

# **Resources to Support Activities in Agriculture and Natural Resources in Sub-Saharan Africa**

**Proposed Analytical Agenda with FY 1993 Funding**  
under the  
Policy, Analysis, Research, and Technical Support (PARTS) project

U.S. Agency for International Development (USAID)  
Bureau for Africa (AFR)  
Office of Analysis, Research, and Technical Support  
Division of Food, Agriculture, and Resources Analysis  
(ARTS/FARA)

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AFR/ARTS/FARA works with and for USAID Missions to:

- identify and assess natural resources and environmental issues that affect agricultural productivity;
- assist in the design and implementation of interventions that promote sustainable increases in agricultural productivity; and
- monitor and evaluate people-level impacts and share experience so that lessons learned can be applied to new activities.

FARA's work is divided among five units:

- Food Security and Productivity (FSP);
- Technology Development and Transfer (TDT);
- Agricultural Marketing and Agribusiness (AMA);
- Environmental Quality (ENV); and
- Natural Resources Management (NRM).

Unit activities are encompassed by the PARTS project, which FARA manages.

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## **Proposed Analytical Agenda with FY 1993 Funding**

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# **Resources to Support Activities in Agriculture and Natural Resources in Sub-Saharan Africa**

## **Proposed Analytical Agenda with FY 1993 Funding**

### **Summary**

*The following summary of this report is text of the cable sent to USAID Missions in sub-Saharan Africa in January 1993.*

This report presents a summary of the analytical activities proposed to be undertaken in the area of agriculture and natural resources management by AFR/ARTS/FARA over FY 1993/94. Its purpose is to seek from Missions their perspectives on the activities that ARTS/FARA will be undertaking under the PARTS project. Analytical activities are intended to be useful to the technical, design, program management, and evaluation needs of both Missions and host governments. The goal is to improve the way in which USAID, other donors, and host governments manage development and assistance. Consequently, these activities address a number of questions like:

- What is happening in African development?
- What are the potential for and constraints limiting further development?
- How can development assistance be made more effective?
- In a given area, what are the best practices?
- How effective or ineffective are USAID programs?

Of course, knowledge is only useful if it is in the right minds. Thus, critical to the success of what we are doing is linking the generation of new knowledge to its use or, in other words, making our work demand driven. Consequently, Mission perspectives are important. Missions and REDSOs are requested to review these activities and respond by cable or fax to the brief questionnaire accompanying the report.

#### **I. The PARTS Project**

The PARTS project is designed to support overall Bureau programs by directing analytical efforts in the ANR sector toward key questions being asked by USAID Missions, other donors, and African governments. The programming cycle involves:

- Setting the agenda by soliciting of issues with collaborating institutions, Missions, and host government technical staff;
- Establishing the initial agenda, for which ARTS/FARA met on December 10 to initiate discussions concerning a program of research and analysis for the coming year;
- Vetting the agenda with the field;
- Establishing the final agenda, for which Bureau review and approval will be held in March/April 1993; and

- Implementation of the agenda by ARTS/FARA. Activities are to be fully funded by AID/W, but Missions may choose to supplement funding through buyins or other assistance. The one-page descriptions of activities note the level and nature of proposed Mission involvement, ranging from parallel funding to TDY clearance to receipt of reports.

This report outlines the overall suggested themes to be addressed for each of FARA's five units. Mission level of interest will vary among themes. Mission comments will facilitate priority setting, collaboration in areas of common interest, and change in areas of limited interest. The analytical agenda for the Bureau includes studies and other activities, some of which are implemented by R&D programs through an OYB transfer from the Africa Bureau with direct technical support and analytical oversight from AFR/ARTS/FARA.

The PARTS project operates through a cycle of definition, selection, funding, and implementation of an analytical agenda. ARTS/FARA is currently implementing activities approved last fiscal year. AFR/ARTS is proposing new activities to be initiated during the third or fourth quarter of FY 1993 and implemented through FY 1994. In most instances, the activities and themes proposed reflect and are drawn from field initiatives and Mission interests, and continue or expand upon previous Bureau activities.

The agenda is intended to support applied research directly related to Mission and Bureau programs, focusing on activities that would not normally be fundable bilaterally. The agenda also helps to improve the manner in which the Bureau reports to Congress on Mission successes in meeting DFA objectives. The agenda does not take the place of more operational analysis needed for Mission program identification and implementation, but supports the broader objectives identified for the Bureau under the DFA.

This report outlines the potential management burden (if any) implied by these activities. Missions may be interested in receiving research findings, participating in field work, or collaborating in other ways.

The agenda will be closely linked to the work of PARTS-funded regional technical staff, usually based in the REDSOs, who will be involved in assisting the Bureau with implementation.

## **II. Proposed Themes**

### **A. Food Security and Productivity (FSP)**

The overall objective of the three themes below is to analyze how best to improve sustainable agricultural productivity through individual or combined investments in technology development and transfer, agricultural marketing and agribusiness, and natural resources management. Each theme will develop indicators and measurement techniques to assist in planning and reporting.

#### ***FSP-1: Agricultural Sector Productivity and Its Contribution to Sustainable Economic Growth***

This theme will focus on studies of (1) total factor productivity, (2) the impact of labor-saving technologies on the release of resources to the nonagricultural sector, (3) a pilot

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effort at growth modeling, and (4) methodologies to examine the economic impact of sustainability issues.

***FSP-2: Agricultural Sector Productivity and Its Contribution to Food Security (Availability, Access, and Utilization)***

This theme will (1) study the impact on regional trade and food security of changes envisioned for post-apartheid southern and eastern Africa, and (2) examine strategies to assess the effectiveness of self-targeting commodities (using market forces) and ways to improve the effectiveness of targeting programs, with attention to the most vulnerable groups, including women.

***FSP-3: Agricultural Policy Reform and Dissemination Efforts***

This theme will (1) finance a study on the effectiveness of agricultural policy reform with the intent of informing USAID agricultural officers and their counterparts of the political, social, and economic implications as policy/institutional programs are being developed, and (2) fund the African workshop on agricultural transformation and Winrock's rural social science network. These are intended to directly involve African analysts in the process to inform both U.S. and African decision makers.

**B. Technology Development and Transfer (TDT)**

In TDT's three themes, the objective is to assist field missions and the Bureau to revitalize national technology systems in order to increase the utilization of profitable and sustainable technology.

***TDT-1: Demand and Supply of Technology***

This theme will develop a strategic framework to assist Missions in the design of initiatives that emphasize demand-oriented technology development and transfer and address the whole commodity system, from production to postharvest handling to marketing. Emphasis will be placed on working jointly with Missions to determine the technological options for the most important commodities.

***TDT-2: Policy and Institutional Environment***

This theme concentrates on the conditions required for effective research to take place and the reforms necessary to establish these conditions. It involves working with SPAAR to revitalize agricultural research in Africa and with Missions to identify and implement major policy and institutional reforms needed so that technology systems in participating countries can become more open, sustainable and productive.

***TDT-3: Performance Monitoring and Impact Assessment***

This theme will help Missions establish analytical capacity for the technology systems in their countries so that research can be effectively focused and prioritized, progress monitored, and impact assessed. The theme builds on research findings showing that the returns to research investments in agricultural research are quite high. It offers Missions a means of gaining access through buyins to technical expertise in impact assessment of TDT activities.

### **C. Agricultural Marketing and Agribusiness (AMA)**

The AMA unit conducts analysis and assists Missions with issues related to the development of more efficient agricultural marketing systems in which effective, private, indigenous agribusinesses are engaged in marketing activities.

#### ***AMA-1: Effectiveness of Agribusiness Development Programs in Sub-Saharan Africa***

Under this theme, the AMA unit proposes three distinct but complementary studies: (1) to continue synthesizing analyses of the commodity-specific opportunities for more effective development of agricultural marketing systems and privately owned indigenous agribusiness firms; (2) to initiate an analysis of the operation of existing regional (transnational) marketing networks and to examine methods to promote their efficiency; and (3) to initiate an analysis with Missions which will closely monitor and evaluate the ongoing impact of new and innovative approaches to agribusiness development, especially agribusiness foundations, privately managed export promotion councils, and other private self-help agribusiness-led efforts.

#### ***AMA-2: Relationship Between Agricultural Marketing Development and Effective Financial Systems and Services***

Under this theme, the AMA unit proposes three distinct but complementary studies: (1) to continue analyses of the dynamic and institutional mechanism by which agribusinesses and entrepreneurs secure financial resources to fund their marketing activities and investments; (2) to initiate planning for two major symposia at which the lessons learned from donor and host-country efforts to promote financial markets and services for agricultural development will be discussed and disseminated; and (3) to initiate with Missions analyses to closely monitor the ongoing impact of innovative approaches to financial market development, such as export-financing schemes, venture capital schemes, stock markets, and other approaches to mobilizing financial resources for agribusiness development.

### **D. Environmental Protection (ENV)**

The ENV unit focuses on environmental impact review and monitoring to assess the short- and long-term interrelationships of development and environment. Environmental protection is understood in its positive sense, as providing opportunities to identify activities that are good for development and also good for the environment.

#### ***ENV-1: Environmental Protection for Sustainable Agriculture***

Activities under this theme focus on improving Bureau understanding and programming for developing broad-based local-level support for environmental protection. Examples include (1) characterizing successful methods in integrated pest management as environmentally superior technology and strategy, and (2) innovative approaches to formal and nonformal environmental education directed at host-country environmental protection.

**ENV-2: *Monitoring to Improve Understanding of Environmental Degradation and Development Impact***

This theme will develop better methods of collecting and applying data that are useful in managing projects and assessing impacts. Included are (1) assistance in implementing geographic information systems (GIS), (2) support to Missions through research and TDYs, and (3) support for a natural resources information consultative group (through the World Resources Institute) to provide advice to the Bureau and Missions.

**ENV-3: *Long-Run Environmental Impacts of Policy Reform and Program Assistance***

This theme will provide advice and insights to the Bureau and field regarding the application of environmental authorities to projects and programs under the DFA, including the environmental implications of nonproject assistance (NPA) programs. The Foreign Assistance Act requires that policy reforms include provisions to protect long-term environmental interests from negative consequences of the reforms. Emphasis is on early detection and mitigation of long-term impacts of policy reform, especially in the agriculture sector. The theme will also develop improved environmental review and implementation guidelines for both project- and policy-based activities, including mechanisms to allow a delegation of authority to the field for approval of environmental review processes.

**E. Natural Resources Management (NRM)**

The two themes will apply insights gained to assist Missions in improving programs, putting in place conditions for the adoption of improved natural resources management practices, and developing approaches to track and monitor change and people-level impact. The themes will also improve understanding in key areas not fully addressed in previous years.

**NRM-1: *Enabling Conditions for Improving Natural Resources Management***

This theme will concentrate on key conditions affecting adoption. It will provide guidance and analysis helpful to Missions in analyzing strategies for developing these conditions and will coordinate donor and research efforts on these key areas.

One significant component over the next year will be to improve the quality of economic analysis related to the Bureau's natural resources management programs. Another will be to synthesize existing knowledge (especially on land tenure and institutional reform) and to analyze issues initially identified in last year's Phase I assessments on economic policy and implementing policy reform programs. The theme will emphasize dissemination and the effective leveraging of lessons learned, in part through a meeting in Africa in the fall of 1993 on natural resources management policy and NPA programs, for Mission staff, FARA collaborating organizations, and host-country counterparts.

**NRM-2: *Natural Resources Management Practices and their Impact on Natural Resource Base Productivity***

This theme will address the causal link between changes in practices and increases in productivity, and develop indicators to track progress in putting in place the relevant conditions to encourage these sustainable increases.

This theme will build upon an existing NRM indicator framework and focus on practices directly related to sustainable agriculture, both in the Sahel and elsewhere in Africa. It will further refine tools and methods associated with the Plan for Supporting Natural Resources Management, including the testing and evaluation of resource accounting methodologies and their applicability to Africa. Finally, the theme will consider what might be the implications for conditions of long-term biophysical and socioeconomic shifts.

### **III. Mission and REDSO Actions**

Mission and REDSO comments, expressions of interest, and suggested changes are requested on material in this report. To facilitate response, a brief questionnaire accompanies the report. Please respond by February 28 to AFR/ARTS/FARA by cable or fax (703-235-3805).

## **Resources to Support Activities in Agriculture and Natural Resources in Sub-Saharan Africa**

### **Proposed Analytical Agenda with FY 1993 Funding**

## **I. The PARTS Project**

The Policy, Analysis, Research, and Technical Support (PARTS) project is a resource that enables the Bureau for Africa to work with and for Missions in sub-Saharan Africa on agriculture and natural resources issues. Within the Bureau, the Food, Agriculture, and Resources Analysis Division (FARA) of the Office of Analysis, Research, and Technical Support (ARTS) manages the PARTS project.

The initial analytical agenda under PARTS was based on field and Bureau priorities in FY 1991-92. Subsequent agenda are to be based on a collaborative process involving Missions and African decision makers. This report initiates the process of developing an analytical agenda for FY 1993-94.

### **A. Mandate**

#### **1. *Improve the Effectiveness of Programs***

PARTS funds field-based research, analysis, synthesis, and dissemination on priority issues. It helps both Missions and the Bureau meet the objectives of the Development Fund for Africa (DFA). It responds to the information needs of policy makers and program managers.

Analyses focus on answering three questions:

- What are the priority trends and issues within the sector?
- What works, what doesn't, and why?
- What are the impacts of past and current activities, and how are they best measured?

Issue-oriented research and analyses to be completed with PARTS support include sectoral, cross-sectoral, and synthesis studies and impact evaluations. The project is also developing and testing strategic frameworks, impact indicators, analytical tools, and methods.

#### **2. *Share Lessons Learned***

The PARTS project requires "effective dissemination of project-generated information to achieve the project purpose." Sharing of lessons learned may be accomplished through printed or visual materials, seminars and workshops, or information management and analytical tools.

To ensure that lessons learned are shared, dissemination must be integrated into the analytical process, with end-users participating in this process. The African Research

Fellows Program will enable selected Africans to assist in identifying and implementing the Analytical Agenda.

### **3. *Report on Results and Impacts***

AFR/ARTS/FARA assists the Africa Bureau in reporting on the results and impacts of programs in the area of agriculture and natural resources. Both Bureau and Mission activities are included. Under the DFA, Africa Bureau reports to Congress must include evidence of impact. Many activities in the proposed agenda are designed to obtain and share information on impacts, and to supplement the Assessment of Program Impact (API) process.

## **B. Implementation**

### **1. *Selection of Activities for the Agenda***

The Analytical Agenda is an ordering of analytical and programmatic questions and a major component of the PARTS project's workplan. It establishes priorities, justifies each task, delineates objectives, estimates resources to be applied, and approximates the time frame for completing activities.

The Africa Bureau will conduct a formal issues identification and agenda-setting exercise at least every two years. Issues will be selected in collaboration with colleagues and clients on the basis of strategic criteria (the importance of the activity to development in Africa) and operational criteria (the feasibility and reasonableness of required resources).

PARTS project colleagues and clients include African public and private organizations, USAID field missions, REDSOs, the Africa Bureau, the R&D Bureau, other offices in AID/W, and other donors. The Africa Bureau's Analytical Agenda for the agriculture and natural resources sector considers the expressed needs of all these groups and is managed by ARTS/FARA.

The process of developing the initial analytical agenda was demand-driven and collaborative, involving a series of Mission-Bureau interactions over a three- to five-year period, reviews of past USAID experiences, the identification of current issues and trends, the development of strategic frameworks, and continuous revalidation through interaction with African individuals and institutions, Missions, private voluntary organizations (PVOs), and nongovernmental organizations (NGOs).

This Analytical Agenda is proposed with the intention of maintaining a flexible and collaborative process and close consultation with colleagues and clients.

### **2. *How Activities are Implemented***

Research and analysis proposed in the Analytical Agenda will be carried out by collaborating institutions through contracts, grants, and cooperative agreements. Most of the support will be through PARTS project buyins to ongoing R&D Bureau projects. These arrangements provide a flexible contracting mechanism to meet the changing focus of the Analytical Agenda.

Research will be conducted by U.S. private contractors, NGOs, or universities, all of which will be encouraged to collaborate directly with African organizations and individuals in doing the analysis. AFR/ARTS/FARA staff will manage the individual activities in collaboration with R&D and will review progress at least semiannually.

### **3. *Operational Links to Mission Programs***

The final Analytical Agenda will be a Bureau agenda. Although it is fully funded by the PARTS project, Missions may choose to supplement or extend particular activities through buyins, support to TDYs or participation in workshops. With a buyin, for example, a contractor may focus on cross-cutting questions while Mission funding enables analysis of operational issues.

By participating in the process of defining the Analytical Agenda, Missions can use it to obtain analysis and other assistance needed. Research findings, lessons learned and other information arising from the Analytical Agenda will be available to all Missions.

### **4. *African Participation***

African involvement will enhance the work outlined in the Analytical Agenda and build African capacity to continue monitoring and evaluating developments in the agriculture and natural resources sector. To ensure African involvement, the proposed Analytical Agenda provides opportunities for Africans to collaborate in the design and implementation of specific research and analysis activities and in the dissemination of findings. African participation means significant and direct involvement in identifying the issues, setting the agenda, conducting research, and providing feedback. African participation is intended to enhance the relevance and credibility of the research while strengthening African analytical capacity.

Mechanisms to ensure African participation include:

- Continued use of contractors and collaborators who have well-established linkages with African governmental organizations, NGOs, and African individuals in key positions;
- Direct grants/contracts with African organizations, where appropriate;
- Encouragement of African linkages through the research networks;
- Continued holding of workshops and conferences in Africa to facilitate African participation;and
- Implementation of an African Fellows Program to provide opportunities for Africans to work directly with Resident Technical Advisors and provide feedback and insights on dissemination techniques and African participation.

## **C. Examples of Analytical Agenda Links to Missions**

### **1. Food Security and Productivity**

In recent years, ARTS/FARA and USAID Missions have jointly funded research on food security to provide an empirical basis for policy dialogue. Research findings have influenced policy change in a number of African countries. Specific examples include:

- The Council of Ministers of the Southern Africa Development Coordinating Committee (SADCC) used empirical results and technical assistance from the Food Security in Africa project as a basis for their revised regional food security strategy. This strategy included a change in goal from food self-sufficiency to food self-reliance. In the Sahel, research has also had an impact on shifting the debate from food self-sufficiency to national, regional, and household food security.
- In Mali, food security research has provided the basis for a multidonor policy dialogue with the government to restructure and liberalize the cereals market.
- In Rwanda, food security research assisted dialogue on bean price policy. A more open market approach resulted.
- In Mozambique, research is helping the Mission assess options for increasing the proportion of coarsely ground maize in their food sales program. Research has indicated that low-income households prefer coarse maize flour.

### **2. Technology Development and Transfer**

ARTS/FARA has worked with Missions in several countries on issues relating to technology development and transfer. Specific examples are:

- Research in Mali, Senegal, Kenya, Cameroon, Niger, and Zambia improved understanding of the impact of investments in agricultural research and demonstrated that rates of return are high. A better understanding of the factors explaining successful research efforts contributed to program adjustments and sharpened policy dialogue.
- Studies of the impact of maize production, marketing, consumption, and trade were completed in Senegal, Malawi, Kenya, Zaire, The Gambia, and Ethiopia, with host-country researcher participation. This work is helping decision makers to have greater confidence in the role of agricultural research in economic growth.
- Research in Zimbabwe, Mali, Cameroon, and Zambia has examined the nature of public and private sector collaboration in technology development and transfer and contributed to a better understanding of the regulatory and enabling environment, and how it impinges on the private sector. This information is being used to promote collaboration between public and private sectors.

### **3. *Agricultural Marketing and Agribusiness***

The Analytical Agenda of the AMA Unit involves research on topics of current interest and future utility and the sharing of lessons learned among Missions. Experience with the Mission in Uganda illustrates the links between the Analytical Agenda and Mission programs.

- In 1990, a USAID Center for Development Information and Evaluation (CDIE) team evaluated the USAID/Uganda Agricultural Non-Traditional Export Promotion (ANEP) Program. FARA's Agricultural Marketing Specialist, a member of the team, applied the concepts which had been developed for the Africa Bureau's *Strategic Framework for Promoting Agricultural Marketing and Agribusiness Development in Sub-Saharan Africa*. This guidance helped the Mission identify successes and shortcomings in the ANEP program and make appropriate modifications.
- In 1991, USAID/Uganda requested a study of the impact of the modified ANEP program. FARA assisted with in-depth research among agribusinesses owners, farmers and Government officials as part of an AMA unit study of opportunities and constraints to successful private agribusiness development throughout sub-Saharan Africa. Several Missions (e.g., Ghana, Guinea, Chad, Madagascar, Rwanda, Niger) used the lessons learned in the design of their own agribusiness and agricultural export promotion programs.
- The lessons learned in Uganda and findings from research in 13 other countries have been disseminated in a report on agribusiness development issues.

### **4. *Environmental Protection***

The Analytical Agenda of the ENV unit focuses on applying evolving USAID environmental authorities, developing guidance on monitoring environmental conditions, preventing and mitigating environmental impacts of nonproject assistance (NPA), and addressing issues in pest and pesticide management. Examples of specific assistance are:

- During 1991 and 1992, USAID/Mali requested assistance in addressing the environmental implications in two projects. One of the projects, the Animal Production and Export (APEX) project, has stimulated creative thinking in anticipating and mitigating long-term environmental impacts related to livestock. This thinking will be applicable to other Missions that are considering livestock export promotion and trade issues.
- FARA has provided extensive technical guidance to USAID/Mali in programming for pest and pesticide management. Through TDYs, staff helped set up a series of applied research trials on innovative technologies, including biological control agents, supported interventions relating to pesticide safety and integrated pest management, and assisted in the design of a bilateral project to strengthen crop protection in Mali. These multidisciplinary efforts are contributing to the development of a framework for more effective implementation of integrated pest management throughout sub-Saharan Africa.

## **5. *Natural Resources Management***

The Analytical Agenda of the NRM unit is linked with Mission programs in several ways.

- The Bureau's NRM Organizing Framework evolved from analysis undertaken in the Sahel, but it has been validated and applied throughout Africa, especially with Missions in Madagascar, Niger, Senegal, The Gambia, and Uganda. The framework emphasizes the conditions and actions that enable long-term sustainable natural resources management to occur.
- USAID/Madagascar's large natural resources management program, with LOP \$110 million of activities, is directly linked to the Analytical Agenda of the NRM unit. Since 1988, ARTS/FARA staff have played important roles in assisting field staff to identify issues, develop the ensuing program, and monitor impacts. Nearly all major project and program documents have included participation from ARTS/FARA and from consultants from various organizations that collaborate in the Analytical Agenda--for example, the Land Tenure Center (LTC), the Decentralization: Finance and Management Project (D:FM), the Forestry Support Project (FSP), and the Environmental Planning and Management Project (EPM). The Mission has also parallel-funded a number of activities.
- One of the ideas emerging from ongoing interaction in Madagascar was the possibility for some kind of endowment to sustain the programs in natural resources management. With assistance from one of the collaborating organizations, a proposal for an endowment was prepared and has become a component of NPA. This model, the first of its kind in Africa, will be further refined by the Bureau and the Mission and then tracked for applicability throughout Africa.

The following chapter presents two-page theme descriptions and one-page activity sheets for the five analytical areas.

## **Resources to Support Activities in Agriculture and Natural Resources in Sub-Saharan Africa**

### **Proposed Analytical Agenda with FY 1993 Funding**

## **II. Proposed Themes for 1993**

Each of the following sections presents detailed descriptions of the proposed themes within a particular analytical area and several one-page activity sheets that elaborate on the specific activities proposed within each theme. Many are studies that will assist Missions in planning and implementing programs in agriculture and natural resources. The organization by themes and activities follows the structure presented in the PARTS Project Paper. Activities will be managed within FARA according to the functions and responsibilities presented in the *ARTS/FARA Organization Briefing Document*, dated May 1992. Copies of this document and the PARTS Project Paper are available on request from ARTS/FARA.

Mission level of interest will vary among themes, and some may be of no interest at the present time. Mission comments will facilitate priority setting, collaboration in areas of common interest, and change in areas of limited interest. The number under the heading on each sheet (for example, 93 AMA-1a) may be used as a reference in communications.

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## **A. Food Security and Productivity (FSP)**

### **Objective**

The overall objective of the Food Security and Productivity (FSP) unit is to analyze how best to improve sustainable agricultural productivity through individual or combined investments in technology development and transfer, agricultural marketing and agribusiness, and natural resources management. The focus is on sustainable increases in agricultural productivity, but approaches recognize that the increase of agricultural productivity is not an end in itself, but rather a means to increases in economic growth and food security.

The FSP unit works in close collaboration with the other analytical units of FARA to help Missions and host countries (1) maximize the impact of their investments in the agricultural and natural resources sector to achieve sustainable increases in agricultural productivity and (2) develop policies and investments that enable the sector to contribute more to both economic growth and food security. These analytical efforts are incorporated in the three themes.

### **Theme 1: Agricultural Sector Productivity and Its Contribution to Sustainable Economic Growth**

The agricultural sector contributes to sustainable, broad-based, market-oriented growth through (1) the release of excess labor to other sectors, (2) the supply of agricultural outputs as inputs to the manufacturing sector, (3) the increased demand for manufactured goods and services, (4) the increased savings and investment which result from the higher incomes achieved with increases in agricultural productivity, and/or (5) increased ability to import manufacturing sector inputs as a result of increases in foreign exchange earnings (or savings). The issues within this domain are complex and interrelated, thus necessitating incremental inquiry. In the last two years, the FSP unit has financed partial productivity measures using National Account Data (Abt/HIID) and Household Data (MSU) as well as a Growth Linkage Study by IFPRI. The results of these studies will support Mission efforts to improve their indicators of agricultural sector performance and provide insights to development-planning decision makers in terms of what investments and policies can best facilitate the transformation of the agricultural sector.

These analyses will be complemented and furthered by the proposed list of activities to be examined in FY 1993/94. The activities tentatively include: (1) methodology development for measuring total factor productivity; (2) the impact of labor-saving technologies on the release of agricultural labor to other sectors; (3) a pilot exercise in growth modeling to determine its viability with African data and to inform decision makers of potential strategies to improve the agricultural sector's impact; and (4) efforts to examine the tradeoffs between short-term bursts in productivity and longer-term sustainability issues.

### **Theme 2: Agricultural Sector Productivity and Its Contribution to Food Security (Availability, Access, and Utilization)**

The concept of food security includes important elements of health, education, nonagricultural employment, and infrastructure, but the agricultural sector is a major contributor to food security. The agricultural sector's contribution to food security is realized through increased availability of domestic food commodities, increased income which may be allocated for food purchases, and foreign exchange earnings (savings), which allow for increased imports of food commodities. Many countries are reporting in their CPSPs that food insecurity is a critical constraint to the development of commercial agriculture and the achievement of increases in agricultural productivity.

Previous analyses have found that, while food availability is a concern during times of drought, war, or market failure, food access (lack of purchasing power) is an ongoing limitation, often affected by foreign exchange considerations that limit the import of desired or necessary food commodities.

One of the most significant events for Africa in the late 20th century is the emergence of post-apartheid South Africa, its impact on international trade, and the consequences for the continent's productive comparative advantage and food security. The proposed analysis is an effort to inform the Bureau and interested Missions of likely consequences.

The second activity emerges from previous analyses and the lessons learned during the 1991/92 drought. Stated bluntly, if broad-based impact is to be achieved, cost-effective mechanisms will have to be found for improving food access by vulnerable groups. Failure to increase food access is more than a humanitarian concern in that it influences both farm-level decisions and the ability to physically improve upon current productivity levels. The proposed research is expected to help Missions more effectively address the relevant issues in the portfolio design.

### **Theme 3: Agricultural Policy Reform and Dissemination Efforts**

The FSP unit is currently financing the cross-cutting examination of "Improving the Effectiveness of Agricultural Policy Reform," which is being implemented by Hbt Associates under the APAP II Project. This study is expected to produce a journal article, a guidebook for those involved in agricultural policy reform (both U.S. and African), and training materials. Further analyses on the impact of policy reform has been deferred until this initial report has been completed.

To promote the sound analysis and implementation of agricultural policy and investments, it is critical that USAID improve its ability to articulate the issues and consequences. To develop appropriate policy/investment interventions, it is even more critical that both in AID/W and field personnel improve their ability to listen. Workshops facilitate both dissemination and listening.

The Workshop on African Agricultural Transformation will enable approximately 25 African analysts and decision makers and 5 leading U.S. analysts to develop a shared vision and workplan for examining the transformation process in years to come. The Growth Linkages Workshop will permit a discussion of the IFPRI findings (financed under the FY 1992 Analytical Agenda) with the critical decision makers in AID/W.

Finally, continued funding is proposed for the African Rural Social Sciences Network by Winrock. This program, which funds research by African analysts, has historically been partially funded by the Africa Bureau. Encompassing this within the PARTS project mechanism will encourage greater complementarity between analyses conducted by Africans and U.S. collaborators, and individual Missions' analytical agendas.



**ANALYTICAL ACTIVITY SUMMARY**  
**93 FSP-1a: Methodology Development for Measuring Productivity**  
**of the Total Farm in Africa**

**THEME:** Agricultural sector productivity and its contribution to sustainable economic growth.

**MANAGER:** George Gardner, Al Smith.

**OBJECTIVE:** To develop a methodology for measuring total factor productivity in the context of typical mixed farming systems in Africa.

**BACKGROUND AND JUSTIFICATION:** Agricultural productivity is usually measured as the economic returns to each of the four factors of production--land, labor, capital, and management. The methodology for deriving productivity measures in monoculture agriculture is well established and used worldwide. However, most African farmers engage in mixed farming systems, with many complementary and competitive relationships between the various crops, livestock, and on-farm processing activities. Current economic methodology, when used in the African context, largely ignores these interrelationships and thus is not appropriate. Thus, many experts believe that the total farm productivity of African farms is substantially undermeasured. A refined methodology for use in the typical African agriculture context is sorely needed, and by identifying real constraints to productivity it would allow potential interventions to be identified.

**SPECIFIC STUDIES AND ACTIVITIES:** The proposed study will examine household budget information previously collected but unanalyzed in terms of factor productivity by Michigan State University (MSU) and IFPRI. The focus will be on the development of cost-effective indicators which can be utilized to better inform host countries and USAID Missions of the respective returns to individual factors of production with a view to identifying constraints which may be addressed by project or policy interventions.

**COLLABORATING INSTITUTIONS AND MISSIONS:** MSU; data from Eastern and Southern Africa and the Sahel; interested Missions.

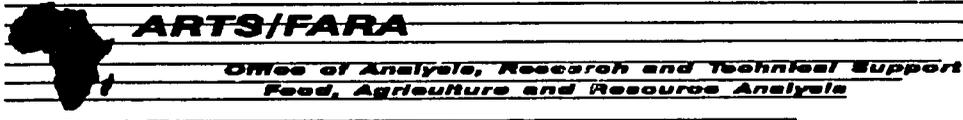
**EXPECTED OUTPUTS:** The development of a cost-effective methodology; supporting analyses for specific case studies; report to Missions.

**DURATION:** 12 months.

**CURRENT STATUS:** New activity building upon previous analyses of total productivity.

**MISSION IMPLICATIONS:** ARTS will support core costs. Country-specific efforts to deepen the analyses or indicator development for a specific country should be financed through Mission buyins.

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**ANALYTICAL ACTIVITY SUMMARY**  
**93 FSP-1b: Impact of Labor-Saving Innovations**

**THEME:** Agricultural sector productivity and its contribution to sustainable economic growth.

**MANAGER:** George Gardner, Jeff Hill, Al Smith.

**OBJECTIVE:** To assess impacts of labor-saving innovations on factor productivity, resource allocations (especially time), equity, environment and incomes.

**BACKGROUND AND JUSTIFICATION:** African farmers are especially interested in innovations which "save" resources, notably labor. However, there is little understanding of what happens as a result of the adoption of such labor-saving innovations as animal traction, which in essence enables farmers to at least maintain production levels while considerably reducing labor inputs. A major portion of this labor is allocated to other activities, including schooling and a broad range of nonfarm enterprises. A better understanding of this process can assist in targeting innovations toward desired impacts and considerably enhancing understanding of the farm-level dimension of agricultural transformation.

**SPECIFIC STUDIES AND ACTIVITIES:** Field studies will utilize the existing national agricultural sample survey households in selected countries to assess changes over time and to conduct FPR-type interviews to assess changes in productivity, resource allocations, etc., that are associated with the adoption of animal traction. Special attention will be given to an examination of time allocation by the household to assess changes in the off-farm supply of labor to off-farm employment.

**COLLABORATING INSTITUTIONS AND MISSIONS:** Michigan State University; possibly the Department of Agricultural Research, and Department of Planning in The Gambia; ISRA in Senegal; KARI in Kenya; other interested Missions.

**EXPECTED OUTPUTS:** Case study reports by June 1994; composite report by December 1994; synthesis and communication to Missions by February 1995.

**DURATION:** 24 months.

**CURRENT STATUS:** New research follow-on to the previous rates of return to agricultural research and labor productivity analyses.

**MISSION IMPLICATIONS:** ARTS will support core costs. Country-specific efforts to deepen the analyses beyond that found in the cross-country effort should be financed through Mission buyins.

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**ANALYTICAL ACTIVITY SUMMARY  
93 FSP-1c: Growth Modeling Pilot Study**

**THEME:** Agricultural sector productivity and its contribution to sustainable economic growth.

**MANAGER:** George Gardner, Brian D'Silva, Al Smith.

**OBJECTIVE:** To develop a system of empirically based simultaneous equations that simulate the growth of sectoral output--modeling which empirically demonstrates the agricultural sector's contribution to broad-based economic growth and projects future impact based upon the agricultural sector's performance.

**BACKGROUND AND JUSTIFICATION:** Conventional wisdom holds that in Africa the agricultural and nonagricultural sectors are closely linked. The Block/Timmer study of Agricultural Productivity measures provides the analytical and empirical foundation for developing a model to investigate economic growth implications of agricultural productivity change in Africa. Such a model needs to capture the effects of intersectoral resource transfers intrinsic to agricultural transformation, as well as the forward and backward linkages between agriculture and industry that sustain the growth process. The modeling work in Africa has remained underutilized due to both the relative paucity of data and the location-specific nature of the linkages. The modeling and case study work is expected to assist decision makers to define appropriate points of intervention to stimulate broad-based economic growth. The simulation efforts will also enable decision makers to anticipate the impact of 2nd- and 3rd-generation implications of their policy/investment interventions.

**SPECIFIC STUDIES AND ACTIVITIES:** An initial modeling effort will be complemented by country-specific case studies or adaptations.

**COLLABORATING INSTITUTIONS AND MISSIONS:** HIID/Abt; USAID/Kenya.

**EXPECTED OUTPUTS:** Model development with supporting case study. If this pilot study proves successful, ARTS/FARA will engage Missions in dialogue with regard to extension and/or country-specific adaptation.

**DURATION:** 6 months.

**CURRENT STATUS:** Phase II of the ongoing work by Block/Timmer on Agricultural Productivity Measures using National Account Data, the ongoing Reardon analysis of Agricultural Productivity Measures using Household Budget Data, and the Delgado Growth Linkages Study.

**MISSION IMPLICATIONS:** ARTS will support core costs. Data has been collected during Phase I of the effort and USAID/Kenya follow-up for Indicator development. Once the model has been developed for Kenya, additional core-funding for 1 to 2 complementary efforts is believed appropriate. Country-specific efforts to deepen the analyses beyond that found in the cross-country effort should be financed through Mission buyins.

**ANALYTICAL ACTIVITY SUMMARY****93 FSP-1d: Managing Productivity Increases and Sustainability in African Agriculture**

**THEME:** Agricultural sector productivity and its contribution to sustainable economic growth.

**MANAGER:** George Gardner, Brian D'Silva, Al Smith.

**OBJECTIVE:** To enhance the contribution to food security of African countries' agricultural sectors.

**BACKGROUND AND JUSTIFICATION:** Research has shown that, under stressed conditions, national food security demands may conflict with the sustainability of production systems. The failure of the maize-based production system to provide food security to large areas of the communal sector of Zimbabwe during the current severe drought is a case in point, raising basic questions about the advisability of the switch from more drought-resistant crops like sorghum and millet and the Government of Zimbabwe's food self-sufficiency policy over the past decade.

Structural transformation in Africa depends on productivity increases in the agricultural sector. Little research has addressed the sustainability of productivity increases. Since the management of natural resources is in the hands of millions of small farmers, production technologies that increase productivity in the short term may not be sustainable. In the mixed cropping systems of Africa, labor productivity changes may be a better guide to analysis of the long-term effect of newly adopted technologies than land productivity changes.

**SPECIFIC STUDIES AND ACTIVITIES:** Investigation of one or more case studies.

**COLLABORATING INSTITUTIONS AND MISSIONS:** (1) Africa and Middle East Branch/ATAD/ERS/USDA; (2) USAID/R&D, SANREM CRSP (University of Georgia); (3) interested USAID Missions.

**EXPECTED OUTPUTS:** A series of reports and workshops which present findings and implications for programming to both Africa Bureau and Mission agricultural and program officers.

**DURATION:** ???.

**CURRENT STATUS:** New activity FY 1993, although literature review has been underway in ERS/USDA for more than a year. This review encompasses both farm-level impacts and interactions and potentially useful analytical methodologies, including APAP II reports.

**MISSION IMPLICATIONS:** ARTS will support core costs. Country-specific efforts to deepen the analyses beyond that found in the cross-country effort should be financed through Mission buyins.

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**ANALYTICAL ACTIVITY SUMMARY****93 FSP-2a: Impact of Post-Apartheid South Africa on Agricultural Trade and Food Security**

**THEME:** Agricultural sector productivity and its contribution to food security (availability, access, and utilization)

**MANAGER:** Brian D'Silva, Melanee Lowdermilk, George Gardner, Al Smith.

**OBJECTIVE:** To analyze the impact of market and trade liberalization in a post-apartheid Southern and Eastern Africa for agricultural production, trade, and food security.

**BACKGROUND AND JUSTIFICATION:** The emergence of a post-apartheid Southern and Eastern Africa has implications for resource allocation in the region. Currently countries in Southern and Eastern Africa are involved in adjustment programs which include trade liberalization and opening up of both domestic and external markets. At least in Southern Africa, this is being driven by the prospects of a post-apartheid South Africa being an active player in the region. Major changes in production patterns could have important implications for regional development, trade, and food security. Analyses will anticipate these potential changes and their implications for trade and food security in the region in order to put in place data for future USAID decision making.

**SPECIFIC STUDIES AND ACTIVITIES:** (1) An analysis of changing production patterns as a result of lifting of sanctions, liberalizing of internal and external markets, and structural adjustment programs currently underway in Southern and Eastern Africa; (2) an analysis of existing trade patterns (both formal and informal) and potential changes in trade as a result of liberalization programs underway; (3) an analysis of trade policies, areas for potential reform, and quantification of benefits accruing from reform of trade and agricultural policies.

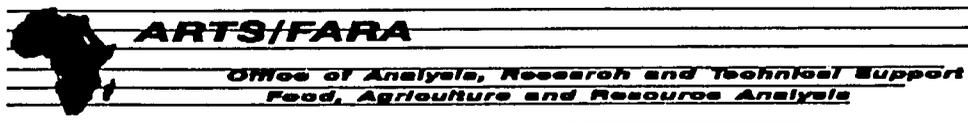
**COLLABORATING INSTITUTIONS AND MISSIONS:** SAFER; AERC; Joint Economic/Agriculture Group of UNECA; interested USAID Missions; SADC and PTA Secretariats; and interested host-country government officials.

**EXPECTED OUTPUTS:** (1) A series of research reports comparing implications for Southern and Eastern African production, trade, and food security as a result of changing economic environment in Southern Africa; (2) PC-based, user-friendly trade data and trade policy information provided for USAID Missions and interested organizations; (3) at least 2 regional seminars/workshops a year; (4) an electronic communications network to enable researchers and policy makers in the region to exchange data, policy papers, research materials, etc.

**DURATION:** 3 years.

**CURRENT STATUS:** New.

**MISSION IMPLICATIONS:** Missions can cofund or parallel-fund activities which are of interest to them; Missions will have opportunity for input into work that has implications for their programs.



**ANALYTICAL ACTIVITY SUMMARY**  
**93 FSP-2b(i) Improving Household Access to Food by Vulnerable Groups**

**THEME:** Agricultural sector productivity and its contribution to food security (availability, access, and utilization).

**MANAGER:** Melanee Lowdermilk, Jonathan Olsson, Brian D'Silva, Al Smith.

**OBJECTIVE:** To examine targeting mechanisms to improve household access to food by vulnerable groups.

**BACKGROUND AND JUSTIFICATION:** The Africa Bureau defines food security as adequate access by all people at all times to sufficient food and nutrition for a healthy and productive life. The proposed research activity would build upon the work currently being done by MSU to enhance understanding of the causes of inadequate access to food and of the effectiveness of interventions targeted to vulnerable groups. Given limited resources, there is a need to target resources to those most in need. This research would examine the scope for targeting vulnerable groups through the market (improving market performance) as well as through direct transfers such as food aid distribution, food-for-work, food ration shops, and food stamp programs.

**SPECIFIC STUDIES AND ACTIVITIES:** (1) Review the effectiveness of existing interventions in reaching the poor and food insecure, and (2) design new interventions. Synthesis study will be based on existing data sets. Some additional field work may be required to acquire additional information.

**COLLABORATING INSTITUTIONS AND MISSIONS:** MSU and interested Missions (especially those facing situations of chronic food insecurity).

**EXPECTED OUTPUTS:** Preliminary and final report with recommendations/guidelines to improve performance; seminar/workshop to disseminate findings to those in AID/W and Missions which express interest in participating (4th Quarter FY 1994).

**DURATION:** 2nd Year of 2-year activity with incremental funding.

**CURRENT STATUS:** Ongoing.

**MISSION IMPLICATIONS:** Missions will be invited to participate in the final workshop. Missions can cofund or parallel-fund activities which tailor the findings to country-specific situations.



**ANALYTICAL ACTIVITY SUMMARY**  
**93 FSP-2b(ii): Intrahousehold Distribution of Resources**

**THEME:** Agricultural sector productivity and its contribution to food security (availability, access, and utilization).

**MANAGER:** Melanee Lowdermilk, Jonathan Olsson, Brian D'Silva, Al Smith.

**OBJECTIVE:** To examine the intrahousehold distribution of resources--who gets what (both food and income to purchase food) within the household.

**BACKGROUND AND JUSTIFICATION:** A number of household expenditure studies have been undertaken in Africa, yet few have examined the intrahousehold distribution of resources. Information on intrahousehold decision making and food allocation would provide an understanding of nonprice factors that influence food consumption. In addition, an understanding of intrahousehold dynamics would provide information on the effects of gender on the allocation of resources. An examination of who controls income within the household and what that income is spent on will inform the design of interventions to augment the food consumption of vulnerable groups. For example, studies in Côte d'Ivoire and Cameroon suggest that income earned and controlled by women is spent largely on food for children within the household. If this is the case, interventions that relieve the constraints women face in gaining access to resources (credit, land, training) may contribute to increased food consumption of children within the household.

**SPECIFIC STUDIES AND ACTIVITIES:** Intrahousehold surveys undertaken in a number of countries to complement existing household expenditure and consumption studies.

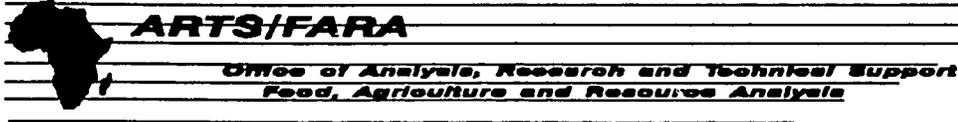
**COLLABORATING INSTITUTIONS AND MISSIONS:** MSU/Tufts, interested Missions.

**EXPECTED OUTPUTS:** Preliminary and final report with recommendations of project activities which address household access issues; seminar to disseminate findings at end of the fiscal year to those in AID/W and Missions who express interest in participating.

**DURATION:** 2nd Year of 2-year activity with incremental funding.

**CURRENT STATUS:** Ongoing analyses--intrahousehold distribution is a new element which builds upon previous efforts.

**MISSION IMPLICATIONS:** Missions will be invited to participate in the final workshop. Missions can cofund or parallel-fund activities which tailor the findings to country-specific situations.



**ANALYTICAL ACTIVITY SUMMARY**  
**93 FSP-3a: Innovative Research Grants for African Analysts**  
**on Food Security and Productivity Issues**

**THEME:** Agricultural policy reform and dissemination efforts.

**MANAGER:** George Gardner, Brian D'Silva, Al Smith.

**OBJECTIVE:** To engage African analysts directly in the examination of specific food security and productivity issues which will inform African decision makers.

**BACKGROUND AND JUSTIFICATION:** FSP analyses are primarily cross-country syntheses that provide broad guidance to decision makers. Experience shows, however, that the African transformation is often location-specific. Therefore, to expand the impact of the synthesis studies, the FSP unit is developing informational flows between the U.S., international, and African collaborators. The purpose of this activity is to provide a mechanism which will ensure that the unit's African collaborators have the resources to be involved directly in the examination of food security and productivity issues. Their involvement is expected to improve: (1) the quality of the analyses undertaken, (2) the dissemination process among analysts, and (3) the interaction between analysts and decision-makers.

**SPECIFIC STUDIES AND ACTIVITIES:** A competitive grant process is anticipated which will consider: (1) the relevance of the issue to be examined, (2) complementarities with the existing and planned analytical agenda, and (3) quality of the research proposal.

**COLLABORATING INSTITUTIONS AND MISSIONS:** Winrock International; African universities; African researchers; interested Missions.

**EXPECTED OUTPUTS:** An estimated 30 country-specific research grants to African researchers for proposals related to agricultural productivity, food security, or the transformation of African agriculture, with each grantee submitting a final report for publication by the program; 2 seminars which will ensure quality of research; input into a planned 1995 African Workshop on Agricultural Transformation.

**DURATION:** 3 years.

**CURRENT STATUS:** Continuation of the current Winrock Rural Social Science Network Project.

**MISSION IMPLICATIONS:** This program offers a unique opportunity for Missions to buy in to relatively low-cost complementary studies/analyses by local analysts for those activities which the Mission would like to pursue but for which there is either no convenient mechanism or insufficient management staff. The program is a grant basis. AFR/ARTS/FARA welcomes input from Mission with regard to both specific research it would like examined and appropriate host-country analysts.

**B. Technology Development and Transfer (TDT)**

In the Technology Development and Transfer (TDT) unit's three themes, the objective is to assist Missions and the Bureau to revitalize national technology systems in order to increase the utilization of profitable and sustainable technology.

**Theme 1: Demand and Supply of Technology**

This theme will develop a Strategic Framework to assist Missions in the design of initiatives that emphasize demand-oriented technology development and transfer and address the whole commodity system, from production to postharvest handling to marketing. Emphasis will be placed on working jointly with Missions to determine the technological options for the most important commodities.

**Theme 2: Policy and Institutional Environment**

This theme concentrates on the conditions required for effective research to take place and the reforms necessary to establish these conditions. It involves working with SPAAR to revitalize agricultural research in Africa and with Missions to identify and implement major policy and institutional reforms needed so that technology systems in participating countries can become more open, sustainable, and productive.

**Theme 3: Performance Monitoring and Impact Assessment**

This theme will help Missions to establish analytical capacity for the technology systems in their countries so that research can be effectively focused and prioritized, progress monitored, and impact assessed. The theme builds on research findings showing that the returns to research investments in agricultural research are quite high. It offers Missions a means of gaining access through buyins to technical expertise in impact assessment of TDT activities.

**ANALYTICAL ACTIVITY SUMMARY  
93 TDT-1a: Technology Frontiers**

**THEME:** Demand and supply of technology.

**MANAGER:** Jeff Hill.

**OBJECTIVE:** To assist in identifying the stock and stream of available technology for commodity systems with a high potential to encourage and influence agricultural transformation.

**BACKGROUND AND JUSTIFICATION:** This activity follows-on and emerges from the *Strategic Framework for Technology Development and Transfer in Sub-Saharan Africa*. It will focus on forging new partnerships to address issues dealing with the stock and pipeline of technology and will provide Missions and the Bureau with information for decision making.

**SPECIFIC STUDIES AND ACTIVITIES:** This activity will include: (1) a dialogue and review process involving Missions, national policy makers, and agents involved in developing and transferring technology to identify high-potential subsectors, determine constraints, prepare an inventory of technology available to address constraints, and examine potential follow-up actions to facilitate increased utilization of available technology.

**COLLABORATING INSTITUTIONS AND MISSIONS:** The activity will build collaboration among Missions within the geographic subregional areas and will leverage the efforts/resources of the following institutions: USDA (ERS & ARS), MSU, National Food Processors Trade Association (processing and post harvest issues), Agricultural Research Institute, IFPRI, selected commodity IARCs, and other marketing and trade firms.

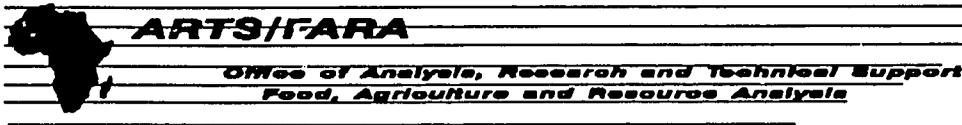
**EXPECTED OUTPUTS:** (1) Analysis of the constraints for subsector development in a regional context; (2) inventory of profitable and sustainable technology available to address on- and off-farm constraints; (3) national and regional dialogue on the development of the commodities; (4) details to guide further investment to increase utilization of technology.

**DURATION:** 24 months.

**CURRENT STATUS:** The activity will commence in FY 1994 and continue through FY 1995.

**MISSION IMPLICATIONS:** Missions will play a key role in facilitating dialogue in the countries with the national policy makers. Hence, Mission participation will be critical to the success of this activity.

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**ANALYTICAL ACTIVITY SUMMARY**  
**93 TDT-1b: Collaborators Advisory Group**

**THEME:** Demand and supply of technology.

**MANAGER:** Mike Fuchs-Carsch, Jeff Hill.

**OBJECTIVE:** To assist the TDT unit to link its analytical activities with the Mission and Bureau technology development and transfer initiatives in a cost-effective manner.

**BACKGROUND AND JUSTIFICATION:** The *Strategic Framework for Technology Development and Transfer in Sub-Saharan Africa* has been completed. The next stage in ensuring that the framework is effectively used is to link it with Mission and Bureau TDT initiatives. To achieve this, a collaborators advisory group will be formed of senior professionals (public and private) involved in technology development and transfer. The group will assist the TDT unit and the ARTS/FARA Division to identify analytical and training applications that will facilitate the transfer of the concepts contained in the framework.

**SPECIFIC STUDIES AND ACTIVITIES:** This activity will develop a process to bring together senior professionals on a regular basis to advise the TDT unit on (1) available knowledge of factors affecting the demand for and the supply of agricultural technology in sub-Saharan Africa, (2) professional credibility of the findings from the analytical activities, (3) the congruity of the TDT analytical activities and factors limiting the use of profitable and sustainable technology in Africa, and (4) analytical and workshop activities that can be used to effectively disseminate concepts and findings.

**COLLABORATING INSTITUTIONS AND MISSIONS:** Winrock, the lead institution, will bring together collaborators. Key Mission representatives will be invited to serve on the collaborator advisory group.

**EXPECTED OUTPUTS:** An inventory of interest and capability to do the type of analyses, designs and monitoring needed to promote the concepts and elements of the new Strategic Framework.

**DURATION:** 27 months.

**CURRENT STATUS:** The activity starts June 1993 and will end September 1995.

**MISSION IMPLICATIONS:** Missions will have a key role in determining resource needs applicable to their country situations.



**ANALYTICAL ACTIVITY SUMMARY  
93 TDT-1c: Regional Research Networks**

**THEME:** Demand and supply of technology.

**MANAGER:** Jeff Hill.

**OBJECTIVE:** To continue developing regional research networks and support their integration into national research systems.

**BACKGROUND AND JUSTIFICATION:** Regional research networks have been implemented by International Agricultural Research Centers (IARCs) for some time in Africa to speed technology development and encourage technology transfer for key commodities and activities. Under PARTS, a few networks have been selected for continued funding until national research systems take them over. Network "bilateralization" will help to assure that these activities are relevant, sustainable, and in conformance with national priorities and plans.

**SPECIFIC STUDIES AND ACTIVITIES:** Four networks are being funded in Eastern and Southern Africa for agroforestry, beans, potatoes, and roots/tubers. Additionally, a few networks may be funded in West Africa should the SAFRAD assessment and reviews recommend this.

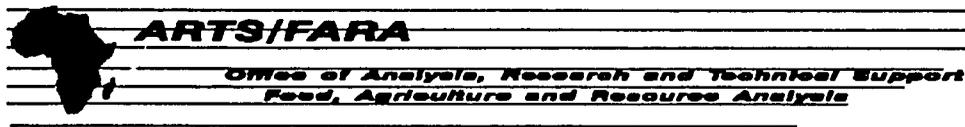
**COLLABORATING INSTITUTIONS:** Missions; REDSOs; IARCs; NARS.

**EXPECTED OUTPUTS:** Modalities for managing and funding these networks increasingly from national and bilateral sources.

**DURATION:** 48 months.

**CURRENT STATUS:** The activity started in FY 1992. It is possible that in FY 1993 six networks could be funded.

**MISSION IMPLICATIONS:** Missions will be able to determine the usefulness of selected networks to their national programs and priorities and fund these activities appropriately.



**ANALYTICAL ACTIVITY SUMMARY**  
**93 TDT-2a: Research and Institutional Reform of NARS**

**THEME:** Policy and institutional environment.

**MANAGER:** Michael Fuchs-Carsch.

**OBJECTIVE:** To identify and share institutional innovations that lead to productive, transparent and sustainable technology systems.

**BACKGROUND AND JUSTIFICATION:** With institutional pluralism emerging in research systems and resulting in greater participation of the private sector, nongovernmental organizations, and faculties of agriculture in the TDT process, National Agricultural Research Systems (NARS) are under increased pressure to be efficient. Improving the efficiency of NARS will require, in many cases, significant reform. To assist Missions, national governments and NARS with reforms, information is needed on the factors which lead to greater institutional productivity and individual creativity. Mechanisms to be examined include those that facilitate contract research, participatory priority setting and research, public-private sector collaboration, promotion of techniques for linking technology development with markets, and bonus and incentive programs that stimulate researcher interest.

**SPECIFIC STUDIES AND ACTIVITIES:** Studies will focus on learning from research institutes and centers that are testing new mechanisms and ways of doing business. The studies will also draw on the experiences in the private sector to examine mechanisms and institutional arrangements used to provide sustainable technology development and to transfer efforts.

**COLLABORATING INSTITUTIONS AND MISSIONS:** To be determined.

**EXPECTED OUTPUTS:** An understanding of the institutional innovations available to facilitate and guide the reform of NARS and specific guidance to share with Missions.

**DURATION:** 28 months.

**CURRENT STATUS:** The activity starts May 1993 and will end September 1995.

**MISSION IMPLICATIONS:** Mission involvement will be critical to success. Collaborating Missions will be requested to include NARS institutional reforms in the policy agenda and to assist with appropriate analyses.



**ANALYTICAL ACTIVITY SUMMARY  
93 TDT-2b: Frameworks for Action**

**THEME:** Policy and institutional environment.

**MANAGER:** Michael Fuchs-Carsch

**OBJECTIVE:** To continue to develop Frameworks for Action (FFAs) to reform and revitalize agricultural research and do the analyses needed for their implementation.

**BACKGROUND AND JUSTIFICATION:** Financing and staffing trends in African National Agricultural Research Systems (NARS) indicate that fewer resources are available per research worker and that the efficiency of public-sector research systems is declining. Through a multidonor initiative organized under SPAAR, efforts are underway to reform and revitalize research systems in Africa. These efforts, contained in respective FFAs, aim to give NARS major responsibilities for research management, planning, prioritizing, and resource allocation. FFAs have been prepared for the Sahel and SADCC countries, and several NARS are implementing reforms in line with SPAAR concepts. Two additional FFAs need to be prepared--for Eastern Africa and the Coastal Countries of West Africa. Also, more analyses and studies are needed to increase research motivation and productivity.

**SPECIFIC STUDIES AND ACTIVITIES:** FFA preparation includes detailed studies on the type and levels of research being conducted, management procedures, technical issues impeding major commodity systems, review of research priorities, and review of resources available to support research. These studies are done in conjunction with NARS scientists and administrators on an ecoregional basis.

**COLLABORATING INSTITUTIONS:** The World Bank; SPAAR; ISNAR; other donors.

**EXPECTED OUTPUTS:** An agreed program of action for each agroecological zone; a time table and budgets for implementation; an analytical agenda to support and monitor implementation

**DURATION:** 48 months.

**CURRENT STATUS:** The activity started September 1992. The FFA for Central and West Africa has been drafted and reviewed. The FFA for Eastern Africa has been outlined and initiated.

**MISSION IMPLICATIONS:** Missions will find the FFAs useful in their decisions about support of agricultural research in their countries. Specifically, proposed institutional reforms could inform policy dialogues, the reform agenda, and the design of nonproject assistance interventions.

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**ANALYTICAL ACTIVITY SUMMARY**  
**93 TDT-3: Developing Policy and Economic Assessment Capacity**

**THEMF:** Performance Monitoring and Impact Assessments

**MANAGER:** Michael Fuchs-Carsch, Jeff Hill.

**OBJECTIVE:** To continue work on the impact of technology and technology-related initiatives and to facilitate learning from these experiences. Also, to help develop institutional capacity in Africa to do impact assessment.

**BACKGROUND AND JUSTIFICATION:** Developing capacity in policy and economic analysis is a key part of improving the demand and accountability of national and regional technology development and transfer activities. This activity will result in the completion of impact studies that deal with important development initiatives related to investments in TDT. In addition, it will ensure that these efforts are maximized through the synthesis and dissemination of experience and lessons learned.

**SPECIFIC STUDIES AND ACTIVITIES:** Each impact study will be carried out with national participation to develop national system capacity. Activities include (1) a study to determine what impact policy reforms and structural adjustment have had on the supply and demand of technology; (2) a synthesis of experience in impact assessment to identify and refine analytical tools and examine indicators that have been used to monitor impact and progress toward impact; (3) a series of workshops in Africa to extend the tools and experience gained in impact assessment, involving, to the fullest extent possible, individuals dealing with technology impact assessment in the national systems; and (4) an examination of the impacts of regional research networks.

**COLLABORATING INSTITUTIONS AND MISSIONS:** Consortium will involve MSU, IFPRI, INSAH, SACCAR, Purdue, ISNAR, USDA, and participating host-country institutions. Focus Missions will be those supporting the development of policy, economic, or socioeconomic units within NARS and undertaking policy, market, or economic analysis for ex ante or ex post impact assessment.

**EXPECTED OUTPUTS:** Country reports for individual studies; strengthened policy units in participating countries; improved understanding of the impacts of regional research networks.

**DURATION:** 29 months.

**CURRENT STATUS:** The activity will start April 1993 and will end September 1995.

**MISSION IMPLICATIONS:** Missions will be requested to engage in appropriate project and nonproject assistance interventions to establish and/or support policy analysis capabilities in their countries.

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### **C. Agricultural Marketing and Agribusiness (AMA)**

#### **Objective**

The Agricultural Marketing and Agribusiness (AMA) unit conducts analyses and assists Missions with issues related to the development of more efficient agricultural marketing systems in which effective private, indigenous agribusinesses are engaged in marketing activities.

#### **Theme 1: Effectiveness of Agribusiness Development Programs in Sub-Saharan Africa**

Under this theme, the AMA unit proposes three distinct but complementary studies:

- (1) To continue synthesizing analyses of the commodity-specific opportunities for more effective development of agricultural marketing systems and privately-owned indigenous agribusiness firms;
- (2) To initiate an analysis of the operation of existing regional (trans-national) marketing networks and to examine methods to promote their efficiency; and
- (3) To initiate analyses with Missions to evaluate the ongoing impact of innovative approaches to agribusiness development, especially agribusiness foundations, privately-managed export promotion councils, and other self-help efforts led by agribusiness.

#### **Theme 2: Relationship between Agricultural Marketing Development and Effective Financial Systems and Services**

Under this theme, the AMA unit proposes three distinct but complementary studies:

- (1) To continue analyses of the dynamic and institutional mechanism by which agribusinesses and entrepreneurs secure financial resources to fund their marketing activities and investments;
- (2) To initiate planning for two major symposia to review lessons learned from efforts to promote financial markets and services for agricultural development; and
- (3) To initiate analyses with Missions to closely monitor the ongoing impact of innovative approaches to financial market development, such as export-financing schemes, venture capital schemes, stock markets, and other approaches to mobilizing financial resources for agribusiness development.

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**ANALYTICAL ACTIVITY SUMMARY**  
**93 AMA-1a: The Dynamics and Operations of Regional Trading Networks**

**THEME:** Effectiveness of agribusiness development programs in sub-Saharan Africa.

**MANAGER:** Thomas J. Herlehy.

**OBJECTIVE:** To analyze the operation of existing regional agricultural marketing networks and to examine methods to promote their efficiency.

**BACKGROUND AND JUSTIFICATION:** Long-distance trading networks have helped transport agricultural commodities across agroecological zones in sub-Saharan Africa for centuries. Many of these long-distance trading networks are operated by traders belonging to the same ethnic or socioreligious groups. However, neither the donors nor African governments fully understand the dynamics by which these regional trading networks operate and function, nor do they comprehend fully the impact of market policies, regulations, infrastructure, or (formal) institutional services on the efficiency of these trading systems. To increase understanding of these existing regional commodity marketing systems, the AMA unit proposes to analyze several of these trading networks.

**SPECIFIC STUDIES AND ACTIVITIES:** A literature search and field-work case study methodology will be followed. Among the trading networks under consideration for analysis are the Hausa, Fulani, Djoula, and Mouride networks of West Africa, the Swahili network of East Africa, and other instances of cross-border regional trade in Southern Africa.

**COLLABORATING INSTITUTIONS AND MISSIONS:** AFR/ARTS/FARA/FSP and TDT units, and AFR/ONI/PSD. Others to be determined.

**EXPECTED OUTPUTS:** Full report that (1) synthesizes the information across countries and provides broad policy guidance to USAID Missions and host-country governments, and (2) provides in-depth regional case studies with more specific recommendations for the respective national governments. In addition, three regional workshops will be convened to present and discuss the findings of these reports with the donors and host-country governments.

**DURATION:** Three workshops will be convened in late CY 1994/early CY 1995.

**CURRENT STATUS:** New.

**MISSION IMPLICATIONS:** Missions may be requested to meet with the analysts and provide suggestions for in-country contacts.



**ANALYTICAL ACTIVITY SUMMARY**  
**93 AMA-1b: Opportunities and Constraints for Agribusiness Development**

**THEME:** Effectiveness of agribusiness development programs in sub-Saharan Africa.

**MANAGER:** Thomas J. Herlehy.

**OBJECTIVE:** To analyze the constraints to and opportunities for more effective development of indigenous agribusinesses in sub-Saharan Africa.

**BACKGROUND AND JUSTIFICATION:** One of the lessons learned from recent AMA unit research is that despite the liberalization of marketing systems and opening of new opportunities for African entrepreneurs, there has been relatively low investment by the private sector in new marketing activities. Many private firms lack the necessary technical and managerial skills; accurate market information, especially about international marketing opportunities; and sufficient supporting services to get commodities to those markets. Moreover, many private business owners lack confidence in the government commitment to reform efforts. For USAID and host-country governments to design more effective marketing and agribusiness programs, more information is needed from the entrepreneurs themselves about what kinds of services and support they need to reach markets efficiently with products that will meet effective market demand. This activity will help collect such information.

**SPECIFIC STUDIES AND ACTIVITIES:** This activity will continue the case study approach to agribusiness development by involving more countries and commodity groups in Phase III of an ongoing activity.

**COLLABORATING INSTITUTIONS AND MISSIONS:** AFR/ONI/PSD and other institutions to be determined.

**EXPECTED OUTPUTS:** Report that (1) synthesizes information gleaned from a wide variety of countries, commodity systems, and case studies; and (2) presents in-depth agribusiness-firm case study information.

**DURATION:** 12 months.

**CURRENT STATUS:** Ongoing through both the AMIS Project (Abt Associates) and FHA/PVC Farmer-to-Farmer Cooperative Grant with VOCA.

**MISSION IMPLICATIONS:** Missions may be requested to meet with the analysts and provide suggestions for in-country contacts.

**ANALYTICAL ACTIVITY SUMMARY****93 AMA-1b: Opportunities and Constraints for Agribusiness Development**

**THEME:** Effectiveness of agribusiness development programs in sub-Saharan Africa.

**MANAGER:** Thomas J. Herlehy.

**OBJECTIVE:** To analyze the constraints to and opportunities for more effective development of indigenous agribusinesses in sub-Saharan Africa.

**BACKGROUND AND JUSTIFICATION:** One of the lessons learned from recent AMA unit research is that despite the liberalization of marketing systems and opening of new opportunities for African entrepreneurs, there has been relatively low investment by the private sector in new marketing activities. Many private firms lack the necessary technical and managerial skills; accurate market information, especially about international marketing opportunities; and sufficient supporting services to get commodities to those markets. Moreover, many private business owners lack confidence in the government commitment to reform efforts. For USAID and host-country governments to design more effective marketing and agribusiness programs, more information is needed from the entrepreneurs themselves about what kinds of services and support they need to reach markets efficiently with products that will meet effective market demand. This activity will help collect such information.

**SPECIFIC STUDIES AND ACTIVITIES:** This activity will continue the case study approach to agribusiness development by involving more countries and commodity groups in Phase III of an ongoing activity.

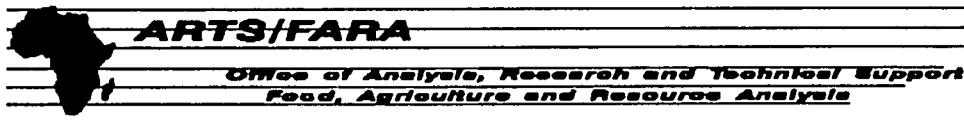
**COLLABORATING INSTITUTIONS AND MISSIONS:** AFR/ONI/PSD and other institutions to be determined.

**EXPECTED OUTPUTS:** Report that (1) synthesizes information gleaned from a wide variety of countries, commodity systems, and case studies; and (2) presents in-depth agribusiness-firm case study information.

**DURATION:** 12 months.

**CURRENT STATUS:** Ongoing through both the AMIS Project (Abt Associates) and FVA/PVC Farmer-to-Farmer Cooperative Grant with VOCA.

**MISSION IMPLICATIONS:** Missions may be requested to meet with the analysts and provide suggestions for in-country contacts.



**ANALYTICAL ACTIVITY SUMMARY**  
**93 AMA-1c: Impact of USAID Assistance on Private Agribusiness Development  
in Sub-Saharan Africa**

**THEME:** Effectiveness of agribusiness development programs in sub-Saharan Africa.

**MANAGER:** Thomas J. Herlehy.

**OBJECTIVE:** To monitor and evaluate the continuing impact of USAID programs to promote more efficient agricultural marketing systems and more effective private agribusiness development.

**BACKGROUND AND JUSTIFICATION:** USAID Missions are trying a variety of new approaches to develop more efficient agricultural marketing systems by focusing services, technical assistance, and resources of private agribusiness firms. Some Missions are experimenting with the development of trade associations and agroindustrial forums through which entrepreneurs can cooperate to make their concerns known to policy makers and achieve a critical mass in securing access to resources and technologies needed to penetrate export markets. At the present, USAID has no effective means to monitor and evaluate the progress being made in these innovative programs, nor to synthesize and disseminate that information to the field and other donors and host-country officials. This activity will work closely with Missions to monitor and evaluate ongoing experience in innovative programs and projects.

**SPECIFIC STUDIES AND ACTIVITIES:** This activity will involve working with collaborators and Missions to monitor the impact of new and innovative programs at the field level through rapid appraisal surveys and a few case studies of targeted agribusiness firms.

**COLLABORATING INSTITUTIONS AND MISSIONS:** AFR/ONI/PSD and other institutions to be determined. Missions in Uganda, Ghana, Guinea (Conakry), Chad, Madagascar, and one more (to be determined).

**EXPECTED OUTPUTS:** Concise report on the impact of new programs, with suggestions for modifications and/or strengthening.

**DURATION:** 36 months.

**CURRENT STATUS:** Building on work started by AMIS project (Abt Associates) in CY 1992 (report submitted November 1992).

**MISSION IMPLICATIONS:** Missions will be requested to designate one person as contact to assist AMA unit by sharing information on impact of program.

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**ANALYTICAL ACTIVITY SUMMARY**  
**93 AMA-2a: Dynamics and Fundamental Links Between Formal and Informal Financial Services for Agribusiness/Entrepreneurs**

**THEME:** Relationship between agricultural marketing development and effective financial systems and services.

**MANAGER:** Garland Christopher.

**OBJECTIVE:** To analyze the dynamic and fundamental links by which agribusinesses and entrepreneurs secure financial resources to fund their agricultural marketing operations and investments.

**BACKGROUND AND JUSTIFICATION:** A lack of formal-sector financial services for agribusiness activity, especially in rural areas, has been identified as a critical constraint to the development of more effective and efficient agricultural marketing systems. However, anecdotal evidence and qualitative information indicate that, despite the lack of formal-sector financial services to entrepreneurs, there is often vibrant agricultural marketing activity in rural areas. Where the funds originate for such activities is not known. What degree of linkages exists between informal financial services and formal-sector financial institutions/markets also is unknown. Therefore, USAID and host-country governments need to know what, if anything, can be done over the short to medium term to strengthen the linkages between the formal and informal financial systems, potentially involving the semiformal financial entities with whom donors, nongovernmental organizations (NGOs), and private voluntary organizations (PVOs) are already working.

**SPECIFIC STUDIES AND ACTIVITIES:** A case study methodology will be followed whereby the linkages between informal and formal financial markets and services in several select countries for similar commodity systems will be analyzed. Phase III of an ongoing activity.

**COLLABORATING INSTITUTIONS AND MISSIONS:** AFR/ONI/PSD and other institutions to be determined (potentially Ohio State University [OSU] through the R&D/EID FIRM project). Missions to be determined after Phase II of this activity (now ongoing) is complete.

**EXPECTED OUTPUTS:** Final report synthesizing the information gleaned from the case studies with an appendix of detailed information of the country-specific case studies.

**DURATION:** 12 months of analysis.

**CURRENT STATUS:** Ongoing with OSU through the R&D/EID FIRM project.

**MISSION IMPLICATIONS:** Missions may be requested to meet with the analysts and provide suggestions for in-country contacts.



**ANALYTICAL ACTIVITY SUMMARY**

**93 AMA-2b: Financial Services for Agribusiness Development Symposium**

**THEME:** Relationship between agricultural marketing development and effective financial systems and services.

**MANAGER:** Garland Christopher.

**OBJECTIVE:** To sponsor two symposia at which the lessons learned from donor and host-country efforts to promote financial markets and institutions for agricultural development will be presented and discussed.

**BACKGROUND AND JUSTIFICATION:** After more than 25 years of collective donor experience in supporting and promoting the delivery of financial services to rural producers, a body of lessons learned has been built up that would seem to call for new approaches to the delivery of financial services to the agricultural sector. Yet, based on research recently completed by the AMA unit, the lessons that USAID may have learned are neither universally known nor shared by other donors and host country governments. Indeed, despite the accumulation of lessons learned, other donor agencies, the private voluntary organization (PVO) and nongovernmental organization (NGO) community, and host-country policy makers, have not modified their approaches to providing financial support for the agricultural sector. Therefore, an urgent need exists to convene two symposia at which the lessons learned from our experiences can be presented and discussed in an attempt to change the approach being taken by the donor community and host-country institutions.

**SPECIFIC STUDIES AND ACTIVITIES:** Two symposia, one in Europe (probably Paris) and one in Africa (potentially Nairobi, Kampala, or Zimbabwe), at which USAID and other donors, host-country officials, and PVOs and NGOs will be asked to present lessons learned.

**COLLABORATING INSTITUTIONS AND MISSIONS:** AFR/ARTS/EA, AFR/ONI/PSD, USAID Gemini Project, PRE Bureau, Women's World Banking and CLUSA. Others to be determined.

**EXPECTED OUTPUTS:** Two symposia organized, and a publication issued thereafter.

**DURATION:** 12 months.

**CURRENT STATUS:** New (building on results of Phase I and II analytical work in item AMA 2-a).

**MISSION IMPLICATIONS:** Missions may be requested to help identify African government, banking, and private agribusiness staff who could benefit from participation in symposia.



**ANALYTICAL ACTIVITY SUMMARY**  
**93 AMA-2c: Effectiveness of Innovative Approaches to  
Financial Market Development**

**THEME:** Relationship between agricultural marketing development and effective financial systems and services.

**MANAGER:** Garland Christopher.

**OBJECTIVE:** To monitor and evaluate the impact of innovative approaches to financial market development and the delivery of diverse and sound financial services to agribusinesses.

**BACKGROUND AND JUSTIFICATION:** Inadequate access to funds to invest in new, or to expand existing, agricultural marketing activities has been cited by a recent AMA unit report as a critical constraint to the development of more robust agribusiness activity in sub-Saharan Africa. To overcome this financial constraint, a variety of African governments, with donor support, are taking new and innovative approaches to mobilize and deliver the funds required both for short- and long-term investments in agroindustrial activities (e.g., purchasing, storage, transport, processing, and packaging). At the present time, there is no method by which these experiences are being monitored and evaluated, nor is there a mechanism by which lessons learned can be synthesized and disseminated to other countries. This activity will work closely with Missions and governments to monitor and evaluate ongoing innovative approaches to provide financial services for agribusiness development.

**SPECIFIC STUDIES AND ACTIVITIES:** This activity will involve working with Missions and host-country governments to monitor the impact of innovative approaches through rapid appraisal techniques and a few case studies of targeted financial institutions and services.

**COLLABORATING INSTITUTIONS AND MISSIONS:** AFR/ARTS/EA and AFR/ONI/PSD. Other institutions to be determined. Missions in Uganda, Ghana, Kenya, Chad, Guinea (Conakry), and one more to be determined.

**EXPECTED OUTPUTS:** Concise report on the impact of the new programs and services with suggestions for modifications and/or strengthening.

**DURATION:** 36 months.

**CURRENT STATUS:** New.

**MISSION IMPLICATIONS:** Missions will be requested to designate one person as contact point to assist AMA unit by sharing information on impact of program.

## **D. Environmental Protection (ENV)**

### **Objective**

The Environmental Protection (ENV) unit focuses on environmental impact review and monitoring to assess the short- and long-term interrelationships of development and environment. Environmental protection is understood in its positive sense, as providing opportunities to identify activities that are good for development and also good for the environment.

### **Theme 1: Environmental Protection for Sustainable Agriculture**

Activities under this theme focus on improving Bureau understanding and programming for developing broad-based local-level support for environmental protection. Examples include (1) characterizing successful methods in integrated pest management as environmentally superior technology and strategy, and (2) innovative approaches to formal and nonformal environmental education directed at host-country environmental protection.

### **Theme 2: Monitoring to Improve Understanding of Environmental Degradation and Development Impact**

This theme will develop better methods of collecting and applying data that are useful in managing projects and assessing impacts. Included are (1) assistance in implementing geographic information systems (GIS), (2) support to Missions through research and TDYs, and (3) support for a natural resources information consultative group (through the World Resources Institute) to provide advice to the Bureau and Missions.

### **Theme 3: Long-run Environmental Impacts of Policy Reform and Program Assistance**

This theme will provide advice and insights to the Bureau and field regarding the application of environmental authorities to projects and programs under the DFA, including the environmental implications of nonproject assistance (NPA) programs. The Foreign Assistance Act requires that policy reforms include provisions to protect long-term environmental interests from negative consequences of the reforms. Emphasis is on early detection and mitigation of long-term impacts of policy reform, especially in the agriculture sector. The theme will also develop improved environmental review and implementation guidelines for both project- and policy-based activities, including mechanisms to allow a delegation of authority to the field for approval of environmental review processes.

**ANALYTICAL ACTIVITY SUMMARY**  
**93 ENV-1a: Environmentally Superior Technologies for Sustainable Agriculture: Pest and Pesticide Management**

**THEME:** Environmental protection for sustainable agriculture.

**MANAGER:** Walter I. Knausenberger.

**OBJECTIVE:** To engage African analysts, agricultural researchers and practitioners in the examination of issues relating to the implementation of integrated pest management (IPM).

**BACKGROUND AND JUSTIFICATION:** The complex of crop-attacking pests constitutes a deterrent to high crop productivity in Africa, such that crop protection is necessarily a component of all agricultural production activities. Control is achieved by the use of synthetic chemical pesticides, which brings with it a host of environmental and human health risks. IPM is a strategy for crop protection, which involves a suitable mix of tactics strongly based on adapted technologies and improved decision-making information. One important rationale for promoting IPM is that it leads to reduced dependency on pesticides while ensuring a safe and adequate food supply. The intent is to identify strategies, technologies, and policies that have been most effective in increasing crop productivity by minimizing the impacts of pests on crop production and food availability. At the same time, this activity will promote the identification of alternative technologies.

**SPECIFIC STUDIES AND ACTIVITIES:** (1) Synthesis report on the pest management experience in Africa, with an inventory of practices, strategies, and policies; (2) refinement and testing of a draft IPM implementation conceptual framework arising from the IPM Opportunities study (92 ENV-1a); (3) a regional workshop together with other donors and with African institutions, to develop action plans for implementation of IPM in specific country, commodity system, and agroecosystem contexts; (4) initiation of an IPM Experts Advisory Group; and (5) examination of the feasibility of alternative means of promoting the implementation of innovative IPM strategies and technologies.

**COLLABORATING INSTITUTIONS AND MISSIONS:** The R&D/EID SARSA project and R&D/ENR EPAT project; possibly, the R&D/AGR IPM CRSP. USDA/OICD will be tapped for specific ad hoc technical assistance.

**EXPECTED OUTPUTS:** Synthesis report on analyses regarding issues, practices and policies related to rational and sustainable pest and pesticide management, including suggested policy initiatives for USAID, public and private sector and NGOs and PVOs. End-user participation promoted through workshop in Africa (funded in collaboration with other donors contributing to International IPM Working Group).

**DURATION:** 12 months.

**CURRENT STATUS:** Continuing from 92 ENV-1a, with additional funding.

**MISSION IMPLICATIONS:** Incorporation of study insights and framework elements into appropriate bilateral USAID projects and programs.

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**ANALYTICAL ACTIVITY SUMMARY  
93 ENV-1b: Environmental Education**

**THEME:** Environmental protection for sustainable agriculture.

**MANAGER:** John Gaudet, Walter Knausenberger, Timothy Resch.

**OBJECTIVE:** To provide detailed analyses of what is needed for environmental education and communication (EEC) in sub-Saharan Africa.

**BACKGROUND AND JUSTIFICATION:** Environmental education and communication are included as important elements of many Mission natural resources management (NRM), environment, and education projects, yet a detailed analysis of what is needed for EEC and how to go about implementation is often not complete; plans for the evaluation of the impact of EEC activities often have not been specified. In addition, National Environmental Action Plans (NEAPs) are being initiated in many countries in Africa, and an analysis of EEC needs is an important element of these plans. This activity would address lessons learned in Kenya, Zimbabwe, and Ghana, where African educationalists and environmentalists have made good beginnings in terms of the environmental ethic in school curricula and have made significant inroads into the informal education sector--e.g., wildlife clubs, environmental comics, and magazines for young people (*Rainbow* in Kenya).

**SPECIFIC STUDIES AND ACTIVITIES:** Analyses for EEC activities will include (1) existing EEC activities and their implementing institutions and circumstances in select countries; (2) need, type, and magnitude of additional appropriate EEC activities, in relation to Mission NRM, environment, or education projects, and to NEAPs, including those institutions and units within institutions which might be appropriate for implementation; (3) assessment activities required to develop these EEC activities, and monitoring and evaluation activities required to assess the progress and impact; (4) estimates of the kind and level of technical assistance, training, and other support required for implementation; and (5) scopes of work and illustrative budget for development, implementation, and/or evaluation.

**COLLABORATING INSTITUTIONS AND MISSIONS:** ARTS/ENV and the ARTS/HHR division (esp. Julie Rea) and parallel activities in the NRM Unit (see NRM Analytical Agenda item 93 NRM-1d, particularly in relation to biodiversity and attitude change).

**EXPECTED OUTPUTS:** Series of analyses to provide Missions and host countries with guidance on formal and informal environmental education.

**DURATION:** 12 months (September 1993-March 1994). ARTS/FARA in conjunction with ARTS/EHR will provide the R&D Envir. Educ. & Commun. Proj. (GREENCOM: 936-5839) with funds from each of the two divisions.

**CURRENT STATUS:** New initiative.

**MISSION IMPLICATIONS:** At least three USAID missions (The Gambia, Namibia, and Mali) have expressed interest in analytical material and guidelines on successful environmental education principles.



**ANALYTICAL ACTIVITY SUMMARY**  
**93 ENV-1c: Environmental Guidelines for NGO/PVO Project**  
**Design and Implementation**

**THEME:** Environmental protection for sustainable agriculture.

**MANAGER:** John J. Gaudet, Tim Resch, Walter Knausenberger.

**OBJECTIVE:** To revise and produce NGO/PVO guidelines for environmentally sound design and implementation of development projects.

**BACKGROUND AND JUSTIFICATION:** FARA/ENV has already produced a rough draft of a manual for nongovernmental organizations (NGOs) and private voluntary organizations (PVOs) involved in the Southern Africa drought emergency, in order to provide guidelines to environmentally sound design and implementation of development projects. This draft manual has been circulated to Southern Africa Missions, and users have been requested to provide feedback to be used in the final draft. The manual will be expanded to include natural resources management issues.

**SPECIFIC STUDIES AND ACTIVITIES:** Manual to be assembled from existing material available to USAID.

**COLLABORATING INSTITUTIONS AND MISSIONS:** Interested USAID Missions, NGOs, and PVOs working in Africa.

**EXPECTED OUTPUTS:** Final manual.

**DURATION:** 12 months.

**CURRENT STATUS:** Draft available for circulation.

**MISSION IMPLICATIONS:** Guidelines for local and international NGOs and PVOs in-country, especially in those countries becoming heavily involved in NRM interventions through such organizations.


**ARTS/FAO**

 Office of Analysis, Research and Technical Support  
 Food, Agriculture and Resources Analysis

## ANALYTICAL ACTIVITY SUMMARY

### 93 ENV-1d: Assessment of the Africa Emergency Locust/Grasshopper (AELGA) Project [AFR/ONI] and Concept Paper on Its Future

**THEME:** Environmental protection for sustainable agriculture.

**MANAGER:** Walter I. Knausenberger.

**OBJECTIVE:** To participate in the process of outlining the case for and against continuing the AELGA project in an appropriate form to serve the Africa Bureau in addressing periodic pest outbreaks and other emergencies.

**BACKGROUND AND JUSTIFICATION:** Africa regularly experiences outbreaks of usually migratory pests, outbreaks which normally are associated with drought. Large investments have been made in providing assistance in an emergency modality, while relatively little is normally done to provide for the sustained development of improved management strategies and preventive approaches for locusts and grasshoppers. Appropriate modalities will be explored for the rational provision of early warning and response capacity to the Bureau within the context of famine prevention and mitigation strategies, building on and going beyond the AELGA project, perhaps towards an umbrella food security and productivity program.

**SPECIFIC STUDIES AND ACTIVITIES:** (1) Contribute to the review and in-house assessment of the AELGA project's status, lessons learned, and future options; (2) assist with development of a concept paper presenting the vision and options for continuation of the AELGA project, possibly leading to participation in design of a new or amended project. Certain elements may evolve for linkage with the Analytical Agenda under PARTS.

**COLLABORATING INSTITUTIONS AND MISSIONS:** AFR/ONI is taking the lead, backed up by AFR/ARTS where apt. Other Bureaus and Missions will be polled for their input and views. Dialogue will be conducted, *inter alia*, with the Consultative Group for Locust Research, FAO, UNDP, IFAD, and World Bank; among bilateral donors, mainly the British, Dutch, German, and French will be consulted.

**EXPECTED OUTPUTS:** Review and assessment; status report outlining resources and past investments; options paper; elements identified for possible continued research and analysis under PARTS.

**DURATION:** Up to 12 months in CY 1993.

**CURRENT STATUS:** Ongoing.

**MISSION IMPLICATIONS:** No direct Mission involvement expected apart from selected Missions' input at PID stage if it gets to that point. Mission buyins would likely be accommodated in a follow-on to AELGA.

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**ANALYTICAL ACTIVITY SUMMARY  
93 ENV-2a: Natural Resources Information Consultative Group**

**THEME:** Monitoring to improve understanding of environmental degradation and development impact.

**MANAGER:** Dan Dworkin.

**OBJECTIVE:** To continue the operation of the Natural Resource Information Consultative Group (NRICG), which provides advice to the Bureau, the Missions, and the multilateral agencies on the applications of natural resource information systems.

**BACKGROUND AND JUSTIFICATION:** The NRICG has been recently set up by the World Resources Institute (WRI) and serves as a center of expert advice on GIS/EIS. Missions have had a number of failed experiences with setting up information systems. USAIDs in Rwanda, Cape Verde, Burundi, and Botswana have provided funding for information systems that have not produced the results expected. There is increased interest in GIS both to manage projects and to provide data for NEAPs, APIs, and for activities in host-country ministries because of the decreasing costs of the hardware and increasing usefulness of the software. Present activities include assuring knowledge of and access to digitized data bases developed by the United States and others that would have to be replicated unless access is made available.

**SPECIFIC STUDIES AND ACTIVITIES:** The group will continue to fund a half-time expert to serve as group leader. It will continue to hold two meetings a year, will accept buyins from Missions to review plans for developing information systems, and will liaise with other bilaterals and the multilaterals working in information technology. It serves as a peer reviewer of efforts in information systems. Its activities are regularly summarized in a regular feature of the ARTS/FARA Newsletter, called "GIS Corner."

**COLLABORATING INSTITUTIONS AND MISSIONS:** WRI through EPM II is responsible for operating the NRICG. Missions using the services of the group have been Rwanda, Uganda, Chad, and Botswana and REDSO/ESA. Buyins are expected from Cameroon and Madagascar. Others involved are the World Bank, who have invited the representatives to all their GIS/EIS meetings, UNSO, The Observatory of the Sahel and Sahara, Clark University and the University of Arizona, NASA, USGS, and USDA.

**EXPECTED OUTPUTS:** The report *Environmental Information Systems in Sub-Saharan Africa*, currently in draft; periodic reports on technology, one currently in preparation is the use of satellite data to produce low-cost contour maps; peer reviews; two workshops in FY 1993; two meetings of experts groups in CY 1993; scopes of work as requested by Missions; ongoing collaboration with other bilateral and multilateral donors; short TDYs to Missions in connection with other African travel.

**DURATION:** 12 months.

**CURRENT STATUS:** NRICG is currently on line and productive.

**MISSION IMPLICATIONS:** Research will be important for all Missions in gathering data for both project management and reporting program impact. Missions can access NRICG through buyins to R&D/EPM II.

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**ANALYTICAL ACTIVITY SUMMARY  
93 ENV-2b: Dissemination Workshops in East and West Africa**

**THEME:** Monitoring to improve understanding of environmental degradation and development impact.

**MANAGER:** Dan Dworkin.

**OBJECTIVE:** To assist Missions and African institutions working with Missions in dissemination of methods of collecting, storing, analyzing, and developing presentations of data on agriculture and natural resources.

**BACKGROUND AND JUSTIFICATION:** The requirements of the Development Fund for Africa (DFA) for API reporting has placed increased emphasis on the need for data collection and analysis. Missions are not fully aware of the options for data collection and analysis. Sampling procedures and the use of GPS and GIS are all options that are available, but there are important implications that should be considered in setting up data collection and analysis systems. Unless the Missions understand the costs and benefits of selected methods, they may end up, as some have done, in the use of substantial resources with unsatisfactory results.

**SPECIFIC STUDIES AND ACTIVITIES:** Two workshops will be held, one in East Africa in FY 1993 and one in West Africa in FY 1994.

**COLLABORATING INSTITUTIONS AND MISSIONS:** WRI through EPM II. Others involved are the World Bank, UNSO, The Observatory of the Sahel and Sahara, Clark University and the University of Arizona, NASA, USGS, and USDA.

**EXPECTED OUTPUTS:** A preparatory report on methods of data collection, analysis and presentation. Two workshops and reports on each.

**DURATION:** 24 months.

**CURRENT STATUS:** New activity.

**MISSION IMPLICATIONS:** Research will be important for all Missions in gathering data for both project management and reporting program impact. Missions will be provided information on the workshop and will be requested to send participants.



**ANALYTICAL ACTIVITY SUMMARY**  
**93 ENV-2c: Data Collection and Analysis for API and Other Analyses**

**THEME:** Monitoring to improve understanding of environmental degradation and development impact.

**MANAGER:** Dan Dworkin, Mike McGahuey.

**OBJECTIVE:** To provide guidance on developing sampling methodology for gathering data for GIS analyses.

**BACKGROUND AND JUSTIFICATION:** To support the requirements of the Development Fund for Africa (DFA), Missions are required to show that their programs affect broad-based and sustainable development. The NRM unit is assuming that the adoption of improved technologies will produce such impacts. It needs data on the adoption of technologies and the effects on yields. The ENV unit is interested in the yield data over time as a measure of the environmental sustainability of the farming practices. The research will address minimum sample size and sampling methodology to gather data at the five levels of the Framework. Data on indicators will be organized in a form consistent with the Framework. The use of GPS will be covered as well as a discussion of the tradeoff between sample size and level of confidence. The question of sample size was the source of discussion at the ADO 1991 workshop in Uganda. Missions are undertaking extensive data collection that is not consistent with the level of assurance that is necessary to support data for APIs, for management of individual projects or for gaining insights into effects of specific interventions.

**SPECIFIC STUDIES AND ACTIVITIES:** Activities will begin with a small workshop. Preparations for the workshop will be a review of the literature to identify the most promising researchers in the field. Based on the workshop the project managers will (1) develop a scope of work; (2) fund the preparation of a guidance paper on collection of a minimum data set for GIS; (3) test the methodology in a selected Mission; (4) prepare a final report; and (5) disseminate the results through a major workshop in Washington.

**COLLABORATING INSTITUTIONS AND MISSIONS:** Recent TDYs by ARTS/FARA staff and discussions with Missions and REDSOs have indicated interests in the possibility of using either Mali or Cameroon as a test site. WRI and the USDA Agricultural Statistics Office would also be collaborators.

**EXPECTED OUTPUTS:** (1) Definition and standardization of the appropriate sampling and costs for the survey and data entry for test country; (2) specific advice provided to country officials and USAID staff on sampling for Missions in the API process; (3) validation of the Framework; and (4) implementation with a selected Mission as a test case.

**DURATION:** 12 months.

**CURRENT STATUS:** New activity.

**MISSION IMPLICATIONS:** Research will be important for all Missions in gathering data for both project management and reporting program impact.



**ANALYTICAL ACTIVITY SUMMARY**  
**93 ENV-3a: Delegation of Authority for Environmental Analysis**  
**to Missions and Regional Offices**

**THEME:** Long-run environmental impacts of policy reform and program assistance.

**MANAGER:** John J. Gaudet.

**OBJECTIVE:** To develop Mission guidance on assessing environmental impacts of nonproject assistance (NPA) and in drafting Initial Environmental Examinations (IEEs) during program/project design.

**BACKGROUND AND JUSTIFICATION:** Under the FY 1992 Analytical Agenda, the ENV unit commissioned an assessment of Mission performance under existing Africa Bureau delegation of authority (DOA) in the Environmental Sector, esp. under Reg 16, and this has been completed. This assessment provided information on existing and ongoing: (1) conditions set out in IEEs; (2) DOAs for local approval of IEEs; and (3) Conditions Precedent related to environmental impacts of project and program implementation.

Section 496 of the Foreign Assistance Act (FAA), which sets out the terms of the Development Fund for Africa (DFA) specifically requires that "policy reforms shall also include provisions to protect ... long-term environmental interests from possible negative consequences of the reforms." Meeting this requirement will be difficult, because little is known for sure either about the impacts of policy reform on the environment or about how to assess those impacts. This requirement of the FAA calls for an analytical consideration of the kinds of policy reforms which are likely to have an impact on the management of the environment in the long run. At present many USAID Missions call upon the expertise of the REDSOs to help in drafting a key document relative to policy reform programs, and in FY 1993 the Bureau expects to start at least eight new NPA programs totalling some \$312 million in obligations. It is therefore urgent that guidance be provided to Missions and REDSOs for FY 1993.

**SPECIFIC STUDIES AND ACTIVITIES:** To develop Mission guidance on assessing environmental impacts of NPA and in drafting IEEs, especially in new NPA programs an interactive hypertext program will be tried out, under the supervision of the REDSOs, during the early phases of design of USAID Mission NPA programs in one or two selected countries. In addition, a follow-on study of the FY 1992 DOA Assessment of Environmental Review Process will be undertaken to determine the effectiveness of the IEE process at field level.

**COLLABORATING INSTITUTIONS AND MISSIONS:** The interactive hypertext program and the follow-on study will be undertaken by the R&D EPAT Project. Trials of the hypertext would go forward in interested Missions with the assistance of REDSOs.

**EXPECTED OUTPUTS:** An interactive hypertext program on diskette and a follow-on study relative to Mission guidance in the application of USAID environmental regulations.

**DURATION:** 12 months.

**CURRENT STATUS:** New activity.

**MISSION IMPLICATIONS:** Missions will need to develop the in-country ability to deal with IEEs and the follow-on to IEEs, especially in the area of NPA.

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**ANALYTICAL ACTIVITY SUMMARY****93 ENV-3b: Environmental Implications of Agricultural Trade and Policy Reform Programs**

**THEME:** Long-run environmental impacts of policy reform and program assistance.

**MANAGER:** Walter I. Knausenberger, John J. Gaudet.

**OBJECTIVE:** To assess the environmental externalities associated with nontraditional crop promotion and nonproject assistance (NPA) in agricultural policy reform, with emphasis upon pesticide use, pricing, and subsidy policies.

**BACKGROUND AND JUSTIFICATION:** The Africa Bureau is a leader among donors in promoting sustainable agricultural sector growth and agribusiness development, particularly through initiatives in policy reform and NPA programs. A major emphasis in NPA programs currently being developed and implemented is upon the promotion of trade and investment and nontraditional crop production. Future increases in crop output in Africa will depend critically on efficient and environmentally safe fertilizer and pesticide use. Increased pesticide use in agriculture is inevitable, particularly given the trend towards emphasizing high-value crops. Current pesticide sales in sub-Saharan Africa are on the order of \$500 million and are projected to double in 10 years. Efficient, equitable, and environmentally sound pesticide use depends not only on sound agronomic practices and appropriate technologies but also on the existence of a conducive economic and policy environment. Because of the particular risks inherent in the distribution and use of toxic crop protection chemicals, special considerations are necessary to assure an appropriate balance between public and private sector roles. Surprisingly little analysis has been directed towards the connections between policy reform initiatives and pesticide use and misuse.

**SPECIFIC STUDIES AND ACTIVITIES:** Specifically, to: (1) examine the policy linkages between pesticide use and donor programs designed to increase the production of crops for export; (2) evaluate the subsidy policies of key sub-Saharan African countries, to identify optimal sequencing to introduce changes in the policy environment; (3) assess changes in public and economic policies which could encourage increased reliance on alternatives to pesticides; and (4) compare public sector and agribusiness activities in the pesticide subsector and identify opportunities for collaboration.

**COLLABORATING INSTITUTIONS AND MISSIONS:** R&D/ENR's EPAT or EPM, possibly R&D/AGR's APAP project and/or the IPM CRSP; EPA, ARI, GIFAP, IFPRI, CICP.

**EXPECTED OUTPUTS:** A series of syntheses of the issues, leading to consensus-building meetings among agriculture policy makers, and analysts and practitioners at the national and donor agency levels.

**DURATION:** 24 months.

**CURRENT STATUS:** New activity.

**MISSION IMPLICATIONS:** Would involve representative countries at various stages of development of private market development, such as Burundi, Cameroon, Mali, and/or Zimbabwe.

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**ANALYTICAL ACTIVITY SUMMARY**  
**93 ENV-3c: Review of Initial Environmental Examinations**

**THEME:** Long-run environmental impacts of policy reform and program assistance.

**MANAGER:** John J. Gaudet, Walter I. Knausenberger.

**OBJECTIVE:** To carry out the review of Initial Environmental Examinations (IEEs) from at least 50 of the projects and programs that will be designed in the Africa Bureau during FY 1993.

**BACKGROUND AND JUSTIFICATION:** Each year, large numbers of IEEs are sent to the Bureau Environmental Officer for review, analysis, approval, and transmittal to the appropriate offices in AID/W for clearance in accordance with Agency Environmental Procedures under Regulation 22 CFR Part 216. A significant number of these IEEs require modification or adaptation, particularly in light of the recent Foreign Assistance Act provisions regarding protection against long-run environmental impacts of nonproject assistance (NPA) programs. In its aggregate, this process constitutes a major analytical exercise; the analyses may be brief, as in most cases, or extensive. This exercise may affect the course of program/project design and implementation. It therefore should be recognized as a discrete part of the ARTS/FARA Analytical Agenda, linked in particular to the Delegation of Authority activity above (see 93 ENV-3a).

**SPECIFIC STUDIES AND ACTIVITIES:** Annual review of approximately 50 IEE will be carried out in ARTS/FARA during FY 1993 by the Bureau Environmental Office.

**COLLABORATING INSTITUTIONS AND MISSIONS:** USAID Missions, REDSOs, AID/W Geographic Desk Officers, and GC/AFR.

**EXPECTED OUTPUTS:** Review and approval, with modification if needed, of approximately 50 IEEs.

**DURATION:** Continuing activity.

**CURRENT STATUS:** Activity linked to Analytical Agenda but not separately funded.

**MISSION IMPLICATIONS:** Missions will need to develop the in-country ability to deal with IEEs and the follow-on to IEEs, especially in the area of NPA.

## **E. Natural Resources Management (NRM)**

### **Objectives**

The overall objectives for this coming year are to:

- Make use of the insights gained so far;
- Assist Missions in improving programs and taking credit for putting in place conditions for adoption of NRM;
- Develop approaches to tracking and monitoring change and people-level impacts; and
- Improve the understanding in key analytical areas not fully covered in previous years.

### **Theme 1: Enabling Conditions for Improving Natural Resources Management**

This theme will concentrate on those key conditions affecting adoption, guidance, and analysis and will be helpful to Missions in analyzing strategies for developing these conditions, and coordination of donor and research effort on these key areas. A significant portion of total effort will focus on synthesis, on more fully analyzing issues initially identified in last year's "training wheels" assessments (EPAT), and on ensuring the dissemination and effective leveraging of lessons learned.

*Links to previous program.* This theme concentrates and summarizes previous work under 92 NRM-1. Several of the previous activities will be phased out (governance with D:FM, institutional analysis with FSP) or led into synthesis work (ACCESS II). In addition, the bundle of activities related to National Environmental Action Plans (NEAPs) and nonproject assistance (NPA) implementation will be narrowed down to synthesis to ensure that the results of this effort are implemented in Africa.

*Synthesis and outreach.* Theme 1 will increasingly revolve around two synthesizing/advisory activities: World Resources Institute's Policy Consultative Group and the World Bank's Multi-Donor Secretariate (MDS). Both activities will evolve from their present narrow interest in the NEAP concept and actively seek to integrate and learn from other activities within Themes 1 and 2, and related activities of other FARA units. Both groups will also seek to expand their links to African researchers, for the Consultative Group through the use of the African Fellow Program and links with the EAGER-supported African Economic Research Consortium (AERC), and for the MDS through increased links with the Regional Environmental Facility (formerly called the Club of Dublin, the African-managed advisory body based in Dakar).

In addition, the NRM unit will increase its efforts to promote Mission buyins into these two activities, in an effort to further integrate Mission and Bureau analytical efforts. Present USAID/Uganda buyins with the two Consultative Groups are expected to be matched by buyins from other Missions over the course of the next FY. This will complement the already substantial network of country buyins into such project as the Land Tenure Center's ACCESS II, EPAT, and D:FM Projects.

### **Theme 2: Natural Resources Management (NRM) Practices and Their Impact on Natural Resource Base Productivity**

This theme focuses on how to make the causal link between changes in practices and increases in productivity, and on what indicators can be developed to track progress in putting in place the relevant conditions to encourage these sustainable increases. It draws upon previous NRMS and PARTS work on the NRM Indicator Framework, and narrows in on practices directly related to

sustainable agriculture, both in the Sahel and elsewhere in Africa. It also further refines tools and methods associated with the NRM Framework, including the testing and evaluation of resource accounting methodologies and their applicability to Africa. Finally, the theme will consider what might be the implications for conditions of long-term biophysical and socioeconomic shifts.

*Links to previous program.* A significant portion of staff time and analytical effort has been focused over the last three years on questions of indicators related to NRM. Theme 2 is the next iteration of this effort, with the agenda evolving from the definition and initial field testing of the Framework (starting in FY 1990/91) to an examination of longitudinal and spatial aspects of impact monitoring (FY 1992) and the expansion of the Framework to include biodiversity concerns (FY 1992 and ongoing) to the proposed program.

*Synthesis and outreach.* Besides collaborator interaction, activities in Theme 2 have direct impact on Missions and the Bureau in general through the influence of the NRM Framework. RSSA staff and the supporting activities will continue to have a major impact on the way Mission NRM programs are incorporated into Mission CPSPs and APIs. In addition, the WRI Information Systems Consultative Group, managed by the ENV unit, will provide overall peer review and advice to the NRM unit in implementing Theme 2 and will play a major role in the synthesis and outreach of the related analytical activities.


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**ANALYTICAL ACTIVITY SUMMARY  
93 NRM-1a: Economic Analysis of NRM**

**THEME:** Enabling conditions for improving natural resources management.

**MANAGER:** Tony Pryor, Gary Cohen.

**OBJECTIVE:** To review in detail key topics related to the economic analysis of natural resources management (NRM).

**BACKGROUND AND JUSTIFICATION:** The economic aspects of improved NRM are complex and difficult to analyze. For instance, it is not a simple matter to limit "market failures" when benefits from improved practices may occur far after the initial intervention-driven costs are incurred, especially when benefits may be intergenerational.

Over the FY 1992 program, EPAT/Winrock has reviewed economic analysis related to USAID-financed NRM programs in six countries: Ghana, The Gambia, Madagascar, Senegal, Lesotho, and Uganda. On the basis of this analysis, the EPAT team has developed an analysis of the economic issues affecting NRM policy programming by USAID in Africa, and will be developing an agenda for developing improved analytical approaches for addressing these issues.

**SPECIFIC STUDIES AND ACTIVITIES:** Follow-on from Phase I of work with EPAT, with definition of program to be defined. Potential analyses include:

1. Economic analysis of nontraditional programs, such as ecotourism, biodiversity, and the long-term impacts of agricultural marketing programs.
2. Review of key issues identified from Phase I review of NRM programs (in conjunction with EPAT/MUCIA).

**COLLABORATING INSTITUTIONS AND MISSIONS:** EPAT/Winrock; EPAT/MUCIA. WRI's PCG will provide peer review of reports and analyses, and will host major reviews of summary studies.

**EXPECTED OUTPUTS:** Detailed analysis and guidelines for Missions, host governments, and others in analyzing a variety of "nontraditional" programs. Country studies to develop detailed analyses of specific key issues. To be completed by August 1994.

**DURATION:** 18 months.

**CURRENT STATUS:** Phase II. Phase I to be completed by March 1993.

**MISSION IMPLICATIONS:** Country approval of TDYs where participation is requested. Mission buyin for parallel operational TDYs possible.



**ANALYTICAL ACTIVITY SUMMARY  
93 NRM-1b: Land Tenure Synthesis**

**THEME:** Enabling conditions for improving natural resources management.

**MANAGER:** Mike McGahuey, Gary Cohen.

**OBJECTIVE:** To summarize lessons learned over the five years of effort by the Land Tenure Center (LTC), incorporating findings from Mission-funded activities, on the importance of land tenure as a factor in sustained natural resources management (NRM).

**BACKGROUND AND JUSTIFICATION:** LTC, through the ACCESS II Project, has been actively involved with the Africa Bureau and its Missions for many years. At present, LTC has more field buyins than all other NRM collaborators combined. Over this time, LTC has increasingly focused its attention on tenure as an enabling condition for improved NRM, expanding its long-term interest in tenure issues in the Sahelian regions and initiating analyses related to tenure and buffer zone management programs.

Since the ACCESS II Project will end in 1994 and it is not clear whether this program will continue beyond that time, the NRM unit proposes to prepare a synthesis of all relevant material developed through ACCESS II over the last five years.

**SPECIFIC STUDIES AND ACTIVITIES:** Synthesis of existing data; field work in two Missions with active ACCESS II buyins; workshop to discuss findings.

**COLLABORATING INSTITUTIONS AND MISSIONS:** Two Missions (ACCESS II Project); data will be entered into the Africa Bureau NRM data base and in Mission-level program designs.

**EXPECTED OUTPUTS:** Synthesis report; field work reports; workshop proceedings; final report.

**DURATION:** 12 months.

**CURRENT STATUS:** Ongoing.

**MISSION IMPLICATIONS:** Bulk of activity will be desk study at LTC. Depending on interest, Missions with LTC buyins related to NRM may wish to approve TDYs. All activities funded by ARTS, but parallel Mission activity possible.



**ANALYTICAL ACTIVITY SUMMARY  
93 NRM-1c: Conservation Education and Attitude Change**

**THEME:** Enabling conditions for improving natural resources management.

**MANAGER:** Tim Resch, Gary Cohen.

**OBJECTIVE:** To analyze environmental impacts associated with conservation education projects.

**BACKGROUND AND JUSTIFICATION:** An understanding of the factors that determine the decision-making process, including cultural, spiritual, knowledge and geographic factors is key to designing, implementing and monitoring effective conservation (or developmental) projects. Understanding how people are motivated to modify their behavior is essential for ensuring sustainable change.

This second phase will build on the findings of the existing study on attitude and activity change with respect to the environment in Africa. Under the 1992 Natural Resources Management (NRM) Analytical Agenda, the first phase of this study included (1) literature review, (2) inventory of USAID and other conservation education projects, (3) development of methodology for analyzing how behaviors are modified or reenforced, (4) state of knowledge report on attitude formation and activity change, (5) analysis of the tools being used to affect attitudes, and (6) recommendations for an research and analysis plan.

**SPECIFIC STUDIES AND ACTIVITIES:** Implementation of a series of case studies designed to examine factors related to (1) policy change among senior-level decision makers and (2) changes in activities among rural peoples.

**COLLABORATING INSTITUTIONS AND MISSIONS:** The Biodiversity Support Program (BSP), in collaboration with the Academy for Educational Development (AED) and independent consultants. Coordinated with the GREENCOM Project.

**EXPECTED OUTPUTS:** Series of case studies analyzing the medium-term impact of conservation education efforts to reenforce or change environment-related behaviors; and a framework with considerations for designing project activities directed at providing incentives for environmentally sound behavior in African populations.

**DURATION:** 12 months.

**CURRENT STATUS:** Phase II of 92 NRM2-b.

**MISSION IMPLICATIONS:** Country TDYs with interested Missions. Fully funded by ARTS. Parallel country buyins possible.


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**ANALYTICAL ACTIVITY SUMMARY  
NRM-1d: Natural Resources Policy Consultative Group**

**THEME:** Enabling conditions for improving natural resources management.

**MANAGER:** Tony Pryor, Gary Cohen.

**OBJECTIVE:** To consolidate research agenda for the PCG, promoting the PCG's role among donors and host countries as the lead policy analysis group on NRM policy issues.

**BACKGROUND AND JUSTIFICATION:** One key constraint to improving the quality of analysis related to NRM policy has been the difficulty in eliciting peer review of studies, reports, project documents, and other related material. To overcome these problems, and to provide an advisory body able to review the overall NRM program of the Bureau and its Missions, ARTS/FARA has been financing the initiation of a Natural Resources Policy Consultative Group (PCG), led by the World Resources Institute (WRI).

The PCG was to have three major purposes: to provide a peer review mechanism for the Bureau, its Missions and host-country personnel; to carry out or oversee specialized studies; and to develop long-term advisory relationships with Missions involved with NRM policy programs. The Group's formative period is nearing an end, and is expected by the completion of this year's support to have a structure, identity, and agenda of its own.

**SPECIFIC STUDIES AND ACTIVITIES:** Peer review of NRM policy programs, special studies, and core support to permit Mission buyins. Synthesis of NRMAA outputs by organizing and hosting a policy conference in Africa in the later part of 1993.

**COLLABORATING INSTITUTIONS AND MISSIONS:** EPM (WRI); Madagascar, Uganda, Cameroon, Gambia, Rwanda, SADCC, MDS, and EPAT.

**EXPECTED OUTPUTS:** Annual report by the PCG. Country reports based on Mission buyin activities. Conference report. Expansion of groups of experts knowledgeable about NRM policy matters in Africa.

**DURATION:** 24 months.

**CURRENT STATUS:** Ongoing.

**MISSION IMPLICATIONS:** ARTS will support core costs, costs of peer review, and cross-cutting studies. Country-specific long-term programs should be financed through Mission buyins.

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**ANALYTICAL ACTIVITY SUMMARY  
NRM-1e: Multi-Donor Secretariat**

**THEME:** Enabling conditions for improving natural resources management.

**MANAGER:** Tony Pryor, Gary Cohen.

**OBJECTIVE:** To evolve the MDS, and to develop synthesis/analytical focus.

**BACKGROUND AND JUSTIFICATION:** National Environmental Action Plans (NEAPs) are designed to provide the overarching strategic vision in countries carrying out natural resources and environmental programs. The most successful to date has been the NEAP in Madagascar; to assist Madagascar and interested donors in implementing the NEAP, USAID funded the installation of a Multi-Donor Secretariat (MDS) within the World Bank.

USAID and the Bank have expanded the MDS's mandate to include Senegal, Gambia, Rwanda, Burundi, Cameroon, and Uganda (which account for the majority of the Bureau's NRM policy reform programs). The Bank and USAID are anxious to consider how best to make the MDS more analytical and synthetic, drawing lessons learned from existing NEAPs and working with other donors and NGOs such as WRI to ensure that the NEAP process is not degraded during the rapid expansion to all of Africa.

**SPECIFIC STUDIES AND ACTIVITIES:** The primary function of this activity will be to provide core funds to assist the MDS to evolve into a more analytical body. The MDS over the course of the grant will become the lead collaborator in regard to NEAPs and other policy mechanisms, working closely with the PCG and EPAT.

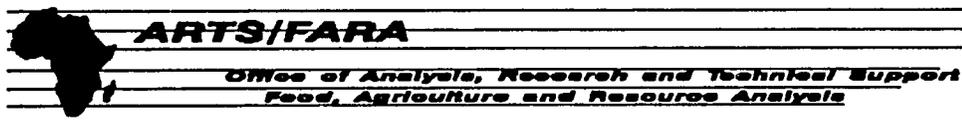
**COLLABORATING INSTITUTIONS AND MISSIONS:** World Bank; Madagascar, Cameroon, Gambia, Rwanda, Senegal, Ghana, donors, interested PVOs, foundations, EPAT, and EPM (PCG). It is hoped that the revision of the R&D/ENR's EPM Project will provide a vehicle for the MDS which can more flexibly permit Mission buyins to support more operational assistance.

**EXPECTED OUTPUTS:** Country reports and analyses. Cohosting with the PCG of the NRM Policy Reform Workshop in Africa in 1993.

**DURATION:** 24 months.

**CURRENT STATUS:** Ongoing.

**MISSION IMPLICATIONS:** ARTS will support core costs and cross-cutting analytical activities. Mission buyins will be sought as feasible to cover in-country operational support.



**ANALYTICAL ACTIVITY SUMMARY**  
**93 NRM-1f: NRM Policy Reform Implementation**

**THEME:** Enabling conditions for improving natural resources management.

**MANAGER:** Tony Pryor, Gary Cohen.

**OBJECTIVE:** To further identify and analyze implementation problems involved with key policy reforms related to NRM.

**BACKGROUND AND JUSTIFICATION:** Policy reform is a key component of many of the Bureau's NRM programs and is utilized as a method for ensuring conditions leading to adoption of innovations. However, as shown in the difference between Levels I and II in the NRM Analytical Framework, the development of policies--changing in regulatory and legal frameworks, etc.--is not always easy to accomplish, and such actions may not necessarily lead to the development of conditions conducive to farmer-level change.

The IPC Project has prepared a literature review for the Bureau on policy reform and is evaluating two key reforms: the development of a National Environmental Action Plan (NEAP), and reforming the forest code found throughout the Sahel.

**SPECIFIC STUDIES AND ACTIVITIES:** Under this buyin, this work will be expanded to include case studies of other key reforms, such as changes in stumpage fees and redirection of funds to local communities, and preparation of a synthesis.

**COLLABORATING INSTITUTIONS AND MISSIONS:** EPAT, ACCESS II, EPM (PCG), and EPM (MDS). Key Missions will be identified. Collaboration from REDSO/ESA and WCA will be sought.

**EXPECTED OUTPUTS:** Country case studies, synthesis report on each reform topic, and overall synthesis report on implementation problems affecting NRM policy reform programs.

**FUNDING AND DURATION:** 12 months.

**CURRENT STATUS:** Phase II, follow-on to 92 NRM-2e(ii).

**MISSION IMPLICATIONS:** Country TDYs with interested Missions. Fully funded by ARTS. Parallel country buyins possible.

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**ANALYTICAL ACTIVITY SUMMARY****93 NRM-2a: Collation of Data on Impact/Diffusion of Sustainable Agricultural Practices**

**THEME:** Natural resources management (NRM) practices and their impact on natural resource base productivity.

**MANAGER:** Mike McGahuey, Gary Cohen.

**OBJECTIVE:** To collate, organize, and use a data base of critical information about the inventory of NRM practices in each agroecological zone.

**BACKGROUND AND JUSTIFICATION:** For each agroecological zone, there is a substantial body of knowledge about how rural producers manage the natural resources base in pursuit of a better livelihood. There is another wealth of wisdom from research reports. The collective body is rich with information about the economical and ecological impacts of the various practices, about the enabling conditions for the diffusion of the various practices, and about programmatic options for establishing the enabling conditions and diffusing the practices.

The purpose of this activity is to collate the existing data in such a way that Missions can more effectively use the data to achieve their goals. The data will be organized according to the NRM Framework to more easily discern cause-and-effect relationships. To obtain the data, collaborators will contact a number of research institutions such as ICRAF, ICRISAT, IITA, CIMMYT, and ORSTOM, as well as NGOs and PVOs.

**SPECIFIC STUDIES AND ACTIVITIES:** This activity will have the following components: (1) build an inventory of practices; (2) establish a data base; (3) conduct analysis of enabling variables; (4) diffuse information.

**COLLABORATING INSTITUTIONS AND MISSIONS:** DESFIL is a promising candidate for a collaborating entity.

**EXPECTED OUTPUTS:** (1) An inventory of practices for each agroecological zone with data on ecological and economic impacts, on enabling conditions, and on programmatic options for establishing conditions; (2) a matrix cataloguing conditions associated with short, medium, and long-term practices; (3) a data base organized according to the NRM Framework that is continually updated; and (4) diffusion of information on each of the above outputs.

**DURATION:** 12 months.

**CURRENT STATUS:** Some aspects will be new. Most will build on past activities.

**MISSION IMPLICATIONS:** [TBD]

## ANALYTICAL ACTIVITY SUMMARY

### 93 NRM-2b: Analyses of Long-Term Potential for Sustainable and Broad-Based Impacts

**THEME:** Natural resources management (NRM) practices and their impact on natural resource base productivity.

**MANAGER:** Mike McGahuey, Tim Resch, Gary Cohen.

**OBJECTIVE:** To evaluate the impact of long-term change on enabling conditions affecting NRM programs.

**BACKGROUND AND JUSTIFICATION:** The goal of most agriculture sector programs is increased productivity. To achieve increased productivity, many programs focus on working with host governments to identify and establish conditions that increase the incentives for millions of smallholders to adopt more productive practices and enterprises. "Establishing the enabling conditions" and the "widespread diffusion of appropriate practices" may not be sufficient. Other conditions such as the natural resources endowment, demographic dynamics, climatic capriciousness, and the vagaries of regional and international economies are also factors in achieving the agriculture sector subgoal.

Most NRM programs under the DFA are long-term in nature but often are caught between the relative shorter-term horizon of the API/CPSP process and the longer-term horizon that may fundamentally alter some of the economic, institutional, and biophysical conditions which these programs have been based upon.

**SPECIFIC STUDIES AND ACTIVITIES:** Specialists will work with FARA and Mission personnel to assess the prospects for NRM-based growth under a number of likely scenarios.

**COLLABORATING INSTITUTIONS AND MISSIONS:** Several Missions, FARA personnel, and several collaborators will be involved. Most of the data will come from the data base established in NRM-2a, from the WRI database, and from the USGS data base. Analysis should be conducted by DESFIL or EPAT.

**EXPECTED OUTPUTS:** Spreadsheet analysis of secondary data; workshops; reports.

**DURATION:** 12 months.

**CURRENT STATUS:** New.

**MISSION IMPLICATIONS:** [TBD].



**ANALYTICAL ACTIVITY SUMMARY  
93 NRM-2c: Resource Accounting--Phase II**

**THEME:** Natural resources management (NRM) practices and their impact on natural resource base productivity.

**MANAGER:** Tony Pryor, Mike McGahuey.

**OBJECTIVE:** To develop and field test a methodology for adapting resource accounting to Africa, with an emphasis on tracking program impact of NRM interventions.

**BACKGROUND AND JUSTIFICATION:** Economic policy analysis has been limited in its ability to take into account the use of natural resources and to estimate what the impact may be of alternatives for resource exploitation. Many policy analysts over the last decade have developed approaches to incorporate natural resources into national economic planning, through various approaches defined as natural resource accounting. At its most extreme, these approaches have attempted to incorporate natural resources into national income accounts. While there have been some attempts to develop these methodologies for use in the Third World (most notably, the work by WRI in Indonesia and Costa Rica) its utility in Africa is clearly limited by the quality of economic data. However, the approach can still be useful in identifying trends, which might assist policy makers in evaluating policy options.

Under funding from PARTS, a team from EPAT coordinated by New York University is reviewing the literature on resource accounting and evaluating options of relevance to Africa. Field trips in the early part of 1993 will review data sources in The Gambia and Madagascar to verify some of the conclusions drawn from the literature review.

**SPECIFIC STUDIES AND ACTIVITIES:** Country-specific analysis, to develop methodology for using resource accounting and related techniques in Africa. (Full definition of activity will be based on findings from Phase II).

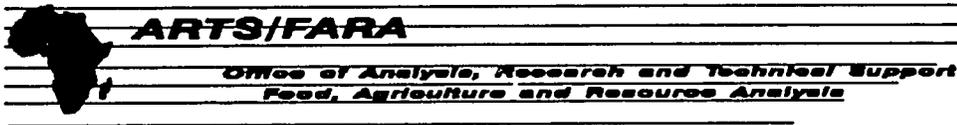
**COLLABORATING INSTITUTIONS AND MISSIONS:** EPAT/Winrock and MUCIA; USAID/Cameroon, Madagascar, and Gambia.

**EXPECTED OUTPUTS:** To be defined in detail in Phase II. Most likely, outputs will include guidelines and background documentation for Missions and governments, as well as peer review of concept within the PCG, and possibly by members of the AERC through the EAGER Project.

**DURATION:** 18 months.

**CURRENT STATUS:** Phase II of NRM-1aii.

**MISSION IMPLICATIONS:** Country approval of TDYs where participation is requested. Mission buyin for parallel operational TDYs possible.



**ANALYTICAL ACTIVITY SUMMARY**  
**93 NRM-2d: Biodiversity Analysis for Africa--Phase III**

**THEME:** Natural resources management (NRM) practices and their impact on natural resources base productivity.

**MANAGER:** Tim Resch, Gary Cohen.

**OBJECTIVE:** To synthesize lessons learned from Biodiversity Analysis for Africa (BAA) grants and Mission experience in implementing effective biodiversity conservation projects, and to disseminate this information in a format useful to Missions.

**BACKGROUND AND JUSTIFICATION:** The conservation of biodiversity has been recognized as an increasingly important natural resource issue. Techniques for accomplishing the goal of conserving biological resources while promoting human prosperity have only begun to be tested by USAID and the conservation and development communities in the past five to ten years. Considerable USAID resources are now being committed to this relatively new field.

In Phases I and II of the BAA Project, the Consultative Group on African Biodiversity identified critical issues in biodiversity conservation and proposed a framework for establishing future priorities. In addition, the Biodiversity Support Program (BSP) awarded a series of grants for testing innovative techniques in the field to capture and analyze lessons learned and build a base of useful knowledge on biodiversity conservation in Africa. The analytical program also focused on the issue of how to monitor and evaluate integrated biodiversity conservation and development projects.

**SPECIFIC STUDIES AND ACTIVITIES:** Implementation of the analytical program developed in Phase II to study the impacts of the activities supported by the BAA grants and USAID Missions. This analysis will be enhanced by similar analyses being conducted from other financial resources by BSP worldwide. Data will be gathered in a manner that will allow comparison and analysis across national, regional, ecosystem and human production boundaries. Dissemination to Missions of the findings and data collected will be a principal component of this activity.

**COLLABORATING INSTITUTIONS AND MISSIONS:** BSP; the Consultative Group on African Biodiversity; collaborating Missions.

**EXPECTED OUTPUTS:** Synthesis reports; grant technical reports; data base on key aspects of conservation and development projects; workshops.

**DURATION:** 24 months.

**CURRENT STATUS:** Phase I continuing to September 1993. Phase II grants active to September 1995.

**MISSION IMPLICATIONS:** Country approval of TDYs where participation is requested. Mission buyins for parallel operational TDYs possible.



**ANALYTICAL ACTIVITY SUMMARY  
93 NRM-G1: PVO/NGO NRMS--Phase II**

**THEME:** Natural resources management (NRM) practices and their impact on natural resources base productivity.

**MANAGER:** Dwight Walker.

**OBJECTIVE:** To undertake an analytical and strategic assessment of the PVO-NGO/NRMS cooperative agreement experiences over the last three years in building awareness and NGO programming capacity in Africa.

**BACKGROUND AND JUSTIFICATION:** For three years, a consortium composed of World Learning (WL), World Wildlife Fund (WWF), and CARE have managed a cooperative agreement to strengthen the technical and institutional capacity of African PVOs and NGOs working in NRM. The cooperative agreement scope of work was implemented primarily in four target countries--Uganda, Madagascar, Mali, and Cameroon. A recent evaluation rated this activity as highly successful and strongly recommended that this effort be extended to additional African countries. In addition to the positive findings of the evaluation, ARTS/FARA has received other positive feedback from a variety of groups and individuals associated with PVO development in Africa. To fully capitalize on the achievements of this activity and in anticipation of expanded activities, the Consortium and ARTS/FARA determined that an analytical and strategic assessment would serve a variety of purposes at this stage in the PVO-NGO/NRMS strengthening process. This grant is propose to analyze experiences of the last three years in building awareness and improving PVO-NGO programming and implementation capacity in NRM and to continue a variety of special situation activities designed to continue and promote active interaction with African PVOs and NGOs.

**SPECIFIC STUDIES AND ACTIVITIES:** Proposed activities include (1) a retrospective analysis of lessons learned; (2) developing an appropriate strategy for a PVO-NGO/NRMS Project follow-on phase; (3) a Special Situations Fund; (4) support for assessing mechanisms through which USAID could access varied services available through the Consortium.

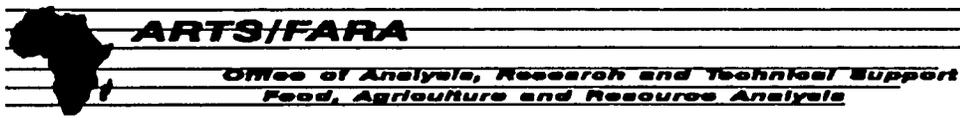
**COLLABORATING INSTITUTIONS AND MISSIONS:** Consortium consisting of WL, WWF, and CARE; USAID Missions (Uganda, Cameroon, Mali, and Madagascar Missions presently participating). An informational cable to other prospective Missions is in process.

**EXPECTED OUTPUTS:** Reports, studies, and seminars/workshops on above activities. Interaction with various Missions on proposed activities. Training and information delivered and field experience developed under the Special Situations Fund.

**DURATION:** 18 to 24 months.

**CURRENT STATUS:** Proposal being reviewed with Consortium.

**MISSION IMPLICATIONS:** Country approval of TDYS where participation in requested. Mission buyins for parallel operational TDYs possible.



**ANALYTICAL ACTIVITY SUMMARY**  
**93 NRM-G2: PARCS Training Program--Phase II**

**THEME:** Natural resources management (NRM) practices and their impact on natural resources base productivity.

**MANAGER:** Tim Resch.

**OBJECTIVE:** To develop appropriate pilot programs for training of parks and protected area professionals in six countries representing each of three regions of Africa.

**BACKGROUND AND JUSTIFICATION:** Africa's system of national parks and protected areas constitutes one of the most important safeguards of the continent's extraordinary biological diversity. Protected area managers, the decision makers in the field, play a critical role. The job of the manager is becoming increasingly complex, requiring technical skills relating to wildlife and tourism but also in skills such as management, planning, law, policies, finance, and accounting. The assumption is that traditional training institutions and programs in Africa generally have not kept pace with the increasing and diversifying demands of the protected area manager and that training opportunities outside the traditional conservation sector need to be identified and made available. The Bureau allocated \$300,000 to initiate Phase I, an in-depth assessment of training needs, priorities, constraints, and opportunities for parks and protected area managers.

**SPECIFIC STUDIES AND ACTIVITIES:** The pilot programs will test models of effective approaches, program structures, and teaching methods for imparting the diversity of skills identified as necessary for effective protected area management.

**COLLABORATING INSTITUTIONS AND MISSIONS:** The Biodiversity Support Program (BSP)--a consortium of World Wildlife Fund (WWF), the World Resources Institute, and The Nature Conservancy--is the implementing agent. BSP is implementing Phase I activities with the African Wildlife Foundation (AWF) for East Africa, WWF for Southern Africa, and Wildlife Conservation International (WCI) for Central Africa.

**EXPECTED OUTPUTS:** National training plans and capacity to implement those plans in six countries. Plans developed through a participatory process where responsibility for skill building responsive to identified needs is inculcated by protected areas managers and their supervisors and by technical staff.

**DURATION:** 24 months. Proposal would be incrementally funded.

**CURRENT STATUS:** Phase I will run through September 1993. A full proposal based on continuing country studies is expected March 30, 1993.

**MISSION IMPLICATIONS:** Phase I country training needs and opportunities assessment will have been conducted in depth in 13 countries and in a limited fashion in 9 countries. From this experience, 6 countries will be selected with concurrence of USAID Missions and in collaboration with national parks, forests, and wildlife management agencies. Additional countries might become partners under sponsorship of other donors, including PVOs.

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**Resources to Support Activities in Agriculture and Natural Resources  
in Sub-Saharan Africa**

**Proposed Analytical Agenda with FY 1993 Funding**

**Annex A**

**List of Activities by Theme**

<b>FY 1993 FOOD SECURITY AND PRODUCTIVITY (FSP) ANALYTICAL AGENDA--THEMES AND ACTIVITIES</b>		
<b>93 Code</b>	<b>Title</b>	<b>Collaborators</b>
<b>THEME 1: AGRICULTURAL SECTOR PRODUCTIVITY AND ITS CONTRIBUTION TO SUSTAINABLE ECONOMIC GROWTH</b>		
FSP-1a	Methodology Development for Measuring Total Factor Productivity in Africa	Food Security II-- Michigan State University
FSP-1b	Impact of Labor-Saving Innovations	Food Security II
FSP-1c	Growth Modeling Pilot Study	APAP II--Abt/IIID
FSP-1d	Managing Productivity Increases and Sustainability in African Agriculture	USDA/ERS; SANREM CRSP--University of Georgia
<b>THEME 2: AGRICULTURAL SECTOR PRODUCTIVITY AND ITS CONTRIBUTION TO FOOD SECURITY (AVAILABILITY, ACCESS, AND UTILIZATION)</b>		
FSP-2a	Impact of Post-Apartheid South Africa on Agricultural Trade and Food Security	African analysts. REDSO/ESA
FSP-2b(i)	Improving Household Access to Food by Vulnerable Groups	Food Security II
FSP-2b(ii)	Intrahousehold Distribution of Resources	Food Security II
<b>THEME 3: AGRICULTURAL POLICY REFORM AND DISSEMINATION EFFORTS</b>		
FSP-3a	Innovative Research Grants for African Analysts on Food Security and Productivity Issues	Winrock

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<b>FY 1993 TECHNOLOGY DEVELOPMENT AND TRANSFER (TDT) ANALYTICAL AGENDA--THEMES AND ACTIVITIES</b>		
<b>93 Code</b>	<b>Title</b>	<b>Collaborator</b>
<b>THEME 1: DEMAND AND SUPPLY OF TECHNOLOGY</b>		
TDT-1a	Technology Frontiers	MSU, IARCs
TDT-1b	Collaborators Advisory Group	Winrock, MSU
TDT-1c	Regional Research Networks	REDSOs, IARCs, NARS
<b>THEME 2: POLICY AND INSTITUTIONAL ENVIRONMENT</b>		
TDT-2a	Research and Institutional Reform of NARS	to be determined
TDT-2b	Frameworks for Action	SPAAR, ISNAR
<b>THEME 3: PERFORMANCE MONITORING AND IMPACT ASSESSMENTS</b>		
TDT-3	Developing Policy Analysis and Economic Assessment Capacity	MSU, IFPRI, USDA, ISNAR

<b>FY 1993 AGRICULTURAL MARKETING AND AGRIBUSINESS (AMA) ANALYTICAL AGENDA--THEMES AND ACTIVITIES</b>		
<b>93 Code</b>	<b>Title</b>	<b>Collaborator</b>
<b>THEME 1: EFFECTIVENESS OF AGRIBUSINESS DEVELOPMENT PROGRAMS IN SUB-SAHARAN AFRICA</b>		
AMA-1a	The Dynamics and Operations of Regional Trading Networks	AFR/ONI/PSD
AMA-1b	Opportunities and Constraints for Agribusiness Development	AFR/ONI/PSD
AMA-1c	Impact of USAID Assistance on Private Agribusiness Development in Sub-Saharan Africa	AFR/ONI/PSD
<b>THEME 2: RELATIONSHIP BETWEEN AGRICULTURAL MARKETING DEVELOPMENT AND EFFECTIVE FINANCIAL SYSTEMS AND SERVICES</b>		
AMA-2a	Dynamics and Fundamental Links Between Formal and Informal Financial Services for Agribusiness/Entrepreneurs	AFR/ONI/PSD; R&D/EID/FIRM (OSU)
AMA-2b	Financial Services for Agribusiness Development Symposium	AFR/ONI/PSD; PRE Bureau; Gemini Project; Women's World Banking; CLUSA
AMA-2c	Effectiveness of Innovative Approaches to Financial Market Development	AFR/ONI/PSD

<b>FY 1993 ENVIRONMENTAL PROTECTION (ENV) ANALYTICAL AGENDA--THEMES AND ACTIVITIES</b>		
<b>93 Code</b>	<b>Title</b>	<b>Collaborators</b>
<b>THEME 1: ENVIRONMENTAL PROTECTION FOR SUSTAINABLE AGRICULTURE</b>		
ENV-1a	Environmentally Superior Technologies for Sustainable Agriculture: Pest and Pesticide Management	R&D/EID; SARSA; R&D/ENR; EPAT; USDA/OICD
ENV-1b	Environmental Education	ARTS/ENV; ARTS/HHR; ARTS/FARA/NRM
ENV-1c	Environmental Guidelines for NVO/PVO Project Design and Implementation	NGOs/PVOs working in Africa
ENV-1d	Assessment of the Africa Emergency Locust/Grasshopper (AELGA) Project (AFR/ONI) and Concept Paper on Its Future	AFR/ONI; AFR/ARTS; other Missions and Bureaus; multilateral and bilateral donors
<b>THEME 2: MONITORING TO IMPROVE UNDERSTANDING OF ENVIRONMENTAL DEGRADATION AND DEVELOPMENT IMPACT</b>		
ENV-2a	Natural Resources Information Consultative Group	WRI through R&D EPM II
ENV-2b	Dissemination Workshops in East and West Africa	WRI through R&D EPM II
ENV-2c	Data Collection for API and Other Analyses	ARTS/FARA/NRM and ENV; WRI through R&D EPM II
<b>THEME 3: LONG-RUN ENVIRONMENTAL IMPACTS OF POLICY REFORM AND PROGRAM ASSISTANCE</b>		
ENV-3a	Delegation of Authority for Environmental Analysis to Missions and Regional Offices	R&D EPAT; Missions; REDSOs
ENV-3b	Environmental Implications of Agricultural Trade and Policy Reform Programs	R&D/ENR: EPAT, &/or the IPM CRSP; ARI; IFPRI; IFDC
3c	Review of Initial Environmental Examinations	Missions; REDSOs; Desk Officers; GC/AFR

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<b>FY 1993 NATURAL RESOURCES MANAGEMENT (NRM) ANALYTICAL AGENDA--THEMES AND ACTIVITIES</b>		
<b>93 NRM Code</b>	<b>Title</b>	<b>Collaborator</b>
<b>THEME 1: ENABLING CONDITIONS FOR IMPROVING NATURAL RESOURCES MANAGEMENT</b>		
NRM-1a	Economic Analysis of NRM	EPAT
NRM-1b	Land Tenure Synthesis	ACCESS (LTC)
NRM-1c	Conservation Education and Attitude Change	BSP
NRM-1d	Natural Resources Policy Consultative Group	WRI/EPM
NRM-1e	Multi-Donor Secretariat	World Bank
NRM-1f	NRM Policy Reform Implementation	EPAT; ACCESS II; EPM (PCG); EPM (MDS); WCA; REDSO/ESA
<b>THEME 2: NATURAL RESOURCES MANAGEMENT (NRM) PRACTICES AND THEIR IMPACT ON NATURAL RESOURCE BASE PRODUCTIVITY</b>		
NRM-2a	Collation of Data on Impact/ Diffusion of Sustainable Agricultural Practices	DEFIL
NRM-2b	Analyses of Long-Term Potential for Sustainable and Broad-Based Impacts	EPM; EPAT; BSP
NRM-2c	Resource Accounting--Phase II	EPAT
NRM-2d	Biodiversity Analysis for Africa--Phase III	BSP; CGAB
<b>NRM Grants</b>		
NRM-G1	PVO/NGO NRMS--Phase II	PVO/NGO NRMS
NRM-G2	PARCS Training Program--Phase II	BSP

## **Resources to Support Activities in Agriculture and Natural Resources in Sub-Saharan Africa**

### **Proposed Analytical Agenda with FY 1993 Funding**

#### **Annex B**

### **List of Acronyms**

<b>ACCESS II</b>	<b>Access to Land, Water, and Other Natural Resources II project</b>
<b>ADO</b>	<b>Agricultural Development Officer</b>
<b>AED</b>	<b>Academy for Educational Development</b>
<b>AELGA</b>	<b>Africa Emergency Locust/Grasshopper Project</b>
<b>AERC</b>	<b>African Economic Research Consortium</b>
<b>AFR</b>	<b>Bureau for Africa (USAID)</b>
<b>AGR</b>	<b>Office of Agriculture (USAID/R&amp;D)</b>
<b>AID/W</b>	<b>U.S. Agency for International Development/Washington</b>
<b>AMA</b>	<b>Agricultural Marketing and Agribusiness (unit within USAID/AFR/ARTS/FARA)</b>
<b>AMIS</b>	<b>Agricultural Marketing Improvement Strategies Project</b>
<b>ANEP</b>	<b>Agricultural Non-Traditional Export Promotion Program</b>
<b>ANR</b>	<b>agriculture and natural resources sector</b>
<b>APAP</b>	<b>Agricultural Policy Analysis Project</b>
<b>APEX</b>	<b>Animal Production and Export Project</b>
<b>API</b>	<b>Assessment of Program Impact</b>
<b>ARI</b>	<b>Agricultural Research Institute</b>
<b>ARS</b>	<b>Agricultural Research Service (USDA)</b>
<b>ARTS</b>	<b>Office of Analysis, Research, and Technical Support (USAID/AFR)</b>
<b>ATAD</b>	<b>Agriculture and Trade Analysis Division (USDA/ERS)</b>
<b>AWF</b>	<b>African Wildlife Foundation</b>
<b>BSP</b>	<b>Biodiversity Support Program</b>
<b>CDIE</b>	<b>Center for Development Information and Evaluation</b>
<b>CGAB</b>	<b>Consultative Group on African Biodiversity</b>
<b>CICP</b>	<b>Consortium for International Crop Protection</b>
<b>CIMMYT</b>	<b>Centro Internaccional de Mejoramiento de Maiz y Trigo</b>
<b>CLUSA</b>	<b>Cooperative League of the United States of America</b>
<b>CPSP</b>	<b>Country Program Strategic Plan</b>
<b>CRSP</b>	<b>Collaborative Research Support Program</b>
<b>DESFIL</b>	<b>Development Strategies for Fragile Lands (USAID/R&amp;D/EID)</b>
<b>DFA</b>	<b>Development Fund for Africa</b>
<b>D:FM</b>	<b>Decentralization: Finance and Management Project</b>
<b>DH</b>	<b>direct-hire</b>
<b>DOA</b>	<b>delegation of authority</b>
<b>EA</b>	<b>Economic Analysis (USAID/AFR/ARTS)</b>
<b>EAGER</b>	<b>Equity and Growth through Economic Research Project</b>

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EEC	environmental education and communication
EID	Office of Economic and Institutional Development (USAID/R&D)
EIS	Executive Information System
ENR	Office of Environment and Natural Resources (USAID/R&D)
ENV	Environmental Protection (unit within USAID/AFR/ARTS/FARA)
EPA	U.S. Environmental Protection Agency
EPAT	Environmental and Natural Resources Policy and Training
EPM	Environmental Planning and Management Project
ERS	Economic Research Service (USDA)
ESA	East and Southern Africa
FAA	Foreign Assistance Act
FAO	Food and Agriculture Organization of the United Nations
FARA	Division of Food, Agriculture, and Resources Analysis (USAID/AFR/ARTS)
FFA	Framework for Action
FIRM	Financial Resources Management (USAID/R&D/EID)
FSP	Food Security and Productivity (unit within USAID/AFR/ARTS/FARA); Forestry Support Project (USDA)
FVA/PVC	Bureau for Food and Humanitarian Assistance / Office of Private and Voluntary Cooperation (USAID)
FY	fiscal year
GC/AFR	Office of the General Council / assigned to AFR (USAID)
GIFAP	International Organization of Agrochemical Product Manufacturers (French)
GIS	geographical informations systems
GPS	global positioning system
GREENCOM	Environmental Education and Communication Project (USAID/R&D)
HHR	Health and Human Resources (USAID/AFR/ARTS)
HIID	Harvard Institute for International Development
IARC	International Agricultural Research Center (USAID/R&D/AGR)
ICRAF	International Council for Research in Agro-Forestry
ICRISAT	International Center for Research in the Semi-Arid Tropics
IEE	Initial Environmental Examination
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IITA	International Institute of Tropical Agriculture
INSAH	Sahel Institute
IPC	Implementing Policy Change Project
IPM	integrated pest management
ISNAR	International Service for National Agricultural Research
ISRA	Senegalese Agricultural Research Institute
KARI	Kenyan Agricultural Research Institute
LOP	life of project
LTC	Land Tenure Center
MDS	Multi-Donor Secretariat
MSU	Michigan State University

<b>MUCIA</b>	<b>Midwestern Universities Consortium for International Activities</b>
<b>NARS</b>	<b>National Agricultural Research Systems</b>
<b>NASA</b>	<b>National Aeronautics and Space Administration</b>
<b>NEAP</b>	<b>National Environmental Action Plan</b>
<b>NGO</b>	<b>nongovernmental organization</b>
<b>NPA</b>	<b>nonproject assistance</b>
<b>NRICG</b>	<b>Natural Resource Information Consultative Group</b>
<b>NRM</b>	<b>Natural Resources Management (unit within USAID/AFR/ARTS/FARA)</b>
<b>NRMAA</b>	<b>Natural Resources Management Analytical Agenda</b>
<b>OICD</b>	<b>Office of International Cooperation and Development (USDA)</b>
<b>ONI</b>	<b>Office of Operations and New Initiatives (USAID/AFR)</b>
<b>ORSTOM</b>	<b>Organisation Française</b>
<b>OSU</b>	<b>Ohio State University</b>
<b>OYB</b>	<b>operational year budget</b>
<b>PARTS</b>	<b>Policy, Analysis, Research, and Technical Support (project within ARTS/FARA)</b>
<b>PCG</b>	<b>Natural Resources Policy Consultative Group</b>
<b>PID</b>	<b>Project Identification Document</b>
<b>PRE</b>	<b>Bureau for Private Enterprise (USAID)</b>
<b>PRISM</b>	<b>Performance Indicators for Strategic Management</b>
<b>PSD</b>	<b>Private Sector Division (USAID/AFR/ONI)</b>
<b>PTA</b>	<b>Preferential Trade Area</b>
<b>PVO</b>	<b>private voluntary organization</b>
<b>R&amp;D</b>	<b>Bureau for Research and Development (USAID)</b>
<b>REDSO</b>	<b>Regional Development Support Office (USAID)</b>
<b>RSSA</b>	<b>Regional Support Services Agreement</b>
<b>SACCR</b>	<b>Southern Africa Center for Cooperation in Agricultural Research and Training</b>
<b>SADC</b>	<b>Southern Africa Development Committee (formerly SADCC)</b>
<b>SADCC</b>	<b>Southern Africa Development Coordinating Committee (now SADC)</b>
<b>SAFER</b>	<b>Southern Africa Foundation for Economic Research</b>
<b>SANREM</b>	<b>Sustainable Agriculture and Natural Resources Management (CRSP)</b>
<b>SARSA</b>	<b>Systems Approach to Regional Income and Sustainable Resource Assistance Project (USAID/R&amp;D)</b>
<b>SPAAR</b>	<b>Special Program for African Agricultural Research</b>
<b>TDT</b>	<b>Technology Development and Transfer (unit within USAID/AFR/ARTS/FARA)</b>
<b>TDY</b>	<b>temporary duty</b>
<b>UNDP</b>	<b>United Nations Development Program</b>
<b>UNECA</b>	<b>United Nations Economic Commission for Africa</b>
<b>UNSO</b>	<b>United Nations Sudano-Sahelian Office</b>
<b>USAID</b>	<b>U.S. Agency for International Development</b>
<b>USDA</b>	<b>U.S. Department of Agriculture</b>
<b>USGS</b>	<b>U.S. Geological Survey</b>
<b>VOCA</b>	<b>Volunteers in Overseas Cooperative Assistance</b>

WCA	West and Central Africa
WCI	Wildlife Conservation International
WRI	World Resources Institute
WWF	World Wildlife Fund

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