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ARTS/FARA

*Office of Analysis, Research and Technical Support
Food, Agriculture and Resource Analysis*

**Division of Food, Agriculture
and Resources Analysis
AFR/ARTS/FARA**

**ARTS/FARA Organization
Briefing Document**

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**Office of Analysis, Research and Technical Support
Bureau for Africa
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Natural Resources Management Support Project
Project Number 698-0467
Contract Number AFR-0467-C-00-1036-00

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THE FARA VISION

WE LEAD ANALYSIS AND SUPPORT MISSIONS TO ENABLE AFRICANS TO PROSPER THROUGH SUSTAINABLE INCREASES IN AGRICULTURAL PRODUCTIVITY.

The Food, Agriculture, and Resource Analysis Division (FARA):

Works through and for AID Missions, to identify and assess critical factors (such as, economic and institutional policies, improved technologies and approaches, robust market systems, and supportive socio-economic incentives) which promote sustainable increases in agricultural productivity.

Conducts sectoral research and analysis in an interdisciplinary manner on those factors as well as new directions and opportunities for growth, and provides technical support to Missions in designing interventions which will lead to sustainable increases in agricultural productivity.

Helps Missions and the Bureau to monitor and evaluate people-level impacts which indicate progress towards the vision and to link lessons learned into the design of new activities.

Works with other donor, research and PVO entities to gather and disseminate information about these issues.

Supports research and analysis on natural resource and environmental issues impinging upon or affected by agricultural productivity.

I. Functional Organization of FARA

A. Objective and Focus of FARA

Under the Development Fund for Africa (DFA), A.I.D. has committed itself to a number of management improvements including: a concentration of resources in priority programs and countries where significant, positive results can be expected; improved donor collaboration; increased partnerships with private voluntary organizations; and an improved capability to monitor, evaluate and report on the impact of Agency activities.

In pursuit of these management objectives, the Africa Bureau scaled down and reconstituted the former Office of Technical Resources as the Office of Analysis, Research and Technical Support (ARTS). ARTS is now the Bureau's and field's primary source of analytical and technical expertise.

Within ARTS, responsibility for supporting and promoting sustainable increases in agricultural productivity rests with the Food, Agriculture and Resources Analysis (FARA) Division. **FARA's five analytical units, in turn concentrate on:**

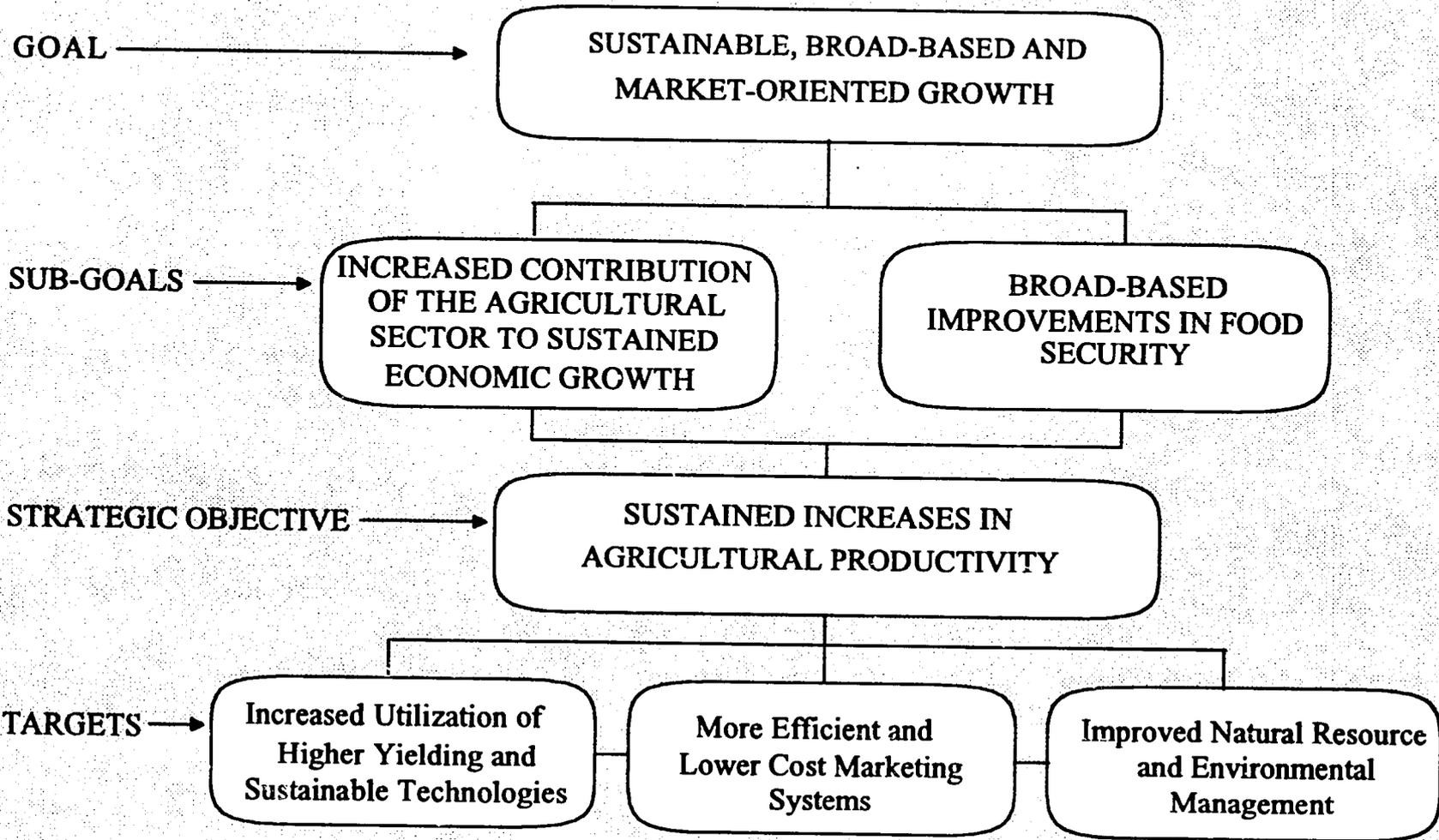
- ◆ *Food Security and Productivity*
- ◆ *Technology Development and Transfer*
- ◆ *Agricultural Marketing and Agribusiness*
- ◆ *Natural Resources Management*
- ◆ *Environmental Protection*

These five analytical units have been established in accordance with the priority analytical issues identified under the DFA for the agriculture and natural resources sector. Because agricultural and natural resources related activities are integral to virtually all aspects of African life (economic, social, cultural, political), developments in that sector directly affect progress towards each of the DFA's strategic objectives. Consequently, the sector has been, and remains, a major focus of A.I.D. assistance programs.

The FARA Division has established a strategic framework for guiding its analytical work. This framework, summarized in the Agricultural and Natural Resources (ANR) Sector Objective Tree (Figure 1), presents the main contributions of the sector to the DFA goal and focuses the work of the Division around the FARA strategic objective of sustained increases in agricultural productivity.

OBJECTIVE TREE: Agriculture and Natural Resource Sector

Figure 1: ANR Objective Tree



In line with the ANR Objective Tree, FARA, working through and for the Bureau and field Missions, exercises its technical leadership in the five principal technical areas by:

- ◆ *identifying and conducting research on critical sectoral and cross-sectoral issues;*
- ◆ *synthesizing cross-national experiences;*
- ◆ *monitoring, evaluating and measuring project and program impact;*
- ◆ *disseminating lessons learned;*
- ◆ *developing sectoral data bases;*
- ◆ *assisting Missions to establish systems for effective Assessments of Program Impact (API); and,*
- ◆ *assisting Missions to obtain technical support services.*

FARA also helps to identify and advise AID/W, field offices, other donors, and host countries on emerging trends and rapidly changing transitions and developments within the sector.

II. FARA and the Africa Bureau Analytical Agenda

The Africa Bureau Analytical Agenda is a priority ordering of analytical and programmatic questions on which most ARTS resources focus. The Agenda encompasses all studies and analyses including impact evaluations. As such, the Analytical Agenda is the major component of the ARTS annual work plan. It delineates the objectives of each task (analytical item), estimates the resources to be applied (human and financial), and approximates the time frame for accomplishing those tasks.

FARA has structured the present Analytical Agenda items for which it is responsible under analytical themes within each of the five analytical units of the Division. **These analytical themes under each Division Unit are the following:**

A. Food Security and Productivity (FSP)

- 1. *impacts and lessons of agricultural policy reform;***
- 2. *agricultural sector productivity and its contribution to sustainable development; and,***
- 3. *food security through improved production, availability, and utilization within the agricultural sector.***

B. Technology Development and Transfer (TDT)

- 1. the demand for and supply of technology;*
- 2. the policy environment for technology development; and,*
- 3. the performance and impact of technology.*

C. Agricultural Marketing and Agribusiness (AMA)

- 1. approaches to improve the efficiency of agricultural marketing systems; and,*
- 2. approaches to increase private agribusiness activities.*

D. Natural Resources Management (NRM)

- 1. policies, institutions and socioeconomic conditions for improving natural resource management;*
- 2. NRM practices and their impacts on natural resource base productivity; and,*
- 3. addressing global environmental issues in sub-Saharan Africa.*

E. Environmental Protection (ENV)

- 1. environmental monitoring to better understand environmental degradation and development impact;*
- 2. integrated pest management approaches for sustainable agriculture; and,*
- 3. improving environmental analysis for A.I.D. programming.*

Attachment I includes a summary sheet for each ARTS/FARA Analytical Theme that includes background, objective, specific studies; collaborating institutions and Missions; expected outputs; and current status.

As currently envisioned, the present Bureau Analytical Agenda will be modified via a flexible, dynamic process which is both bottom-up and top-down. Candidate topics will be solicited and will originate from a wide variety of interested parties both within and outside the Africa Bureau. Each will be channeled through the appropriate ARTS division. The Africa Bureau is

developing a process whereby Field Missions and collaborating organizations inputs will be solicited to identify and discuss the primary sectoral and cross sectoral candidates for the Bureau's Analytical Agenda.

FARA and USAID Missions will carry out the studies approved for the Analytical Agenda either directly, with a combination of direct hire and RSSA staff, or more often, through the R&D Bureau working collaboratively with a variety of institutions. It is anticipated that many studies will be jointly funded by FARA and field Missions through buy-ins to a common R&D project. The results of the work will be reviewed by FARA and field Missions and the results will be fed back into the iterative development of the analytical issues.

III. FARA Organization and Staffing

A. Organizational Structure

The FARA organizational structure is presented in Figure 2. FARA is led by a Division Chief. The Division Chief provides overall Division management, representation and technical leadership for the Africa Bureau in the agriculture and natural resources sector. A Deputy Division Chief works directly under the Division Chief and is responsible for management of operations and staff supervision. The Deputy Division Chief also provides complementary technical leadership to the Division Chief in either Agriculture or Natural Resources and Environment.

B. The Establishment of Analytical Units

To define, organize, and manage the execution of the Division Analytical Agenda, five Analytical Units and one Project Management Unit have been established in FARA. These groups form the official supervisory structure of the Division. However, technical working groups are also established drawing upon individuals from these Analytical Units, from R&D offices and from outside organizations to provide peer review and address other cross-cutting FARA, ARTS, or Bureau analytical themes and issues.

These Analytical Units have been formed in accordance with the ANR Objective Tree and the principal analytical theme areas the Division intends to address. The groups also form the basis for the management of program resources, current and planned under the new PARTS Project.

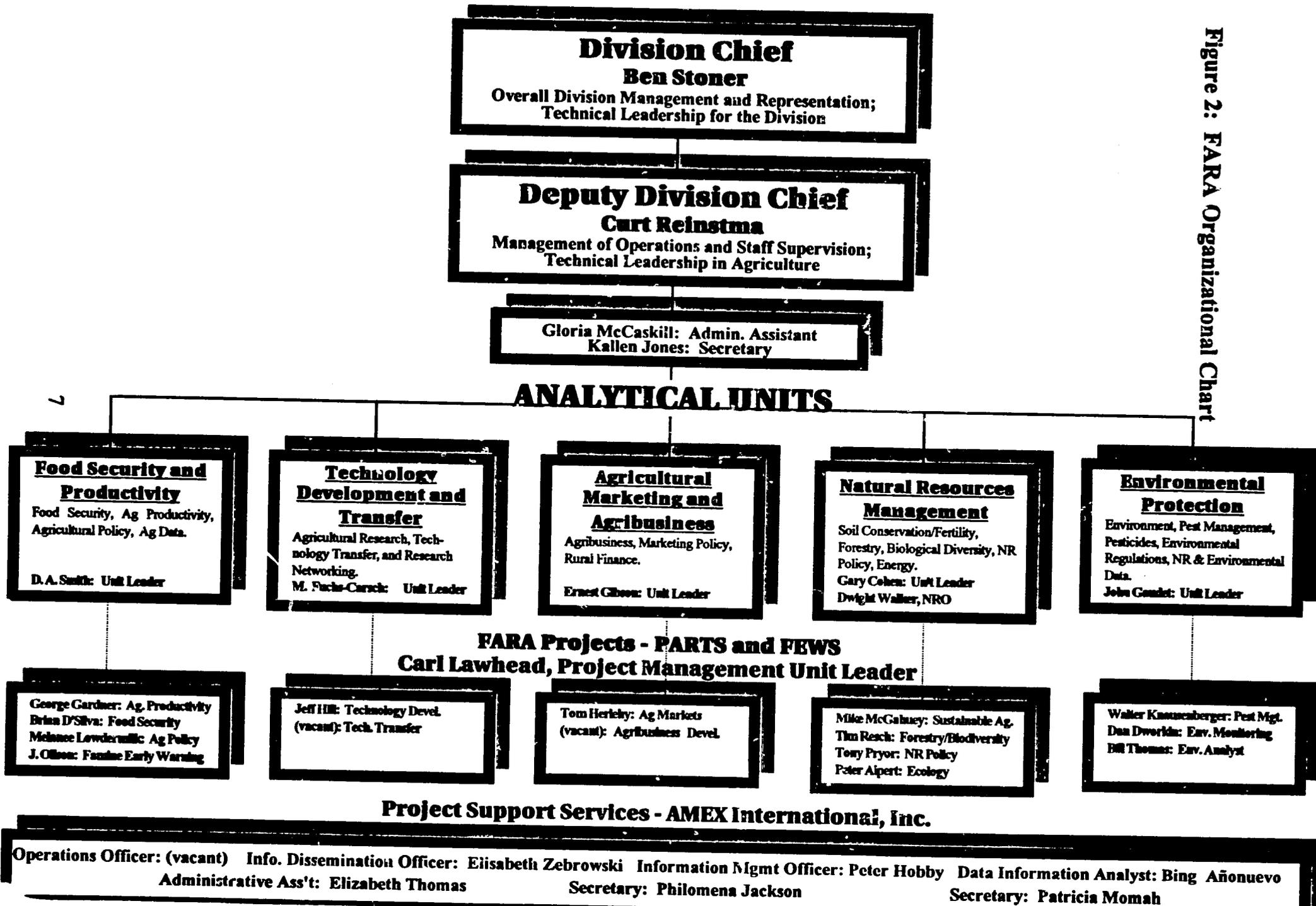
Each Analytical Unit is responsible for developing an analytical agenda for its area. The analytical agenda consists of the sector theme and issues to be investigated. These activities, with designated FARA staff responsibilities and program resource needs, comprise the analytical work plan for the Analytical Unit.

The Analytical Unit Leader, who reports to the Deputy Division Chief, is the lead spokesperson for the Bureau in the area for which the Unit is responsible. He/she is also responsible for development and overall management of the analytical activities in the Unit's analytical area and for supervision of staff under the Analytical Unit.

The Project Management Unit provides Division-wide information systems, data base, dissemination and administrative support. The R&D Direct Hire Unit Leader manages the PARTS and FEWS projects and oversees the analytical support contract with AMEX International that includes: an operations officer, dissemination officer, information management officer, information assistant, administrative assistant, and two secretaries. Administrative support staff are funded under the PARTS Project. They are housed in Rosslyn and work under the direct supervision of AMEX. The technical advisers, who are also funded under the PARTS Project and based in Rosslyn, work under the supervision of USDA/OICD.

FOOD, AGRICULTURE AND RESOURCE ANALYSIS (FARA)

Figure 2: FARA Organizational Chart



Division Chief

Ben Stoner

Overall Division Management and Representation;
Technical Leadership for the Division

Deputy Division Chief

Curt Reinstma

Management of Operations and Staff Supervision;
Technical Leadership in Agriculture

Gloria McCaskill: Admin. Assistant
Kallen Jones: Secretary

ANALYTICAL UNITS

Food Security and Productivity

Food Security, Ag Productivity,
Agricultural Policy, Ag Data.

D.A. Smith: Unit Leader

Technology Development and Transfer

Agricultural Research, Tech-
nology Transfer, and Research
Networking.

M. Fuchs-Carick: Unit Leader

Agricultural Marketing and Agribusiness

Agribusiness, Marketing Policy,
Rural Finance.

Ernest Gibson: Unit Leader

Natural Resources Management

Soil Conservation/Fertility,
Forestry, Biological Diversity, NR
Policy, Energy.

Gary Cohen: Unit Leader
Dwight Walker, NRO

Environmental Protection

Environment, Pest Management,
Pesticides, Environmental
Regulations, NR & Environmental
Data.

John Gaudet: Unit Leader

FARA Projects - PARTS and FEWS

Carl Lawhead, Project Management Unit Leader

George Gardner: Ag. Productivity
Brian D'Silva: Food Security
Melanee Lowdermilk: Ag Policy
J. Olson: Famine Early Warning

Jeff Hill: Technology Devel.
(vacant): Tech. Transfer

Tom Herlehy: Ag Markets
(vacant): Agribusiness Devel.

Mike McGahuey: Sustainable Ag.
Tim Reck: Forestry/Biodiversity
Tony Pryor: NR Policy
Peter Alpert: Ecology

Walter Knusberger: Pest Mgt.
Dan Dworkin: Env. Monitoring
Bill Thomas: Env. Analyst

Project Support Services - AMEX International, Inc.

Operations Officer: (vacant) Info. Dissemination Officer: Elisabeth Zebrowski Information Mgmt Officer: Peter Hobby Data Information Analyst: Bing Añonuevo
Administrative Ass't: Elizabeth Thomas Secretary: Philomena Jackson Secretary: Patricia Momah

IV. Technical Responsibilities: Coordination and Networking

Within the FARA Division and the FARA Analytical Units the assigned technical specialty areas of each officer are shown below. The designated officers provide leadership and coordination in these technical areas for major Division functions.

Person

Technical Responsibilities

Coordination Responsibilities

Division Management:

Ben Stoner	Overall FARA Division & ANR Sector	ANR Sector Strategy and Policy. Sector Analysis for program design. NRM/Environment. Donors, International Organizations BIFADEC & Universities.
Curt Reintama	AFR Agriculture and Ag Policy	ANR Sector Agriculture; Ag Policy. A.I.D. Technical Coordination. Personnel Management.

Project Management Unit:

Carl Lawhead	Project Management and Information Management Systems; Research Dissemination	ANR Cross-cutting analysis. Database and Information Management. POL/CDIE
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Food Security and Productivity (FSP):

Al Smith	Ag. Sectoral Economics; Productivity & Food Security	ANR Sectoral Strategy--DP, ONI, & OFDA. Ag. Sector Indicators--DP, & POL/CDIE. FSP Analytical Agenda.
George Gardner	Agricultural Productivity Agricultural Trade	R&D Bureau Projects USDA/ERS International Databases
Brian D'Silva	Food Security	AFR Food Security Framework R&D Bureau Projects
Melanee Lowdermilk	Agricultural Policy-Regional Integration	R&D Bureau Projects
Jonathon Olsson	Famine Early Warning	Remote Sensing Geographic Information Systems U.S. Geological Service

Technology Development and Transfer (TDT):

Michael Fuchs-Carsch	Technology Development Technology Transfer	AFR Sub-Sector Strategy--DP, R&D, POL, Donors & International Centers, FARA TDT Analytical Agenda
Jeff Hill	Technology Development	R&D Bureau, Office of Agriculture Private Sector Ag. Research

Person

Technical Responsibilities

Coordination Responsibilities

(Vacant)

Technology Transfer

R&D Bureau, Office of Agriculture, USDA

Natural Resources Management (NRM):

Gary Cohen

Natural Resources Management

AFR NRM Strategy—DP, R&D, NRM Analytical Agenda: Coordination of Collaborating Institutions.

Dwight Walker

Natural Resources Management

Private Voluntary and Non-Government Organizations. Peace Corps.

Mike McGahuey

Agro-Forestry
Soil Conservation & Fertility

R&D Bureau, Office of Agriculture Sustainable Agriculture Projects
USDA/Soil Conservation

Tony Pryor

Natural Resources Policy
Energy

R&D Bureau, Office of Economic Institutional Dev., R&D Bureau, Office of Energy & Infrastructure, NR Policy and Energy Projects

Tim Resch

Tropical Forestry
Biodiversity & Nat. Resources

R&D Bureau, Office of Environment and Nature Reserves. USDA/Forest Service; Department of the Interior; PVOs: Biodiversity Grants.

Peter Alpert

Ecology
Global Climate Change

Ecology/Conservation Groups
AFR Climate Change Program

Environment (ENV):

John Gaudet

Environment
Environmental Regs.
Biotechnology

AID Environmental Officers; ENV Analytical Agenda. Environment Coordination with The World Bank.

W. Knausenberger

Pest Management
Integrated Pest Management

R&D Bureau, Office of Agriculture
Pest Management Projects
Donors for Pest Management

Dan Dworkin

Environmental Monitoring

Environmental Information Projects
Geographic Information Systems

Bill Thomas

Environmental Assessment

Pesticides
Toxic Pollutants
Environmental Protection Agency

Agricultural Marketing and Agribusiness (AMA):

Ernest Gibson

Agribusiness & Marketing

AFR Ag. Marketing & Agribusiness Strategy. Donor Coordination. AMA Analytical Agenda.

Tom Herlehy

Agribusiness & Marketing

R&D Bureau, Office of Economics & Institutional Dev.

(Vacant)

Agribusiness Development

AFR, Office of Operations & New Initiatives. U.S. Dept. of Agriculture.

V. FARA Division Projects

A. Policy, Analysis, Research, and Technical Support (PARTS) Project (698-0478)

The FARA Division is implementing a new Division-wide support project in FY 1992. The Policy, Analysis, Research and Technical Support (PARTS) Project is a six year project, with initial four year authorization funding of approximately \$46.1 million. An estimated \$5.1 million of this is planned through Mission and REDSO buy-ins for long term field staff, replacing the African Development Support (ADS) Project mechanism as discussed below.

PARTS incorporates and provides ongoing funding for the research and analytical elements of the Natural Resources Management Support (NRMS) project (698-0467), the Africa Emergency Locust/ Grasshopper Assistance (AELGA) project (698-0517), the Strengthening African Agricultural Research and Faculties of Agriculture (SAARFA) project (698-0435), and some elements of the Africa Development Support (ADS) project. It supports high priority information and analysis not currently falling under one of the above projects.

By advancing the work of the FARA Division, PARTS supports research and analyses leading to the design of more effective sectoral strategies and specific investments to serve the needs of the Bureau, USAID field Missions, host country government and private sector entities and the African peoples whose development A.I.D. is ultimately assisting. Much of the research in agriculture and natural resources that A.I.D. assisted projects and programs use in the coming years will originate and be funded in the field. Nevertheless, FARA has a key role to play in catalyzing, building upon and supplementing these other efforts to increase the relevance and utility of the information provided.

1. Project Purpose

The project purpose is to increase the utilization of information and analysis for agricultural and natural resources policies, programs and projects in Sub-Saharan Africa. Towards that end, PARTS supports strategic analyses and information activities needed by the project clients in order to develop, implement and measure the impact of AID supported agricultural and natural resources (ANR) policies, programs and projects in Sub-Saharan Africa.

The indicators for achieving this purpose are:

- a. PARTS-generated information and analysis will have been used by project clients to influence or shape policies, strategies, allocation decisions and projects in at least 25 African countries;
- b. In collaboration with project clients, all missions with ANR programs will be using strategic frameworks, DFA indicators and other PARTS products to support policy dialogue and reform in the ANR sector; and,

- c. All Bureau and field investment decisions in agriculture and natural resources will be based on policy and program priorities determined by sector assessments or other appropriate analyses.

2. Project Outputs:

Specific project components include:

- a. Research and analyses on critical sectoral, cross-sectoral studies and impact evaluations, country and region-specific studies, and research grants (implementation of the Analytical Agenda);
- b. Identification, development, adaptation and/or testing of analytical tools, methodologies and indicators to more cost-effectively identify priority data needs, collect the data, analyze it, transform the data into information packages which are understandable to decision makers and deliver the information to the appropriate users in a timely fashion;
- c. An ANR information dissemination and management system in place, compatible with other projects and data bases to facilitate country-level collection, reporting and feedback. The system would also include strengthened institutional mechanisms to facilitate effective two-way information flow (solicitation of information needs, packaging, dissemination, etc.); and
- d. A collaborative analytical process in place permitting ANR priorities and Agenda to be set and implemented in coordination with AID field office and other project clients and permitting ANR personnel to initiate analytical work and to use project generated research and analysis.

3. Project Inputs:

The lion's share of project inputs will fund the technical support required of the Bureau, its field office and host countries for the project activities (CPSPs, APIs, data bases, sector assessments, evaluations, etc.) The technical support will primarily be analysis and research under the Africa Bureau Analytical Agenda conducted by a variety of public and private institutions through Agency contracts, grants, and cooperative agreements. It will also include some long-term support provided to ARTS/FARA with core funding, and to REDSOs and missions funded through ADS-type buy-ins for long-term field-based technical advisers. Because PARTS analysis and research will be undertaken through R&D Bureau cooperative agreements and contracts to which Missions can also buy-in, no Missions buy-ins for such activities are incorporated into PARTS.

B. Famine Early Warning Systems (FEWS) Project (698-0466)

The goal of the FEWS Project is to reduce the incidence of famine in Africa, thereby helping insure food security in famine-prone countries.

Its purpose is to help establish a famine early warning system that provides timely information so that decision makers can authorize famine prevention initiatives. In carrying out the purpose, three objectives were defined for FEWS:

- ◆ *Enhance A.I.D.'s famine early warning capability;*
- ◆ *Create or reinforce national early warning systems; and,*
- ◆ *Collaborate on the evolution of internationally acceptable early warning methodology.*

With the reorganization of the Africa Bureau, and following a project evaluation, management of FEWS was transferred to ARTS/FARA. ARTS/FARA is integrating FEWS analytic support into a broader role in developing data systems, including for the assessment of program impact, as well as in GIS and remote sensing work carried out within AFR.

During FY 92/93, a next phase of the project will be designed to consider broader objectives, as well as to satisfy needs arising out of the drought in Southern Africa.

1. The FEWS Monitoring System

The FEWS Monitoring System is based on analysis of the combination of locally-based secondary data with other information derived from remotely-sensed means to produce an overall assessment of vulnerability to famine. The monitoring system is made up of sets of activities, the field and U.S. (including all implementing agencies).

The mainstay of the U.S. component of FEWS is the FEWS/W office, staffed by the Tulane/Pragma Group, which manages the day to day organizational tasks, receives information from both the field and the various participating agencies and contractors, conducts supplementary analyses, produces and publishes all publications, and interacts with AID/W to report early warnings and promote general early warning awareness.

In six of the seven FEWS countries (Mauritania, Mali, Burkina, Niger, Chad, Ethiopia) an FFR employed by the Tulane/Pragma Group, is actively working under the umbrella of the local USAID Mission to facilitate the collection of national data.¹ Work plans are drawn up by the FFR and FEWS/W and submitted to AID/W and the USAID Missions for approval. Each of the FFRs receive data on a regular basis from the supporting contractors and a variety of local agencies, other early warning units (both national and donor-supported), PVOs, UN agencies, and regional institutions. In addition to the information yielded from this flow, most agencies also receive support from FEWS FFRs in terms of training, technical assistance, and EW enlightenment.

The FFR analyzes this information, to help the local Mission, produce its monthly reports on early warning, including food aid needs assessment. In theory, FFRs were to be collecting data from and collaborating with the donors, but in practice, with few exceptions, the individual USAID Mission undertakes all official contact.

¹ A FEWS Amendment is being prepared to expand activities to cover Southern Africa and provide consultant assistance to East Africa.

2. Other Implementing Agencies

There are three PASAs and one additional contractor supporting the FEWS monitoring system. These include:

- **The United States Geological Service/USGS**, through its EROS Data Center (EDC), located at Sioux Falls, South Dakota, provides technical assistance to FEWS/W, the FFRs, and the Missions through various special studies and the development of software tools, training for the FFRs and other staff, and data archiving. An EDC-provided senior scientist is based at AID/W to facilitate and coordinate FEWS USG and A.I.D.-related international collaboration, provide overall technical direction to FEWS, and advise A.I.D. decision-makers of the potential utility of EW, remote sensing, and GIS methodologies.
- **The National Aeronautical and Space Agency's (NASA)** Global Inventory Modeling and Monitoring System creates and provides information on the relative productivity of FEWS country vegetation (NDVI - Normalized Difference Vegetation Index) from National Oceanic and Atmospheric Administration GAC (Global Area Coverage) satellite imagery (of approximately seven kilometers resolution). The NDVI has been composited every 10 days (dekad) since 1981. It is useful to FEWS from an operational perspective as it made FEWS/W, the FFRs, and HC agencies not only acutely aware of real time vegetative activity, but permits temporal comparisons of any group of dekads.
- **The University of Reading's** Department of Meteorology creates and provides dekadal rain information through analysis of thermal data collected by sensors of the geostationary METEOSAT satellite. With computers provided by FEWS, information on the duration of cold clouds (which at certain temperatures are indicative of thunderstorm generated rainfall) is compared with ground data to produce a best estimation of dekadal rainfall for FEWS countries.
- **The National Oceanic and Atmospheric Administration (NOAA)**, through its Climatic Analysis Center/Joini Agriculture and Weather Facility, creates and provides written descriptions of recent FEWS country weather activity, geographic location of the ITCZ (Intertropical Convergence Zone, a region of low surface pressure which is indicative of the seasonal path of rain activity), and a map of recent Sahelian rainfall. The ITCZ and rainfall data are faxed to the FFRs to provide additional information to backstop those data derived from METEOSAT.

Attachment I

FARA Analytical Themes: Summary Sheets

A. Food Security and Productivity (FSP)

- FSP-1 Impacts and Lessons of Agricultural Policy Reform;
FSP-2 Agricultural Sector Productivity and its Contribution to Sustainable Development; and,
FSP-3 Food Security through Improved Production, Availability, and Utilization within the Agricultural Sector.

B. Technology Development and Transfer (TDT)

- TDT-1 The Demand for and Supply of Technology;
TDT-2 The Policy Environment for Technology Development; and,
TDT-3 The Performance and Impact of Technology.

C. Agricultural Marketing And Agribusiness (AMA)

- AMA-1 Approaches to Improve the Efficiency of Agricultural Marketing Systems; and,
AMA-2 Approaches to Increase Private Agribusiness Activities.

D. Natural Resources Management (NRM)

- NRM-1 Policies, Institutions and Socioeconomic Conditions for Improving Natural Resource Management;
NRM-2 NRM Practices and their Impacts on Natural Resource Base Productivity; and,
NRM-3 Addressing Global Environmental Issues in Sub-Saharan Africa.

E. Environmental Protection (ENV)

- ENV-1 Environmental Monitoring to Better Understand Environmental Degradation and Development Impact;
ENV-2 Integrated Pest Management Approaches for Sustainable Agriculture; and,
ENV-3 Improving Environmental Analysis for A.I.D. Programming.

ANALYTICAL THEME SUMMARY

AFR/ARTS/FARA

FSP-1

ANALYTICAL THEME: Impacts and Lessons of Agricultural Policy Reform

THEME MANAGER: FSP Unit: Dwight A. Smith

OBJECTIVE: To capture the "lessons learned" of agricultural policy reform in Sub-Saharan Africa and to better understand: (1) what has worked; (2) what hasn't worked; (3) if it hasn't worked, why it hasn't; (4) institutional considerations; (5) political considerations; and (6) social implications.

BACKGROUND AND JUSTIFICATION: While A.I.D. has long been concerned with both macro and sectoral policies/regulations affecting the agricultural sector, it is only relatively recently that we have begun to address the issues directly. Although a healthy policy environment is a necessary condition to sustainable agricultural development, it is frequently observed that policy reform has not had the expected impact. Often this observation is made by skeptics or by individuals who expect immediate impact and do not appreciate the intermediary stages between policy pronouncement and people level impact. It behooves us, however, to provide advice and suggestions to the Bureau and Missions in order that policy issues may be addressed as effectively as possible.

At this time, the agenda is rather fluid in that the specific topics for inclusion should be based on field demands. The proposed November 1992 Workshop on Agricultural Transformation is intended as a bridge which will contribute to the Unit's longer-term analytical agenda. It should be noted that each of the Target Units will be addressing policies as they affect their focus of analysis. The FSP Unit will be examining the impact at the sectoral level and working in collaboration with the Economic Analysis Division of ARTS on macro-sectoral linkages.

SPECIFIC STUDIES/ACTIVITIES:

1. Improving Effectiveness of Agricultural Policy Reform (FY 92/93).
2. Synthesis Reviews (On-going).
3. Agricultural Transformation (FY 92/93).

COLLABORATING INSTITUTIONS AND MISSIONS:

1. Agricultural Policy Analysis Project (APAP) II Project,
2. Implementing Policy Change Project,
3. World Bank, and
4. Interested USAID Missions.

EXPECTED OUTPUTS:

1. A series of reports and workshops which present findings and implication for programming to both Africa Bureau and Mission agricultural and program officers.

CURRENT STATUS: All activities will be implemented in FY 92/93.

ANALYTICAL THEME SUMMARY

AFR/ARTS/FARA

FSP-2

ANALYTICAL THEME: Agricultural Sector Productivity and its Contribution to Sustainable Development.

THEME MANAGER: FSP Unit: Dwight A. Smith

OBJECTIVE: To assist AID Programming achieve greater people level impact (productivity and employment) from policy and investment interventions in the agricultural sector.

BACKGROUND AND JUSTIFICATION: Agriculture is the dominant sector in sub-Saharan African economies. Its importance is reflected in the agricultural sector's share of Gross Domestic Product, employment and foreign exchange earnings (savings). It is also reflected in the fact the domestic agricultural sector is the primary source for food and fiber as well as raw materials for the industrial sector. More importantly, given the structural importance of the agricultural sector, the concept of broad-based, sustainable and market-led economic growth requires that the agricultural sector become actively engaged as a catalyst for generating broad-based economic growth. The question, then, is what can be done to encourage the increased direct and indirect benefits accruing to investments in the agricultural sector. The Productivity theme examines sectoral impact across targets, as well as multiplier effects, and growth linkages to the economy as a whole.

SPECIFIC STUDIES/ACTIVITIES:

1. Review of National Account Data for productivity trends of land, labor and capital (FY 1991/92).
2. Growth Linkages between Overall Economic Growth and Regional Trade in Agricultural Economies (FY 1993).
3. Review of Household Budget Data for productivity trends of land, labor and capital (FY 1992/93).
4. Sectoral Data Base acquisition and management (on-going).

COLLABORATING INSTITUTIONS AND MISSIONS:

1. International Food Policy Research Institute (IFPRI),
2. Universities,
3. World Bank, and
4. Interested USAID Missions.

EXPECTED OUTPUTS:

1. A series of reports and workshops which present findings and implication for programming to both Africa Bureau and Mission agricultural and program officers.

CURRENT STATUS: The initial productivity trends study was funded with FY 1991 PD&S funds. This study and data base acquisition are on-going. The complementary productivity study and growth linkages studies are being implemented in FY 1992/1993 under the PARTS Project.

ANALYTICAL THEME SUMMARY

AFR/ARTS/FARA

FSP-3

ANALYTICAL THEME: Food Security through Improved Availability, Access and Utilization within the Agricultural Sector.

THEME MANAGER: FSP Unit: Dwight A. Smith

OBJECTIVE: To enhance the African agricultural sector's contribution to food security.

BACKGROUND AND JUSTIFICATION: Food Security is one of the Strategic Objectives of the Development Fund for Africa (DFA). By definition, food security which includes health and education is larger than the agricultural sector. Yet, agriculture's contribution in terms of increased domestic availability, increased foreign exchange earnings (food import capacity) and increased access (either purchasing power or the ability to meet one's own food needs) is viewed as critical if a country to make progress in achieving this development goal. Therefore, it is critical that this theme be address both within the agricultural sector and as a cross-sectoral theme.

SPECIFIC STUDIES/ACTIVITIES:

1. Examination of temporal (inter-annual vs. intra-annual) dimension of food security (FY 1991).
2. Examination of marketing as a constraint to domestic food security (FY 1991).
3. Strategies to improve household access to food by vulnerable groups (FY 1992/93).
4. Relationships between availability, access and consumption/nutrition well-being (FY 1992/93).
5. Sectoral Data Base acquisition and management (on-going).

COLLABORATING INSTITUTIONS AND MISSIONS:

1. Food Security in Africa Project,
2. Food Security II Project,
3. IFPRI, Universities,
4. World Bank, and
5. Interested USAID Missions.

EXPECTED OUTPUTS:

1. A series of reports and workshops which present findings and implication for programing to both Africa Bureau and Mission agricultural and program officers.

CURRENT STATUS: The initial food security analyses were funded through the Food Security in Africa Project. In FY 1992, we plan to do a synthesis of consumption methodologies which will feed into a subsequently stronger diagnostic capacity. Under the PARTS project, we expect to be addressing these issues as well as focusing largely upon access issues with implications for mitigation and development.

ANALYTICAL THEME SUMMARY

AFR/ARTS/FARA

TDT-1

ANALYTICAL THEME: The Demand for and Supply of Technology

THEME MANAGER: TDT Unit: Jeff Hill and Michael Fuchs-Carsch

OBJECTIVE: To revitalize agricultural research in Africa through a better understanding of the factors which determine the productivity of the public sector elements of National Agriculture Research Services (NARS) and to better understand the factors determining the demand for technology and to develop and apply new analytical tools for accomplishing this.

BACKGROUND AND JUSTIFICATION: A review of the past 20 years of agricultural research and extension projects in Africa indicates that agricultural research has been too restrictive in scope and function. Research has been supply-oriented focusing on production problems of farmers which were the major, if not the sole, clients. There has been a disconnect between markets, consumers and producers. Policy and institutional issues have not received full attention either. Thus, the impact of research has been limited. The strategic framework and the new analytical tools it espouses will support Missions and the Bureau to identify appropriate mixes of technological, policy and institutional interventions to assure that key (comparative advantage) commodities are produced and marketed more efficiently through appropriate channels to final consumers.

SPECIFIC STUDIES:

1. Completion of the Strategic Framework for TDT in Africa (FY 92).
2. Application of commodity systems analysis to identify research priorities for food and nontraditional export commodities (FY 92/93).

COLLABORATING INSTITUTIONS AND MISSIONS:

1. World Bank, ISNAR, CIRAD, and other SPAAR donors,
2. USAID Missions in Africa with TDT target,
3. USDA,
4. REDSOs,
5. NARS and other supporting research organizations, and
6. The private sector.

EXPECTED OUTPUTS:

1. Strategic Framework.
2. Testing/Application of new methodological tools and analytical approaches in 3-5 Missions and participating NARS.
3. Reports informing research agendas and detailing specific areas for public and private sector collaboration in TDT.

CURRENT STATUS: Analytical work in support of the Strategic Framework began early in FY 92. Synthesis is ongoing. Document in draft. Testing and dissemination will be completed in FY 94.

ANALYTICAL THEME SUMMARY
AFR/ARTS/FARA
TDT-2

ANALYTICAL THEME: The Policy Environment for Technology Development.

THEME MANAGER: TDT Unit: Michael Fuchs-Carsch and Jeff Hill

OBJECTIVE: To improve the policy environment for TDT through greater involvement of the private sector.

BACKGROUND AND JUSTIFICATION: This theme looks at the policy, institutional and technology linkages and seeks to improve the policy environment for TDT through greater involvement of the private sector in technology transfer in the short run and technology development in the long run. The need for this theme was identified through Michigan State University's work on food security in Africa, an activity with which there will be continued close collaboration.

SPECIFIC STUDIES:

1. Private sector collaboration in agricultural research/technology transfer through a buy-in to the R&D Bureau Agricultural Marketing Improvement Strategies (AMIS) Project with Abt Associates.
2. Technology transfer study by Lisa Schwartz through a contract with Tropical Research and Development.

COLLABORATING INSTITUTIONS AND MISSIONS:

1. Missions to be identified, and
2. USAID Missions in Zimbabwe, Kenya, and Mali.

EXPECTED OUTPUTS:

1. Reports on new approaches to foster collaboration between the private & public sector.
2. Reports on public and private sector collaboration in extension.

CURRENT STATUS: Missions are being identified for case studies. Field work in progress.

ANALYTICAL THEME SUMMARY

AFR/ARTS/FARA

TDT-3

ANALYTICAL THEME: The Performance and Impact of Technology.

THEME MANAGER: TDT Unit: Michael Fuchs-Carsch and Jeff Hill

OBJECTIVE: To better understand the people-level impacts of A.I.D. technology development and transfer (TDT) programs in Africa and to guide Missions in the design of more effective and efficient TDT activities.

BACKGROUND AND JUSTIFICATION: Under the DFA, the impact of Africa Bureau TDT activities needs to be demonstrated and measured. Research under this theme, undertaken at program and people levels, will help to synthesize the Bureau's experience and inform new policy and program directions.

SPECIFIC STUDIES:

1. Impact of Research Networks.
2. Rate of Return studies being conducted by Michigan State University.
3. MARIA. Maze research impact assessment being conducted by Elon Gilbert.

COLLABORATING INSTITUTIONS AND MISSIONS:

1. REDSO/ESA and REDSO/WCA,
2. Phase I: USAID Missions in Kenya, Malawi, and Mali,
3. Phase II: USAID Missions in Cameroon, Niger, Uganda and Zambia, and
4. Most USAID Missions in Africa.

EXPECTED OUTPUTS:

1. New performance & Impact indicators.
2. Reports indicating rate of return (ROR) on investments in agricultural research in these countries and analysis of institutional factors which determine ROR's.
3. Final Report explaining impact of research on maize production, consumption and trade. Due Feb. 1992.

CURRENT STATUS: Working Matrix Developed. Phase I : Field work nearing completion. Phase II: Field work Beginning. Interim report reviewed; field work nearing completion.

ANALYTICAL THEME SUMMARY

AFR/ARTS/FARA

AMA-1

ANALYTICAL THEME: Approaches to Improve the Efficiency of Agricultural Marketing Systems in Sub-Saharan Africa

THEME MANAGER: AMA Unit: Thomas J. Herlehy

OBJECTIVE: To analyze the links between sound financial services and agricultural marketing development in sub-Saharan Africa.

BACKGROUND AND JUSTIFICATION: In January, 1991, the Africa Bureau of USAID adopted A Strategic Framework for Promoting Agricultural Marketing and Agribusiness Development in Sub-Saharan Africa to provide analytical guidance to USAID field Missions. The Strategic Framework specifically identifies sound financial markets and systems as providing a critical service to support the development of effective agricultural marketing systems with financially strong agribusinesses. However, more information is needed regarding the particular financial policies, regulations, institutions and services which can best promote agricultural marketing activities. This analytical activity will help build upon the initial guidance established in the Strategic Framework by examining the impact of financial policies and services on agricultural marketing efficiency and agribusiness development so that more thorough guidance can be developed and disseminated to the field.

SPECIFIC STUDIES:

1. Financial market and services analysis by Ohio State University through the R&D/EID Financial Resource Management (FIRM) Project.

COLLABORATING INSTITUTIONS AND MISSIONS:

1. AFR/ONI, Africa Geographic Offices, Near East Bureau (NE/DR/PIE), Asia Bureau (ASIA/DR/TR), Private Enterprise Bureau (PRE/T), USDA/Food Industries Division, and The World Bank, Africa Technical Department, will be involved in reviewing draft and final reports.
2. Eight Missions have responded, expressing strong interest in this research activity: Mali; Senegal; Uganda; Kenya; Burkina Faso; and Cameroon, Niger and The Gambia.

EXPECTED OUTPUTS:

1. A final report which contains: (a) an annotated bibliography, and (b) a synthesis essay which summarizes the findings of the annotated bibliography and the field visits, and which will enumerate lessons learned and will identify additional questions and issues which require further analysis.

CURRENT STATUS: A draft report was reviewed by AFR/ARTS/FARA in November 1991. Based on that review meeting, Ohio State University is making preliminary revisions to the draft report and Annotated Bibliography. A reporting cable has been sent to the field describing the initial lessons learned and listing the initial questions that require further investigation. Missions selected for initial field visits are: Niger, Burkina Faso, Gambia, and Cameroon. The visits have been between March and April, 1992 and a final report is due no later than July 12, 1992.

ANALYTICAL THEME SUMMARY AFR/ARTS/FARA AMA-2

ANALYTICAL THEME: Approaches to Increase Private Agribusiness Activities

THEME MANAGER: AMA Unit: Thomas J. Herlehy

OBJECTIVE: To synthesize the lessons learned from recent approaches to agribusiness development and suggest new approaches to promote indigenous agribusiness activities.

BACKGROUND AND JUSTIFICATION: In January, 1991, the Africa Bureau of USAID adopted A Strategic Framework for Promoting Agricultural Marketing and Agricultural Development in Sub-Saharan Africa to provide analytical guidance to USAID field Missions. While the Strategic Framework provides broad Africa Bureau policy guidance regarding agribusiness development, more specific information is needed about the particular policy, regulatory, institutional and infrastructural constraints which private agribusiness face in Sub-Saharan Africa and what USAID Missions could do to help private entrepreneurs take advantage of business opportunities.

SPECIFIC STUDIES:

1. A study synthesizing the lessons learned and information needs of USAID Missions and African agribusinesses by Abt Associates and the Post-Harvest Institute for Perishables through the R&D/EID Agricultural Marketing Improvement Strategies (AMIS) project.
2. Appendix to the Abt study, especially regarding African agribusiness information needs and opportunities for investment, by assistance from Volunteers in Overseas Cooperative Assistance (VOCA) planned for FY 1992 PARTS Project funds.

COLLABORATING INSTITUTIONS AND MISSIONS:

1. Africa Bureau Geographic Offices, AFR/ONI, USDA/Food Industries Division, and the World Bank, Africa Technical Department will be involved in the review of draft and final reports.
2. The following USAID field Missions are participating in and facilitating this initial phase of the research and analytical activity: Mali; Uganda; Kenya; Niger; Cameroon and Zimbabwe.
3. Other USAID Missions have expressed interest in participating in the next phase of the study (Guinea and Madagascar).

EXPECTED OUTPUTS:

1. A report providing (a) lessons learned; (b) analysis of current approaches; (c) identification of impact indicators; (d) identification of further information needs; and, (e) recommendations on additional agribusiness issues and topics that require further study.

CURRENT STATUS: A draft report from Abt was reviewed in January 1992 with participation of the other collaborating entities mentioned above. Based on that review, and the response from the field to the cable outlining the research activity, five field Missions have been selected for participating in the field research for this analytical activity. Field research began in April 1992 and a final draft report is expected no later than July 12, 1992. VOCA volunteers, for the complementary aspect of this research activity, will be selected with USAID field Mission assistance with trips planned for September - December, 1992. Individual reports from VOCA volunteers will be submitted to AMA Unit and combined into a comprehensive report by VOCA.

ANALYTICAL THEME SUMMARY

AFR/ARTS/FARA

NRM-1

ANALYTICAL THEME: Policies, Institutions, and Socioeconomic Conditions for Improving Natural Resources Management.

THEME MANAGER: NRM Unit: Tony Pryor

OBJECTIVE: To identify policy, institutional, and socioeconomic conditions and that contribute to widespread adoption of appropriate NRM practices and to recommend program measures for A.I.D. Missions to use these in Africa.

BACKGROUND AND JUSTIFICATION: To help Missions to assist host governments to make progress toward broad-based sustainable economic development, the NRM Analytical Agenda aims to increase our understanding about both (a) the economic and environmental impacts from various agricultural practices and (b) the process of diffusing appropriate practices. This theme area focuses on better understanding and establishing the conditions the contribute to the widespread diffusion of appropriate NRM practices.

SPECIFIC STUDIES:

1. (a) Overview of economic issues affecting the establishment of conditions leading to adoption, including the use of endowment funds, (b) The role of natural resource accounting as a means to monitor NRM change, and (c) Guidelines for the development of local currency endowments to support natural resources management activities.
2. Field studies of local governance and autonomy-related NRM innovations and practices.
3. Summary of experience with land tenure and its relevance to NRM, and linking of country-specific research programs.
4. Field studies of public sector institutional constraints, with emphasis on financial and structural approaches to remedy problems, and local policy revision and institutional change.
5. (a) Definition of how National Environmental Action Plans (NEAPs) affect policy change during their implementation and field review of ongoing NRM NPA and a review of policy reform programs, (b.1) Review of existing NEAPs in terms of their incorporation of local participatory concerns, (b.2) Review of existing NPA and NEAP programs in terms of their implementation: Review of Forest Code Reform in Mali, (c) Review of economic reforms in the context of the NPA, and (d) Lessons learned on NEAP design and implementation.
6. Initiation of the Consultative Group on Natural Resource Policy.

COLLABORATING ORGANIZATIONS and Missions:

1. (a) EPAT (Winrock) - Desk study, (b) EPAT, with USAID Gambia and Madagascar, and EPM, FSP, and (c) EPAT, with USAID Madagascar, The Gambia and Uganda.
2. FM, with USAID Namibia, CILSS, Uganda, and LTC, WRI.
3. ACCESS II (LTC), synthesis of bilateral programs in Uganda, Madagascar, the Gambia, Guinea, Senegal, and Niger.
4. FSP (USFS), with USAID Madagascar, with IPC and EPM.
5. (a) EPM (WRI), with USAID Madagascar, Rwanda, Ghana, and Uganda, an all 1e collaborators, (b.1) IPC, with USAID Madagascar, EPAT and EPM, (b.2) IPC, with USAID Mali and LTC, (c) EPAT, with USAID Madagascar, with EPM and IPC, and (d) MDS, with USAID Gambia, Senegal, Rwanda, Burundi, Uganda, and Madagascar, other Collaborators, host governments, PVOs and the World Bank.
6. EPM (WRI), with other collaborators, USAID Uganda, Madagascar, SADCC countries, Niger, Rwanda, and Ghana.

NRM-1 (continued)

EXPECTED OUTPUTS: (Each activity with site visit includes in-country workshop/presentation).

1. (a) Desk study, final report, (b) Site visit reports, workshop and final report, (c) Site visit reports, workshop and final report.
2. Site visit reports, workshop and final report.
3. Workshop report and synthesis paper.
4. Site visit reports and final report.
5. (a) Site visit reports and final report, (b.1) Final report, (b.2) Final report, (c) Site visit reports, and (d) Country reports, synthesis report with other collaborators.
6. Peer reviews of #5 reports, special studies, action plans for mission programs.

CURRENT STATUS: All activities are funded, Memoranda of Understanding negotiated and approved, and work underway. All collaborators will be meeting to discuss progress in March, 1992.

ANALYTICAL THEME SUMMARY

AFR/ARTS/FARA

NRM-2

ANALYTICAL THEME: Natural Resource Management (NRM) Practices and their Impact on Natural Resource Base Productivity.

THEME MANAGER: NRM Unit: Mike McGahuey

OBJECTIVE: To identify the range of NRM practices for each agro-ecological zone and each type of resource manager and to establish the sustainable economic and environmental impacts from adoption of various NRM practices.

BACKGROUND AND JUSTIFICATION: NRM Analytical Agenda aims to increase our understanding about both (a) the economic and environmental impacts from various agricultural practices and (b) the process of diffusing appropriate practices. This theme focuses on the element (a) by: (1) identifying, for each major agro-ecological zone, the biophysical elements that need to be addressed; (2) analyzing the array of NRM options and their individual and aggregate impact the natural resource base; and, (3) showing how these practices increase productivity and maintain the resources base in each agro-ecological zone.

SPECIFIC STUDIES:

1. Review of the Framework and links between levels from a systems perspective, to evaluate whether that approach might provide a more realistic review of relationships between the levels of causality identified under the NRM Framework.
2. Study on attitude and activity change from integrated conservation and development projects Africa-wide. Policy and education initiatives as a factor in change.
3. Analysis of USAIDs' effectiveness in strengthening PVO/NGOs doing natural resource management.

COLLABORATING MISSIONS:

1. FRM II (FSP), with USAID/Mali, USAID/Kenya, and EPAT.
2. CBD (BSP), USAID/Madagascar, USAID/Rwanda, U.S. educational institutions and field-based NGOs.
3. FRM II (FSP), with ARTS/FARA, ONI & FHA/PVC.

EXPECTED OUTPUTS:

1. Desk study report, report from field assessment, peer review conference reports.
2. Issues paper, project description report, case study design, analytical/research plan.
3. Issues paper, desk study report, report formulating methodology for obtaining field data, workshop report, and summary paper.

CURRENT STATUS: All activities are ongoing and will be reviewed at the March 1992 NRM Collaborators Workshop.

ANALYTICAL THEME SUMMARY

AFR/ARTS/FARA

NRM-3

ANALYTICAL THEME: Addressing Global Environmental Issues in Sub-Saharan Africa.

THEME MANAGER: NRM Unit: Tim Resch

OBJECTIVE: To prioritize environmental problems and develop strategic frameworks and programming guidance for the Africa Bureau and its Missions concerning global public good issues, such as preserving biological diversity and mitigating global climate change, related regional and local issues, and issues related to the health and amenity impacts from changes in air and water quality.

BACKGROUND AND JUSTIFICATION: Most of the NRM Unit's program supports the DFA's Sub-Objective 3.1, sustained increases in agricultural productivity. However, Congress and AID have other broader environmental and natural resource interests which can be defined as having a "global public good", i.e. a value in terms of a larger environmental or social purpose not specifically related to sustained agricultural productivity (in fact, in some instances such an activity may conflict with efforts to promote sustainable agriculture), or which affects health and amenities directly and only indirectly has an impact on agricultural productivity.

Activities within this category include global climate change, biodiversity, and the health effects of pesticides. In each of these examples there are aspects of the problem that are directly linked to agricultural productivity, and in those instances are included within the work undertaken within Themes I and II. However, this Theme has been developed to acknowledge that certain aspects of AID's mandated interests are of a more "global" nature.

SPECIFIC STUDIES:

1. (a) Technical support for the design of a Climate Change and African Development Project: Technical Annexes, and (b) Technical support for the design of a Climate Change and African Development Project: Advisory Group.
2. Approaches for analyzing the impact of biodiversity conservation activities in Africa.
3. Innovative Research Grants in Biodiversity, Impact Monitoring and Global Climate Change.

COLLABORATING MISSIONS:

1. (a) AID/W, BSP collaborators, USGS, Goddard Space Flight Center, USFS, NASA, EPA, USAID Cameroon, REDSO/WCA, Cameroon Government, AFR/CCWA, and (b) BSP collaborators, USAID Cameroon, PVO community.
2. BSP collaborators, African Advisory Panel members, NSF, other grantees.
3. GCC and BAA Advisory Panels, NSF, grantees.

EXPECTED OUTPUTS:

1. (a) Interim and final drafts of background analyses related to possible actions in support of global climate change, and (b) Minutes from Advisory Panel, technical report on climate change status.
2. Report on data collection and monitoring, and lessons learned, related to ongoing biodiversity portfolio.
3. Criteria for grants programs published. Grantee proposals circulated, and completed grants reviewed and results shared.

CURRENT STATUS: Work is ongoing.

ANALYTICAL THEME SUMMARY

AFR/ARTS/FARA

ENV-1

ANALYTICAL THEME: Environmental Monitoring to Better Understand Environmental Degradation and Development Impact

THEME MANAGER: ENV Unit: Dan Dworkin

OBJECTIVE: To facilitate the effective utilization of relevant geographic and environmental information systems to better understand environmental degradation and the impact of environmental programs in Africa.

BACKGROUND AND JUSTIFICATION: A number of USAID Missions in Africa are already involved, or are planning to become involved, in Geographic Information Systems (GIS) activities that cover their entire country, e.g., Senegal, Rwanda, Botswana, etc. Others are involved in specific GIS and EIS (Environmental Information Systems) activities within their country, e.g., Zimbabwe, Uganda, Botswana, Rwanda, Zaire, Gambia, Chad, and Kenya. Past experience has shown that substantial efforts in building GISs/EISs have not produced useful products.

The reasons for lack of success are usually conceptual and institutional. Conceptual, in that the products from GISs/EISs are not well defined in advance and do not meet the needs of the decision makers in the host country and in A.I.D.; institutional, in that the selection of the operator of the database is not well chosen. In addition, the effort and length of time required to build the database is often underestimated.

SPECIFIC STUDIES:

1. Information Systems Experts Group for GIS and EIS at the World Resources Institute through a buy-in to the R&D/ENR Environmental Planning and Management (EPM) Project.
2. Development of a method to provide inexpensive synoptic, sequential monitoring of environmental degradation through agreements with the EROS Data Center of USGS and the Goddard Space Center of NASA.
3. Provision of remote sensing data and analysis by NASA Goddard Space Center to the Central Africa Global Climate Change Action Plan being undertaken by the ARTS/FARA/NRM Unit through the Biodiversity Support Program.

COLLABORATING INSTITUTIONS AND MISSIONS:

1. World Resources Institute. USAID Missions expressing interest are: Uganda, Senegal, Rwanda, Burundi, Botswana, Zimbabwe, Zaire, Gambia, Chad and Kenya.
2. USGS EROS Data Center and NASA Goddard Space Center. This study does not involve field work with Missions.
3. NASA Goddard Space Center is assisting the Biodiversity Support Program that includes the World Wildlife Fund, The Nature Conservancy, and the World Resource Institute.

EXPECTED OUTPUTS:

1. Guidelines and field support for and networking among USAID Missions involved in GISs/EISs. An analytical paper called: "GIS/EIS Procedures" by June 1992.
2. The NASA/USGS product is still under negotiation, most likely it will be an analysis of remotely-sensed imagery, compared to existing ecological conditions on the ground.
3. Outputs from the Central Africa Global Climate Change Study are presented under Analytical Theme NRM-4.

CURRENT STATUS: All of these analyses and studies are on-going.

ANALYTICAL THEME SUMMARY AFR/ARTS/FARA ENV-2

ANALYTICAL THEME: Integrated Pest Management Approaches for Sustainable Agriculture

THEME MANAGER: ENV Unit: Walter Knausenberger

OBJECTIVE: To analyze pest management programs and preventive and integrated management measures against pests and to recommend priority measures for A.I.D. programs in Africa that will facilitate the longer-term and sustainable control of pests in an environmentally sound and more cost-effective manner.

BACKGROUND AND JUSTIFICATION: Pest and pesticide management is included in the Africa Bureau Natural Resources Strategy as a priority technical area in the environmental sector, supportive of agricultural productivity, sustainable development and food security. Increased concern for the safety and sustainability of agricultural production systems has given added importance to integrated pest management. To achieve an agriculture that is sustainable in both good and bad seasons, farmers must be able to manage pests without dependence upon continuous outside input. This concern extends to the numerous pesticides in use and being stored in African nations over the last several years. Many of these chemicals are no longer usable in an environmentally sound manner, and others have degraded to a point of being hazardous.

SPECIFIC STUDIES:

1. Crop Loss Assessment in Africa Due to Pests.
2. Environmental Impact of Locust Control in Africa (Supplementary Environmental Assessments in Locust/Grasshopper Problem Countries).
3. Lessons Learned from the 1987-89 Locust Control Program.
4. Pesticide Disposal, Lessons from Niger Dieldrin Disposal.
5. Prediction of Pest Outbreaks in Africa.

COLLABORATING INSTITUTIONS AND USAID MISSIONS:

1. Oregon State University, USAID Mali, Senegal and Chad.
2. National Crop Protection Units and the USAID Missions in: Burkina Faso, Cameroon, Cape Verde, Chad, Gambia, Mali, Mauritania, Niger, Senegal, and Sudan.
3. PANOS Institute, London.
4. Shell International, GTZ, USAID Niger.
5. U.S. Geological Survey- EROS Center.

EXPECTED OUTPUTS:

1. Computer Model (GHLSIM) and Final Report on Cost/Benefit Study of Grasshopper/ Locust Damage. March, 1992.
2. Review of Environmental Concerns in USAID Programs for Grasshopper and Locust Control. Louis Berger and Associates. December, 1992. Supplementary Environmental Assessments in Eight Sahelian Countries. July, 1991.
3. Information Dossier on the Locust Control Program, PANOS Institute, World-wide distribution. March, 1992. Pest Management in Africa, Clip-Art Manual. August, 1991
4. Niger Dieldrin Disposal Program, Final Report. February, 1992. Pesticide User's Guide, a Manual for Field Use. December, 1991.
5. Greenness Maps and PRIFAS Newsletters, issued periodically 1991-1992.

CURRENT STATUS: All of the above are on-going and are being reviewed for preparation of the PARTS Project.

ANALYTICAL THEME SUMMARY

AFR/ARTS/FARA

ENV-3

ANALYTICAL THEME: Improving Environmental Analysis for A.I.D. Programming

THEME MANAGER: ENV Unit: John Gaudet/Bill Thomas

OBJECTIVE: To improve Africa Bureau guidelines and procedures for assessing and monitoring the environment impacts of development programs.

BACKGROUND AND JUSTIFICATION: There is a need to assure effective and efficient compliance of Africa Bureau programming with the A.I.D. Environmental Procedures. For this there is a need to measure impacts relative to Reg 16, and to monitor, evaluate, and provide analysis of the Mission program planning. Compliance with Reg 16 for the Africa USAID Missions will involve: (1) establishing guidelines for tracking environmental reviews and recommendations of these reviews and (2) preparing guidelines for to assist Missions in tracking the environmental impacts of Non-Project Assistance. {Many of the negative impacts in NPA programs may be difficult to detect on a short-term basis, and therefore the guidelines should be keyed to the indicators and deal especially with long-term effects.}

Another area for consideration under PARTS is the progress and effectiveness of program planning processes, particularly the National Environmental Action Plan (NEAP) process of the World Bank.

SPECIFIC STUDIES:

1. Supplementary Environmental Assessments in eight Sahelian countries.
2. "Environmental Assessment in Africa" study by the International Resources Group.
3. World Resource Institute studies of World Bank Environmental Action Plans undertaken through a buy-in to the R&D/ENR Environmental Planning and Management (EPM) Project.

COLLABORATING INSTITUTIONS AND MISSIONS:

1. Environmental Assessments were done by eight USAID Missions with assistance from the Africa Emergency Locust/Grasshopper Assistance (AELGA) Project. Louis Berger International is preparing a synthesis report of these.
2. Interest in regard to environmental policy studies has been expressed by USAID Missions in: Rwanda, Ghana, Mali, and Uganda.
3. Interest in the NEAPs is evident in USAID Missions in: Madagascar, Uganda, Rwanda, Guinea, Kenya, and Cameroon. (NEAPs are in progress in 24 African countries).

EXPECTED OUTPUTS:

1. Supplementary Environmental Assessments completed in eight Sahelian countries.
2. Report, "Environmental Assessment in Africa" prepared by the International Resources Group. December, 1991.

CURRENT STATUS: Supplementary Environmental Assessments, completed in eight Sahelian countries (July, 1991). "Environmental Assessment in Africa", a report by International Resources Group, completed in October, 1991. "National Environmental Action Plans Current Information and Review", a Comprehensive Reporting Cable sent to all interested USAID Missions in July, 1991.

Attachment II

ARTS/FARA Telephone Listing

NEW STATE STAFF:

Ben Stoner, Chief	202-647-7202
Gary Cohen	202-647-9352
Michael Fuchs-Carsch	202-647-7194
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Ernie Gibson	202-647-5565
Carl Lawhead	202-647-5902
Curt Reintsma (arrival 8/92)	202-647-7197
Al Smith	202-647-5998
Dwight Walker	202-647-7622
Gloria McCaskill, Admin. Ass't.	202-647-7627
Kallen Jones, Secretary	202-647-5765
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Tom Herlehy	703-235-3788
Jeff Hill	703-235-3787
Walter Knausenberger	703-235-3826
Melanee Lowdermilk	703-235-3803
Mike McGahuey	703-235-3774
Millie Morton	703-235-3827
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Tony Pryor	703-235-3832
Tim Resch	703-235-3786
Bill Thomas	703-235-3837
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AMEX SUPPORT STAFF:

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Peter Hobby	703-235-3771
Eiisabeth Zebrowski	703-235-3695
Elizabeth Thomas, Admin. Ass't.	703-235-4081
Philomena Jackson, Secretary	703-235-3753
Patricia Momah, Secretary	703-235-3767

Attachment III

**ARTS/FARA Biodata
Summary Sheets**

NAME: Benjamin A. Stoner

TITLE OF PRESENT POSITION: Chief; Food, Agriculture and Resource Analysis Division
(ARTS/FARA)

ACTUAL FUNCTION TITLE: Supervisory Agriculture and Natural Resources Officer

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
University of Michigan	M.P.P.	Resource Economics & Public Policy
Yale University	B.A.	Political Science & Economics

TECHNICAL EXPERIENCE

1992-present	Chief, ARTS/FARA
1991-1992	Deputy Chief, ARTS/FARA
1989 - 1991	Chief, Natural Resources Branch, TR/ANR
1985 - 1989	Deputy Chief, Agriculture and Rural Development, USAID/Nepal
1982 - 1984	Regional Project Manager: Senegal River Basin, USAID/Senegal
1979 - 1981	Project Development Officer, USAID/Senegal
1978 - 1980	International Development Intern, Africa Bureau, A.I.D/Washington
1976 - 1978	Social Science Analyst, R & D Economic Studies Division, National Science Foundation
1971 - 1973	Peace Corps Volunteer: Agricultural Extension, Nepal

NAME: Curt Reintsma

TITLE OF PRESENT POSITION: Deputy Chief, ARTS/FARA

ACTUAL FUNCTION TITLE: Supervisory Agricultural Development Officer

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
University of Wisconsin	M.A.	Agricultural Economics
University of Texas	B.A.	Political Science

TECHNICAL EXPERIENCE

1989-1992	S/ADO, USAID/Lesotho
1987-1989	Project Development Officer, Africa Bureau
1984-1987	Agricultural Economist, Ag and Rural Development Office, Africa Bureau
1982-1984	Chief of Party, USAID Agricultural Sector Studies Project, Zaire
1978-1982	Project Director, Food Storage and Marketing Project, USAID/Rwanda
1981	Acting team leader, Project Design Team, Congo Smallholder Agricultural Development Project, Brazzaville, Congo
1977-1978	Research Assistant, Land Tenure Center, University of Wisconsin
1973-1974	Development Officer, Ministry of Agriculture, Government of Mauritius
1970-1973	Peace Corps Volunteer, Ministry of Co-ops, Mauritius

NAME: Carl Lawhead

TITLE OF PRESENT POSITION: PARTS and FEWS Project Officer

ACTUAL FUNCTION TITLE: Agricultural Development Officer

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
University of California, Davis	M.S.	International Agricultural Development
University of California, Davis	B.S.	International Agricultural Development

TECHNICAL EXPERIENCE

1992-Present	PARTS and FEWS Project Officer, ARTS/FARA
1990-1992	Project Officer, ME/DR/HR (Backstopping the West Bank/Gaza Program)
1986-1990	Agricultural Development Officer, USAID/Egypt
1985-1986	Project Development Officer, USAID/Bangladesh
1981-1985	Agricultural Development Officer, USAID/Bangladesh
1980-1981	International Development Intern, A.I.D./Washington
1978-1980	Research Associate, Plant Pathology Department, University of California, Davis

NAME: Dwight A. Smith

TITLE OF PRESENT POSITION: Food Security and Productivity Unit Leader

ACTUAL FUNCTION TITLE: Agricultural Economist

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
Yale University	Post-Grad Studies	Labor Markets, Economics of Agricultural Research
Ohio State University	M.S.	Agricultural Economics
Georgetown University	B.S.F.S.	Foreign Service, International Law & Organizations

TECHNICAL EXPERIENCE

1991-Present	Leader, Food Security and Productivity Unit, ARTS/FARA
1991	Chief, Policy Analysis Branch, TR/ANR
1989-1990	Agricultural Economist, TR/ANR/PA
1984-1989	Agricultural Economist, USAID/Kenya
1980-1984	Agricultural Economist, USAID/Burkina Faso
1979-1980	International Development Intern, Africa Bureau, A.I.D./Washington

NAME: George Gardner

TITLE OF PRESENT POSITION: Agricultural Policy Analyst

ACTUAL FUNCTION TITLE: Agricultural Economist

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
Cornell University	Ph.D.	Agricultural Economics, Development Economics
Auburn University	M.S.	Agricultural Economics, Rural Sociology
Auburn University	B.S.	Business Administration, Economics

TECHNICAL EXPERIENCE

1989-Present	Agricultural Policy Analyst, ARTS/FARA/FSP
1984-1989	Agricultural Economist, USDA/ERS/ATAD
1980-1984	Rural Development Officer, USAID/NE/TECH
1978-1980	Assistant Professor, New Mexico State University
1976-1978	Research Associate, Cornell University

NAME: Melanee Lowdermilk

TITLE OF PRESENT POSITION: Sahel Food Security Coordinator

ACTUAL FUNCTION TITLE: Economist

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
Tufts University The Fletcher School	Ph.D.	Economic Development
Tufts University The Fletcher School	M.A.	International Food and Agriculture
Brown University	B.A.	International Relations and Economics

TECHNICAL EXPERIENCE

1991-Present	Sahel Food Security Coordinator, ARTS/FARA/FSP
1989-1990	Consultant, Food Needs Assessment Project, USAID
1986-1988	Project Field Director, Food Price Policy and Consumption Research Project, Tufts University/USAID
1986	Research Assistant, The Special Office for African Affairs, The World Bank
1985	Summer Intern, West Africa Country Programs, The World Bank
1984	Intern, USAID/Senegal
1983	Special Assistant to Program Officer, USAID/Zaire

NAME: Jonathan Olsson

TITLE OF PRESENT POSITION: FEWS Technical Director

ACTUAL FUNCTION TITLE: Geographer

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
Boston University	Ph.D.	Geography (Trade)
Northwestern University	M.A.	Geography (Transportation)
Boston University	B.A.	Geography (Location Analysis)

TECHNICAL EXPERIENCE

1985-Present	FEWS Technical Director, AFR/ARTS
1984-1985	Geographer, DOS/INR/GE
1982-1984	Co-chair, Socioeconomic Task Force for the Gulf of Maine Boundary Arbitration, DOS/L/LCMB
1981	Geographer, DOS/INR/GE

NAME: Michael Fuchs-Carsch

TITLE OF PRESENT POSITION: Technology Development and Transfer Unit Leader

ACTUAL FUNCTION TITLE: Supervisory Agricultural Development Officer

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
University of Tennessee	Ph.D.	Agricultural Economics

TECHNICAL EXPERIENCE

1991-Present	Unit Leader, Technology Development and Transfer Unit, ARTS/FARA
1990-1991	Agricultural Economist, TR/ANR/PA
1988-1990	Agricultural Development Officer, USAID/Somalia
1984-1988	Agricultural Development Officer, USAID/Rwanda
1981-1984	Agricultural Development Officer, Bureau for Policy and Planning Coordination, A.I.D./Washington
1978-1981	Agricultural Development Officer, USAID/Tanzania
1977-1978	Agricultural Development Officer, USAID/Philippines
1974-1977	Agricultural Economist, USAID/Ghana
1966-1968	Peace Corps Volunteer, Kenya

NAME: Jeff Hill

TITLE OF PRESENT POSITION: Agricultural Research Advisor and Analyst

ACTUAL FUNCTION TITLE: Agricultural Economist

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
University of California, Davis	M.S.	Agronomy and Agricultural Economics
Weber State College	B.S.	Public Administration

TECHNICAL EXPERIENCE

1991-Present	Agricultural Research Advisor and Analyst, ARTS/FARA/TDT
1986-1990	Program Advisor, Cashew and Coconut Tree Crops Project, The World Bank, Tanzania
1986	Monitoring and Evaluation Consultant, The World Bank
1983-1986	Senior Evaluation Officer, Kano State Agricultural Development Project, The World Bank, Nigeria
1979-1982	Research Associate, Department of Agricultural Economics, University of California, Davis
1976-1978	Associate Peace Corps Director, Agriculture, Sierra Leone
1974-1976	Peace Corps Volunteer, Agriculture, Sierra Leone

NAME: Gary Cohen

TITLE OF PRESENT POSITION: Natural Resource Management Unit Leader

ACTUAL FUNCTIONAL TITLE: Natural Resource Officer

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
State University of Minnesota at Bemidji	M.A.	Environmental Science
University of New Hampshire	B.S.	Wildlife Management

TECHNICAL EXPERIENCE

1990 - Present	Natural Resources Officer, AFR/ARTS/FARA
1987 - 1990	Agriculture Development Officer, USAID/Cameroon
1984 - 1987	Agriculture Development Officer, USAID/Liberia
1981 - 1984	Environmental Advisor, USAID/Somalia
1980 - 1981	Ecologist, U.S. Department of Energy
1977 - 1980	Peace Corps Volunteer, National Parks, Ecuador

NAME: Dwight L. Walker

TITLE OF PRESENT POSITION: Natural Resources Officer

ACTUAL FUNCTION TITLE: Same

<u>EDUCATION INSTITUTION:</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
University of Arizona	M.S.	Plant Pathology
New Mexico State University	B.S.	Biology - Agriculture

TECHNICAL EXPERIENCE

1987 - Present	Natural Resources Officer, ARTS/FARA
1983 - 1987	Agricultural Development Officer , USAID/Kenya Project Manager - Kenya Renewable Energy (Agroforestry), On-Farm Grain Storage, Agricultural Systems Support, and Women in Development (Agricultural Extension)
1987 - 1979	Agricultural Development Officer , USAID/Panama, Project Manager - Panama Canal Watershed Management and Education for Development (Agricultural Extension/Training) Projects.
1972 - 1979	Economic Development Specialist, Governor's Office, State of New Mexico
1967 - 1972	Peace Corps Staff, Guatemala and Dominican Republic
1966 - 1967	Rural Youth Specialist, National 4-H Club Foundation
1964 - 1966	Peace Corps Volunteer, Guatemala

NAME: Michael McGahuey

TITLE OF PRESENT POSITION: Agroforestry/Natural Resource Advisor

ACTUAL FUNCTIONAL TITLE: Same

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
Oregon State University	M.S.	Agronomic Crop Science/Soils
Oregon State University	B.S.	Agronomic Crop Science/Soils

TECHNICAL EXPERIENCE

1987 - Present:	Agroforestry/Natural Resource Advisor, ARTS/FARA
1985 - 1987	Agroforestry Specialist, Chemonics International, Consulting Division
1980 - 1985	Oregon State University, Student-emphasis on crop physiology and nutrition, and plant-soil-water relationships
1985	Formulated UNSO forestry project, Somalia
1984	Evaluated USAID/Guinea Fouta Djallon Forestry Project
1982	Formulated CARE/Sudan Eastern Province Forestry Project
1975-1980	CARE/Chad <u>Acacia albida</u> Project
1968 - 1972	Peace Corps Volunteer, Forestry, Niger

NAME: C. Anthony Pryor

TITLE OF PRESENT POSITION: Natural Resource and Energy Policy Advisor

ACTUAL FUNCTIONAL TITLE: Same

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
John Hopkins University, SAIS	M.S.	International economics/environmental economics
Franklin and Marshall	B.A.	Government/law

TECHNICAL EXPERIENCE

1990-Present	Natural Resource and Energy Policy Advisor, ARTS/FARA
1988-1990	Project Development Officer, Environment Officer and Forestry Advisor, USAID/Sudan
1983-1987	Regional Energy and Natural Resource Advisor, REDSO/ESA
1981-1983	Consultant, Rockefeller Foundation, IDRC, Carnegie Corporation
1980-1982	Chair, NGO Committee for UN Conference on New and Renewable Sources of Energy
1977-1981	Research Fellow, Environmental Sciences and International Relations Divisions, Rockefeller Foundation
1975-1977	Research Assistant, Resources for the Future
1974-1975	Research Assistant, Woodrow Wilson International Center for Scholars

NAME: Tim Resch

TITLE OF PRESENT POSITION: Tropical Forestry and Biological Diversity Advisor

ACTUAL FUNCTION TITLE: Natural Resources Analyst

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
Colorado State University	M.S.	Silviculture (Forestation)
University of Minnesota	B.S.	Forest Resources Management

TECHNICAL EXPERIENCE:

1990-Present	Tropical Forestry and Biological Diversity Advisor, ARTS/FARA
1986-1990	Food Aid and Voluntary Assistance Coordinator, USDA/FS Forestry Support Program
1981-1986	Coordinator for Africa, USDA/FS Forestry Support Program
1976-1981	Forest Management Specialist, State of South Dakota Division of Forestry
1970-1974	Peace Corps Volunteer, Research Forestry, Morocco

NAME: Peter Alpert

TITLE OF PRESENT POSITION: AAAS Fellow

ACTUAL FUNCTION TITLE: Biological Conservation Analyst

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
Harvard University	Ph.D.	Biology
Harvard University	M.A.	Biology
Oxford University	B.A.	Botany

TECHNICAL EXPERIENCE:

1990-Present	AAAS Fellow, Natural Resources Unit, ARTS/FARA
1991-Present	Associate Professor, University of Massachusetts
1984-1991	Assistant Professor, University of Massachusetts
1988-1989	Professeur Invite, Centre National de la Recherche Scientifique Montpellier, France
1984	Ecological Consultant, The Nature Conservancy
1983	AAAS Mass Media Fellow, Smithsonian World
1982-1984	Postdoctoral Fellow, Stanford University

Name John J. Gaudet

Title of Present Position: Environment Unit Leader

ACTUAL FUNCTIONAL TITLE: Africa Bureau Environmental Coordinator

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
University of California, Berkeley	Ph.D.	Plant Physiology and Ecology
University of Rhode Island	M.S.	Plant Biology and Aquatic Ecology
University of Rhode Island	B.S.	Botany and Zoology

TECHNICAL EXPERIENCE

1987 - Present	Environmental Coordinator, A.I.D. Africa Bureau, ARTS/FARA
1979 - 1987	A.I.D. Regional Environmental Officer; REDSO/ESA, Nairobi, Kenya Consultant for various engineering corporations.
1973-1979	Senior Lecturer in Tropical Plant Ecology, University of Nairobi, Nairobi, Kenya
1971-1973	Senior Lecturer in Tropical Aquatic Ecology, Makerere University, Kampala, Uganda
1963-1971	Assistant Professor in Ecology, State University of New York at Stony Brook
1965	Fulbright Fellowship to the University of Maylaya

NAME: Walter I. Knausenberger

TITLE OF PRESENT POSITION: Environmental Analyst and Advisor

ACTUAL FUNCTION TITLE: Pest and Pesticide Management Advisor

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
Virginia Polytechnic Institute	Ph.D.	Entomology, Ecology and Systematics
Virginia Polytechnic Institute	M.S.	Entomology, Aquatic Biology
Pennsylvania State University	B.S.	Biophysics

TECHNICAL EXPERIENCE

1991-Present	Environmental Analyst & Advisors, ARTS/FARA
1989-1991	Pest Management Advisor to AELGA, AFR/TR/ANR
1988-1989	Secretary, Caribbean Food Crops Society
1985-1989	Program Leader, Natural Resources and Pest Management Specialist, V.I. Cooperative Extension Service, University of the Virgin Islands (Eastern Caribbean)
1980-1985	Pest Management Specialist, V.I. Cooperative Extension Service and V.I. Agricultural Experiment Station, University of the Virgin Islands
1979-1980	Extension Entomologist, University of the Virgin Islands

NAME: Dan Dworkin

TITLE OF PRESENT POSITION: Environmental Information Systems Advisor

ACTUAL FUNCTION TITLE: Same

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
Clark University	Ph.D.	Geography
Clark University	M.S.	Geography
Clark University	B.S.	Social Sciences

TECHNICAL EXPERIENCE

1991-Present	Environmental Systems Advisor, ARTS/FARA
1987-1991	Geographer and Social Science Advisor, S&T/RD/RRD Seconded from the Office of Arid Lands Studies, University of Arizona
1982-1985	International Director, GIS/Remote Sensing, IRIS International
1978-1982	Geographer and Environmental Advisor, PPC/E/S. Seconded as Associate Professor from Clark University
1977-1978	Assistant Professor of Geography, Southern Illinois University
1974-1977	Research Associate, Holcomb Research Institute

NAME: William B. Thomas

TITLE OF PRESENT POSITION: Environmental Analyst

ACTUAL FUNCTION TITLE: Entomologist

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
University of Arizona	M.S.	Entomology
University of Arizona	B.S.	Agriculture
New Mexico State University	-----	Agriculture

TECHNICAL EXPERIENCE

1991-Present	Environmental/Entomological Analyst, ARTS/FARA
1990-1991	Entomology Advisor, AFR/TR/ANR
1987-1990	Project Officer, USAID/Mauritania
1983-1985	Research Assistant, University of Arizona
1982	Laboratory Technician, University of Massachusetts
1978-1980	Laboratory Assistant, USDA, Tuscon, AZ
1976	Field Assistant, New Mexico State University

NAME: Ernest F. Gibson

TITLE OF PRESENT POSITION: Agricultural Marketing and Agribusiness Unit Leader

ACTUAL FUNCTION TITLE: S/Agricultural Development Officer

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
Howard University	M.A.	Agricultural Economics
Florida A&M University	B.A.	Economics

TECHNICAL EXPERIENCE

1992-Present	Leader, Agricultural Marketing and Agribusiness Unit, ARTS/FARA
1990-1992	S/ADO, USAID/Cameroon
1985-1990	S/ADO, USAID/Niger
1980-1985	S/ADO, USAID/Zambia
1976-1980	Project Officer, USAID/Tunisia
1975-1976	International Development Intern, Africa Bureau, A.I.D. /Washington

NAME: Thomas J. Herlehy

TITLE OF PRESENT POSITION: Agricultural Marketing Specialist

ACTUAL FUNCTION TITLE: Agricultural Marketing and Agribusiness Analyst

<u>EDUCATION INSTITUTION</u>	<u>DEGREE</u>	<u>MAJOR AREAS OF STUDIES</u>
Boston University	Ph.D.	African History and Economics
Kent State University	M.A.	African History and Economics
Boston College	B.A.	History

TECHNICAL EXPERIENCE

1992-Present	Agricultural Marketing Specialist, ARTS/FARA
1991-1992	Acting Unit Leader, Agricultural Marketing and Agribusiness Unit, ARTS/FARA
1989-1991	Agricultural Marketing Specialist, AFR/TR/ANR
1985-1989	Program Analyst, USAID/Gambia
1983-1985	Financial Services Advisor, Brookline Savings Bank, Brookline, MA
1982	Economic Affairs Analyst (Dept. of State Intern), US Embassy, Nairobi, Kenya
1979-1981	Fulbright-Hays Scholar (Ph.D. research) Research Associate, University of Nairobi Research Associate, University of London
1977-1979	Teaching Fellow and Summer School Instructor, Boston University
1976-1978	Assistant to the Editor, <u>International Journal of African Historical Studies</u>