support requirements within one contract following very much the pattern used by the Irrigation Support Project for Asia and the Near East (ISPAN). For example, the ISPAN project has a prime contractor and seven subcontractors (including two universities and a PVO) and a Rosslyn-based technical support center to backstop the ANE/TR Project Manager. Thus, under this option, the NRMS Project Manager would only have to deal with one entity for all backstopping requirements (other than the biodiversity component).

ISPAN has only occasionally been used as a mechanism for providing long term resident staff to the field but Option II could include such services as part of the core contract if needs could be determined in advance. Long term field personnel could also be funded by buy-ins.

A disadvantage to Option II is its higher cost. Also, a prime contractor is often not in the best position to make the most objective choice between modes of accomplishing a given task. The contractor is always under self-induced pressure to utilize his own overhead-generating staff and to exercise quality control. Another disadvantage of this option is the effort and length of time that would be required to announce, compete and award such a large and highly sought after contract. Furthermore, it is not clear that the quality and range of service that could be offered by the successful bidder and its subcontractors would constitute for ANR/NR a substantial improvement over what it can obtain through presently available S&T buy-ins and IQCs. Thus the disadvantages of this option appear to outweigh the advantages.

2.3.4 Supplementary Measures and Administrative Styles

The choice of Option I would not mean that ANR/NR would forego opportunities to further improve its management and technical services to the missions and to the Bureau. Particular attention would be given to meeting Bureau and mission needs for policy analysis and special studies drawing on S&T resources (e.g. the EPM, Access and APAP projects and the forthcoming EPAT project) as well as IQC talent.

Another potential source of analytical expertise may be the S&T/LAC Development Strategies for Fragile Lands (DESFIL) project which is in the process of being redesigned (and a new contract competed) with the possibility of realigning its services to meet the needs of Africa and/or Asia. DESFIL provides a range of policy, planning, data management, evaluation, sustainable agriculture and resource assessment

services which could strengthen ANR/NR's delivery capacity in those areas and DESFIL's emphasis on working with and strengthening local institutions runs parallel to that of ANR/NR. Other opportunities for inter-Bureau collaboration could be utilized within the framework of Option I.

The structure of Option I could also accommodate a change toward providing a more significant role for the REDSOs in the implementation of NRMS II if the Bureau wished to move in that direction. It is assumed that the methodologies of many of the Washington initiated or executed activities that characterized NRMS I are now sufficiently well understood by the REDSOs that they are in a position to lead and supervise such efforts on their own. REDSOs could, as requested, assist field mission to select and buy with NRMS funding into relevant S&T projects, IQCs (both Washington and REDSO let) and RSSA or PASA services. While some missions are familiar with the range of these services, many are not and could utilize a REDSO brokering function. A larger role by the REDSOs in NRMS II implementation might require additional REDSO NR personnel and authorization for such positions should be included in the PP Supplement.

2.3.5 Interim Measures

ANR/NR should consider adopting interim measures in the interest of coping with its expanding workload until more permanent implementation arrangements are installed. A long standing and readily accessible source of help would be the AFR/USDA RSSA managed by OICD. ANR/NR should consider requesting OICD to use its contracting authority to hire appropriate staff to provide near term support to the NRMS Project Manager. Use of short term purchase orders for bringing personnel on board quickly might be considered in order to tackle the immediate workload.

Two positions are proposed, an operations officer and a program analyst. The first would handle the operational tasks concerned with program implementation (processing PIO/Ts, drafting cables and assisting with a myriad of liaison and administrative functions) plus the additional work involved in establishing the management support or "Mega" contract.

The second position would be concerned with the operation and effectiveness of the data management system as it evolves and with methods of tracking, monitoring and reporting on NRMS activities generally. He/she would work in close liaison with the ANR/NR officer working on impact indicators. If possible, this person would also assist on training matters. The two support officers should be assisted by a secretary. Addition of these three positions would permit the Project Manager to devote more time to substantive issues, tracking the program and to facilitating the installation of new implementation arrangements. Recruitment action should be started soon in view of the imminent move of ANR/NR's direct hire staff to Main State and the disruption which that will involve.

2.3.6 Biodiversity Grant Management Options

As will be discussed in the following chapter, the biodiversity component of NRMS I, although quite modest in the original design of the project, has mushroomed both in magnitude and in geographic scope since 1987. For understandable reasons, arrangements for monitoring and evaluating this diverse series of activities have not kept pace. It is therefore felt that the design of the PP Supplement should include a mechanism, or mechanisms, to permit ANR/NR to make grants and to keep better track of biodiversity work and to gain a better understanding as to its problems and potential. To that end, the Study Team proposes consideration of one or more of the following mechanisms.

2.3.6.1 Buy-Ins to the Biodiversity Support Project

An obvious and appropriate means by which ANR/NR could fund and track biodiversity activities and establish linkages among the participating PVOs would be through a buy-in to the S&T's conservation of biological diversity program's Biodiversity Support Project (BSP). The BSP is being implemented through a cooperative agreement with the World Wildlife Fund in partnership with the World Resource Institute and The Nature Conservancy (TNC). Both the World Wildlife Fund (WWF) and WRI have considerable African experience although TNC does not. An AFR buy-in to BSP could provide the funding under which WWF (either alone or in collaboration with the other two) could make subgrants for biodiversity activities and monitor the program. In FY'89 LAC financed a $500,000 buy-in to BSP for a small grant activity. Following LAC-developed criteria, WWF solicited proposals, evaluated and ranked the responses, recommended the awards and, after consultation with LAC, made the subgrants. The buy-in also financed an additional WWF staff person to manage the process and monitor the grants. NRMS II could follow a similar pattern. BSP could probably accommodate AFR buy-ins at a level of up to $400,000 per year (not including buy-ins from field missions). Administratively the option is attractive in that it would involve only an amendment to the S&T/WWF cooperative agreement per buy-in. A possible disadvantage of the arrangement might be the perception of other conservation PVOs that they were being shunted aside by their large colleagues.

2.3.6.2 Award of a Cooperative Agreement for Monitoring and Grant Management

An alternative which might complement the previous option would be to compete and award a cooperative agreement to a PVO, university or consortium. Advantage to this approach would be to tap the resources of conservationist agencies with strong African experience -- e.g. Conservation International, Wildlife Conservation

International, African Wildlife Foundation -- and to pair one or more of them up with a developmental PVO [4] so that human needs considerations can be factored in.

Another advantage of a separate entity is that the program would not be limited to BSP's absorptive capacity for AFR buy-ins. If future biodiversity activities in Africa are going to be characterized by a large number of grants over and above activities financed by bilateral programs, a separate grant making arrangement might be appropriate. The disadvantage of this option is the time and effort required to set up the new mechanism.

2.3.6.3 Private Contract

A third possibility would be to compete and award a contract for a firm to monitor the biodiversity program and either (a) recommend biodiversity grants on the basis of criteria and procedures stipulated by ANR/NR or (b) perform the grant making function for the office. While the use of a profit making organization may seem strange at first sight, the formula has worked to a degree in the case of the African PVO Initiatives project (see Chapter III, 2.2.2). Good relations are reported to exist between the contractor and its U.S. and African PVO clientele. Here the contractor processes subgrant requests but awards are made by AFR. This procedure has proved somewhat cumbersome and lengthy due to a requirement for contracts office review of each subgrant. AFR/DP, (the sponsoring office) considered including the subgrant function within the contract but decided against it because of the higher overhead charge and a desire to retain greater control. In either case, a disadvantage to using a private contractor is the additional cost and the time and work required for competition and selection. The time factor could be reduced if a 8-A or Gray Amendment firm were selected.

[4] e.g. World Neighbors, Cultural Survival

III. NRMS SUPPORT TO PVOS/NGOS

1. The Evolving Role of PVO/NGOs in the NR Sector

1.1. Historical Perspective

PVO [5] involvement in NRM in Africa is a relatively recent phenomenon, beginning to be significant in the early 1980s. Development oriented PVOs initially received the bulk of NRM funding, with CARE being the main actor from the beginning. Some of the principal activities have been in forestry, agroforestry, soil and water conservation and improved wood stoves. A.I.D. funding for the development oriented PVOs has reportedly been nearly flat since 1984; CARE funding has greatly expanded through its European affiliates.

Beginning in the mid-80s, with the growing awareness of the linkages between poverty, demographic growth and environmental problems, and recognizing that policing and enforcement will rarely be adequate measures in themselves to protect endangered species or natural areas in Africa, some of the traditionally environmental/preservationist oriented PVOs -- WWF in particular through the A.I.D.-funded Wildlands and Human Needs Program -- began to expand their field activities into associated development activities. Most of their development work has centered on "buffer zones." Buffer zones denote areas surrounding or adjacent to a protected site in which limited developmental, income producing opportunities for the local populations are permitted or encouraged, thereby diverting or reducing pressure on the resources of the protected sites. This approach has been very successful in attracting funding from A.I.D., other donors and from the general public. At present time there is a marked increase in biodiversity funding for PVO integrated conservation-development projects based on the buffer zone management philosophy.

PVO involvement in NRM in Africa has grown so dramatically in the past 10 years because PVOs are generally credited with the following positive characteristics:

- A more direct and closer understanding of the real needs and problems of rural people than that of governments or of donors;
- More often able to recruit more highly motivated individuals to their staffs than most other organizations;

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[5] This paper follows the convention of using "PVO" to refer to the U.S. based, international Private Voluntary Organization and indigenous "NGO" for the national or local Non-Governmental Organizations found in A.I.D. client countries.

- More cost efficient operations due to their non-profit status, lower salaries and overhead and generally greater cost consciousness;

- A flexible and innovative approach (which is recognized by the use of grants as a funding mechanism compared to the more prescriptive contracting mechanism.)

Where local governments are repressive or corrupt, PVOs may also provide a mechanism for donors to promote development while circumventing bilateral support to such governments.

While PVOs do have many very strong points, they have no "magic bullets". Some of their weak points often include the following:

- While very successful in recruiting highly motivated junior professionals, the lack of career opportunities for natural resource professionals often leads to high turnover and a shortage of senior level technical expertise on their staffs.

- Directly related to the first point is a generally lower level of technical expertise, particularly for the development-oriented PVOs. The environmental PVOs, on the other hand, may be the principal source of technical expertise for Africa in the field of biodiversity.

- PVOs are poorly placed to achieve natural resource policy reform. They are, however, often well placed for identifying policy constraints and for recommending or demonstrating policy alternatives. They generally lack, however, much clout with the national governments who too often view PVOs with suspicion and mistrust.

- They cannot replace or substitute for governmental institutions charged with natural resource management.

- They are characterized by poor management of information and by poor (or uneven) reporting.

Another development in the late 1980s has been donor interest in, and support for, indigenous NGOs, including those involved in the natural resource sector. It is felt that NGOs are apt to be even more "in touch" with local needs than the PVOs, and more likely to have a long term presence than the PVOs. It is generally recognized that most NGOs have very poor management, bookkeeping and proposal writing skills, and are often lacking in technical expertise.

NGOs in the NR sector are extremely variable. They run the gamut from truly grass roots, small rural groups whose members are mostly illiterate, to small groups of urban "intellectuals" with no rural constituency to church affiliated, multi-tiered NGOs of national or regional scope. The Kalahari Conservation Society in Botswana, with its

modern, computerized offices and its avowed role of serving as a "watchdog on the government," resembles an American environmental PVO.

1.2 Role of PVOs in Support of Indigenous NGOs

There seems to be a consensus that indigenous NGOs can and should play an increasingly active role in NRM, but that most NGOs are very weak in their managerial capacity to plan, prioritize, prepare proposals, and to perform monitoring, evaluation and accounting functions. Technical capacity is highly variable. There is further general agreement that PVOs are the best placed to provide support to indigenous NGOs.

The PVO/NGO NRMS cooperative agreement supports a consortium of American PVOs for the principal purpose of capacity building of indigenous NGOs, primarily in four African countries through the creation and/or support of local consortia of NGOs. It has only been operational for a little over a year. The two year period it is funded for is clearly not adequate to accomplish the type of institution building/strengthening that is being attempted.

The impressions gathered on this activity are positive, but the project has not been evaluated, and it is premature to say now how this activity should be modified or expanded under NRMS II. Clearly the initiative should be continued in some form beyond the completion date of July 1991, but more information is needed. An evaluation is scheduled in the near future to aid in the design of the extension. Although PVO/NGO NRMS is supporting several regional activities and special events, the evaluation should concentrate on the four target country programs which have directly confronted the task of indigenous NGO capacity building. Issues to be addressed include the following:

- The extent to which the national programs are demand driven versus supply driven and the degree to which they respond to the real needs of the NGOs.

- The desirability of continuing to run the program out of Washington, of what has been/should be the involvement of the USAIDs, and of the importance of the regional aspects of the program, (i.e., the sharing of information and experiences among the four country programs)

- The types of NGOs that are participating in the national programs. The danger exists that they are mostly urban-based NGOs without significant rural constituencies. The most effective outreach to rural NGOs should be sought.

- Evidence that the local consortia can become sustainable organizations that can survive beyond the end of the project. Look at how well the NGOs collaborate. Define the advantages of membership in the national

consortia. Look at what the length of project involvement in a given country should be.

- The issue of whether the national programs should continue to focus on the process of NGO capacity building or if they should become increasingly product oriented through the issuance of grants for NRM activities to consortia members. The possibility of the USAIDs supplying such grant money should be explored.

- The overall potential of NGOs in NRM. Look at what types of NGOs should be supported. Determine whether there is justification for a substantial increase in overall support for NGOs.

It would seem that the regional aspects of the project are very important; much would be lost if the national programs were simply bilateralized. For ANR/NR, the process of NGO capacity building would seem a more important objective than the products (NRM activities) that flow directly out of this project. The small grants component of PVO/NGO NRMS is important as part of the process of increasing the managerial capacity of the national consortia and their members. More substantial funding, though, should come from the USAIDs and other bilateral or multilateral donors present in country.

The evaluation that is planned will not only help to shape the future direction of the PVO/NGO NRMS project but should be helpful in terms of the Bureau's policy and attitude toward other PVO/NGO activities that are emerging in support of NR activities in Africa. Some of these are briefly discussed in the following section 2.2.2, "Other Modalities".

1.3. Role of PVOs in Biodiversity Activities

As virtually all of the NRM I biodiversity program as well as much of the bilateral activities are being implemented through PVOs, it is important to look at how this is being done. The 30-35 biodiversity grants and cooperative agreements let under NRMS I have not been evaluated, and it is probably too early to do a meaningful evaluation. One can, however, define certain issues that must be addressed and that should govern the future development of the program.

- The appropriate roles of the environmental and the development PVOs in buffer zone development must be better defined. The environmental PVOs are recent players in development and have obviously started out very low on the learning curve (McKay and Gow, 1990). Their dedication to the cause of biodiversity protection may, however, compensate in large measure. The traditional development PVOs have no particular motivation to protect natural areas. ANR/NR will need to closely evaluate the growing body of buffer zone management experience with the objective of trying to define the best forms of collaborative arrangements between

PVOs with differing specializations -- environment/ preservation, development, institution building, etc.

ANR/NR will need to study how PVOs can best be included in large projects, that, by A.I.D. contracting regulations, must be competed. This issue has recently come up in Botswana and Kenya on bilateral biodiversity projects that have been or may be let competitively. PVOs are often opposed to the competitive bid process and do not view themselves in the role of a consulting firm. Yet the implementation of large projects may often call for a mix of organizations including consulting firms, PVOs and others.

2. PVO/NGO Support Mechanisms

2.1 NRMS I Experience

2.1.1 The PVO/NGO NRMS Project

This project involves a cooperative agreement of approximately $1.9 million with the Experiment in International Living in its capacity as the lead agency of a three party consortium -- working under a memorandum of understanding -- which includes CARE and the World Wildlife Fund. The structure of the project is well organized but somewhat complex due to the many parties involved and the emphasis on securing a collaborative mode of operations. It is headed by an Experiment in Living (EIL)-employed Home Office Coordinator who is assisted by an Activity Manager (housed in the World Wildlife Fund's Washington office). Collaboration among the three consortium members is facilitated by a Consortium Steering Committee. In addition, a number of other U.S. PVO/NGOs are brought together for advisory and information sharing purposes from time to time through meetings and informal liaison of Consortium Associates.

As indicated above, the project aims at institutional and technical strengthening of local NR-oriented NGOs in four target countries - Mali, Cameroon, Uganda and Madagascar. Cooperating NGOs in each country work through a consortium under the auspices of a lead agency or agencies, chosen by the consortium. Country Coordinators, financed by the project, serve as a point of contact to facilitate sub-grants or contracts with participating NGOs.

The cooperative agreement was only concluded in July 1989. Although experience is therefore limited it appears to be working well in many respects. Relationships between the U.S. consortium and A.I.D. at the Washington level have been harmonious and effective. The three members of the consortium have worked well together and the Steering Committee reports that the process has led to collaboration in a number of related areas. Relationships between the local PVO/NGO community and

the Country Coordinators have also seemed to work well, particularly in those countries, like Mali, which have formed fairly cohesive and purposeful local consortia. Relations with the USAID in the four countries vary from cooperative to distant; in the latter cases it is not clear whether the project has not kept the USAIDS adequately informed or whether the latter are not sufficiently interested or too preoccupied with other matters.

From an administrative standpoint an important characteristic of the project is that it imposes few management burdens on A.I.D. field missions or on ANR/NR's staff in Washington. Sub-grants or contracts let by the Country Coordinators, on the recommendation of the consortium and lead agencies, are monitored by the former and include financial and program reporting requirements. These in turn are to be reviewed by the EIL Activity Manager who prepares periodic reports to the NRMS Project Manager. The cooperative agreement also includes a fairly elaborate system for monitoring activity impacts and provides for two formal evaluations. The first such evaluation will take place in early 1991.

2.1.2 Other Activities

In addition to the foregoing project, NRMS I included a number of other initiatives dealing with the PVOs and NGOs in Africa. For example, ANR/NR helped to finance CIDE's continuing examination, support and dissemination of successful local initiatives through its "From the Ground Up" project. A FY'88 NRMS grant, also to CIDE financed a study on strengthening local Rwandan NGOs. A transfer of funds in FY 1989 permitted the USAID in Kigali to award a series of sub-grants to local NGOs. In addition, as part of the LOE contract, E/DI produced a substantial report, supported by case studies drawn from three countries, on the role of African NGOs in NR management and ways of enhancing their effectiveness. Finally, as noted above, NRMS-funded biodiversity activities have grown apace since 1987 and have often included the participation of local NGOs.

2.2 Options for NRMS II

2.2.1 Continuation/Expansion of PVO/NGO NRMS

The existing organizational structure of the PVO/NGO NRMS activity seems to have worked well during its initial period of program start up, despite the multiplicity of organizations involved at both Washington and field levels. Roles and responsibilities appear to be well understood and are being followed. A professional and collaborative relationship exists among the parties. The quality of field and headquarters staff appears to be high. Subject to the results of the forthcoming evaluation, an expansion of the project to additional countries (while solidifying the work in the original four) appears to be an efficient means of serving the Bureau's interest to initiate or broaden PVO/NGO natural resource activities, especially in Group III countries, while involving minimal additional management tasks for ANR/NR.

The present cooperative agreement expires in August 1991. If the evaluation is positive, the obvious option would be to amend the agreement to (1) continue the work in the original four countries (with emphasis on strengthening local capabilities and initiating activities that will generate local self support), (2) expansion of the program on the basis of jointly agreed criteria, (3) bringing additional PVOs into the Consortium as needed, (4) strengthening the project management structure by adding a monitoring and evaluation capability to the EIL staff. Given the major role played by women in NR activities in Africa, it would be appropriate to choose a woman for the monitoring and evaluation function. As the project expands, the NRMS Project Manager and the ANR/NR officer dealing with impact assessments will need to have fuller reports of project activities and results. Evaluation criteria and impact indicators should be designed in conjunction with the broader environmental indicators ANR/NR is formulating (and should include criteria which try to measure changes in "process" attitudes and behavior). Suitable data gathering and retrieval linkages should be established with the broader data management system to be adopted by NRMS II.

If there are contracting difficulties with the above option (the A.I.D. contract office is negative on bringing additional PVOs into the existing agreement), two alternative possibilities exist: (1) expand the activity through the existing consortium, or (2) continue the present activity for an additional 2-3 years and solicit proposals from the PVO community for a companion activity to be initiated in FY '92. Design of the latter activity should be quite similar to the present one. The solicitation for proposals should specify that the activity would be for five years or more in length and would include up to ten additional African countries.

2.2.2 Other Modalities

Support for the PVO/NGO NRMS project represents only one means for expanding support to the NR/NGOs in Africa. Several other organizations have been actively involved in assisting NR work including PACT and CODEL. Their work should be evaluated and NRMS II should explore other channels for reaching African NGOs in this field.

CODEL

Coordination in Development (CODEL) is an association of 40 interdenominational PVOs headquartered in New York and oriented toward third world issues, a leading one being environmental protection. It receives a general support matching grant of $600,000 from A.I.D.'s Bureau for Food for Peace and Voluntary Assistance (AID/FVA), a portion of which is programmed for environmental activities ($100,000). It has no field offices but operates through its membership affiliates or through direct contact with third world NGOs and it supports their approved projects through sub-grants. CODEL support and interest of NR in Africa includes a recent agroforestry workshop in Zimbabwe and another planned for Kenya. CODEL has cooperated with EIL in Uganda. CODEL's Director for its Environment and Development Program indicates that its staff could handle without difficulty an

augmentation of its NR work in Africa of $100,000 - $200,000/year. She indicates such support would permit an expansion of its information and publication services, additional workshops and more attention to implementing workshop results.

PACT

Private Agencies Collaborating Together (PACT) is a New York-based consortium of 20 U.S. and foreign PVOs to promote collaboration on third world issues including environmental problems. It receives general support through a cooperative agreement with A.I.D./FVA. It has successfully competed for A.I.D. project funding for various activities and is presently in the process of increasing its capacity to support PVO/NGO NR activities in Africa, particularly in the Sahel. To this end it is in the process of issuing a strategy paper on program priorities, an inventory of Sahel activities, and cosponsored with a Canadian group (Solidarité Canada Sahel) a conference in Quebec in November on the subject "Partners in the Management of Natural Resources in the Sahel".

PACT has also established a regional office in Dakar to oversee its Sahel program, will hire a fund raiser and is preparing to mount a collaborative program with African universities, research centers and PVOs which will stress several NR themes. A Sahelian NR database is also contemplated. If the results of the meeting seem favorable, NRMS might provide funds in support of PACT's Sahel program, perhaps through some matching contribution formula (PACT wants to raise $1.2 million a year over the first four years).

Center for International Development and Environment

ANR/NR is already drawing heavily on the Center's capacity for NR consulting, policy analysis and project identification and design work through its buy-in to the S&T EPM project. However, a modest amount of additional funding (perhaps $100,000 a year) would permit the Center to strengthen the "From the Ground Up" project as well as the African dimension of its NGO Support Services Project. Additional funding would, for example, permit expanded African regional attendance at the Center's workshops and for increased funding to African NGOs to augment their program participation. Since the Center's work in Africa is already running at nearly full capacity, supplementary funding for additional staff might also be necessary.

African PVO Initiatives Project

This three year Africa Bureau project, sponsored by AFR/DP, complements the work being done by PVO/NGO NRMS and other PVO NR activities in Africa through its efforts to strengthen the skills and institutional capacity of African NGOs in management, planning, finance, public relations, etc. There is good liaison between this project and the PVO/NGO NRMS activity. At some point ANR/NR and AFR/DP may

wish to discuss ways in which the PVO Initiatives Project could give special attention to selected NR-oriented PVOs through an add-on to the Bureau's grant.

2.2.3 Management Considerations

If the PVO/NGO component of the project expands and diversifies along the above lines, ANR/NR will have to give attention to the need for tracking and monitoring the various activities. One alternative would be to include that responsibility in the management support contract recommended in Chapter II, in which case consideration should be given to adding an additional person to the contractor's staff to backstop and monitor the activity as it grows and becomes more complex. A second alternative would be to lodge the function with an appropriate PVO. The Center for International Development and Environment would be well qualified for such a task, given its experience and familiarity with the field. If CIDE is not available, ANR/NR could invite proposals from the PVO community and a cooperative agreement could be concluded with the PVO offering the most responsive and cost effective proposal. In any event, the data generating and disseminating results of PVO/NGO activities should be tied into the proposed ANR/NR information management system (see Chapter V).

IV. TRAINING

1. Introduction

1.1 Training under NRMS I

Most of the training conducted under NRMS I was training of Africans done under the LOE contract. It was done in the absence of an overall training needs assessment. Ten training workshops were conducted; eight of them were agroforestry and natural resources extension training of trainers workshops based on the recently completed CARE Agroforestry Extension Training Manual. Participants were mostly staff members of NGOs, PVOs, host country natural resource and agricultural departments and PCVs. Communication skills received strong emphasis. The other two workshops were on natural resource economics and wildlife management.

The natural resource economics workshop was reportedly very well received and scattered reports on the agroforestry workshops have been positive. One must question, however, the utility of such "one shot", short term training exercises. As one experienced observer noted, training under NRMS to date has been but "a drop in the bucket".

1.2 Foreseeable Needs

Pending the completion of a training needs and resources assessment, the following training priorities for NRMS II are recommended:

- Follow-up to the training conducted under NRMS I, in particular the economic analysis and agroforestry extension training.
- GIS and resource analysis training for DHs and Africans.
- NRM database training: access, potentials, limitations, applications for DHs and Africans.
- NR/Environment indicator and evaluation training (design of baseline, monitoring, evaluation), for DHs and PVOs.
- Options and methods in biological diversity conservation, for DHs and Africans.
- Local natural resources management workshops, "field days", for PVOs and NGOs.

2. Existing NR Training Resources

2.1 PM/TD Direct Hire Training

2.1.1 Environmental Training Program

The program, managed by Don Foster Gross of the training office for A.I.D. Personnel (PM/TD), is of 5 years in length with $1.5 million in funding for the first three years. A contract to implement the program was recently awarded to the Institute for International Research, Inc., 1815 N. Ft. Myer Drive, 6th Floor, Arlington, Va.

The training is to include energy and global warming issues as well as skills enhancement training in specific areas: environmental impact assessment (as established in Reg. 216), economic analysis of environmental aspects. The contractor will work closely with PM/TD in identifying short term training opportunities.

Phase I (first 18 months) will develop (1) a "comprehensive and coordinated A.I.D. environment, energy and natural resource training program" aimed at training 100 USAID staff in five years, (2) environmental impact assessment training and train at least one person in each A.I.D. mission and Washington office over the next three years, and (3) put environmental issues on the agendas of mission director and technical officer conferences.

Phase II will undertake training on economic analysis and additional training that will sensitize and up-date agency personnel. The contractor's training proposals will be reviewed by AID/W and the missions.

2.1.2 Short Term Technical and Executive Training Program (STET)

Short term (2 to 16 weeks) individual training sponsored by PM/TD is available to individuals who need specific skill development for a current or future assignment. (The IIR Inc. group will identify relevant existing training courses for STET).

Annual Budget: $100,000

2.2 Bureau for Science and Technology

The Bureau offers a number of training activities for NR personnel from the developing countries as follows.

2.2.1 Forestry Support Project

This project has a training coordinator (Tom Geary) and program for forestry related subjects.

2.2.2 Environmental Policy and Training Project

In the final planning stages, this 10 year project will focus on environmental policy analysis and related institutional development. Although mainly a research oriented effort, it will include a buy-in capability for technical assistance. Its training component will emphasize policy analysis but detailed design and implementation of the training component has not been finalized.

2.2.3 New S&T Environmental Training Project

This is reported to be a $1 million effort, under design (contact Dan Deeley or Gene Chivaroli). It would allow NRMS buy-ins and conversely could be used to supplement other training efforts. It derives support from the Institutional training sub-group of the Environmental Working Group which is charged with planning A.I.D.'s $16 million Environmental Initiative that would transfer $10 million to S&T. Planning will involve a training needs assessment worldwide in FY'91. The scope of training to be offered is as follows:

> Environmental impact assessments, natural forest management, integrated pest management, energy conservation, environmental policy formulation and administration.

2.2.4 GIS Training Work Stations

GIS training work stations (3) have been set up in S&T/RD with training software developed by Clark University. (IDRISSI).

2.3 Discussion

None of the PM/TD programs mention foreign service national staff, who are providing considerable continuity and technical foundation to USAIDs.

It is unlikely that a sufficiently detailed assessment of training needs and resources in Africa will be carried out by PM/TD or S&T.

3. Options for NRMS II

1. Make maximum use of and when necessary buy into on-going or planned training projects.

- PM/TD training for DHs.

Clark University and EROS training capabilities in GIS should be included as possibilities in these programs. ANR/NR should make contact with the contractor in order to ensure identification of short term training opportunities and needs in the region, as these come to the attention of staff.

NRMS money under FY'90 and '91 legislation could be used to supplement mission Operating Expense funds, required to send participants for group or individual training offered by PM/TD. Must verify with the Bureau for Program and Policy Coordination (PPC) and agency contract staff on this funding mechanism but it is apparently possible now.

- Influence design of new S&T environmental training project so as to ensure good survey of Africa region needs and possibility of NRMS buy-ins or the converse -- S&T buy-ins or collaboration with NRMS planned events.

  This option would require devotion of perhaps 1/2 time of the Liaison and Training officer recommended in Chapter 2 (2.3.2.3).

- Support NGO and PVO training through the PVO/NGO NRMS cooperative agreement and buy-in to EPM to support CIDE's Africa-centered From the Ground Up project, which will entail a series of training sessions in Africa.

- Continue funding, as needs arise, regional training that falls within the PNRM and DFA mandate, through special training activities included in the proposed NRMS II budget. See Chapter VI 2.

- Undertake a regional training needs and opportunities resources assessment using special studies funding, in order to develop a more coherent training strategy that would orient NRMS funded training efforts in Years 2-5.

V. INFORMATION REQUIREMENTS AND MANAGEMENT

Technical information concerning natural resources management and the environment and related development activities in Africa is needed to support work at the Africa Bureau level, at the USAID level and among PVOs and NGOs. Information must be collected, organized and managed so as to facilitate NRMS project management activities as well as to respond to queries and reporting requirements. This chapter treats both the content and the management of natural resources information that could be supported by NRMS II.

Information on natural resources and environments in Africa is the foundation for almost all that TR/ANR does. Information can be considered a resource that is collected or compiled and made valuable through processing in the following broad categories of operations:

- compilation or collection,
- organization and management (to facilitate access/manipulation),
- analysis or interpretation, and
- appropriately presented communication.

Information support and management must concern itself with all four of these steps in the information "cycle". Particular attention must be given in NRMS II to interpretation and communication, but these will be dependent upon effective compilation and organization.

1. Analysis of Information Needs[6]

Bureau and mission needs for technical information on natural resources are not specifically addressed by NRMS at present. PPC's Center for Development Information and Evaluation (CDIE) is the only branch of A.I.D. officially charged with compiling or collecting, organizing and managing all kinds of information for the agency. The collection is very poor in natural resources and agricultural materials, especially those generated in Africa. S&T's FENR has supported the additional creation of data banks on biological diversity and tropical forestry activities (for reporting to Congress).

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[6] This analysis was carried by means of interviews in Washington D.C. and in a number of countries in the region, visited by TR&D's Roy Hagen (Botswana, Kenya, Uganda) as well as visits by TR/ANR staff in Mali, Burkina Faso, Niger and Ivory Coast during October. Also a questionnaire on information needs was telefaxed to USAIDs and REDSOs in the region. Responses received in AFR/TR/ANR are annexed.

Except for these collection and organization efforts, Africa-specific NRM information is situational and piecemeal, representing shortlived efforts (2 to 5 years) by project managers or individuals to maintain organization of useful documents that accumulate during the life of a project or assignment. These collections are not likely to be well organized or easily accessible to others. Thus, the point of departure is a weak and uneven foundation of compiled or collected information, whether it be technical or related to project activities.

1.1 Information for Program Management Functions

Program management requires information to manage the NRMS project and information to report to Congress on the NRM portion of the DFA.

1.1.1 Information for NRMS Project and Activity Management

So far NRMS project tracking has followed inputs (as financial obligations) quite well using a Lotus 1-2-3 program. Project files seem in good order, with the notable absence of a chronological file (possibly archived at another location). Status of activities cannot be readily ascertained, however, except for "completed" or "on-going".

It is recommended that a computerized file system be developed for every NRMS activity managed by TR/ANR that registers key events, documents, etc. This could serve as both a management and reporting tool. A file structure could also be agreed upon with sub-contractors that would allow the NRMS Project Manager to import and view activity files.

1.1.2 Reporting to Congress on Program Impact

Assessment and reporting to Congress on the overall impact of assistance in Africa is an important Congressional requirement attached to the DFA. Sub-objective 3.1 in the DFA involves achieving "increases in productivity through better management of natural resources" thereby orienting the reporting requirement.

The impacts of a wide range of actions, project or non-project, including those supported by NRMS and other AFR/TR projects, REDSOs, USAIDs and PVOs must be summarized. A set of indicators would greatly facilitate the reporting task and the PNRM includes the specific objective of developing impact indicators.

Descriptive and cartographic presentations will be the best means of communicating the results of A.I.D. support to NRM in Africa. These can be supplemented by tabular or statistical presentations. Yearly reporting, at least, is required with special requests likely at any moment.

In reporting on project impacts, a number of information categories must be satisfied, particularly in regards to how the information is organized for analysis and report writing. These categories include;

- Information on **the activity** being supported, e.g. information contained in the project face sheet, logical framework analysis, and project agreements or contracts, location of the activity.

- Information on the **environmental context** and **socio-economic context** at the site(s) where management is being supported.

- Information on the **institutional or organizational context** for institutional strengthening activities, e.g. lacking mandate? recently created and without experienced staff? backed by recent policy?, etc.

- Information on the **related development support**, which will show how A.I.D. support is synergistic, additive or is strategically linked to other NRM support, including work by A.I.D. supported PVOs or NGOs, as well as other donors.

- **Situation of the activity within a development paradigm** for the subsector or context of the intervention.

A focussed and well-organized project activity tracking effort will be required to collect and organize information in this manner, and to prepare periodic reports.

1.1.3 Special Analyses

Analysis and interpretations are needed for various purposes; gaining an overview at the AFR/TR level of directions and patterns of NRM assistance, internal reporting; communicating technical achievements with USAIDs and, internal analysis of policy and other issues falling within ANR/NR's charge.

The number and diversity of activities in NRM has so far not been subjected to overall monitoring and reporting. Successes, failures and progress are not being systematically recorded. Lessons are not being systematically acquired and transmitted. Numerous reports financed by NRMS are accumulating in bookshelves in ANR/NR without further review or synthesis. The NRMS newsletter which reviewed some of this work was not based upon systematic reviews of all NRM activities, and a newsletter is of limited utility for communicating lessons in development, owing to its format. Lessons and experience are accumulating, even if not recorded or synthesized, and evaluations frequently do not serve to capture the best or most relevant material.

Skilled writing and editing are required to carry out such work. As an example are the Development Strategies for Fragile Lands (DESFIL) "Blue Cover" monographs which provide indepth, carefully written analyses of project related activities. Occasional visits

to project sites are needed, as well as continuous voice or mail contact with project managers and project implementors. Data gathering and reporting should capture technical lessons relevant to other USAIDs, NGOs and other donors. Later, the treatments can be generalized for Congressional-level reporting.

1.2 Information Support to Missions

One need was expressed by several respondents to the information needs questionnaire: that of having access to tools (maps, imagery, publications) and successful NRM technologies or innovations. (See Annex C). ANR/NR should be able to provide information to missions on NRM experiences elsewhere in Africa (or other regions) that is of relevance to early design, project planning and implementation. The results of project outputs, for instance, should be organized in a database that employs an indexing thesaurus and/or geo-referencing so as to match queries or (anticipated information needs) with information resources.

Another type of information need concerns environmental assessments. For instance the USAID/Niamey anticipates that the NRMS extension can provide assistance in developing an environmental assessment manual to be used by the Government of Niger. An informational resource for supporting environmental assessments by missions or host governments appears to be a clear need, and current A.I.D. materials are considerably out of date. The *Environmental Assessment Sourcebook*, now being prepared by the World Bank's Environment Department should help fill the demand for background information and orientation. ANR/NR should have on hand copies of relevant material to provide to missions, and, optimally, loose leaf format technical materials on the environmental aspects of different kinds of development that can be reproduced and sent to missions. Attention must also be given to the environmental assessment methods and information needs for non-project assistance, e.g. for agricultural sector reform, where the emphasis is on privatization and pricing policies.

ANR/NR through the NRMS extension should also be prepared to facilitate mission access to imagery (LANDSAT, Skylab, SPOT) as well as databases of potential use to mission programming maintained by other organizations.

1.3 Information Support for PVOs and NGOs

Given the variability of the PVO/NGO community and the early stage of NRMS support for strengthening PVOs in natural resources fields, a specific analysis cannot be made. However, with some exceptions, (e.g., CARE) PVOs and NGOs in general do not have well-developed technical information support. In Africa, nevertheless, several organizations stand out for their technical competence and effective work in communicating to the PVO community on natural resources issues: KENGO (Nairobi), ENDA (Environment and Development in Africa, Dakar and Harare), and INADES (Institut Africain pour le Developpement Economique et Social, Ivory Coast). INADES generates teaching and technical sheets for all Francophone Africa.

Better diffusion of information and experiences is always mentioned as a need in PVO and NGO conferences, and NRMS could make support available on a flexible basis for doing so by various means: publications, videos, "south-south" exchanges, international field days, and so on. WRI/CIDE's "From the Ground Up" is focussing on ways to magnify and diffuse successful village level experiences by means of encounters and workshops, etc., at various levels up to ministry officials.

2. Natural Resources Information Organization & Management

2.1 Categories of Information and Related Resources/Tools

Much information is of multiple use. Virtually all information management requires or is greatly assisted by computerized databases; many NRM management systems could (or do) benefit from the use of GIS, including maps based on satellite images.

The following categories of information should be available at the AFR/TR/ANR level for various uses described below.

- Overview and directory of all NRM work planned (CPSPs, ABSs) and supported by A.I.D., in or related to Africa.
- Impacts, technical achievements and lessons learned from A.I.D. funded NRM work.
- Environmental status and year to year trends in priority nations or sub-regions.
- Principal environmental and natural resources problems/issues in priority countries, sub-regions.
- Assistance in natural resources management in the region.
- Projects with major negative environmental impacts in the region.

To follow is each described with notes as to availability of the needed information.

2.1.1 A.I.D. supported NR Activities in Africa

Use: Program planning and reporting on A.I.D.-funded NRM activities in the region.

Proposed Form: Periodic (twice annually) overview report (one official to Congress & public) organized by major PNRM and DFA categories; project/program directory; database; location maps on a simple GIS or graphics package, i.e. Lotus Free Lance.

Availability of sources: NRMS records on biodiversity grants & PVO support, studies, etc.; USAID, REDSO and AID/W planning documents; CDIE's Development Information System (DIS) for approved projects (but the DIS was not on database format or PC compatible, and DIS system does not include verifiable indicators or logical frameworks); PPC's database; Forestry Support Program (FSP) annual reports (worldwide) and related database on biodiversity and tropical forestation support; WRI database on biological diversity projects; locations not generally available.

2.1.2 Technical Information Database

This database would focus on impacts, technical achievements and lessons learned from A.I.D. funded NRM work. The Organizing Framework being developed in ANR/NR could serve as the foundation for much of the data.

Use: Mission and REDSO support for planning projects or answering questions/issues, contractor orientation, donor coordination, reports to Congress, and special reports.

Proposed Formats: Annual report with maps (NRM development atlas), full text database of important individual experiences/evaluations/reports, GISeographic information systems (GIS) database with maps showing project/experience location.

Availability: not presently available in TR/ANR, but partial reporting exists in FSP and Biological Diversity reports to Congress, and for some older projects in the DIS catalogue of project documents. Consultants' documents are typically quickly lost or misplaced.

2.1.3 Environmental Status and Trends in Priority Nations and Sub-Regions

- Forest resources (and other natural vegetation)
- Biological resources
- Soil resources

Uses: Assess overall situation, to assess impacts of large area projects, to help plan or study large area projects or impacts on large areas of events, e.g. watershed rehabilitation or management, baseline.

Form: maps, status reports, databases including GIS and imagery developed for 2.1.2 above can serve this information category.

Availability: Generally not available; must be compiled.

- Maps: available for vegetative index only for Sahelo-Sudanian zone.
- Satellite images: available from National Oceanographic and Atmospheric Administration (NOAA), EROS or SPOT Image, but need interpretation.
- Space photography (Space Shuttle, Sky Lab): available from EROS.
- Digitized maps: various locations -- USDA, USGS, GRID, FAO, some African countries.
- Environmental status reports: No consistent reporting except for climate and perhaps river flow. Occasional observations and surveys of wildlife.
- Databases: WRI has inventoried available databases and will report to AFR/TR. CDIE's DIS has arranged access of FAO and ILO databases and is planning on-line access to A.I.D. offices.

2.1.4 Principal Natural Resources Problems/Issues in Priority Countries, Sub-Regions

Use: Special analyses and regional reporting.

Form: Resource files or fact sheets, periodically updated, in loose leaf with maps.

Availability: Numerous sources but need synthesis.

NRMS I files, country assessments by A.I.D., IBRD, IUCN (World Conservation Union), UNEP, ECA, CILSS, SADCC, etc. Project planning documents and studies carried out with project funding. Studies at the national level.

2.1.5 Assistance in Natural Resources Management in the Region

Use: donor coordination, program planning, assessment of relative impact of A.I.D.-funded activities.

Form: Hard copy directories, databases, index maps, and periodic reports.

Availability:

- NRMS I funded partial database of 1,500 projects.

- A.I.D. databases (DIS in CDIE).
- Biological diversity and forestry databases (S&T supported).
- National NGO associations databases in Sahel for NGO projects.
- African PVO Initiatives Project (AFR/DP) database (under development by Datex, Inc).

2.1.6 Projects with Major Negative Environmental Impacts in the Region

Use: General awareness and possible effects on A.I.D. initiatives or environmental trends.

Form: Directory with maps; database including GIS or graphics for locations.

Availability: IBRD, African Development Bank and Development Assistance Committee (DAC) records through State Dept. environmental coordinator (Anna Quant). Generally not mapped.

Where databases and GIS systems are involved, important considerations are (1) database management, (2) database manipulation for report writing and addressing issues, and (3) database access. Natural resource and environmental database management (creation, maintenance) is not a task that should be parcelled out to various technicians in TR/ANR. It should be either contracted or undertaken by CDIE, possibly through a buy-in. ANR/NR staff should be capable of database manipulation for the purposes of doing analyses and generating reports.

2.2 GIS and Related Remote Sensing

Revolutionary developments in resource mapping and spatial analysis have been taking place in the past five years as a result of technological advances and falling prices in the following areas:

- The development of GIS software for personal computers.
- The acceleration of personal computers with the 386 chip, and dramatic increases in random access memory (needed to run GIS software) as well as file memory (needed to store digitized maps or images).
- The development of desk top scanners that can digitize hard copy data (satellite or aerial photograph) for subsequent cartographic compilation or analysis.

Work that once was limited to specialized cartographic laboratories and resource mapping agencies (which in some countries are entirely lacking) now can be done in any office with a minimal investment (approximately $20,000) and appropriate training, by analysts and planners whether in A.I.D. or in host country agricultural ministries, interior ministries, and others.

These developments in mapping and spatial analytical capabilities are revolutionary in the same way that word processing and desk top laser jet printers have revolutionized the production and printing of documents. Now, sophisticated map making and analysis capabilities can be set up within a small office anywhere in USAIDs or in African institutions.

Can AFR/TR or USAIDs in Africa make use of these capabilities in pursuit of the PNRM in Africa? Should the NRMS extension foster or support these tools?

This section examines these questions and sets forth various options.

2.2.1 On-going GIS and Remote Sensing Activities and Initiatives

The following lists only A.I.D.-supported work in GIS and remote sensing.

- Famine Early Warning Systems (FEWS) work in Sub-Saharan Africa and recently in Senegal ("carrying capacity" project), with backstopping from EROS center in Sioux Falls, under AFR/TR/PRO auspices.

  The FEWS project has demonstrated the possible usefulness of satellite imagery for detecting changes in vegetative cover in the Sahel-Sudanian zone. Eight years of observation have resulted in a time series of increasing utility for predictive purposes as well as for the purpose of establishing expected seasonal changes in vegetative cover.

- Workshop for AID/AFR/TR at EROS data center in Sioux Falls (Sept. 1990).

- SARSA (Human Settlement and Natural Resource Systems Analysis) funded GIS learning stations (3) in ST/RD, just being set up (Nov. 1990). The same learning software (IDRISSI developed by Clark U.) is being used by EROS and UNITAR for GIS teaching.

- AGRHYME. has an ARC/INFO station and other software to process NOAA and other satellite imagery for Sahelian vegetation index mapping.

- A.I.D. funded Nairobi regional remote sensing center - "Regional Center for Services in Surveying Mapping and Remote Sensing" RCSSMRC (1980-90) and Centre Regional de Teledection in Ouagadougou (1980 to 1988).

2.2.2 Potential Uses in Natural Resources Management

GIS technologies allow sophisticated analysis at many more levels and contexts than was the case in the era before PC-based GIS -- which ended only a few years ago. In addition to use by traditional resource planning and management agencies usually located in governmental institutions in capital cities or technical secretariats of large NR or regional development programs, analysis can be done and is being done in university settings, by development banks (IBRD), by PVOs and by private individuals and companies. Map digitization can also be carried out at all these levels. Consequently the spread of GIS technology is not dependent upon mounting institutional programs and related institutional development.

There are two important caveats to the assertion that GIS is not dependent upon traditional natural resource institutions. The first concerns the preparation and management of data banks of images and geo-referenced statistics or other phenomena -- the first two stages of the information cycle referred to at the beginning of this chapter. These operations are best done in an institutional setting where quality control and standardization of data management can be achieved. The second concerns the continuation of natural resources inventories, surveys and monitoring. These activities also require professional competence and quality control, best achieved in an institutional setting. The centralized institutions in Africa charged with these operations are generally weak notwithstanding occasional bilateral and international support. Non project assistance could be one means of financing improvements in these institutions' technical capabilities in GIS.

To date TR/ANR has not made use of small scale mapping possibilities for monitoring region-wide environmental trends or for other purposes such as assessing program impacts. However, satellite imagery has made possible reconnaissance level mapping of very large surfaces, such as sub-regions comprising several states. Compilation work is greatly facilitated by GIS software.

GIS could be used at all levels in A.I.D., where spatial analysis is desired. Contexts would be TR/ANR program analysis and information management for reporting and specified analyses; REDSO and mission-level environmental reviews (e.g. to study the spatial relationship of a project's impacts and resources in the impact area); mission-level programming. Use of GIS for analyzing project impacts, and more recently for programming are under way in Senegal.

It is entirely feasible to envision the creation of a GIS analytical baseline together with other standard socio-economic data, for use in mission planning and programming. GIS user packages can only evolve to greater user-friendliness, and the IDRISSI package developed by Clark University for training purposes is being upgraded. A literal host of other GIS software exists, including the industry leader, ARC/INFO, which, it may be noted, has been donated to several African universities.

2.2.3 Conclusions

There seems little doubt that the use of GIS with A.I.D. will evolve whether or not NRMS supports it. However, with NRMS support the development and spread of GIS applications could be influenced towards facilitation of PNRM goals and a coordination of efforts would be possible.

(1) Small Scale GIS Analysis can be useful for mission programming.

Mission programming purposes can be served by 1:1 million scale or smaller maps that depict vegetation and landuses, production or yield, population, protected areas, land potentials and degradation hazards, and more. Recently completed work for USAID/Dakar (with USAID/Dakar participation) serves to demonstrate the utility of map analysis in the context of mission programming. It can be noted here that digitized map products of Senegal recently generated at EROS at the 1:1 million scale reflect the considerable accuracy achieved in the 1:500,000 maps upon which they are based (A.I.D. sponsored Land Resource Mapping Project of 1981-85 which used Landsat images, aerial photography and extensive ground checks).

(2) Monitoring of vegetation changes on sub-regional as well as national level is possible.

Changes in vegetation on sub-regional as well as national levels can be monitored and this work should be done in Africa, by African technicians, in universities or ministries or specialized centers. NRMS could directly support the training, equipping and installation, as well as methodology research or pilot projects.

This could be a managed as a sub-regional or regional project, in collaboration with other donors or bilaterally.

(3) Monitoring of large area soil changes is probably feasible but needs methodological development.

Assessment of degradation risks (or limiting factors) is already feasible and within the present possibilities of on-going small scale mapping efforts using satellite imagery and aerial photography. 1:1 million soil mapping of the continent by USDA is contributing to the development of the baseline information needed for monitoring soil changes. The methodological integration of field observations, large scale aerial photography, and space photography or satellite imagery and the use of statistical sampling procedures will be required to monitor soil degradation or conservation over large areas.

(4) AFR/TR could employ smaller scale GIS maps (e.g. FAO soils at the 1:5,000,000 or smaller, UNESCO vegetation map, etc.) of Africa for general analysis purposes and reporting.

At least two types of communications are needed: reports to Congress and information support to field missions and REDSOs. Data gathering can serve both purposes, but frequency of communications to USAIDs might be far greater and the demand quite variable as to topics and depth of information.

3. Recommendations and Options for Implementation

In order to understand and communicate to various actors (USAIDs, PVOs, Congress) the diversity of NRM activities in Africa supported by A.I.D., AFR/TR should expand its activities and capabilities in information collection, management and processing. Specific recommendations presented imply an information management and reporting as well as servicing capability. Recommendations concerning large area monitoring and the use of GIS in Africa and in A.I.D. -- analyzed above -- are presented in Chapter 2, section 1.3.7.

3.1 Organizing Framework

Further development of an organizing framework and related database for the analysis of NRMS program impacts and monitoring progress in natural resources management is being conducted by the NRMS Office. A number of refinements can be made on the existing framework (See Figures 3 and 4). The refinements are summarized as follows:

- Examine the cultural factors throughout Africa that may influence farmer behavior and adoption of resource enhancing practices.

- Add an additional analytical level of analysis to introduce local environmental, demographic and cultural influences on farmer adoption of practices.

- Seek empirical substantiation of the framework for analyzing the evolution of improved resource management in irrigated agriculture.

- Empirical models for analyzing natural resources management in the public domain and in common property areas should be developed. For biodiversity activities, a sequence of necessary pre-conditions and subsequent steps must be developed (see, for example, the Greg Booth report on the Buffer Zone management workshop, Oct. 4-10, Uganda).

- Develop field tested methods for introducing soil erosion baseline and monitoring with A.I.D. support, possibly as a sub-regional project.

- Re-phrase Level V (of the Organizing Framework) as "sustained increases in the productivity of the resource base and/or of products and services

derived from the local resource base." Once achieved this would lead to increased production and income.

- Use income savings as one indicator.
- Re-label Level IV: " Improved status of the natural resource base."
- Use the relationship between chemical fertilizer inputs and yield as a surrogate indicator of the productivity of the soil resource.
- Reverse the places of policy and institutional changes in the framework and rename Level I "Legal and Policy Changes."

Figure 3. Organizing Framework for Natural Resource Management Indicators

Level V: Stategic Objective. Developing the Potential for Long term Increases in Productivity through better Natural Resource Management

MEASURING INCREASES IN INCOME AND PRODUCTIVITY

Increases Nationally	- GNP change, increased production, sustained production over time.	DFA Benchmarks
Increases by Household	- Increases in income, health, nutrition, improved economic viability.	
Increases by Individuals	- Increased income, etc. by gender and economic group.	

Level IV: Biophysical Changes that Produce Increases in Productivity

MEASURING BIOPHYSICAL CHANGES

Soil Fertility	- Improved fertility, improved yeilds per inputs.	DFA Benchmarks
Soil Moisture	- Improved water retention, resistance to drought.	
Vegetative Cover	- Quantity and quality of forest/ vegetative cover.	
Biodiversity	- Biodiversity maintained.	

Level III: Adoption of Practices that Produce Biophysical Changes

MEASURING ADOPTION OF IMPROVED PRACTICES

Practices emphasizing:	(short, medium & long term)	DFA Benchmarks - Number of community/ individual initiatives
Soil Fertility Soil Moisture Vegetative Cover Biodiversity	Number of adaptors, spatial impact, potential for diffusion, change in adaption over time.	- Areas under management - Number of Voluntary users of improve practices.

Level II: Conditions that Lead to Adoption of Improved Practices

MEASURING CHANGES IN POLICY

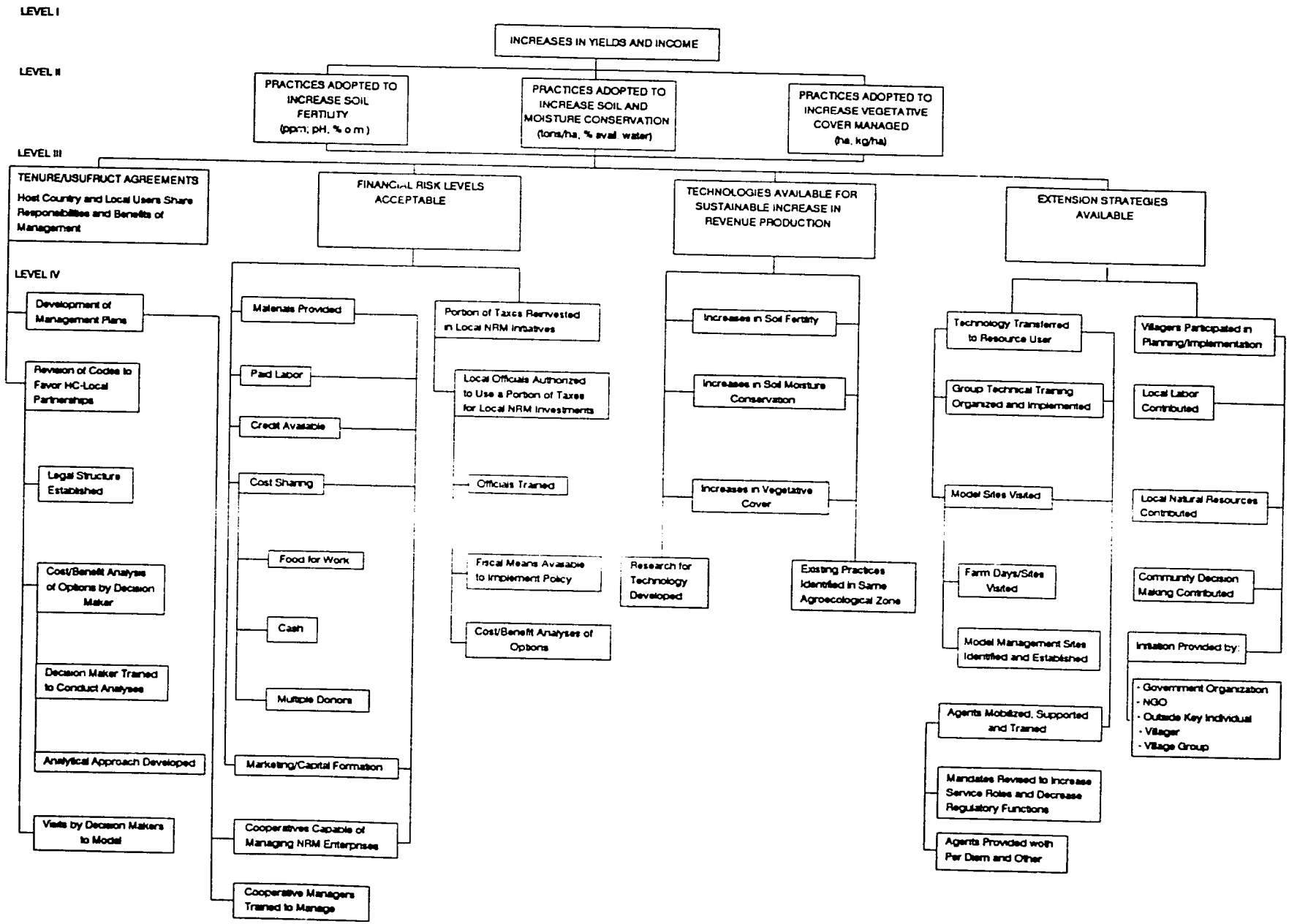
Tenure/usufruct	- Land/tree ownership policy.	DFA Benchmarks
Financial/economic risks	- Credit, markets, pricing policies.	Public policy revisions providing incentives fo
Extension assistance	- Extension/outreach systems.	more sustainable resource management
Technology	- Agroforestry, biodiversity systems.	

Level I: Actions that Establish Conditions

MEASURING INSTITUTIONAL CHANGES

Forest laws reviewed/revised, management plans developed. Credit systems revised, credit unions established. Ag technologies extended, extension mechanisms improved.	DFA Benchmarks

Figure 4. Objective Tree Analysis of Natural Resource Management



These refinements should be under the direct management of ANR/NR. Work should involve evaluation experts from CDIE as well as other appropriate experts. Financing of further development in NRMS II could be through the proposed research and special studies, items in the proposed budget (Chapter VI).

3.2 Information Management and Reporting for NRM Activities Funded by ANR/NR (NRMS II) and others)

This recommendation refers to the NRMS project and includes NRM activities supported through buy-ins to other agency projects. NRMS project specific information should be managed so as to facilitate yearly reporting to Congress on Bureau funded NRM in Africa and to foster integration of experiences and operations.

Project inputs as well as outputs and interim progress should be tracked, organized on a database, cross referenced to hard copies of studies and reports and to related databases. Inputs and outputs should be linked to the Organizing Framework so as to facilitate later overall reporting.

Management of information on NRMS inputs (obligations, starts, components, etc.) should be done within ANR/NR (NRMS project management). The present system seems adequate. Input tracking for projects other than NRMS would not be necessary.

Management of information on outputs and progress could be integrated with tracking functions covered in recommendation 3.3 below. Output tracking and information management should be accomplished so that databases and related reports are always accessible to ANR staff. ANR/NR staff and the NRMS project manager should be able to use them for analyses and report generation.

3.3 NRM Activity Tracking, Reporting and Query Response

Routine and periodic tracking of natural resources management activities in the region, supported by A.I.D. as well as other donors or multilateral agencies, is recommended. The information is needed for providing technical support to USAIDs, for program planning and analysis, and to provide a context for DFA supported NRM activities. Tracking should yield information on all the categories described in section 2.1, Categories of Natural Resources Information.

Occasional synthesis or special issues reports will be called for as experience accumulates. Information dissemination could also be accomplished by means of a newsletter or through contributions to other periodicals or newsletters, e.g., the FSP newsletter.

Periodic tracking -- through visits, telephone, consultant debriefings, etc. -- of USAID-funded NRM project progress and achievements is recommended. Other

donors',projects and their results should also be tracked to learn from successes and failures. The NRMS I-financed database of NRM projects in Africa could be the point of departure. S&T supported databases should also be used to the maximum.

To facilitate tracking of activities managed by USAIDs in the region, standard baseline survey and indicator monitoring for land and vegetation management should be developed. The indicators could also orient project and program design.

Tracking, reporting and responding to special queries could be internalized in ANR/NR, through a contracted individual as recommended in Chapter II. The information specialist should draw on funds included in the budget for the PP Supplement to utilize an IQC firm or another project (e.g., through a buy-in to S&T's Environmental Planning and Management Project) for undertaking field surveys, contracting field correspondents, hiring database management and maintenance assistance, and hiring professional writing and report design assistance.

A second option would be an arrangement with a firm or group dedicated to this kind of work, through a cooperative agreement or contract. The arrangement should ensure close and frequent contact with AFR/ANR and the NRMS project manager, and collaboration with on-going A.I.D.-funded database and information support in NRM in Africa should be obligatory.

Planning of this work should incorporate advice and guidance from CDIE, in view of a major new evaluation program under development there. Coordination with the planning of an extension to S&T's Environmental Planning and Management Project is also recommended. The extension will possibly include an environment and natural resources information system.

3.4 Tracking and Reporting on PVO/NGO Activities

As recommended in Chapter III, a tracking and reporting function should be supported that would synthesize A.I.D.-funded PVO progress Africa-wide in (1) natural resources management, and (2) conservation of biological diversity .

This function could be entrusted to the entity or entities that will manage the PVO/NGO work in these two fields. Coordination should be sought with AFR/DP which is funding the creation of a database on PVO activity in general in Africa.

3.5 Enhance PVO/NGO Monitoring and Reporting Capabilities, and NRM Information Exchange Among PVOs and NGOs

This recommendation is distinct from 3.3 above, in that it focuses on a process of strengthening and information exchange rather than a reporting requirement. It would entail the financing of a monitoring, evaluation and enhanced communications function

in PVOs and in African NGOs or NGO associations (1) in countries being supported by NRMS and (2) in other countries or at a sub-regional level.

A number of African NGOs are devoted to this kind of activity, e.g., INADES, ENDA, ANEN (Africa Network of Environmental NGOs), or ELC (Environment Liaison Centre). PVOs such as CODEL PACT, and WRI's CIDE are also committed to information exchange. Support would entail field visits and standard data collection (monitoring) of NRM oriented projects, working with PVO and NGO partners. It could support regional south-south meetings and "field day" type tours for villagers and local NGOs.

A cooperative agreement or contract with a PVO registered with A.I.D. would be the means of providing support to African-based (or European-based) NGOs dedicated to information support to African NGOs.

VI. PROGRAM MANAGEMENT AND COST ESTIMATES

1. Overall Program Management and Staffing

1.1 Management Support Contract

As discussed earlier, the NRMS office during the period of extension of the project will probably function in a more field-responsive mode as regard to NR activities while providing a guidance and leadership function with respect to NR program strategy and policy matters, information needs, program monitoring, training and dealing with new or emerging issues. With these considerations in mind, the Study Team considered a number of ways ANR/NR might enable the NRMS office to best deal with the implementation tasks of NRMS II. Among the factors which influenced its thinking were (1) the technical resources currently available through the S&T Bureau and from IQCs, (2) the time and effort needed to put new implementation mechanisms into place, (3) how well each mechanism dovetailed with the needs of the NRMS office (especially after the return of its DH staff to Main State), and (4) relative costs.

As a result, the Team recommends the letting of a four or five year Washington-based management support contract that would both add depth to the program backstopping capability of the NRMS office while enabling it to come to grips more effectively with its analytical, information and liaison/training tasks. The contract would provide three mid-level NR professionals -- an Operations Officer, an Information Officer and Program Analyst and a Training and Liaison Officer -- plus an administrative assistant and a secretary. In addition, a PVO/NGO Monitoring Officer may be required later if that function is included in the contract. The contract would include funding, as required, for office space and equipment for the NRMS office (including its present RSSA staff) and for the information management activity recommended in Chapter V. Other NRMS II functions, e.g., overseas staff, technical assistance, studies, training, etc. would be funded and authorized by the PP Supplement but made available outside of the contract. The Supplement should also authorize the competing and letting of one or more Africa-specific IQCs for the delivery of technical services if existing sources of expertise within A.I.D. becomes inadequate or are over-taxed.

1.2 Biodiversity Support Management

The growth and expanding geographic scope of the biodiversity program have outpaced the means of the NRMS office to monitor and evaluate it. There is also the issue as to how the NRMS office can best support future biodiversity activities which are not included in bilateral programs. Several management choices are open to ANR/NR. One would be through a buy into the S&T Biodiversity Support Program (BSP) which, though of relatively recent origin, has nonetheless established a good track record for grant management. A second would be to compete and award a cooperative agreement with a biodiversity PVO, or PVO consortium, to monitor and finance biodiversity

activities. A third choice would be to utilize the services of a private contractor as has been done by AFR/DP with respect to the African PVO Initiatives project.

The Team suggests that the BSP be utilized in the first instance to monitor and evaluate ANR/NR's current biodiversity portfolio and to serve as a vehicle for funding and monitoring future biodiversity grants. The second or third alternatives should be considered if and when the size and scope of the program surpasses BSP's absorptive capacity.

1.3 PVO/NGO Support

If there is a continued expansion and diversification of PVO/NGO activities in support of NR management, as seems probable, ANR/NR will need to consider how best to track and monitor the program. The most efficient and easily implementable solution would be to include the function as a possible contingency in the management support contract and, at such time as the need arises, fund and recruit a staff position for that purpose through a contract amendment. Other ways of dealing with the issue are also noted in Chapter III (2.2.3).

1.4 Training

The Training and Liaison Officer would program and plan specific training events for direct hires and foreign service nationals, PVO/NGO staff, and African NR agency personnel. The officer would assess training needs and opportunities; plan, publicize or solicit interest in specific events; and facilitate the use of NRMS funding for training events organized by others. Specific training events could also be planned and implemented by the training officer on subjects not offered by other training centers and in the form of regional workshops and conferences. At least two such events should be planned and carried out.

Coordination and collaboration with on-going PM/TD and S&T training offerings in NRM would be an important aspect of the Training and Liaison Officer's work. Use of NRMS funding to supplement other A.I.D. training that falls within PNRM and Bureau NRM objectives would be utilized.

1.5 Information Support

A full time Information Officer/Program Analyst will carry out information support activities in NRMS II. This person will plan, design and carry out -- or contract out -- information collection, organization, database management, and report generation for various purposes as set forth in sections 3.2 and 3.3 in Chapter V, concerning NRM activity tracking, reporting and query response and concerning information management on NRMS-funded activities, both inputs (obligations, activities being financed) and outputs or results. This individual would also coordinate with GIS experts in any NRMS-

funded initiative in the area of geographic information systems, and with S&T's CDIE in regard to evaluations. He/she would also be expected to carry out day to day coordination and oversight of information management, editing and other tasks that might be contracted out through IQC or other mechanisms or "purchased" through buy-ins to projects elsewhere in A.I.D., e.g., S&T's FSP or EPM.

The Information Officer/Program Analyst would be expected to review specific information support requirements and assess the various ways of satisfying them, and recommend solutions to the NRMS project manager. It is expected that tracking of NRM activities by other donors could be carried out by regionally based European and African correspondents, commissioned by the NRMS project to provide periodic reports on donor NRM activity. If the activity were included in a "Mega" contract (Option II) the duties and tasks to be performed would be the same as in Option I. However, it would be expected that the contractor would possess the capabilities to carry out information collection, organization, database creation and management and reporting functions that in Option 1 might be obtained through buy-ins, IQC services or contracts.

1.6 Field Staffing

The more responsive, field-oriented approach and style of NRMS II -- and a growing workload for the missions and REDSOs as the NR portfolio expands - argues for the positioning of additional NR experts in the field. As indicated in Chapter II (see 1.4.1.4), program growth points to the need for NR specialists in one or both of the REDSOs, at ICRAF and possibly a regional position for the SADCC countries as well as NR positions at key missions. These needs are based on the Team's observations, interviews and judgments; they have not as yet crystalized in field requests.

Therefore, for estimating purposes, the Team's budget analysis provides for the recruitment of an additional NR specialist in Year One of the project extension, a second in Year Two and a third in Year Three, all to serve for the duration of the extension. Given A.I.D. DH staffing constraints, the additional field personnel would be provided under USDA PASAs or through PSCs if Option I were followed or would be recruited and posted to the field by the contractor under Option II.

2. Cost Estimates

The figures in the following two tables seek to give a comprehensive estimate of the cost of a five year project extension. They include (1) NRMS office backstopping and Washington support services, (2) technical assistance to the field, (3) field staff, and (4) rough estimates for the biodiversity and PVO/NGO support activities. The estimates in both tables are based on experience calculations prepared by Tropical Research and Development, Inc. (whose assistance is gratefully acknowledged) except for the estimates for non-contract personnel and for the PVO/NGO and biodiversity support figures. Costs of office space and equipment are not included in the tables and should, if necessary, be added.

Both tables assume that the present RSSA staff of the NRMS office will continue and that a contractor will be engaged to provided the management support functions for the NRMS office recommended in the report. The estimates for Table I are based on the assumption that technical activities (except training) will be performed by IQCs and/or S&T buy-ins while the estimates in Table II assume they will be performed under a "mega" contract which will also provide the field personnel. The assumption used in calculating the costs of each of the budget line items are explained in the notes accompanying the tables.

On the basis of the foregoing calculations, total cost of the five year extension would be approximately $28.7 million under Option I and $31.1 million under Option II. Abstracting biodiversity and PVO/NGO support costs, Option II represents a 13% cost increase over Option I.

Table 1. Option I Budget

Table I (Option I)
($000)

	YEARS [1]					
	ONE	TWO	THREE	FOUR	FIVE	TOTAL
I. NRMS Backstopping						
A. Staff						
RSSA [2]	350	368	386	405	425	1,934
Contract [3]	659	642	852	894	953	4,000
Subtotal	1,009	1,010	1,238	1,299	1,378	5,934
B. Services						
Research & Studies [4]	93	98	103	108	113	515
Workshops & Conferences [5]	240	252	265	278	292	1,327
Info Mgmt [6]	225	236	248	260	273	1,242
Subtotal	558	586	616	646	678	3,084
Subtotal A + B	1,567	1,596	1,854	1,945	2,056	9,018
II. Tech.Assistance to Field						
Project Design & Evaluation [7]	282	296	310	326	342	1,556
NR Assessments [8]	172	181	190	199	209	951
Planning/Policy Analyses [9]	258	271	284	299	314	1,426
Field Studies [10]	80	84	88	92	97	441
Workshops & Conferences [11]	300	315	331	347	365	1,658
Training [12]	200	200	200	200	200	1,000
Subtotal	1,292	1,347	1,403	1,463	1,527	7,032
II. Field Staff [13]	184	386	609	639	672	2,490
V. PVO/NGO Support	1,000	1,000	1,000	1,000	1,000	5,000
/. Biodiversity Grants	1,000	1,000	1,000	1,000	1,000	5,000
/I. Evaluation			100		100	200
TOTAL	5,043	5,329	5,966	6,047	6,355	28,740

Notes - TABLE I

1/ A 5% annual inflation factor included in years two through five, for items other than "Training", "PVO/NGO Support" and "Biodiversity".

2/ Year One figures taken from ADS Project Paper, Annex E, assumes 2.5 persons (two professionals and a secretary).

3/ Assumes three professionals, a junior professional and a secretary; a fourth professional is included beginning year three; costs include travel (2 trips per year) home office support, allowances, overhead and fee.

4/ Assumes one desk study ($13,000) and two field studies ($40,000 each).

5/ Assumes one workshop ($60,000) and one conference ($180,000) per year.

6/ Includes database creation and management ($75,000/year), annual report to Congress ($50,000), special issue reports ($50,000 each), and miscellaneous, reports ($50,000 each).

7/ Assumes 3 project design exercises per year. Evaluations to be project funded.

8/ Assumes 2 NR assessments ($86,000 each) per year.

9/ Assumes 3 planning/policy analyses ($86,000 each) per year.

10/ Assumes 2 field studies ($40,000 each) per year.

11/ Assumes 2 workshops ($60,000 each) and one conference ($180,000) all in Africa.

12/ Includes, over duration of project, buy-ins to A.I.D. sponsored training activity ($500,000), participation in training activities by other organizations ($250,000), two NRMS-sponsored training events ($150,000) and cost of training materials, assessments, evaluation ($100,000).

13/ Assumes one RSSA/PSC in year One and one additional one in year two and a third in year three - data derived from ADS project paper, Annex E.

Table 2. Option II Budget

Table 2. (Option II)
($000)

	YEARS [1]					
	ONE	TWO	THREE	FOUR	FIVE	TOTAL
I. NRMS Backstopping						
A. Staff						
RSSA [2]	350	368	386	405	425	1,934
Contract [3]	659	642	852	894	953	4,000
Subtotal	1,009	1,010	1,238	1,299	1,378	5,934
B. Services						
Research & Studies [4]	106	111	117	123	129	586
Workshops & Conferences [5]	294	309	324	340	357	1,624
Info Mgmt [6]	338	354	372	390	410	1,864
Subtotal	738	774	813	853	896	4,074
Subtotal A + B	1,747	1,784	2,051	2,152	2,274	10,008
I. Tech.Assistance to Field						
Project Design & Evaluation [7]	336	353	370	389	408	1,856
NR Assessments [8]	204	214	225	236	248	1,127
Planning/Policy Analyses [9]	306	321	337	354	372	1,690
Field Studies [10]	90	95	99	104	109	497
Workshops & Conferences [11]	366	384	404	424	449	2,027
Training [12]	200	200	200	200	200	1,000
Subtotal	1,502	1,567	1,635	1,707	1,786	8,197
II. Field Staff [13]	249	442	654	635	765	2,745
V. PVO/NGO Support	1,000	1,000	1,000	1,000	1,000	5,000
'. Biodiversity Grants	1,000	1,000	1,000	1,000	1,000	5,000
'I. Evaluation			100		100	200
TOTAL	5,498	5,793	6,440	6,494	6,925	31,150

Notes - TABLE II

1/ A 5% annual inflation factor included in years two through five, for items other than "Training", "PVO/NGO Support" and "Biodiversity".

2/ Year One figures taken from ADS Project Paper, Annex E, assumes 2.5 persons (two professionals and a secretary).

3/ Assumes three professionals, a junior professional and a secretary; a fourth professional is included beginning year three; costs include travel (2 trips per year) home office support, allowances, overhead and fee.

4/ Assumes one desk study ($16,000) and two field studies ($45,000 each).

5/ Assumes one workshop ($72,000) and one conference ($220,000) per year.

6/ Includes same level of effort as in Option I, costs increased by 50% to reflect contract overhead, fringe and fee.

7/ Assumes 3 project design exercises ($112,000 each) per year. Evaluations to be project funded.

8/ Assumes 2 NR assessments ($102,000 each) per year.

9/ Assumes 3 planning/policy analyses ($102,000 each) per year.

10/ Assumes 2 field studies ($45,000 each) per year.

11/ Assumes 2 workshops ($72,000 each) and one conference ($220,000) all in Africa.

12/ Some figures as Table I. Assumes training will be carried out outside the contract.

13/ Assumes contract will provide one person in year one, an additional one in year two and a third in year three. Assumes REDSOs/Missions will provide housing and office equipment, supplies and vehicle - if not total for this item should be increased by $250,000.

ANNEX A

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ANNEX B

LIST OF CONTACTS

I. Washington

A. U.S. Agency for International Development (USAID)

1. Bureau for Africa (AFR)

   a. Office of Technical Resources (TR)-Richard Cobb, Lance Jepson, Judy Gilmore, Ben Stoner, Gary Cohen, John Gaudet, Tony Prior, Mike McGahuey, Greg Booth, Timothy Resch, Dwight Walker, Randall Roeser, Yvonne Andualem, Patricia O'Brien, Jonathan Olsson
   b. Office of Development Planning (DP)-James Govan, Richard Hynes, Jerome Wolgin, Scott Allen
   c. Office of Sahel and West Africa (SWA)-Ron Daniel, Dana Fisher
   d. Office of Management (MGT)- Carol McGraw

2. Bureau of Science and Technology (S&T)

   a. Office of Forestry, Energy and Natural Resources (FENR)-Dan Deely, Carl Gallegos, Russ Misheloff, Mike Philly, John Speicher, Shirley Toth
   b. Office of Rural Development (RD)-Michael Yates, Nancy Adamson, Jeanne North, Gloria Steele, Dan Dworkin
   c. Office of Agriculture (AGR)-David Bathrick, John Malcolm, Chris Brown, Lamarr Trott

   d. Office of Planning & Program Coordination (PPC) - CDIE - John Erickson

3. Bureau for Asia and Near East (ANE)-Molly Kux, Stan Peabody, Dennis Weller

4. Bureau for Latin America and the Caribbean (LAC)-Jim Hester, Ray Waldron

5. Bureau for Management Services (MS)-Jean Hacken, Kitty O'Hara

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6. Office of Personnel Management - Don Foster Gross

B. U.S. Department of Agriculture

1. Forest Service-Gary Wetterberg, Julia Morris

2. Office of International Cooperation and Development (OICD)-Bruce Crossan, Catherine Watkins

3. Office of World Soil Resources, Soil Conservation Service - Hari Eswaran

C. National Park Service-Robert Milne, Sharon Clearly, George Mahaffey, Mel Reid.

D. U.S. Fish and Wildlife Service-Lawrence Mason

E. Peace Corps-David Reynolds

F. World Wildlife Fund (WWF)-Laura Campobusso, Barbara Wyckoff-Baird, Meg Symington, Kate Newman, Bruce Leighty, Tom McShane, Erica Caluzi, Gary Hartshorn

G. CARE-Remko Vonk

H. Experiment in International Living (EIL)-Tony Schwarzwalder, Michael Brown, Alex Singer, Monica Sinding, Thomas Fricke, Diana Myers

I. Energy/Development International (E/DI)-Kjell Christopherson, Karen McKay, Samuel Hale

J. Irrigation Support Project for Asia and the Near East (ISPAN)-Peter Reiss

K. World Resources International (WRI)-Walter Arensberg, Fred Mallya, Peter Veit, Kirk Talbott, Dan Tunstall, Bob Winterbottom

L. Land Tenure Center (LTC)-Peter Bloch

M. Wildlife Conservation International (WCI)-Amy Vedder

N. Environment and Development-Jim Tarrant

O. PVO Initiatives Project (AFR/DP funded), Datex Corp - Pat Scheid, Carl Vander, Anne Drebek

P. L. M. Karsh

II. Kenya

A. Kenya Mission-John Westley, Eric Zahlman, Jim Dunn, Gary Moser, Program Officer, Cheryl McCarthy

B. REDSO/ESA-Richard Edwards, Dick Pellek, Paul Andre deGeorges, Joe Carvalho, Bruce Odell,

C. World Bank Representative-Tom Allen

D. World Wildlife Fund (WWF) Kirk Freese, Ed Wilson, Rick Weyerhaeuser

E. World Wildlife Fund Int. approx. 15 other Lake Naivasha workshop participants

F. African Wildlife Foundation (AWF)-Deborah Snelson, Gary Tabor

G. ICRAF-Bruce Scott, Dirk Hoekstra

H. SIDA-Rodney Cheattle

III. Botswana

A. USAID-Richard Shortlidge, Robert McColaugh, Ray Baum, Barbara Belding

B. GOB/DWNP-Nigel Hunter, Jacklyn Bruhn

C. GOB/MLGL-Victor Rantshabeng

D. GOB/Ministry of Mineral Resources and Water Affairs-Stewart Child

E. Kalahari Conservation Society (KCS)-Eleanor Patterson

F. Swedish Geological International AB-Leif Carlsson

G. Aqua Tech-Paul Larkin, Dianna Larkin

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IV. Uganda

A. USAID-Keith Sherper, Al Agard

B. CARE/Uganda-John Miskell

C. PVO/NGO NRMS-Michael Brown, Susan Muballa

V. Others

A. FAO, Soils Resource Management and Conservation Service - Dr. Antoine

C. Environmental Sciences Research Institute, Reston, VA - Roman Pryomko

D. Donald Reilly, St. Louise

E. EROS Data Center, Sioux Falls, South Dakota

ANNEX C: Survey's and Questionnaires

September 28, 1990

Subject: Survey of information support needs related to USAID work in natural resources and environment matters (NR/E).

Context: Planning for extension of NRMS project.

Dear Colleague:

I know that your in-box is piled high and you are swamped with paperwork. So please do not let the fact that there is a questionnaire attached to this letter stop you from reading the next few sentences. YOU DO NOT HAVE TO FILL OUT THE QUESTIONNAIRE. But if you could give a few moments of thought to the following basic questions and write down your responses in the spaces after them, it would be of great help. If you can also fill out the questionnaire, please do so. And please send your reply by the end of October. Many thanks in advance!

What projects or planning are you working on that deal with NR/E questions?

What problems do you experience in obtaining the information you need on NR/E?

Do you have suggestions or ideas for improving your access to information and knowledge on NR/E matters?

Please send your reply to:

Peter Freeman, NRMS analysis team
c/o Gary Cohen
AFR/TR/ANR
AID
Washington, D.C.

Your name + title:

Location of mission: Projects you manage

NRMS Analysis - Information Support Needs

Geographic analysis and GIS

Has the mission supported resource mapping?

If yes, when?

what project

are the maps and studies used by the mission?
(for what purposes, etc.)

are the maps and studies being used by the government?
(for what purposes, etc.)

Does the mission have a GIS program installed? If so,

wha was the origin or initiative that resulted in getting it?

what GIS program being used?

what uses are being made of it?

what results?

perceptions of this technology?

(please send documents, if any)

Monitoring and impact assessment

Are better resource management, conservation of natural resources or biological diversity the goals or objectives or outputs of any recently completed or on-going project (or non-project)?

If yes, were baseline studies done at project's beginning against which progress could be measured? (if no, why?)

were objectively verifiable indicators monitored and evaluated? (if no, why?)

was monitoring and evaluation of indicators carried out? (or is it being carried out?) (if no, why?)

what plans are there for monitoring and impact assessment in projects to be designed (and that fit the above description)?

Information support for NRM planning/programming/issue analysis

Is there a formal library with staff in the mission?

If, yes, does it contain NRM materials of use to the mission?

What are your principal sources of information or knowledge on NRM subjects? (check one or more below)

___ documents and publications available in the mission

___ consultants -- local or international

___ personal library

___ materials received from AID/Washington

___ local documentation centers or libraries.

___ Other -- please list.

Needs and adequacy of NRM information.

Do you feel that you are abreast of NRM activities and technologies applicable to your country?

In planning NRM activities, do many issues arise for which technical answers are not available, i.e. which require additional study, surveys, research, etc.

If yes, what issues?

Is lack of information on, or lack of knowledge of, workable technologies and approaches in NRM a handicap, i. e. in planning or managing projects?

If yes, list fields or resources where lack is felt.

Suggestions and commentary.

Please provide your suggestions or commentary regarding NRM informati in general, and information support that could be developed or offered to assist you and the mission.

Name of person interviewed or responding.

Title and job responsibilities.

Mission location.

Please list any college level or professional training you have had in natural resources and environmental matters, including AID training courses.

NRMS II Design Questions for Field Visits

1. What kinds of support will Missions need in NR over the next 5-6 years - e.g. project design, special studies, preparation of program grants, evaluations? Will these be funded from NRMS II or by USAID?

2. Will your requirements be mostly for short term experts or will you also need continuing in-country help? What level of effort do you foresee?

3. What types of NR services will be most useful to your Mission during the next 5-6 years - e.g. agro-forestry, land use planning, soil conservation, NR economics, resource tenure analyses, other?

4. Should AFR in-house technical support to its missions be mainly Washington based or REDSO based and for what reasons?

5. What are the Mission's preferences as to mechanisms for the delivery of services to field missions a nd REDSOs:

   - level of effort contract
   - IQCs
   - buy-ins from S & T projects
   - USDA RSSA staff in TR/ANR
   - other

6. In what ways can AFR improve its field support for NR activities?

7. What have been the major strengthes and shortcomings of NRMS I support to your mission to date?

8. Is training an important priority for NRMS II:

   - training of Africans - at what levels and in what skills?
   - training of AID staff including FSNs?

9. What is the Mission's relationship to AID-supported bio-diversity activities in your country? Do you see bio-diversity becoming a major or expanding element in USAID's NR program? Is the Bureau's bio-diversity strategy on target or should it be changed/updated?

10. Are PVOs playing a role in NR activities in your country; how do you assess their effectiveness; is monitoring adequate and, if not, how might this best be done; should AID increase support for PVO activities in NR and, if so, in what ways?

11. Do you see a need for improved/increased flow of information on NR experiences in other countries ? Should the NRMS I newsletter be continued. What kind of help does USAID need to monitor and evaluate NR impacts?

12. What do you think of the PNRM's technical and geographic priorities? Are any modifications needed?

U.S. DEPT. OF STATE
2201 C ST. NW SUITE 5440
WASHINGTON, DC 20520

3B D102 25-1 3E056 14 11/21/90 13:55 RP

HAND DELIVERY 32607 AID
JOHN BLUMGART
TROPICAL RESEARCH AND DEVELOPMENT INC
519 NW 60TH STREET SUITE D
GAINESVILLE FLORIDA 32607-

TEL: (904) 331-1886

REF: FAX DATED 10/03/90

1. THIS MESSAGE IS IWME-DR-90-095.

INFORMATION SUPPORT NEEDS.

2. ALL OF THE MISSION'S FOLLOWING COMMENTS ARE IN ORDER OF REF. QUESTIONS.

3. WHAT PROJECTS OR PLANNING ARE YOU WORKING ON THAT DEAL WITH NR/E QUESTIONS'

ALL PROJECTS INCLUDE ENVIRONMENTAL REVIEW. SOUTHERN ZONE WATER MANAGEMENT PROJECT (SZWM) AND SENEGAL REFORESTATION PROJECT (SRP) BOTH ARE DIRECTLY RELATED TO NRMS.

4. WHAT PROBLEMS DO YOU EXPERIENCE IN OBTAINING THE INFORMATION YOU NEED ON NR/E?

SENEGAL HAS DIVERSE SOIL, WATER CONDITIONS AND CLIMATIC ZONES, THUS LOCATION SPECIFIC INFORMATION IS DIFFICULT TO OBTAIN.

5. DO YOU HAVE SUGGESTIONS OR IDEAS FOR IMPROVING YOUR

ACCESS TO INFORMATION AND KNOWLEDGE ON NR/E MATTERS?

MISSION IS IN PROCESS OF COLLECTING NRMS DATA AVAILABLE WITHIN SENEGAL AND IS OPEN TO SUGGESTIONS ABOUT ADDITIONAL INFORMATION SOURCES.

6. GEOGRAPHIC ANALYSIS AND GIS

-- HAS THE MISSION SUPPORTED RESOURCE MAPPING?

(A) MISSION SUPPORTED MAPPING DONE BY SOUTH DAKOTA STATE ON PROJECT MAPPING AND REMOTE SENSING OF THE RESOURCES OF THE REPUBLIC OF SENEGAL.

(B) OMVS - GROUNDWATER MONITORING SYSTEM.

(C) USAID/W - RESOURCES AND POPULATION MONITORING.

-- IF YES, WHEN?

(A) 1982-1986.

(B) 1983-1990.

(C) 1990.

-- WHAT PROJECT?

(A) NATIONAL PLAN AND LAND USE PROJECT (685-0233).

(B) OMVS GROUNDWATER MONITORING PROJECT (625-0938)

(C) EXAMINE CARRYING CAPACITY UNDER ALTERNATIVE POPULATION AND GROWTH SCENARIOS.

-- ARE THE MAPS AND STUDIES USED BY THE MISSION?
YES FOR REGIONAL AND PROJECT RELATED WORK AND STRATEGIC PLANNING.

ARE THE MAPS AND STUDIES BEING USED BY THE GOVERNMENT?
YES FOR RESOURCE PLANNING.

7. DOES THE MISSION HAVE A GIS PROGRAM INSTALLED? NO.

8. MONITORING AND IMPACT ASSESSMENT:

ARE BETTER RESOURCE MANAGEMENT, CONSERVATION OF NATURAL RESOURCES OR BIOLOGICAL DIVERSITY THE GOALS OR OBJECTIVES OR OUTPUTS OF ANY RECENTLY COMPLETED OR ON-GOING PROJECT (OR NON-PROJECT)?

YES, SRP, SZWM AND STRATEGIC PLANNING.

-- IF YES, WERE BASELINE STUDIES DONE AT PROJECT'S BEGINNING AGAINST WHICH PROGRESS COULD BE MEASURED? YES.

-- WERE OBJECTIVELY VERIFIABLE INDICATORS MONITORED AND EVALUATED? IN PROCESS.

-- WAS MONITORING AND EVALUATION OF INDICATORS CARRIED OUT? (OR IS IT BEING CARRIED OUT?) IN PROCESS.

-- WHAT PLANS ARE THERE FOR MONITORING AND IMPACT ASSESSMENT IN PROJECTS TO BE DESIGNED (AND THAT FIT THE ABOVE DESCRIPTION)?

BASELINES WILL BE DONE AND MONITORING ASSESSED.

9. INFORMATION SUPPORT FOR NRM PLANNING/PROGRAMMING/ ISSUE ANALYSIS

IS THERE A FORMAL LIBRARY WITH STAFF IN THE MISSION? YES.

IF YES, DOES IT CONTAIN NRM MATERIALS OF USE TO THE MISSION? YES.

10. WHAT ARE YOUR PRINCIPAL SOURCE OF INFORMATION OR KNOWLEDGE ON NRM SUBJECTS? (CHECK ONE OR MORE BELOW)

X DOCUMENTS AND PUBLICATION AVAILABLE IN THE MISSION
X CONSULTANT - LOCAL OR INTERNATIONAL

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X PERSONAL LIBRARY
X MATERIALS RECEIVED FROM AID/WASHINGTON
X LOCAL DOCUMENTATION CENTERS OR LIBRARIES
X OTHER - PLEASE LIST. REGIONAL ORGANIZATIONS AND OTHER DONORS.

11. NEEDS AND ADEQUACY OF NRM INFORMATION.

-- DO YOU FEEL THAT YOU ARE ABREAST OF NRM ACTIVITIES AND TECHNOLOGIES APPLICABLE TO YOUR COUNTRY?

YES WITHIN THE COUNTRY CONTEXT.

-- IN PLANNING NRM ACTIVITIES, DO MANY ISSUES ARISE FOR WHICH TECHNICAL ANSWERS ARE NOT AVAILABLE, I.E. WHICH REQUIRE ADDITIONAL STUDY, SURVEYS, RESEARCH, ETC. IF YES, WHAT ISSUES?

YES, AS STATED ABOVE SENEGAL IS DIVERSE BOTH IN SOILS, WATER, RAINFALL, AND VEGETATION. INFO IS NEEDED REGARDING THE NRM IMPACT OF THESE VARIABLES PARTICULARLY THEIR INTER-RELATIONS.

-- IS LACK OF INFORMATION ON, OR LACK OF KNOWLEDGE OF, WORKABLE TECHNOLOGIES AND APPROACHES IN NRM A HANDICAP, I.E. IN PLANNING OR MANAGING PROJECTS? NO.

FROM: GILBERT HAYCOCK
CHIEF,
IRRIGATION, WATER MANAGEMENT AND ENGINEERING OFFICE
USAID/DAKAR 2130
WASHINGTON, D.C. 20090-6950
US DEPT OF STATE
AMEMBASSY DAKAR SENEGAL 13072 / L1323 655
WASHINGTON DC 20520-2130

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UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
AMERICAN EMBASSY
BP. 11201
NIAMEY, NIGER
COMMUNICATIONS AND RECORDS UNIT
TELEPHONE: (227) 73-35-08
TELEX: 5444 EMB NIA
FAX: (227)72-39-18

FACSIMILE COVER SHEET

[x] Official

[ ] Personal

DATE: November 19, 1990

TO: John Blumgart and Peter Freeman

ORGANIZATION: NRMs Analysis Team c/o AFR/TR/NR

FAX: 703 - 235 - 0875

FROM: Barry C. Fields, NRM Specialist, ADO

NUMBER OF PAGES (INCLUDING COVER SHEET)

REMARKS:

The following 2 sheets are the memo referred to in an earlier cable response (Niamey 10195) to your letter of September 29.

CLEARANCES: ~~CFTaylor, ADO (Draft)~~

_____

_____

_____

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MEMO

To: George Taylor, Chief ADO

From: Barry Rands, ADO/NRM

Date: September 28, 1990

Subject: Proposal to organize and upgrade NRM information base

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The first duty listed in my job description is to "provide analytical guidance to USAID on the status of NRM in Niger...with a view to incorporating the constraints analysis into further USAID/Niger program design". In order to do this it is important to have an efficient and effective system for gathering, processing, and analyzing the various pieces of information that are pertinent to NRM in Niger. I am referring here to not only information gained from studies, reports, evaluations and such that we have commissioned, but also other various relevant sources of information including field trips, books and journals, other donor documents, local news, etc. My experience with the current system for processing this type of information leaves me with the feeling that we can do much better. Your initiative to catalogue AID reports is a step in the right direction. I would like to see this extended to other sources of information as well.

I envisage that this upgraded information processing system would have at least the following components:

1. Systematic information procurement - our present system seems to be somewhat haphazard. Many of the newsletters, magazines, books, reports, etc. that we receive come to us at the initiative of the sender. This results in our receiving some good stuff, but some of lower priority than other. A more systematic approach would involve selecting the priority items we need to receive and making sure that these items are processed appropriately.

2. Information processing (reading) - at present, information is read and processed by each individual within ADO according to how he/she perceives the importance of the material and his/her schedule. This may mean casual reading for some, in depth for others, and direct pass from in to out box for others. This is not bad, as it permits individual choice and flexibility. However, some important things are surely to be overlooked. I would suggest a more formalized system whereby all the priority information (as determined in 1. above) is read by at least one person and important parts flagged for others to read.

3. Information processing (analyzing) - The next step in the process is to make note of the relevant articles, ideas, etc. that have a direct bearing on our work. Some would require action, others would be appropriate to save for future reference. In any case, information that has a direct bearing on our activities should be made known to all relevant staff and discussed as needed. This might be done in ADO weekly staff meetings. Just as consultants give ADO presentations, we could have periodic presentations of

new books, articles, projects, etc.

4. Information processing (application) - Some items require further study, some require policy changes or changes in our development strategy, in any case, all such application of new knowledge that results in change should be noted, applied and followed up. Responsibility for change is made at the appropriate level.

5. Information storage and retrieval - An efficient system for classifying information needs to be set up so that it can be stored in a manner that facilitates future access and retrieval. For this, we should make use of our growing computer capacity. An information database should be set up on computer, complete with topics and key words. Documents can be stored in central files or in individual offices, as long as the location is specified in the database

6. Information presentation and dissemination - Mission capacity for dissemination and presentation of information to appropriate parties needs to be enhanced. Relevant books, reports, articles, etc. should be made available to appropriate parties and a record made of their distribution. We should also upgrade our information presentation capacity with enhanced presentation software (e.g. Harvard Graphics, Storyboard, etc) and hardware (overhead projector, computer to TV linkage, slide projector, etc.) and training in its use.

When I started this proposal, I meant it for NRM only, but as I progressed, I realize that it would be appropriate for the whole of ADO, although I could design the system for just my position. Either way, it will take some time and some technical assistance (and funds) to implement. The long term results should however greatly enhance our information processing capacity.

On a related item, all of us that will be using the IBM compatible computers, could use some assistance in setting up our systems and basic training in use of the software and eventually advanced uses. There is at least one person I know of who is doing this for CARE (Robin Wheeler). Could we make up a contract for services for someone like him (say for 40 hours of computer training) and then schedule some training sessions over the next couple months. I suppose this could be a trust fund expenditure.

page 1/9

UNITED STATES GOVERNMENT

DATE: October 31, 1990

FROM: Catherine McIntyre, ADO
USAID/Lesotho

SUBJECT: NRM Analysis - Information Support Needs

TO: John Blumgart and Peter Freeman, NRMS Analysis Team
c/o Gary Cohen, AID/AFR/TR/NR

In response to your fax of October 3, 1990 concerning the NRMS Redesign Exercise, I offer the following:

A. Name and Title as above. I am Project Manager of Lesotho Agricultural Policy Support Program (ongoing) and Community Natural Resource Management Project (now in design)

B. Projects which deal with NR/E questions: The new Community Natural Resource Management Project will continue range management aspects currently being implemented under the Lesotho Agricultural Production and Institutional Support Project (PACD 8/92).

C. Problems obtaining information on natural resources and environment:

No national level statistics on natural resource degradation.

No direct measurements relating range quality to soil loss.

No attribution of economic costs of natural resource degradation (soil loss and overgrazed rangelands).

A well-developed, reasonably valid system of monitoring range quality exists in one project zone; however, reliability of measurements is problematic. Measurements vary according to season, from year to year according to rainfall. Also access to measurement sites is sometimes difficult due to weather, quality of vehicles, etc.

Reporting is minimal, both in frequency and dissemination, because data analysis resources are limited--lots of data, but it takes scarce time and skills to analyze them.

D. Suggestions for improving our access to information and knowledge on NR/E matters: Feedback on this questionnaire, and

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summary of lessons learned on NR/E measurement systems in other missions.

E. Analysis-Information Support Needs.

1. Geographic analysis and GIS.

a. Has the mission supported resource mapping? Yes. A completed project, Lesotho Conservation and Resource Development (LCRD) did national vegetation maps and an ecological site map showing soil types. The LAPIS project supports the Min. of Agriculture, Division of Range Management (RM). With assistance from another donor, that division has installed a GIS. The LAPIS project has assisted in training RM staff, and has developed capabilities in the newly-installed GIS to develop appropriate grazing plans in a key Range Management Area. Annex A, attached, is an excerpt from documentation regarding these applications of the MOA/RM GIS.

b. Are the maps and studies used by the mission or by the government? The LCRD maps have been extensively used to determine the carrying capacity of rangelands. Data from those maps has also been entered into the GIS.

2. The Mission does not have a GIS program installed.

3. Monitoring and impact assessment. Better resource management and conservation of natural resources (soil) are not a goal or objective of LAPIS; however, it is believed that the improvement of range quality in order to increase livestock productivity, which is an objective, conserves soil. The CNRM project (now at the PP stage) goal is to improve natural resource management by improving or restoring rangelands.

Baseline studies were done in 1983 when the LCRD project initiated a range management area in one project zone. The indicators are objectively verifiable--their validity has been evaluated, negotiated and refined. Their reliability is affected by season, weather, and other variables which are out of the control of data gatherers. For example, if one measures in July one year, the same site may not be able to be measured at the same time the following year because it's snowed under. Rainfall is variable in amount and timing, and it certainly affects the measures of range quality.

Monitoring is done about as well as can be done; range management specialists from the government have been trained in how to collect the data, and what it means. However, analysis of the data takes time--it is the variability, and thus its comparability, which makes interpretation so difficult.

Some of these problems will be minimized when longer periods of time and more measures smooth out the variability. We expect to

continue collecting and analyzing these data under the CNRM project.

4. Information support for NRM planning/programming/issue analyis:

a. Yes, there is a formal library, but it has only part-time efforts of staff member whose primary responsibilities are elsewhere.

b. It has few NRM materials.

c. Principal sources of info on NRM subjects are

-- documents which are routed around Mission--reports from other donors, technical bulletins distributed by ag. research organizations.

-- international consultants contracted by AID, for example on CNRM project design, CSPS development, etc. Also long-term technical assistance on LAPIS project.

--personal libraries of technicians

--materials received from AID/W

5. Needs and adequacy of NRM information. Yes, I believe I am abreast of NRM activities and technologies applicable to Lesotho. Nonetheless, there are certainly issues which arise for which technical answers are not available--this is an evolving field, and the reports from experience with efficient and reasonably priced technologies are scarce. For example, the ground-truthing needed to interpret conclusions made from satellite photos makes the technology less useful in reality than it appears at first glance.

Not surprisingly, the tradeoffs between measurement precision and cost in an environment of scarce resources and competing information needs make realization of NRM approaches and measurements spasmodic at best.

Suggestions - see D. above.

memorandum

Memo to Freeman + Blumgart
from McDonnyu, ADO, USAID/Lesotho
10/31/90

Annex 1 -

page 4/9

DRAKENSBERG/MALUTI SUBPROJECT FUNDING PROPOSAL:

COMPUTER SUPPORT AND TRAINING

25 October, 1989

1.0.0 INTRODUCTION:

The Governments of Lesotho and the Republic of South Africa (RSA) working in a joint effort, have for the past five years been embarked on a programme known as the Drakensberg/Maluti Project. The long-term objective of the Project is the implementation of improved resource management on the high alpine watersheds along the Drakensberg Escarpment of the eastern Mokhotlong and northeastern Qacha's Nek Districts. These watersheds are critical to the sustainability of both Lesotho and RSA water supplies, and provide unique alpine ecosystems which are found in no other African country. In addition, the watersheds provide significant economic returns to Lesotho herdsmen who graze vast numbers of livestock throughout the area.

Phase One (currently ending) is basically a resource inventory/ research process, in which 11 subprojects collected key sociological and environmental data that will assist Lesotho Resource Management Specialists with the implementation of improved management. Phase One will culminate with the finalization of policy guidelines to designate the Drakensberg/Maluti Project Area as an International Union for the Conservation of Nature (IUCN) recognized Managed Resource Area (MRA).

Phase Two will commence in March, 1990, pending approval of funding by RSA Foreign Affairs. Phase Two will utilize Phase One information to develop a comprehensive management plan towards implementing management in the Study Area in a manner which is compatible with MRA guidelines. The goal of management will be to allow continued use of the Study Area's resources by the local indigenous population, but in a manner which is indefinitely sustainable.

It is anticipated that several Subprojects will continue to receive funding during Phase Two. However, justification for continued funding will in all probability, be based upon the potential merit each has with respect to introducing management. Following is justification for continued and expanded funding of the Data Management Subproject.

2.0.0 Data Management Subproject:

2.1.0 Data Management Phase One Applications:

The Data Management Subproject was directed by the Institute for Natural Resources (INR) in Pietermaritzburg, Natal. The INR,

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through application of its computer capabilities, was responsible for receiving, collating and computer encoding of all quantitative data generated from Phase One Subprojects. This information was then formulated into data bases, and when pertinent, mapped with the INR Geographical Information System (GIS).

During Phase One, the Lesotho Ministry of Agriculture (MOA) Range Management Division became aware of additional potential uses for the GIS. The level of interest was such that the Division invested M35,000 in computer hardware. This investment was based upon promises by the INR to supply GIS software and for the Drakensberg/Maluti Project to fund training of Range Management computer technicians.

Phase One is now in its final stages, and GIS software and training is being supplied to the Division. As anticipated, the Range Management Division has initiated use of the GIS into resource inventory and management programmes. A particularly important use of the GIS is its application in the cattlepost readjudication programme.

2.2.0 Cattlepost Readjudication Programme:

Traditional grazing throughout Lesotho is seasonal in nature. Livestock are grazed in village areas during winter seasons and in high mountainous elevations during summers. These summer grazing areas are known as cattleposts. Over the past 150 years, several thousand cattleposts have been established throughout Lesotho. Unfortunately, no register of cattlepost locations or ownership has ever been developed, and it is not known who is grazing specific cattleposts or even where they come from. This lack of knowledge places the resource manager at a great disadvantage, for it is almost impossible to develop extension packages for introducing management if one does not know who the audience is.

The Range Management Division decided that one of the primary steps towards introducing management to the Study Area is to conduct a cattlepost inventory of all cattlepost users. Thus, over the past two years, Divisional staff have been actively involved with the conduction of cattlepost inventories to determine who historical and present users of cattleposts are; which village they come from; how many livestock they own; etc. In conjunction with this inventory, the Division has mapped: cattlepost locations; summer grazing areas; cattlepost/village grazing boundaries; chieftainship boundaries; etc. To date approximately 1/3 of the Study Area has been inventoried, and it is anticipated that the entire Study Area will be completed by April, 1990.

Central to implementing management in the Study Area will be controlling indiscriminant use of communal rangeland resources, particularly the cattleposts. Presently, grazing of the Study Area is subject to minimal control, and competition for the limited forage is fierce. This has lead to a degradation of the grassland, soil and water resources. As a result, the ecosystems composing

these critical watersheds are now in a state of instability and fragility. Thus, threatening the continued long-term productivity of the area's water and vegetative resources critical to both Lesotho and the RSA.

The Range Management Division seeks to introduce management into the Study Area by initiating a cattlepost readjudication programme, thereby allowing users from a common group of villages to be allocated exclusive grazing rights to summer grazing areas. This procedure is intended to give users a sense of ownership of the rangelands and to reduce competition from outsiders who have no vested interest in attempting to improve the rangelands. These procedures will initially be applied to the area known as the Sangebethu/ Mokhohtlong Range Management Area (RMA), which is a 52,000 hectare area centrally located in the Study Area. Upon completion of readjudication of the grazing rights in the RMA, the effort will be expanded to adjacent portions of the Study Area.

Upon completion of the Study Area cattlepost inventories, it is envisioned that data bases on more than 5,000 livestock owners and 400 villages will be have been developed. Additionally, up to 150 summer grazing areas and 1,200 cattlepost locations will have been mapped. As can be imagined, correlation of these data bases to maps will be a job of immense proportions. This will not be possible without continued training and facilitative support from INR, and additional upgrading of the Range Management Division's computer hardware. In this end, it is requested that the Data Management Subproject be given high priority for continued funding under Phase Two of the Drakensberg/Maluti Subproject.

2.3.0 Specific Objectives - Cattlepost Readjudication Data Management:

Following are some of the specific data management guidelines of importance which have been identified for the cattlepost readjudication programme. During the initial stages of Phase Two these guidelines will be applied only to the Sangebethu/Mokhotlong RMA, or approximately 20% of the Study Area. Thus, the following guidelines specifically refer to the data management programme as it relates to the RMA. Upon completion of the RMA, the data management procedures will be refined and applied to additional portions of the Study Area.

GIS interpretation of the cattlepost readjudication programme will require three steps: 1) generation of data bases; 2) mapping of key boundaries and key parameters; and 3) manipulation and evolvement of data bases/maps to determine suitable grazing arrangements.

2.3.1 Generation of Data Bases:

Following is a summary of data which must be developed into data bases for correlation with maps. To date, all of this information has been encoded in a d-Base III programme, which was developed specifically for analysis of the cattlepost readjudication data.

A. Cattlepost Data Bases:

A. Cattlepost Data Bases:

1. Who the owner of the cattlepost is.
2. The village he originates from.
3. How long he has used the cattlepost.
4. Where he grazed in the cattleposts before grazing in his current cattlepost.
5. The name of the cattlepost grazing area.
6. The code number assigned to his specific cattlepost.
7. How many sheep, goats, horses, donkeys, and cattle he grazes in his cattlepost.
8. The time of year he enters and leaves the cattlepost.
9. How many people share the cattlepost with him.
10. The home villages of sharers.
11. How long sharers have used the cattlepost.
12. How many sheep, goats, horses, donkeys, and cattle sharers graze in the cattleposts.
13. The name of the Principal Chief giving permission for use of the cattlepost.
14. The name of their village chief.
15. The names of livestock owners having mafisa arrangements with cattlepost owners or users.
16. The number of mafisa sheep, goats, horses, donkeys, and cattle using the cattlepost by cattlepost owner and user.

2.3.2 Mapping of Key Boundaries and Parameters:

Boundaries and key parameters to be mapped have been subdivided into administrative, geographic and manmade subsections. All parameters will be mapped in a layered manner. Thereby, reducing the conjestion of the maps.

A. Administrative Boundaries:
   1. Chieftainship:
      a) Cattlepost
      b) Village
   2. Grazing Areas:
      a) Cattlepost
      b) Village

B. Geographic Boundaries:
   1. Watersheds:
      a) Primary
      b) Secondary
      c) Tertiary
   2. Rivers:
      a) Primary
      b) Secondary
      c) Tertiary
   3. Contours at 200 m intervals
   4. Wetlands
   5. Vegetation Types
   6. Land Classes

C. Manmade:
   1. Roads
      a) Primary
      b) Secondary
   2. Trails
   3. Cattlepost Kraal Locations
      a) Buffer Zones
   4. Diptanks
   5. Woolsheds
   6. Saleyards
   7. Villages
   8. Croplands
   9. Fence Lines:
      a) RMA Headquarters
      b) Breeding Pastures
   10. Forage Utilization
   11. Woodlots

2.3.3 Manipulation of Data Bases and Maps:

The GIS will be utilized to analyze and manipulate data bases in correlation with mapped boundaries and parameters. Following are some of the objectives and applications of these analyses and manipulations.

A. Provision of Demographic Data for Livestock Producers living within the RMA versus those resident outside the RMA:

   1. Total number of livestock owners living within the RMA.
   2. Total number of livestock owners living outside the RMA.
   3. Total number of livestock grazed in the cattleposts by RMA residents.
   4. Total number of livestock grazed in the cattleposts by non-RMA residents.
   5. Total number of villages having livestock owners who graze in the cattlepost:
      a) RMA resident
      b) Non-RMA resident
   6. An index by RMA village of total livestock owners grazing cattleposts, by cattlepost areas.
   7. An index by non-RMA village of total livestock owners grazing cattleposts, by cattlepost areas.
   8. An index of all village names and duplicate names of villages having livestock producers using the RMA cattleposts.

B. Development of Exclusion Zones:

   1. Ecologically sensitive areas (wetlands).
   2. High erosion areas.
   3. Cropping areas.

4. Topographically unacceptable zones (steep slopes).

C. Manipulation of RMA Boundaries:

1. Extend boundaries to include additional portions of the watershed, and analyze the resulting changes in the number of villages, livestock owners, and livestock to be excluded from RMA participation.

D. Develop Management Strategies:

1. Based upon identified use patterns and density of use, shift RMA and non-RMA livestock owners into a controlled pattern of even usage.

2. Readjudicate cattlepost grazing rights based upon the most effective use patterns identified.

OCT 31

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A/ADO
ADO → cy info

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September 29, 1990

To: Agricultural Development Officer/Environmental Officer
From: John Blumgart and Peter Freeman, NRMS Analysis Team

Subject: USAID/REDSO input to NRMS Redesign Exercise

Greetings:

FILE

I understand that this is a hectic time for everyone, but please do not discard this letter into your waste paper basket and assist us in answering a few questions. As you may know, AFR/TR is evaluating options for the future direction of the Natural Resource Management Services (NRMS) project. We would like to have your views on some of the broader issues related to the future of NRMS. We have listed below the different [illegible] answer those questions listed on the attached sheet which you consider most relevant to our planning effort. Because of interest expressed by some missions in GIS and improved information systems to support and monitor Natural Resource activities, questionnaire addresses that subject. Please let me have your opinions on this matter.

Please send your reply by the END OF OCTOBER to:

John Blumgart and Peter Freeman, NRMS Analysis Team
c/o Gary Cohen
AID/AFR/TR/NR
FAX: 703-235-0875

Your name and title: CJ Rushin-Bell, Environmental Officer

Location of Mission: USAID/Madagascar

Projects you manage:

Andoany Mtn. # 687-103
Masoala Peninsula # 687-104
Ranomafana # 687-0106
Debt Swap # 687-0112
SAVEM # 687-0110
Andohahela / Beza Mahafaly # 687-[illegible] (overight)
KEAPEM (in design phase) # 687-
Total $32.3 million

TRAD

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NRMS Analysis - Information Support Needs

What projects or planning are you working on that deal with NR/E questions?

All of above

Do you have suggestions or ideas for improving your access to information and knowledge on NR/E matters?

SDT / FENR / FSP has been providing outstanding assistance to date, although they are just approaching staff limitations.

NRMS Analysis - Information Support Needs

Geographic analysis and GIS

Has the mission supported resource mapping? Yes

If yes, When? Feb/March, 1990 and Oct/Nov, 1990

What project? NRMS Biodiversity Grant (PID/W).

are the maps and studies used by the mission? in pilot/feasibility phase;
(for what purposes, etc.) team currently in-country.

are the maps and studies being used by the government? Biodiversity Planning Service
(for what purposes, etc.) is one of 3 major components to be supported under the new SAVEM project. Yes, maps + studies will be used by govt. & project planning

Does the mission have a GIS program installed? If so,
No

what was the origin or initiative that resulted in getting it?

what GIS programs are being used?

what uses are being made of it?

what results?

perceptions of this technology?
(please send documents, if any)

Monitoring and impact assessment

Are better resource management, conservation of natural resources or biological diversity the goals or objectives or outputs of any recently completed or on-going project (or non-project)? This is the underlying goal of all our environmental grants and projects, as well as the planned non-project assistance (KRMPEM).

If yes, were baseline studies done at project's beginning against which progress could be measured? (if no, why?) Baseline socio-economic studies and documentation of present biodiversity levels has been or will be done with Ranomafana, Masoala, Amber Mtn., SAVEM, etc.

were objectively verifiable indicators monitored and evaluated? (if no, why?)
SAVEM: Indicators being monitored and evaluated throughout project.

was monitoring and evaluation if indicators carried out? (or is it being carried out?)
(if no, why?) Most grants/projects in start-up phase. Monitoring will be accomplished through the Biodiversity Planning Service to be established as part of ANGAP (Natl. Asso. for the Mgt. of Protected Areas).

what plans are there for monitoring and impact assessment in projects to be designed (and that fit the above description)?
Impact assessments are an integral part of the SAVEM project as a means to test project hypothesis that local populations will alter their behavior from destruction to conservation if they see a relationship between their economic and social well-being to the conserved area.

NRMS Analysis - Information Support Needs

Information support for NRM planning/programming/issue analysis

Is there a formal library with staff in the mission?

If yes, does it contain NRM materials of use to the mission? Yes

What are your principal sources of information or knowledge on NRM subjects? (check one or more below)

documents and publication available in the mission

___ consultant -- local or international

✓ personal library

✓ materials received from AID/Washington

___ local documentation centers or libraries.

___ Other - please list

Needs and adequacy of NRM information.

Do you feel that you are abreast of NRM activities and technologies applicable to your country? Yes

In planning NRM activities, do many issues arise for which technical answers are not available, i.e. which require additional study, surveys, research, etc.

If yes, what issues? Forest Products Pricing / Marketing
Land Tenure
Environmental Policy Changes

Is lack of information on, or lack of knowledge of, workable technologies and approaches in NRM a handicap, i.e. in planning or managing projects?

If yes, list fields or resources where lack is felt.

Suggestions and commentary.

Please provide your suggestions or commentary regarding NRM information in general, and information support that could be developed or offered to assist you and the mission. - Practical field guides for extension workers
- Documentation of successful activities in other countries similar to Madagascar (this was done in West Africa)
- Work with CDIE + the Forestry Support Program rather than setting up a new entity for NRM information

To P. Freeman Andre E. DeSorgher

September 28, 1990

Subject: Survey of information support needs related to USAID work in natural resources and environment matters (NR/E).

Context: Planning for extension of NRMS project.

Dear Colleague:

I know that your in-box is piled high and you are swamped with paperwork. So please do not let the fact that there is a questionnaire attached to this letter stop you from reading the next few sentences. YOU DO NOT HAVE TO FILL OUT THE QUESTIONNAIRE. But if you could give a few moments of thought to the following basic questions and write down your responses in the spaces after them, it would be of great help. If you can also fill out the questionnaire, please do so. And please send your reply by the end of October. Many thanks in advance!

What projects or planning are you working on that deal with NR/E questions?

- NRMP Project for SADCC – Zimbabwe/Botswana/Zambia
- NRMP Project Madagascar
- Parks & Buffer Zone Development Agenda
- Range Management Lesotho
- Coastal Zone Issues, Urban & Engineering as they arise

What problems do you experience in obtaining the information you need on NR/E?

1) Most of what I am doing is making first hand observations & using oral history to write my reports
2) I collect relevant in-country reports as I go
3) I could use a "Hot Line" where I could FAX for quick turn around information, & pouched reports
4) I'd like to know what is happening in West Africa that is relevant

Do you have suggestions or ideas for improving your access to information and knowledge on NR/E matters?

Please send your reply to:

Peter Freeman, NRMS analysis team
c/o Gary Cohen
AFR/TR/ANR
AID
Washington, D.C.

Peter – How's it going
Andre
PS – You're always welcome – I'm a big empty house

Your name & title: Andre E. DeSorgher

Location of mission: REA/REDSO/ESA

Projects you manage NA

NRMS Analysis - Information Support Needs

Geographic analysis and GIS

Has the mission supported resource mapping?

If yes, when? 1) We are in the process of purchasing IDRISI, a scanner, an ink jet printer, and we're to link to video, video editing gear, etc. on my contract

what project are the maps and studies used by the mission? (for what purposes, etc.)

2) I will be trained - Italy at Clark Univ in the summer 1991

are the maps and studies being used by the government? (for what purposes, etc.)

3) We will begin trying to use this in a practical manner

Does the mission have a GIS program installed? If so, Idrisi - REDSO/ENG

what was the origin or initiative that resulted in getting it? The engineers feel this is an important technology for planning & analysis

what GIS program being used? Idrisi

what uses are being made of it? - OTJ for the moment. Our biggest problem will be to obtain already transformed data on 3½ disks that we can use directly.

what results? Possibly we need ties with Tribal Remote Sensing Institute or a similar organization

perceptions of this technology? - Lots of potential, only time will tell how practical it will be & how cost effective it will be

(please send documents, if any)

Monitoring and impact assessment

are better resource management, conservation of natural resources or biological diversity the goals or objectives or outputs of any recently completed or on-going project (or non-project)? Yes

If yes, which were baseline studies done at project's beginning against progress could be measured? (if no, why?)

1) - Important First - We collected baseline ecological & commercial forestry data

2) NRMP – Madagascar – will collect baseline data

To my knowledge the other Uganda & SADCC project do not have baseline data. We do know however in the Rwenzori Mountains Services Project – what they had in the way of infrastructure (roads, pit latrines, water supplies, trails, garbage pits, school buildings & dispensaries when they arrived.

were objectively verifiable indicators monitored and evaluated? (if no, why?)

In the Development through Conservation Project – we felt the verifiable indicators were unrealistic & were not appropriate since they measured how many trees were planted, workshops were held & not the "Development Process" that is needed.

was monitoring and evaluation of indicators carried out? (or is it being carried out?) (if no, why?)

In DTC Project – Quarterly Reports indicated where they stood in attaining verifiable indicators – but they were unrealistic & too much time was spent in trying to attain them & not in making the project work & in establishing the necessary Development Processes that would guarantee the project's success & continuation beyond PACD.

what plans are there for monitoring and impact assessment in projects to be designed (and that fit the above description)?

Information support for NRM planning/programming/issue analysis

Is there a formal library with staff in the mission? Yes

If, yes, does it contain NRM materials of use to the mission? Some – we are trying to build this up. Also I have my library left by Gaudet, the Regional Post Specialist & the Nat'l Parks Ab and have their own library – they need consolidation

What are your principal sources of information or knowledge on NRM subjects? (check one or more below)

We reported this – so far no luck!!

___ documents and publications available in the mission

___ consultants -- local or international

✓ personal library

___ materials received from AID/Washington

___ local documentation centers or libraries.

___ Other -- please list. As I explained most what I am doing is first land evaluations – mostly gathering information by observation & through oral history

Needs and adequacy of NRM information.

Do you feel that you are abreast of NRM activities and technologies applicable to your country? To A Degree – we can always use better information

In planning NRM activities, do many issues arise for which technical answers are not available, i.e. which require additional study, surveys, research, etc. Yes (eg – I need info on min-hydro power stations – types/expenses that can be tied into piped water in the Rwenzori Mts)

If yes, what issues?

See previous page as example

Is lack of information on, or lack of knowledge of, workable technologies and approaches in NRM a handicap, i. e. in planning or managing projects?

If yes, list fields or resources where lack is felt.

- African wildlife management - I am obtaining some books out of S. Af on the subject

Suggestions and commentary.

Please provide your suggestions or commentary regarding NRM information in general, and information support that could be developed or offered to assist you and the mission.

As I said we could use

1) FAX Hot Line

2) List of Short Term Specialists we could call in to help

Name of person interviewed or responding.

Title and job responsibilities. Andrew D'Arcy
REA/REDSO/ESA

Mission location. Nairobi

Please list any college level or professional training you have had in natural resources and environmental matters, including AID training courses.

- BA Biology
- MS Fisheries & Aquatic Ecology
- 6-8 Credits Night School Environmental Engineering
- School of Hard Knocks

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September 29, 1990

To: Agricultural Development Officer/Environmental Officer
From: John Blumgart and Peter Freeman, NRMS Analysis Team

Subject: USAID/REDSO input to NRMS Redesign Exercise

Greetings:

I understand that this is a hectic time for everyone, but please do not discard this letter into your waste paper basket and assist us in answering a few questions. As you may know, AFR/TR is evaluating options for the future direction of the Natural Resource Management Services (NRMS) project. We would like to have your views on some of the broader issues related to the future of NRMS. We have listed below the different questions which would greatly facilitate our planning. We would very much appreciate your taking a moment to answer those questions listed on the attached sheet which you consider most relevant to our planning effort. Because of interest expressed by some missions in GIS and improved information systems to support and monitor Natural Resource activities, questionnaire addresses that subject. Please let me have your opinions on this matter.

Please send your reply by the END OF OCTOBER to:

John Blumgart and Peter Freeman, NRMS Analysis Team
c/o Gary Cohen
AID/AFR/TR/NR
FAX: 703-235-0875

Your name and title: Richard Pellek, Regional Natural Resources/Policy Advisor

Location of Mission: REDSO/ESA, Nairobi, Kenya

Projects you manage: N/A

TR&D

NRMS Analysis - Information Support Needs

Information support for NRM planning/programming/issue analysis

Is there a formal library with staff in the mission?

If yes, does it contain NRM materials of use to the mission?

What are your principal sources of information or knowledge on NRM subjects? (check one or more below)

X documents and publication available in the mission

___ consultant -- local or international

___ personal library

X materials received from AID/Washington

X local documentation centers or libraries.

___ Other -- please list.

Needs and adequacy of NRM information.

Do you feel that you are abreast of NRM activities and technologies applicable to your country? No

In planning NRM activities, do many issues arise for which technical answers are not available, i.e. which require additional study, surveys, research, etc. Yes

If yes, what issues?
Baseline data of all kinds: Maps, Research and Survey data, Rainfall and soils information.

Is lack of information on, or lack of knowledge of, workable technologies and approaches in NRM a handicap, i.e. in planning or managing projects? Yes - for everyone

If yes, list fields or resources where lack is felt.
Resources: Field maps, aerial photos, concise references to nature of research results, survey data compilation and indexing of geographical information should be undertaken by USAID.

Suggestions and commentary.

Please provide your suggestions or commentary regarding NRM information in general, and information support that could be developed or offered to assist you and the mission.
Written subject matter should be indexed, compiled and color coded so that files can be stored and retrieved along lines of main subjects. When written materials apply to several subject areas, the cross reference index codes should be used. Maps, photos and audio-visual materials should also be coded.

NRMS Analysis - Information Support Needs

Geographic analysis and GIS

Has the mission supported resource mapping? Not usually applicable to REDSO, on the basis of traditional division of labor. However, engineeri division has purchased some GIS software.

If yes, When?
1990

What project?
General use

are the maps and studies used by the mission? Unknown
(for what purposes, etc.)

are the maps and studies being used by the government?
(for what purposes, etc.)
There is a trend of some countries making use of data, others n

Does the mission have a GIS program installed? If so,

what was the origin or initiative that resulted in getting it?

what GIS programs are being used?

what uses are being made of it?

what results?

perceptions of this technology?
(please send documents, if any)

Monitoring and impact assessment

Are better resource management, conservation of natural resources or biological diversity the goals or objectives or outputs of any recently completed or on-going project (or non-project)? Yes, in ways that take special qualification and qualification to describe.

If yes, were baseline studies done at project's beginning against which progress could be measured? (if no, why?) Some "Baseline" information is always availabl but no project ever has enough, or always in the proper format.

were objectively verifiable indicators monitored and evaluated? (if no, why?) Unknown, for the most part. Logframe contains these indicators.

was monitoring and evaluation if indicators carried out? (or is it being carried out?) (if no, why?) Doubtful if entirely satisfactory monitoring and evaluation system exists, but some attempts made on ad hoc basis.

what plans are there for monitoring and impact assessment in projects to be designed (and that fit the above description)?
Assessment of effectiveness of monitoring and impact tends to be on a project-by-project basis, with various levels of concern on the importance of monitoring. As a rule, effectiveness of monitoring still depends on motivation of individuals attached to specific projects, and does not relate to broad prescriptions.

NRMS Analysis - Information Support Needs

What projects or planning are you working on that deal with NR/E questions?

1. PID/PP - Kenya Natural Resources Management Project 615-0247
2. Unsolicited Proposal - CARE/Uganda, Re: Reforestation and Park Management
3. PAIP Activity-Madagascar, Forest Products Study
4. ICRAF/AFRENA Monitoring - Rwanda, Uganda, Kenya, Burundi
5. NRMS monitoring, Botswana 690-0251

What problems do you experience in obtaining the information you need on NR/E?

Obtaining maps for use in the field always a problem, aerial photos almost never available, or access is restricted; central files of published information does not include all types of information, i.e. they are located in different places. Also, some important sources are found only in certain offices.

Do you have suggestions or ideas for improving your access to information and knowledge on NR/E matters?

The time has come for the agency to purchase GIS for use on a regional basis; and to employ/train enough specialists to make the investment worthwhile. The incorporation of GIS into the overall information management systems will require a re-structuring of library management procedures, i.e. cataloging, filing, etc. and it will be expensive.

However, with operations world-wide, and with frequent personnel turn-overs, transfers and TDYs, GIS systems, complete with raster and vector interfaces, data diskettes, etc. will some day put the most amount of information at one's fingertips in the most useful, convenient form.

One information source of a generic type which would be a valuable additions to a world-wide NR/E baseline is a country-by-country treatment using the Holdridge Life Zone System of land classification. USAID should consider contracting out for preparation of life zone maps, at least for the tropical countries.

TROPICAL
RESEARCH and
DEVELOPMENT, INC.

519 N.W. 60th Street - Suite D • Gainesville, Florida 32607 • USA
(904) 331-1886 • TELEX 955439 INTL TLX ATTN: TR&D • FAX (904) 331-

September 29, 1990

To: Agricultural Development Officer/Environmental Officer
From: John Blumgart and Peter Freeman, NRMS Analysis Team

Subject: USAID/REDSO input to NRMS Redesign Exercise

Greetings:

I understand that this is a hectic time for everyone, but please do not discard this letter into your waste paper basket and assist us in answering a few questions. As you may know, AFR/TR is evaluating options for the future direction of the Natural Resource Management Services (NRMS) project. We would like to have your views on some of the broader issues related to the future of NRMS. We have listed below the different questions which would greatly facilitate our planning. We would very much appreciate your taking a moment to answer those questions listed on the attached sheet which you consider most relevant to our planning effort. Because of interest expressed by some missions in GIS and improved information systems to support and monitor Natural Resource activities, questionnaire addresses that subject. Please let me have your opinions on this matter.

Please send your reply by the <u>END OF OCTOBER</u> to:

John Blumgart and Peter Freeman, NRMS Analysis Team
c/o Gary Cohen
AID/AFR/TR/NR
FAX: 703-235-0875

Your name and title: Donald Dryer ADO Donald A. Dryer

Location of Mission: The Gambia

Projects you manage: Soil + Water Mgmt
Gambian Agricultural Research + Diversification

NRMS Analysis - Information Support Needs

What projects or planning are you working on that deal with NR/E questions?

The Natural Resource/Agricultural Sectors Program Grant.

What problems do you experience in obtaining the information you need on NR/E?

The Mission/Government/Village has not decided what information is necessary, yet. The Mission is assessing the need for a sector grant program.

Do you have suggestions or ideas for improving your access to information and knowledge on NR/E matters?

The rhythm of receipt of N.R. materials and personal visits to the Mission seems appropriate now. The Mission doesn't feel a lack of N.R. information.

NRMS Analysis - Information Support Needs

Information support for NRM planning/programming/issue analysis

Is there a formal library with staff in the mission? No.

If yes, does it contain NRM materials of use to the mission?

What are your principal sources of information or knowledge on NRM subjects? (check one or more below)

___ documents and publication available in the mission Doc. and Pub.

___ consultant -- local or international Consultant.

___ personal library Personal Library.

___ materials received from AID/Washington Materials received from AID/Washingtor

___ local documentation centers or libraries. Local.

___ Other -- please list. WRI, other donors.

Needs and adequacy of NRM information.

Do you feel that you are abreast of NRM activities and technologies applicable to your country? Yes.

In planning NRM activities, do many issues arise for which technical answers are not available, i.e. which require additional study, surveys, research, etc.

If yes, what issues? Percentage of land burned of forest reserves, fish stock assessment, watersheds reclaimed, fuelwood harvested, tons if soil/hectare washed into streams, biological diversity of plants and animals.

Is lack of information on, or lack of knowledge of, workable technologies and approaches in NRM a handicap, i.e. in planning or managing projects? At the moment workable technologies and approaches seem to exist. The NRMS project has developed NRMS Action Plan to NRMS Action Program.

If yes, list fields or resources where lack is felt.

Suggestions and commentary.

Please provide your suggestions or commentary regarding NRM information in general, and information support that could be developed or offered to assist you and the mission.

Development of a cost effective national soil survey for the nation.

NRMS Analysis - Information Support Needs

Geographic analysis and GIS

Has the mission supported resource mapping? Yes.

If yes, When? 1985.

What project? Mixed Farming Project.

are the maps and studies used by the mission? No.
(for what purposes, etc.)

are the maps and studies being used by the government?
(for what purposes, etc.)

Does the mission have a GIS program installed? If so, No

what was the origin or initiative that resulted in getting it?

what GIS programs are being used?

what uses are being made of it?

what results?

perceptions of this technology?
(please send documents, if any)

Monitoring and impact assessment

Are better resource management, conservation of natural resources or biological diversity the goals or objectives or outputs of any recently completed or on-going project (or non-project)? All three will be sub goals for our just developing Natural Resou Agricultural Program sector grant.

If yes, were baseline studies done at project's beginning against which progress could be measured? (if no, why?) The Mission is preparing to begin the baseline survey.

were objectively verifiable indicators monitored and evaluated? (if no, why?) Not

was monitoring and evaluation if indicators carried out? (or is it being carried out?) (if no, why?) To be developed.

what plans are there for monitoring and impact assessment in projects to be designed (and that fit the above description)? Too early to tell, yet.

AID TEL NO. 26000 07 NOV 90 4:10 P.03

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519 N.W. 60th Street - Suite D • Gainesville, Florida 32607 • USA
(904) 331-1886 • TELEX 955439 INTL TLX ATTN: TR&D • FAX (904) 331-328

September 29, 1990

To: Agricultural Development Officer/Environmental Officer
From: John Blumgart and Peter Freeman, NRMS Analysis Team

Subject: USAID/REDSO input to NRMS Redesign Exercise

Greetings:

I understand that this is a hectic time for everyone, but please do not discard this letter into your waste paper basket and assist us in answering a few questions. As you may know, AFR/TR is evaluating options for the future direction of the Natural Resource Management Services (NRMS) project. We would like to have your views on some of the broader issues related to the future of NRMS. We have listed below the different questions which would greatly facilitate our planning. We would very much appreciate your taking a moment to answer those questions listed on the attached sheet which you consider most relevant to our planning effort. Because of interest expressed by some missions in GIS and improved information systems to support and monitor Natural Resource activities, questionnaire addresses that subject. Please let me have your opinions on this matter.

Please send your reply by the END OF OCTOBER to:

John Blumgart and Peter Freeman, NRMS Analysis Team
c/o Gary Cohen
AID/AFR/TR/NR
FAX: 703-235-0875

Your name and title: D SONGER

Location of Mission: CAMEROON

Projects you manage:

TRD

NRMS Analysis - Information Support Needs

Information support for NRM planning/programming/issue analysis

Is there a formal library with staff in the mission?

If yes, does it contain NRM materials of use to the mission?

What are your principal sources of information or knowledge on NRM subjects? (check one or more below)

X documents and publication available in the mission

___ consultant -- local or international

___ personal library

X materials received from AID/Washington

___ local documentation centers or libraries.

___ Other -- please list.

Needs and adequacy of NRM information.

Do you feel that you are abreast of NRM activities and technologies applicable to your country? IN PROCESS OF BECOMING SO

In planning NRM activities, do many issues arise for which technical answers are not available, i.e. which require additional study, surveys, research, etc.

If yes, what issues? TOO EARLY TO COMMENT

Is lack of information on, or lack of knowledge of, workable technologies and approaches in NRM a handicap, i.e. in planning or managing projects? NO

If yes, list fields or resources where lack is felt.

Suggestions and commentary.

Please provide your suggestions or commentary regarding NRM information in general, and information support that could be developed or offered to assist you and the mission.

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NRMS Analysis - Information Support Needs

Geographic analysis and GIS

Has the mission supported resource mapping? NO

If yes, When?

What project?

are the maps and studies used by the mission?
(for what purposes, etc.)

are the maps and studies being used by the government?
(for what purposes, etc.)

Does the mission have a GIS program installed? If so, NO

what was the origin or initiative that resulted in getting it?

what GIS programs are being used?

what uses are being made of it?

what results?

perceptions of this technology?
(please send documents, if any)

Monitoring and impact assessment

Are better resource management, conservation of natural resources or biological diversity the goals or objectives or outputs of any recently completed or on-going project (or non-project)?

YES

If yes, were baseline studies done at project's beginning against which progress could be measured? (if no, why?)

NO

were objectively verifiable indicators monitored and evaluated? (if no, why?)

NO

was monitoring and evaluation if indicators carried out? (or is it being carried out?) (if no, why?)

NO

what plans are there for monitoring and impact assessment in projects to be designed (and that fit the above description)?

NONE

NRMS Analysis - Information Support Needs

What projects or planning are you working on that deal with NR/E questions?

KORUP NATIONAL PARK

What problems do you experience in obtaining the information you need on NR/E?

Shortage / LACK OF TECHNICALLY EXPERT PEOPE FAMILIAR WITH AID requirements.

Do you have suggestions or ideas for improving your access to information and knowledge on NR/E matters?

DON'T SEND UNQUALIFIED PEOPLE, SUCH AS RON STANLY, TO THE FIELD TO DO GENERAL WORK THAT HAS NO UTILITY TO A USAID'S SPERIFIC NEEDS

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September 29, 1990

To: Agricultural Development Officer/Environmental Officer
From: John Blumgart and Peter Freeman, NRMS Analysis Team

Subject: USAID/REDSO input to NRMS Redesign Exercise

Greetings:

I understand that this is a hectic time for everyone, but please do not discard this letter into your waste paper basket and assist us in answering a few questions. As you may know, AFR/TR is evaluating options for the future direction of the Natural Resource Management Services (NRMS) project. We would like to have your views on some of the broader issues related to the future of NRMS. We have listed below the different questions which would greatly facilitate our planning. We would very much appreciate your taking a moment to answer those questions listed on the attached sheet which you consider most relevant to our planning effort. Because of interest expressed by some missions in GIS and improved information systems to support and monitor Natural Resource activities, questionnaire addresses that subject. Please let me have your opinions on this matter.

Please send your reply by the END OF OCTOBER to:

John Blumgart and Peter Freeman, NRMS Analysis Team
c/o Gary Cohen
AID/AFR/TR/NR
FAX: 703-235-0875

Your name and title: IQBAL QAZI, MISSION ENGINEER

Location of Mission: GUINEA

Projects you manage:

- ECONOMIC POLICY REFORM
- AGRICULTURAL INFRASTRURE DEVELOPMENT
- AFRICARE FARM-TO-MARKET ROADS

TR&D

NRMS Analysis - Information Support Needs

Information support for NRM planning/programming/issue analysis

Is there a formal library with staff in the mission? NO

If yes, does it contain NRM materials of use to the mission?

What are your principal sources of information or knowledge on NRM subjects? (check one or more below)

___ documents and publication available in the mission

✓ consultant -- local or international

___ personal library

✓ materials received from AID/Washington

___ local documentation centers or libraries.

___ Other -- please list.

Needs and adequacy of NRM information.

Do you feel that you are abreast of NRM activities and technologies applicable to your country? YES

In planning NRM activities, do many issues arise for which technical answers are not available, i.e. which require additional study, surveys, research, etc. NO

If yes, what issues?

Is lack of information on, or lack of knowledge of, workable technologies and approaches in NRM a handicap, i.e. in planning or managing projects?

If yes, list fields or resources where lack is felt.

Suggestions and commentary.

Please provide your suggestions or commentary regarding NRM information in general, and information support that could be developed or offered to assist you and the mission.

NRMS Analysis - Information Support Needs

Geographic analysis and GIS

Has the mission supported resource mapping? NO

If yes, When?

What project?

are the maps and studies used by the mission?
(for what purposes, etc.)

are the maps and studies being used by the government?
(for what purposes, etc.)

Does the mission have a GIS program installed? If so, No

what was the origin or initiative that resulted in getting it?

what GIS programs are being used?

what uses are being made of it?

what results?

perceptions of this technology?
(please send documents, if any)

Monitoring and impact assessment

Are better resource management, conservation of natural resources or biological diversity the goals or objectives or outputs of any recently completed or on-going project (or non-project)? YES

If yes, were baseline studies done at project's beginning against which progress could be measured? (if no, why?) Baseline studies in progress.

were objectively verifiable indicators monitored and evaluated? (if no, why?) NO Not at that stage yet.

was monitoring and evaluation if indicators carried out? (or is it being carried out?) (if no, why?) NO. Not at that stage yet.

what plans are there for monitoring and impact assessment in projects to be designed (and that fit the above description)?

Establish baseline studies at the beginning of the project

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
MISSION TO MALAWI

P.O. Box 30455
Lilongwe 3
Malawi

NICO House, City Center
Tel: 731 455/731 632/731 09
Telex: 4627

FAX: 265-730237

TO: (COMPANY/ORGANIZATION) : NRMS ANALYSIS TEAM

ATTENTION : MESSRS JOHN BLUMGART AND PETER FREEMAN

FAX NO : 703 235 0875

DATE : OCTOBER 15, 1990

REFERENCE NO :

TOTAL NUMBER OF PAGES : one (INCLUDING THIS ONE)

NAME OF SENDER : JOANNE T. HALE

OFFICE : AGRICULTURE AND FOOD SECURITY

MESSAGE:

Our Mission does maintain a formal Library which includes NRM materials.

Principle sources of information include documents and publications available in the Mission and from AID/W as well as our Agroforesty Consultant under the Malawi Agricultural Research and Extension (MARE) Project.

While we do not have any projects or programs that deal directly with natural resource management, some related concerns are included in MARE's agroforestry technical assistance component

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U.S.A.I.D., Mission to Botswana
Embassy of the United States

USAID
P.O. Box 2427
Gaborone, Botswana

(U.S. Mailing Address)
USAID/GABORONE
Washington, D.C. 20090-6950

Tel.: (267) 353382 FAX : (267) 313072 TELEX: 2336 BD

FAX TRANSMISSION

TO : JOHN BLUMGART FAX NUMBER: ( )(904) - 331-3284

OFFICE : TROPICAL RESEARCH & DEVELOPMENT DATE 10/16/90

FROM : ROBERT MCCOLAUGH FAX NUMBER (267) 313072

SUBJECT: NRMS RE-DESIGN EXERCISE

PERSONAL [ ] OFFICIAL [X] PROJECT [ ] (NUMBER:)

SIGNATURE OF SENDER: KBlaine

PAGES SENT IN THIS TRANSMISSION, INCLUDING COVER SHEET: 1

NOTE: PLEASE CONFIRM RECEIPT OF FAX FOR PURCHASE ORDERS AND SIMILAR CONTRACT DOCUMENTS.

ROY HAGEN GATHERED THE INFORMATION, REQUESTED IN YOUR FAX OF 29 SEPTEMBER. DURING HIS RECENT SIX DAY TDY IN BOTSWANA.

FROM:
USAID/MAURITANIA

DEPT. OF STATE
WASHINGTON, DC
20520-2430

B.P. 222
NOUAKCHOTT
MAURITANIA
WEST AFRICA

FAX #: 222 25 33 55

TO: JOHN BLUMGART 7 PETER FREEMAN, NRMS ANALYSIS TEAM, AID/AFT/TR1NR FAX: 703-235-075

OFFICE: AID/AFT/TR/NR

HEADER PLUS 1 PAGES

FROM: WILLIAM H. FAULKNER, SUPERVISORY

OFFICE: PROGRAM OFFICER, USAID/NOUAKCHOTT

DATE: OCTOBER 14, 1990

****

COMMENTS:

SUBJECT: USAID/REDSO INPUT TO NRMS REDISIGN EXERCISE

REF : YOUR FAX DATED OCTOBER 03, 1990

FYI: USAID/Nouakchott's program emphasis has been changed to include only humanitarian food assistance and limited training support. The mission will not be participating in the NRMS Project.

This message is transmitted using a Canon FAX-630
If any problems occur, or if you need to talk to
a human being, call 222 25 39 14 or 222 25 29 59.

ANNEX D

SCOPE OF WORK

The contractor will work with AFR/TR/ANR/NR staff in completing the work outlined below. The contractor will also coordinate activities and research closely with other AID/W staff deemed necessary by AFR/TR/ANR/NR. The following work will be completed by the contractor:

1. Review all relevant NRMS and biodiversity country assessments and organize most important data that will allow natural resource planners in Africa to make meaningful decisions regarding impact of past, present and future NRMS interventions. Review the various elements of support the Africa Bureau provides for remote sensing and geographical information systems and recommended how to (a) consolidate this support and (b) incorporate NRM data in order to more effectively monitor Natural Resources degredation.

2. Synthesize mission and field input and suggestions from the May NRMS Lome Conference and insure that this input is incorporated into the NRMS Phase II design and data base.

3. Further organize data from (1) and (2) above into a GIS-type format based within an organizational framework and other attributes necessary to tailor products to the needs of the Bureau and Missions.

4. In addition to the bio-physical characteristics that the GIS system normally demonstrates, the contractor will construct overlays in the AFR/TR NRMS GIS that include the following:

(a) location of sites where Africans as land users have adapted NRM practices that produce increases in income and productivity; and

(b) socioeconomic conditions (tenure, financial, human resources for extension, resource-use laws, cooperations, etc) that contribute to the adaption of the above NRM practices.

5. Review AFR/TR/ANR cable on NRM objectives and indicators in mission's action plans. Based on field mission concerns, past data collected and future assessments planned, expand and finalize strategy for NRM indicator development and implementation into a format readily usable by field missions. Assist in the adoption, field testing and final establishment of NRMS indicators in NRM Group I and II countries.

6. Once the NRMS project information base is developed, the contractor will assist AFR/TR/ANR/NR in completing the inferences to help us identify appropriate actions for the second phase of the NRMS project.

7. Review our biodiversity strategy and recommend any changes in technical or managerial modalities of assistance both to the field and regarding how biodiversity grants are approved and managed in AID/W. Recommendations on the above and inclusion of indicators on biodiversity interventions will be given within the context of the NRMS phase two.

8. Complete at least one trip to Africa to present results of the above steps in order to "sound out" field response to data base and indicator development and options for the future NRMS.

9. Review AFR/TR/ANR/ND's Africa Bureau NRMS strategy review as a guideline for future NRMS development and assist in completing several tasks outlined in the strategy review's ten steps.

10. Determine what aggregate trends and issues appear to be emerging from previous and planned natural resources assessments and action plans and biodiversity activities.

11. Complete a detailed concept and strategic document outlining the NRMS phase two project, and providing analyses on:

(a) the design of the information management elements of the phase II project for improving NRM analysis and technical networking;

(b) expansion of Bureau natural resources programming, through PVOs, in lower priority countries, focussing on biological diversity;

(c) alternative for efficient provision of technical services to high priority countries for assessments, strategy development and program design and evaluation, and;

(d) design of mechanism to assist the Bureau in addressing natural resources policy issues and to support the design of NPA programs in the natural resources and environment sector.

Based on information collected and organized, the completion of necessary analyses will have to include strong administrative analysis of possible implementation modalities.

Field travel to several selected Africa countries is planned to present preliminary results from (A) though (D) above and to obtain feedback from several key NRMS countries regarding implementation actions.

These analyses will also assist AFR/TR/ANR to further define guidance for natural resource management objectives and indicators in mission action plans.

The product will be a report(s) containing the above analyses and summaries of the analyses which can be used in the project paper or project paper amendment for the phase II project. The report will provide the Bureau with the needed analyses to restructure the NRMS project to fulfill Bureau and mission needs in accordance with the Bureau Strategy Review, the NRMS Project Evaluation, and recommendations from missions.

II. Background and Discussion:

Two major program activities form the basis for the design of the second phase NRMS Project: (1) the Africa Bureau Natural Resources Strategy Review, which was held in January 1990; and (2) the NRMS project evaluation, which was completed in March 1990.

The Africa Bureau Review of the Natural Resources Strategy concluded that: (1) the "Plan for Supporting Natural Resources Management in Sub-Saharan Africa" (PNRM) remains a valid initial strategy; and (2) ten action steps should be taken to implement the PNRM more effectively. The reporting cable on this review (State 07[illegible]897) concluded that these ten action steps, plus a number of other actions, will lead over the next year to a more focussed strategy for the Bureau in natural resources and the environment. AFR/TR will implement several of these action steps through modifications to the NRMS Project, so that revision of the Bureau Natural Resources Strategy and preparation of documentation for the Phase II NRMS Project will proceed simultaneously, which is proper since the NRMS Project will provide program support for continuing implementation of the Bureau strategy.

The mid-term evaluation of the NRMS project was completed in March 1990. Among the findings, the evaluation positively stated that (1) NRMS had succeeded in attracting USAID Mission's attention to the Plan for Supporting Natural Resources Management (PNRM) in Sub-Saharan Africa; and (2) NRMS accelerated natural resources programming in Africa USAID's through technical assistance, natural resource assessments and

support to U.S. based PVO's and host country NGO's in natural resources. Modifications for the second phase of the NRMS Project will use the recommendations of this evaluation.

At this critical project junction another important NRMS activity will occur the first week of May 1990: The NRMS Africa conference in Lome, Togo. This conference will bring together key personnel in Africa to discuss various future activities and to prioritize these within the key areas of the Africa Bureau Natural Resources strategy.

Indeed, the immediate task of AFR/TR/ANR at this stage is to prepare modifications to the project based on (1) strategy review, (2) field recommendations from the Lome conference and (3) increased utilization of data and information collected under the current NRMS project to date. Completion of these steps will result in a valuable assessment of exactly what the NRMS project role should be in supporting natural resource activities in sub-saharan Africa and provide AFR/TR/ANR with the necessary information base to design phase two of NRMS.

Assistance is needed, through the use of PD&S funds, to incorporate (1) through (3) above into project modifications. More specifically, funds will be used to provide the following:

A. Analysis for the design of the information management elements of the phase II project for improving NRM analysis and technical networking;

B. Analysis for expansion of Bureau natural resources programming through PVOs in lower priority countries, focussing on biological diversity;

C. Analysis of alternatives for efficient provision of technical services to high priority countries for assessments, strategy development, and program design and evaluation.

D. Analysis for design of mechanisms to assist the Bureau in addressing natural resources policy issues and to support the design of NPA programs in the natural resources and environment sector.

These analyses will be undertaken by organizing available NRMS data, from various sources including project studies and NRMS assessments, to clearly demonstrate technical and programmatic relationships. It is proposed that a Geographical Information System (GIS) format be used, and include site specific data and socioeconomic conditions (tenure, financial, human resources for extension, resource-use laws etc.) that contribute to the adoption of NRM practices.