



INSTITUT SENEGALAIS DE RECHERCHES AGRICOLES
NATURAL RESOURCES-BASED AGRICULTURAL RESEARCH PROJECT
(NRBAR)

FIRST BIENNIAL REPORT

FOR THE PERIOD 21 JULY, 1992 TO 30 JUNE, 1993

in collaboration with
The United States Agency for International Development (USAID)
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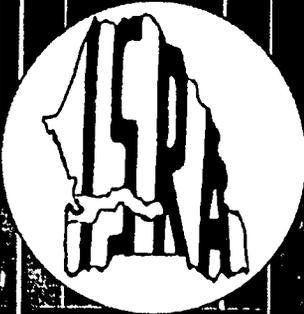
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United States Agency for International Development



Institut Senegalais de Recherche Agricole



Consortium for International Development



Howard University

COOPERATIVE PROJECT OF:



Tennessee State University



Oregon State University



Development Alternatives, Inc.

- Utah State University
- Texas Tech University
- Katholieke Universiteit Leuven, Belgium

- Royal Tropical Institute, Netherlands
- Institut Francais de Recherche Scientifique Pour le Developpement en Cooperation, France
- The Natural Resources Institute, England



SUMMARY

This report details progress from the inception of the project to 30 June, 1993, according to the seven project resource components and the four major project programs.

PROJECT RESOURCE COMPONENTS

- I. **RESEARCH PROGRAM SUPPORT:** policies and protocols for the collaborative research program have been developed, and have been put into operation. ISRA has awarded Collaborative Research Grants to three teams consisting of both ISRA researchers and non-governmental organisations to undertake natural resources technology research. Policies and protocols for the ISRA Grants for Research in Senegal have been developed, and have been put into operation. ISRA has awarded grants to four of its research teams to develop specific natural resources technologies. ISRA is presently drafting proposals for appropriate site studies and sabbaticals, some of which will be implemented before the end of 1993.
- II. **SUPPORT FOR ISRA'S NATURAL RESOURCES PROGRAM:** these funds are expected to be released directly to ISRA by USAID in 1995 or 1996 following ISRA's financial certification. The project's input into the process of certification has just begun, following the arrival of the NRBAR financial advisor in June, 1993.
- III. **LINKAGES TO INTERNATIONAL RESEARCH INSTITUTIONS:** these funds are expected to be released directly to ISRA by USAID in 1995 or 1996 following ISRA's financial certification. ISRA is presently drafting proposals for appropriate visits and for developing institutional linkage structures, some of which will be implemented before the end of 1993, and funded through the NRBAR training component.
- IV. **PERSONNEL:** all long-term ISRA and CID personnel have been recruited and assigned. CID and ISRA personnel have established rapport and have formed productive collaborative teams in order to implement project activities. Communications and rapport between the CID/ISRA team and USAID have also been well established. Three short-term consultants (TDYs) have been employed to date; these have played crucial roles in developing the procedures manual, the long-term training program, and the monitoring and evaluation plan.
- V. **TRAINING:** ISRA has developed a life-of-project training plan for NRBAR long-term participant trainees, which details criteria for candidate selection, training policies, description of the selection process, an implementation plan with budget, and detailed dossiers for each candidate for M.S. and Ph.D. training. USAID has approved the plan, and the 5 Ph.D. and 9 M.S. candidates are presently being prepared for, and are being placed at, U.S. universities. In addition, there has been four Short-Term Training events in Senegal: (1)the January, 1993, launching workshop which successfully brought together all potential collaborators for two days to discuss the first annual workplan, (2)the May, 1993, training meetings between candidates for long-term training and NRBAR personel which successfully established the basis for implementing the training plan, (3)the June, 1993, grants committee workshop which

successfully finalised the grants protocols and selected grantees for 1993/94, and (4) the 30th June, 1993, public exposition of ISRA's research results, which included a successful display of ISRA's work on natural resources technologies. ISRA is presently drafting proposals for other short-term training activities, some of which will be implemented before the end of 1993. ISRA is presently negotiating with three Senegalese educational institutions for implementation of the women's B.S. program; it is expected that a specific training program will be put in place following the conclusion of the present ISRA study of the needs of female technical staff.

VI. ISRA DIRECT SUPPORT: ISRA continues to provide the necessary physical support, and the necessary staff time and resources, to successfully implement the project.

VII. USAID DIRECT SUPPORT: virtually all furniture and equipment has been supplied, the technology inventory study and the first stage of the financial management study have been successfully implemented, and all USAID project staff are in place.

PROJECT PROGRAMS

RESEARCH PLANNING. Programs for the measurement of research impact, for a study of strategic research priorities, for the development and institutionalisation of socio-economic analyses, for human resources planning, and for monitoring and evaluation, have been agreed upon and are presently being successfully implemented.

NATURAL RESOURCES MANAGEMENT PROGRAMS. The policies and protocols for Grants to ISRA researchers were successfully established and are being implemented, programs for drafting a natural resources management strategic plan and for developing a geographical information system were agreed upon and are being implemented, and a program for ISRA's technical review of the natural resources technology inventory is in place.

OUTREACH. The policies and protocols for the Collaborative Research Grants program were successfully established and are being implemented through grants which have been given by ISRA to three non-governmental organisations and collaborating ISRA research groups. Programs for public awareness and gender issues have been agreed upon and are being implemented.

FINANCIAL MANAGEMENT. This program has been successfully initiated with productive planning meetings between the Financial Advisor and the financial units of ISRA and with USAID. and with Ernst and Young.

PROJECT SUPPORT. All facets of the project support program are being successfully implemented, including meetings' schedules and reporting exercises, with highest priority being placed on those activities which directly complement institutionalisation of the four programmatic thrusts. ISRA, CID and USAID staff closely collaborated in the production of the 1993 Workplan and the Procedures Manual (approved by USAID), and the Monitoring and Evaluation Plan is presently being reviewed. ISRA's long-term training plan was also approved by USAID. Total project expenditures to 30 June, 1993, of \$971,379, equivalent to 6% of the \$15,617,714 contract budget, are at approximately the expected level.

No substantial difficulties were encountered during this initial period of the project. Some delays in implementation were encountered due to travel restrictions and unavailability of some team members during the 1993 national elections period, the continuing travel restrictions in the Casamance, the eight-months delay in receiving NRBAR computers, the additional time and effort needed to institutionalise NRBAR administrative structures and programs within ISRA from the outset, and the time needed for ISRA NRBAR team members to develop the administrative processes necessary to take full advantage of opportunities provided by the project.

Major scheduled activities during July to December, 1993, include: logistical and programmatic implementation of the seven 1993 NRBAR grants projects, development of the 1994 NRBAR grants program, a feasibility study of Geographical Information Systems, development of an outline natural resources management research strategy, implementation of the NRBAR long-term participant trainee and B.S. level training for women programs, a short-term training needs assessment and an outline human resource development plan, research impact and priorities studies, a study of ISRA's micro-economics needs, an ISRA public awareness study, a gender study, assistance with Stage 2 of the ISRA Financial Management Study, and assistance for developing the 1993 ISRA accounts.

In conclusion, excellent rapport and collaborative relationships have been forged between ISRA, CID and USAID staff in the process of implementing the project during its first 9 months. Project-specific needs such as the monitoring and evaluation plan and the procedures manual have been addressed within the context of developing and sustaining the institutional capacity of ISRA to undertake these tasks. All major tasks of the 1993 summary project schedule are being successfully implemented; minor delays in some activities such as the timing of placement of the Ph.D. candidates, will be resolved in the coming months, with the anticipated completion by the end of the year of all major tasks scheduled for 1993.

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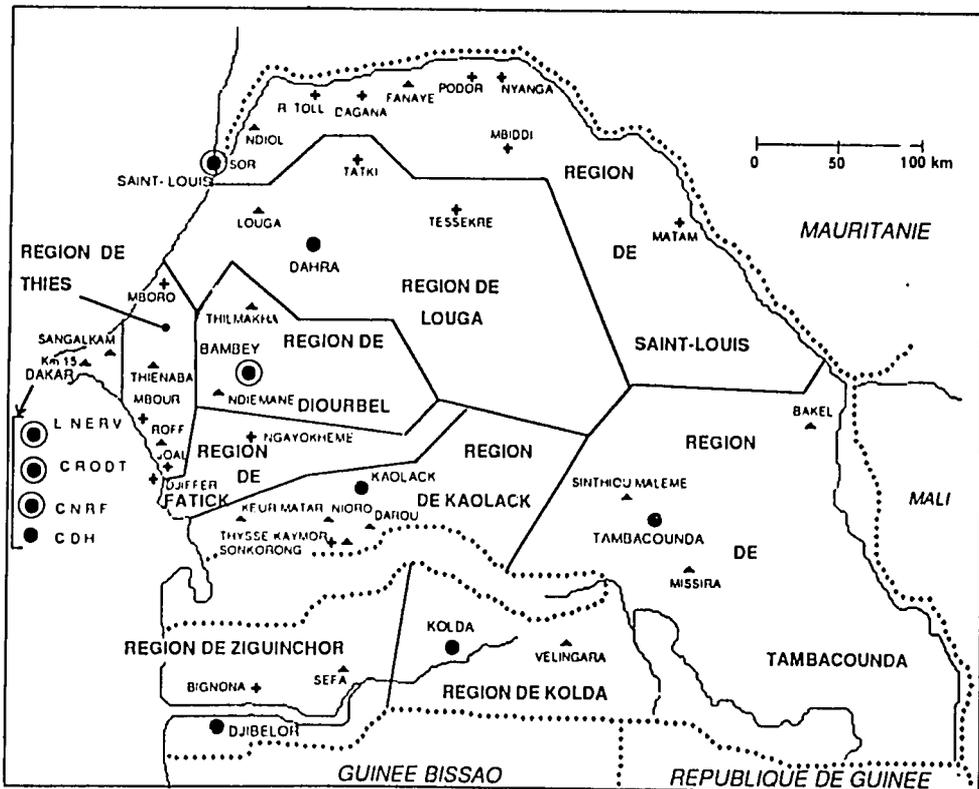
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LIST OF ACRONYMS

ACP	Agence Comptable Particulière
AFID	Africaine D'Ingenierie pour le Développement
BAME	Bureau d'Analyses Macro-économiques
CG	Contrôle de Gestion
CGO	Comité de Gestion des Octrois
CID	Consortium for International Development
COP	Chief of Party
CRSP	Collaborative Research Support Program
DAI	Development Alternatives Incorporated
DRCSP	Direction des Recherches sur les Cultures et Systèmes Pluviaux
DRPF	Direction des Recherches sur les Productions Forestières
DRSPA	Direction des Recherches sur la Santé et les Productions Animales
DS	ISRA Scientific Director
FA	Financial Advisor
GIS	Geographical Information System
GRN(SP)	Gestion des Ressources Naturelles (et Systèmes de Production)
GWC	Grants Working Committee
IARC	International Agricultural Research Centre
INTSORMIL	International Sorghum and Millet Program
ISNAR	International Service for National Agricultural Research
ISRA	Senegal Agricultural Research Institute
KIT	Royal Tropical Institute, The Netherlands
M/E	Monitoring and Evaluation
MIS	Management Information Systems
NARS	National Agricultural Research System
NGO	Non-governmental Organisation
NRBAR	Natural Resources-Based Agricultural Research Project
NRI	Natural Resources Institute, The United Kingdom
NRM	Natural Resources Management
NRP	Natural Resources Planner
OA	Outreach Advisor
ORSTOM	Office de la Recherche Scientifique et Technique Outre-Mer
OSU	Oregon State University
PIR	Program Implementation Review
PNVA	National Extension Service Project
PVO	Private Voluntary Organisation
RP	Research Planner
SARH	Service de l'Administration et des Ressources Humaines
SG	Sécretariat Général
SOW	Scope of Work
TA	Technical Assistant
TDY	Short-term Consultant
UNIVAL	Unité d'Information et de Valorisation
UPF	Unité de Programmation et Formation
USAID	United States Agency for International Development

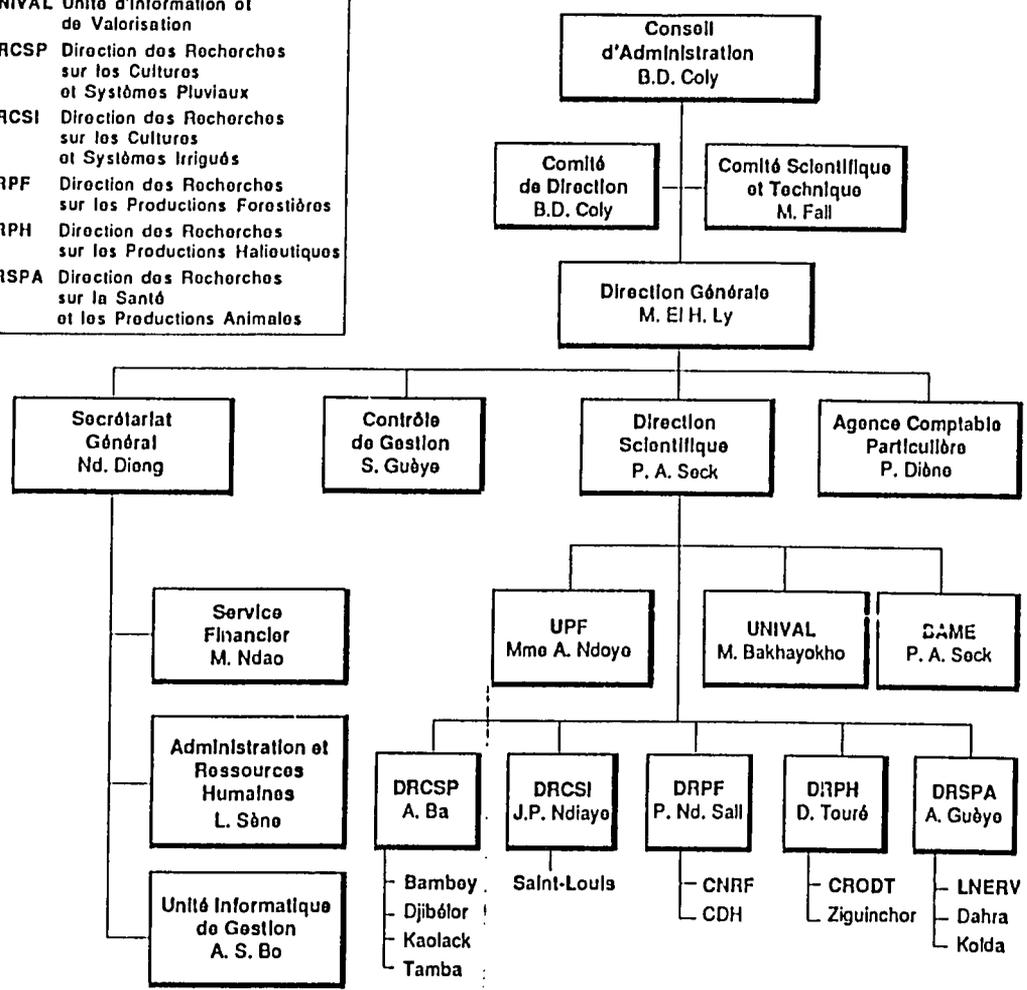
IMPLANTATIONS GÉOGRAPHIQUES DE L'I.S.R.A

<p>● 5 centres principaux, bases des Directions</p> <p>Dakar - LNERV pour la DRSPA</p> <p>Dakar - CRODT pour la DRPH</p> <p>Dakar - CNRF pour la DRPF</p> <p>Bambey - CNRA pour la DRPV</p> <p>Saint-Louis pour la DRSAEA</p>	<p>● 6 centres secondaires</p> <p>Kolda</p> <p>Dahra</p> <p>CDH</p> <p>Djibélor</p> <p>Tamba</p> <p>Kaolack</p> <p>▲ 18 stations et PAPEM</p> <p>✦ 15 points d'essai</p>
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ORGANIGRAMME

- UPF** Unité de Programmation et de Formation
- BAME** Bureau d'Analyses Macro-économiques
- UNIVAL** Unité d'Information et de Valorisation
- DRCSP** Direction des Recherches sur les Cultures et Systèmes Pluviaux
- DRCSI** Direction des Recherches sur les Cultures et Systèmes Irrigués
- DRPF** Direction des Recherches sur les Productions Forestières
- DRPH** Direction des Recherches sur les Productions Halieutiques
- DRSPA** Direction des Recherches sur la Santé et les Productions Animales



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1. INTRODUCTION

1.1 BACKGROUND AND OBJECTIVES

The Institut Sénégalais de Recherches Agricoles (ISRA) and the United States Agency for International Development (USAID) have designed the Natural Resources-Based Agricultural Research Project (NRBAR), which is being implemented during the period 1991 to 1998. A five-years contract to assist ISRA with implementing the project was awarded to the Consortium for International Development (CID) by USAID on 21 July, 1992.

The principal problems addressed by the project are Senegal's need for low-cost natural resources-based agricultural technologies in order to increase the productivity of agricultural systems, and the need for ISRA to have a strong institutional capacity to undertake natural resources-based research. The project is designed to focus particularly on improving resource management practices which enhance the productivity and sustainability of cereals-based cropping systems in areas of Senegal having greater than 400mm annual rainfall.

There are four overriding project objectives, expressed in terms of ISRA's development during the project period:

- (1) an improved natural resources-based research program in place,
- (2) natural resources-based technologies validated and available for adoption,
- (3) a strong farmer-participatory research system in place for designing, testing and validating research, and
- (4) improvements in research and financial management.

1.2 ANTICIPATED OUTPUTS DURING THE LIFE OF THE PROJECT

1. Effective, adaptive, research program focusing upon cropping systems and resource management in areas of:

- 1a. soil and water management,
- 1b. forestry and agroforestry,
- 1c. improved cultural practices for millet, sorghum, rice and corn, and
- 1d. applied economics for production, marketing and policy issues relating to cereals cropping systems.

(It is expected that at least 15 technology systems will be validated for on-farm use during the life of the project.)

2. Improved research planning, and improved research, financial and manpower management, such that:

- 2a. research programs have clearly-defined objectives achievable in the medium term,
- 2b. systems are in place for periodically evaluating and revising research priorities and programs,
- 2c. financial management systems are in place providing satisfactory accountability and control, and producing useful information to senior management,
- 2d. a merit-based personnel evaluation and promotion system is in place, and
- 2e. the size and composition of ISRA staff are aligned with research priorities and available resources.

3. Improved research-extension linkages, including feedback from farmers to ISRA on research results and from ISRA to farmers on appropriate and sustainable technologies, such that:

- 3a. ISRA collaborates with at least 15 private voluntary organizations (PVOs), farmer organizations and input suppliers to evaluate technology (including the use of signed protocols), and
- 3b. ISRA has developed methods for enhancing the roles of farmers' organizations, PVOs and private input suppliers to transfer improved technology to farmers.

4. Strengthened linkages with key domestic and international research institutions on natural resource management, cropping systems and adapted technologies, such that:

- 4a. protocols with network collaborators clearly support ISRA's research priorities, and define roles, responsibilities and resources.

5. Up-graded technical and administrative staff skills.

1.3 PROJECT RESOURCE COMPONENTS

In order to achieve the above objectives, the project has seven major resource components, which can be summarised as follows:

I. **RESEARCH PROGRAM SUPPORT:** a grants program to support effective ISRA/farmer collaboration and interdisciplinary research proposals from ISRA scientists, consisting of a Collaborative Research Grants program and a Grants to ISRA Researchers program. The Grants to ISRA Researchers program has three sub-components: Grants for Research in Senegal, Site Studies and Sabbaticals.

II. **SUPPORT FOR ISRA'S NATURAL RESOURCES PROGRAM:** a grants program to support ISRA's core funding,

III. **LINKAGES TO REGIONAL AND INTERNATIONAL RESEARCH INSTITUTIONS:** a grants program to develop and strengthen ISRA's links with international institutions,

IV. **PERSONNEL:** the NRBAR Project Director is the Director General of ISRA, with the NRBAR Deputy Director designated as the ISRA Scientific Director. Project personnel consist of ISRA permanent staff, four long-term external Technical Assistance staff seconded to ISRA, CID and USAID support staff, and numerous short-term external staff,

V. **PARTICIPANT TRAINING:** a grants program for long-term and short-term training of ISRA staff,

VI. **DIRECT SUPPORT BY ISRA:** for example, salaries of staff, the provision of office space, and access to appropriate ISRA facilities and equipment, and

VII. **ADDITIONAL MATERIAL SUPPORT BY USAID:** for example, the assignment of personnel, funding of technology inventory and financial studies, purchase of equipment and vehicles. CID also provides U.S. support through the CID/USAID contract.

1.4 PROJECT PROGRAMS

In order to use these seven categories of resources to achieve project objectives, the project is organized into four programs: research planning and management, natural resources programs, outreach, and financial management. Activities planned under each of these programs are detailed in the 1993 Annual Workplan for NRBAR. Activities can be summarised as follows:

RESEARCH PLANNING

The aim of this facet of the project is to strengthen ISRA's planning and management systems by:

- (a)redefining the five-year plan,
- (b)establishing a program which matches priorities with human, physical and financial resource realities,
- (c)planning and implementing institutional reorganisation,
- (d)improving the research planning process with regard to the way decisions are made, budgeted for, and implemented,
- (e)improving manpower planning,
- (f)planning and coordination of ISRA-wide research and linkage activities at Departmental, station, on-farm and international levels,
- (g)reviewing priorities,
- (h)reviewing research methodology,
- (i)dissemination of results,
- (j)organising periodic peer and program reviews, and
- (k)undertaking other tasks consistent with project objectives.

NATURAL RESOURCES MANAGEMENT PROGRAMS

The aim of this facet of the project is to strengthen ISRA's natural resources-based agricultural research activities by:

- (a)planning, conducting and evaluating natural resources-based agricultural research,
- (b)developing a coherent strategy and program for natural resources-based agricultural research which fits into ISRA's long-term development strategy and plan,
- (c)developing inter-disciplinary, farmer-oriented and farmer-participatory approaches to research planning, execution and evaluation,
- (d)reviewing existing natural resources technologies available in Senegal and elsewhere, and
- (e)establishing a program to address priority natural resources management needs.

OUTREACH

The aim of this facet of the project is to strengthen ISRA's links with its clients by:

(a) developing a system of protocols and grants with NGOs, farmers organisations, and extension agencies, such that farmers participate in research needs assessment, research priority setting, execution and validation,

(b) organising its outreach program,

(c) establishing adequate outreach procedures,

(d) establishing monitoring systems, and

(e) ensuring effective field testing and adoption of technologies.

FINANCIAL MANAGEMENT

The aim of this facet of the project is to strengthen ISRA's financial management system by:

(a) developing adequate financial systems at ISRA,

(b) increasing the effectiveness of the computerised accounting system,

(c) strengthening indirect cost accounting processes,

(d) generating timely financial analyses in forms appropriate to decision-makers at all levels, and

(e) developing a system for tracking all donor and Government of Senegal contributions.

PROJECT SUPPORT ACTIVITIES

The activities summarised above are supported by management, administration, and monitoring and evaluation activities, as well as by the provision of financial services. Leadership and overall project support is provided by the Project Director, the Deputy Project Director and the Grants Administrator, as part of their ISRA duties. In addition, CID NRBAR staff participate in project support activities, with effort being concentrated at the Chief-of-Party and Project Administrator levels.

1.5 OVERVIEW

This first Biannual Report of the NRBAR project covers progress achieved up to 30 June, 1993. Biannual Reports, which summarise progress recorded in the NRBAR Monthly reports and other project reports, are scheduled to be produced twice each year. The second Biannual Report is scheduled for February 1994, covering the period July to December, 1993. The format of this report follows as closely as possible the format of the 1993 workplan, in order to ensure adequate cross-referencing.

Sections 2 to 5 of this report detail progress to date under the four major thrusts of the project: research planning and management, natural resources management programs, outreach, and financial management; each of these Sections consists of a separate report from the responsible ISRA/NRBAR team. Section 6 details project support activities, including orientation, administration, management, monitoring and evaluation, and financial services. Section 7 summarises progress under each resource component of the project, while Section 8 provides a summary of the budget and levels of expenditures to date.

The technical assistants have formed teams and work collaboratively with counterpart scientists and administrators in the relevant sections of ISRA. The emphasis is on strengthening ISRA as an institution, in those areas targeted by the project. Multidisciplinary and farmer-participatory approaches to research are being emphasised.

2. RESEARCH PLANNING

2.1 OBJECTIVES AND PLANNED WORK ACTIVITIES

The aim of this facet of the project is to strengthen ISRA's planning and management systems. Scheduled research planning activities, summarised as (a) to (k) below and described in detail in pages 7 to 14 of the 1993 Workplan, are particularly oriented to achieving Project Objective (4) and Anticipated Project Outputs -2a. to -2e.

2.2 WORK UNDERTAKEN DURING THE PERIOD

To date, the research planning team has emphasised programs for the measurement of research impact, for a study of strategic research priorities, for the development and institutionalisation of socio-economic analyses, for human resources planning, and for monitoring and evaluation, and these programs are presently being successfully implemented. A significant amount of time was also spent in developing rapport within the team.

The following major activities have been undertaken by the research planning team to date:

(a) redefining the five-year plan,

-a visit to ISNAR by senior ISRA administrators and scientists has been agreed upon with the Scientific Director, partly to develop a workplan and methodology for compiling the five-year plan.

(b) establishing a program which matches priorities with human, physical and financial resource realities,

-an initial proposal for defining ISRA's strategic research priorities has been drafted and is being reviewed by the DS, BAME, and UPF. A TDY proposal has been drafted and is being reviewed. An ISNAR visit has been agreed by the DS on this topic, in conjunction with activity (a).

(c) planning and implementing institutional reorganisation,

-the need for a management-oriented database for ISRA's human resources has been agreed upon with the DS, and a first draft database has been compiled with the Unité d'Administration et Ressources Humaines. A TDY assisted ISRA with the compilation of the first NRBAR Procedures Manual, and began the process of revising the ISRA institution-wide procedures manual: further TDY inputs on this have been agreed upon in principle.

(d)improving the research planning process with regard to the way decisions are made, budgeted for, and implemented,

-initial discussions on describing the existing processes and defining constraints have been held at BAME. A monitoring and evaluation program for ISRA has been initiated with the CG and other ISRA units; a TDY assisted with preparation of a monitoring and evaluation plan for ISRA/NRBAR, which was designed to provide a blueprint for monitoring and evaluation processes throughout ISRA. It was agreed that the TDY should return each year, in order to assist CG and others with institutionalisation of these processes. Proposals for an research impact study, including the services of a TDY, were developed with BAME.

(e)improving manpower planning,

-a first draft database for ISRA professional staff has been compiled with the Unité d'Administration et Ressources Humaines. A TDY assisted ISRA with compiling a long-term training plan for participant trainees under NRBAR, as a blueprint for a similar institution-wide plan. An outline human resources plan is presently being drafted with the Unité d'Administration et Ressources Humaines. A similar short-term training study has been agreed upon for October.

(f)planning and coordination of ISRA-wide research and linkage activities at Departmental, station, on-farm and international levels,

-a proposal for a TDY to review linkages needs is presently being drafted with the DS. A specific visit to the national agricultural research service in Morocco is being arranged.

(g)reviewing priorities,

-participated in various ISRA and unit level planning meetings, designed to provide a secure planning base for the 1994 program.

(h)reviewing research methodology,

-assisted with reviews of the technology inventory survey proposals, with the technology inventory reports, and with the Ernst and Young financial study reports. A proposal for the review of economics methodology has been drafted with BAME.

(i)dissemination of results,

-proposals for an research impact study, including the services of a TDY, were developed with BAME and DS.

(j)organising periodic peer and program reviews.

-participated in planning functions on ISRA grants committees for NRBAR resource components. A program of planning meetings prior to compilation of the 1994 ISRA workplan is being developed for September with the DS.

(k)undertaking other tasks consistent with meeting project objectives in an efficient manner,

-DS, UPF and BAME participated in the monitoring and evaluation exercise indicated under (d) above, from the viewpoint of improved project management. A program for micro-economics training and development of BAME has been agreed, and a TDY has been agreed with BAME to initiate this program.

2.3 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The above activities and thrusts of the research planning program are in accordance with the NRBAR 1993 Workplan, and have involved in many cases the cooperation of the NRBAR natural resources, outreach, and financial and administrative teams. The main difficulty of implementing the program was limited staff time due to the need to initiate the planning and administrative mechanisms of the NRBAR grants programs, and to establish appropriate project reporting systems.

The program for the remainder of 1993 will concentrate on the planning and implementation of the research impact, research priorities and the BAME microeconomics studies, on developing an overall basis for the next five-year plan, and on the short-term training plan.

3. NATURAL RESOURCES MANAGEMENT PROGRAMS

3.1 OBJECTIVES AND PLANNED WORKPLAN ACTIVITIES

Objectives and Approach

The objectives of the Natural Resources Management Program is to strengthen ISRA's capacity to generate agricultural technologies that sustainably manage the natural resource base for its clients by:

- (a) planning, conducting and evaluating natural resources-based agricultural research;
- (b) developing a coherent strategy and program for natural resources-based agricultural research which fits into ISRA's long-term development strategy and plan;
- (c) developing inter-disciplinary farmer-oriented and farmer-participatory approaches to research planning, execution and evaluation.
- (d) reviewing existing natural resources technologies available in Senegal and elsewhere, and
- (e) establishing a program to address priority natural resources management needs.

The Natural Resource Planner (NRP) is primarily responsible for developing project activities to meet these objectives. The strategy of the NRP towards meeting these objectives has been grounded in a participatory approach with counter-parts and other effected ISRA staff, Senegalese, and expatriates involved in improving the integration of natural resource management into the agricultural technology development process. This strategy is based on joint ownership of ideas and actions so that individuals have invested both their perspectives and time and therefore have a vested interest in the success of these ideas and actions as valuable advances for ISRA. Joint ownership of actions will be pursued through a series of five steps: planning, sensitization, training, implementation, and follow-up.

Planning is the process of organizing thoughts for action. For the Natural Resource Planner it has been the initial process in which approaches to workplan objectives have been developed and has involved (1) setting specific objectives for tasks; (2) identifying key people needed for collaboration, joint ownership, and strategizing the approach; and (3) developing a time-line of sub-tasks that implement the previous two steps in the series.

Planned Workplan Activities

The focus of the Natural Resource Planners program during the first year of the project has been on the following sub-program areas: (A) Orientation to ISRA; (B) Sensitization to NRBAR Technical Objectives; (C) NRM Program Objective and Priority Setting; (D) Training and Site Visits; (E) Linkages to International Agricultural Research Centers (IARC) and Networks; (F) Bi-Annual Research Collaboration; and (G) Project Set-up. Each sub-program area is composed of specific activities and explained in detail in the 1993 Workplan.

Natural Resource Planner 1993 Workplan Activities

Sub-Program & Activity	Sub-Program & Activity
A. Orientation	E. Linke with IARCs and Networks:
1. Orientation to ISRA DG, Station, and Research and financial cycles and personnel	13. Evaluate and catalogue present and needed linkages
2. Orientation to other in-country NRM and research groups (OSTROM, CIRAD, Rodale, CILLS, CORAF etc.)	14. Develop needs and selection criteria
B. Sensitization to Technical Objectives:	F. Short-term Bi-Annual Technical Assistance
3. Agro-Ecological Basis for NRM	15. Needs Assessment
4. Scientific and Technological Research	16. Solicit & Select Proposals
	17. Develop Working Protocols with Individuals
C. NRM Program Objective and Priority Setting	
5. Logical Framework for Objective Setting	G. Set-up Internal Project Structures
6. Research alignment to priorities	18. Monitoring and Evaluation Plan
7. NRM Strategic Plan Planning	19. Management Information System
8. Program NRM Grants to ISRA Researchers	20. Geographic Information System
9. Establish Soil/Legume/Agroforestry disciplinary Soil Management group	21. Policy and Procedures
	22. Protocols for Grants to ISRA Researchers
D. Training and Site Visits:	
10. Network Possibilities	
11. Determine ISRA needs; strategize exposure	
12. Selection Criteria	

Activities were prioritized in early February during consultations with Tom Cusack, NRBAR COP, and Amadou Bâ, NRP Counterpart. Highest priority was given to: mobilization of Grants to ISRA Researchers Program; development of ISRA Natural Resource Management Research Strategy; implementation of GIS capacity to support Monitoring and Evaluation activities and to assist ISRA research planning. To meet these priorities, specific activities were chosen from the Workplan and will henceforth be referred to by those designated Activity Numbers.

The high priority assigned to some activities, obviously and consequently, required assigning lower priority to the other activities. In addition several sub-program areas were dependent on initial steps by other project components. For example, sub-program areas D, E, and F are to be implemented based on a Training Needs Assessment or a Short-term Training Plan, which is planned for implementation in late 1993 or early 1994 by the Research Planner. Therefore, some activities will be moved to higher priority as the initial High Priority activities are implemented.

3.2 WORK UNDERTAKEN DURING THE PERIOD

3.2.1 Description of Work Undertaken

Orientation to ISRA personnel and systems was initiated during workplan development and continued at the Project Launching Conference in late January, 1993, primarily with ISRA administrators. It was anticipated that all Research Directors and those Program Coordinators with objectives relevant to the project objectives would be contacted and interviewed to get a better understanding for ISRA research planning and execution processes. In addition, activities with the Outreach Advisor were planned to provide an introduction to NGOs, the variety of agro-ecologies, production systems in the project zone, etc.

These types of activities were initiated. Discussions were held with Papa SALL, Direction des Recherches sur les Production Forestières, and Amadou BA, Direction des Recherches sur les Cultures et Systems Pluviaux, Hyacinthe MBENGUE, Coordinateur du Programme sur la Gestion des Ressources Naturelles et Systemes de Production en Zone Seche. In addition discussions were held with numerous researchers in these Directions and Programmes. Site visits were made to several villages in the regions of Thies et Diourbel with Winrock and Rodale.

Unfortunately, the orientation process was cut short by several factors: (1) demands to immediately initiate other project activities; (2) security concerns related to national elections; and (3) security concerns related to political problems in Ziguinchor. Presently, only the second of the three constraints is no longer a concern. However, slowly conversations with ISRA personnel have been programmed during visits to Dakar or mutually attended meetings or seminars. Additional introductions and discussion are now being planned during site visits associated with the grants programmes.

By far the most pressing issue since February has been the implementation of the Grants to ISRA Researcher and the Collaborative Research Grants Programs, for which the NRP has played a lead role for the former and a supporting role for the latter in collaboration with the Outreach Advisor and Project Administrator. The process incorporated Workplan Activities 6, 8, and 22, and involved developing:

- (1) Grant Committee Management Protocols, which explain committee procedures for management of the grants program, including program objectives, committee membership, proposal evaluation criteria, selection procedures, submission forms, program advertisement, and management of funding.
- (2) Receiving, registering, copying, distributing, reading, technically evaluating, and quantifying the quality of each proposal for the two grant programs (18 total).
- (3) Assisting with the initial USAID/CID/ISRA contracting procedures to mobilize the funding for each research project.

A Natural Resource Management Technology Inventory was contracted by USAID and ISRA/NRBAR before the TA team arrival. The document, a survey of technologies, their method of implementation, and obvious constraints to further adoption, was presented to ISRA/NRBAR in several draft forms for commentary. The NRP presented comments and participated as Rapporteur during both review sessions. The Technology Inventory will be utilized as a part of the overall process to develop the Natural Resource Management Research Strategy.

The ISRA Natural Resource Management Research Strategy has incorporated workplan activities 5, 6, 7. The general approach to initiate a strategy was discussed with Tom Cusack, Research Planner; Wendy Wilson, Outreach Advisor; Amadou BA; and Hyacinthe MBENGUE. A formal proposal for the approach which explained the objectives, several implementation options (with advantages and disadvantages for each), and an implementation plan was developed and distributed to the NRBAR TA Team and to Amadou BA, H. MBENGUE, and Mabeye SYLLA.

The process to develop the strategy will be complex and time consuming to explore ideas, debate approaches and methods, and bring people on board to the general concept of development of an explicit strategy to target resources. To alleviate the administrative load on Amadou BA, Director of Research for Rainfed Cropping Systems, he was asked to, and did delegate the overall oversight responsibility to H. MBENGUE and M. SYLLA the Natural Resource Management and Production Systems Coordinators for Zones Dry and Humid (respectively). A steering committee composed of H. MBENGUE, Madiagne DIAGNE, Mamadou NDIAYE, and Modou SENE has been formed and met. The committee is presently refining objectives, determining the operating methodology, and reviewing additional candidates for committee membership.

It is anticipated that the Strategy will: utilize the Technology Inventory, the Grants Program, and several seminars to synthesize previous NRM research; identify and prioritize NRM research for different agro-ecological zones based on the synthesis; and develop an implementation plan to align experimental proposals and training needs with programme priorities. The Strategy will be a stand alone document for the two NRM Programmes, and will be submitted as a framework for the NRM research to be conducted under the next ISRA Five-Year Plan.

Certain aspects of Project Set-Up activities were assigned to and managed by the NRP, whereas others only required his assistance. The NRP was assigned the lead role to assist ISRA with assessing its needs and planning to development an institute-wide Geographic Information System. A draft proposal was distributed which recommended starting the planning process with a Needs Assessment that would look at ISRA's needs to have such technology as well as the resources needed to implement an ISRA GIS (equipment, training, operating expenses, etc.).

The NRP contributed to the Monitoring and Evaluation Plan (MEP), which was developed in conjunction with a TDY MEP specialist. The major contributions were related to helping maintain the scope of the indicators within the manageable interests of the project and helping to identify process indicators that show intermediate progress towards eventual output indicators. This emphasis was made to improve the usefulness of the MEP as a management tool by providing indicators that allow tracking of implementation steps, and thereby identify weak process links.

Several activity areas are dependent on initial steps by other project components. For example, the programs for Training and Site Visit, Links with IARCs and Short-term Bi-Annual Assistance will be developed in collaboration with a training needs assessment or a short term training plan, which are planned for late 1993.

3.2.2 Achievements

The Natural Resource Planner has been able to develop close working relations with the Outreach advisor, Bambeby Directeur de DRCSP, and the Coordinateur du Programme de Recherche sur la Gestion des Ressource Naturelle et Systemes de Production en Zone Seche (GRNSP-Seche), focusing on developing technologies in the project zone. Closer collaboration with the Humide Zone GRNSP Program, the NRBAR Research Planner and the Direction des Recherches sur les Productions Forestières, will be sought as the NRM Research Strategy develops, and as training and research plans are initiated.

The orientation to ISRA has been started, but will continue as working relations progress and site visits to research grant recipients start. The development of the NRM Strategy will also undoubtedly increase access to personnel, policy, and procedures, as will development of the GIS capacity.

The Grants Protocols have been the most obvious achievement to date. They were initially well received by ISRA counterparts in draft forms, official reviews centered on financial requirements of USAID and/or OSU and were for the most part either easily resolved or non-negotiable. The final approval of the protocols took much longer than expected and almost too long to make them implementable for the 1993 growing season, but the approval period was typical of implementing a new policy requiring administrative coordination. The first real utilization of the protocols, during the proposal evaluation seminar, went smoothly. Objectives were clearly stated, rules were explicit, and forms were apparently easily understood and completed, and the protocols were never questioned as either being unworkable or even cumbersome.

The NRM Research Strategy has been slow to develop, but is coming. The fulfillment of the whole activity will take a considerable amount of time. As a concept and policy statement, it must first be seen by ISRA and the planning committee as useful for it to have any real intrinsic value. Second a general model of approach must be developed, which spells out what the strategy should do in relation to targeting resources or identifying topics or priorities. What is its real objective, and can the methods prescribed attain them? And third, the strategy will need to be put to paper, critiqued, reformulated, approved and implemented. The planning committee has formed, objectives and methods are being proposed, discussed and reflected upon.

3.2.3 Difficulties

Major difficulties encountered during the first six months of project implementation have been primarily related to (1)credibility of the project to deliver as promised and (2)access to personnel. Early discussions with ISRA Directors, Coordinators, and researchers during workplan development emphasized the importance to mobilize project activities in a orderly but rapid manner. There was considerable apprehension that the grants programs would be so slow to mobilize funds that they would be essentially unusable. Unfortunately, there was an apparent misunderstanding by both ISRA and NRBAR personnel that the general support funding would be immediately available. The funding was discussed at the launching conference and plans had been drawn since November 1992, to program the funds into the two Natural Resource Management Programs and the Agroforestry Program. However, three days after the conference ISRA/NRBAR was informed by USAID that the funding would not be available until financial certification. This did not help credibility.

Due to the security problems, travel is restricted to Ziguinchor. This has severely limited access to Mabeye SYLLA, Natural Resource Management and Production Systems Programme Coordinator, and the programmes personnel and planning activities.

3.2.3 Work Planned for July to December 1993

July: The first three weeks of July will be spent as Acting Chief of Party and preparing workplan activities to sustain a three week break in direct management while the NRP takes a vacation. The ACOP will require minimal administrative staff management, following up on mobilizing the funding for the grants programs, representing the project at the review of the Monitoring and Evaluation Plan with USAID, coordinating the submission of parts of the semi-annual Progress report. The NRP will have two meeting of the NRM Research Strategy planning committee, finalize and submit the final version for the GIS Needs Assessment Proposal, and complete the NRP portion of the semi-annual report.

- Aug:** The first two weeks will be spent on vacation. The last two weeks will be spent following up on work plan activities placed on auto-pilot before vacation. This includes the approval progress on the GIS Needs Assessment, meeting with the NRM Research Strategy planning committee, visiting research site funded under the ISRA Research and Collaborative grants program.
- Sept:** Meet with NRM Research Strategy planning committee to set provisional objectives and agreement on general methods. Visit Collaborative and ISRA Research grant research sites with USAID representatives. Prepare program for GIS Needs Assessment Team. Review Project Policy and Procedures manual with NRBAR team. Plan NRM Training Needs Assessment with Research Planner. Initiate protocols for USAID-managed International Linkages Program.
- Oct:** Start new funding cycle: gather lesson-learned from first funding cycle; review protocols; debate topics and encourage proposal preparation with researcher(s). GIS Needs Assessment started. NRM Research Strategy progress.
- Nov:** GIS Needs Assessment completed. GIS Needs Assessment review and initiate implementation decisions. Team coordination and planning for 1994 and 1994-1997 Workplans. Invite 1994 ISRA Researchers Grants Program proposal submissions.
- Dec:** Complete 1994 and 1994-1997 Workplans. ISRA Researchers Grants promotion and guidance.

3.2.4 Comparison of Work Undertaken with Workplan

The only major deviations will (could) be related with the development of the NRM Research Strategy. The strategy was to be based on several discrete preconceived steps, but as the planning process progresses these steps may change as different paths are chosen. The development of the NRM Research Strategy is presently very ISRA-participatory and their experience and insight will continue to help guide the process.

Developing linkages to people, organizations, or phenomenon outside of Senegal will be approached in conjunction with the Research Planner and the Outreach Advisor. This activity has taken a lower priority in the first half of the work-year, but will be elevated to a higher priority to promote exposure of ISRA administration and researchers to new ideas and skills.

3.3 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In summary most of the Natural Resource Program objectives have seen or will see significant progress towards achievement by the end of 1993. The most important program priorities have progressed well, in spite of the cancellation of the ISRA NRM program support funding. The grant protocols have been developed and function well to date. The research strategy is in its initial planning stages, but it is hoped to play a major role to support program objectives. The NRM training and linkages activities will be initiated by years end.

ISRA has already made significant progress towards some project objectives before our arrival. ISRA restructure in 1991-92 and created Natural Resource Management and Systems Production Programs. These programs contain multi-disciplinary staffs and are already actively incorporating natural resource base management practices in the technology development process. A farmer-participatory research planning process needs institutionalization, but is already used by some research in collaboration with NGOs. Different modalities exist and are being explored and will be reflected in the NRM Research Strategy.

Several NRBAR specific activities are recommended. With the arrival of the Financial Advisor, thereby, making us a complete team, and with the completion and USAID and ISRA approval of the Policy and Procedures Manual, the NRBAR team will need to review the Manual together and identify key systems that still need implementing or modified to meet project personnel needs. Filing procedures, document (software, reports, books) storage and access, computer allocations, will need to be addressed to put the final touches on smoothing office management systems.

Also with the completion of the TA Team, the experience of each others work habits and personal approaches, and the upcoming development of the 1994 Workplan and the 1994-1997 Workplan, the team will need to more clearly define responsibilities for lead and supporting roles for collaborative activities. It is recommended that this be conducted as a team building seminar and include an outside moderator to facilitate discussion and promote consensus. An additional session would be useful with the TA Team and their counterparts (8 to 10 persons) to jointly review progress, problems, and look to the future. The launching conference with its 50-80 participants was really too large of a forum to effectively deal with some important project issues.

4. OUTREACH

4.1 OBJECTIVES AND PLANNED WORKPLAN ACTIVITIES

The aim of this facet of the program is to strengthen ISRA's links with its clients by:

- a) developing a system of protocols and grants with NGO's, farmers' organizations, and extension agencies, such that farmers participate in research needs assessment, research priority setting, execution; and validation,
- b) organizing the outreach program
- c) establishing adequate outreach procedures
- d) establishing monitoring systems, and
- e) ensuring effective field testing and adoption of technologies

OBJECTIVES

The primary objective of the Outreach and Collaborative Grants Program is to ensure that clients of agricultural research (farmers' groups, NGO's, parastatals, private sector) have knowledge of access to appropriate and locally adapted natural resources based agricultural technologies, and that adoption of such technologies is increased within a locally sustainable context. A secondary objective is close collaboration with ISRA's UNIVAL (Unité de Valorisation) in order to increase public awareness of the services and products that ISRA can provide and the critical nature of these services and products to the effective management of Senegal's natural resource base. A third objective is the establishment of a system of administering, financing, and monitoring of performance based collaborative research contracts among client groups and ISRA.

A more detailed set of objectives can be summarized from the project paper. These are described in the context of major responsibilities of the Outreach Advisor. In summary, the Outreach Advisor should:

1. Spend at least 50% of his/her time in the field advising and assisting the project with the collaborative research program.
2. Establish strong relationships with ISRA's UNIVAL, extension agency staff and farmer groups, NGO's, and private and parastatal organizations involved in agricultural development in the project zone.
3. Review the inventory of available technology and work with clients to define their research requirements in a performance-based proposal which can be carried out under this project.

4. Assist in the refinement of collaborative research contract proposals, attend review meetings, and review financial and technical requirements of each proposal.
5. Work with UNIVAL staff and clients to measure the impact of the research work under the contract.
6. Meet bi-annually with ISRA scientists and extension staff, as well as representatives of client organizations to review progress and plan future activities and modifications to the collaborative research contract process.
7. Work with appropriate organizations to assure the transfer of technology to the clients.

In order to carry out the responsibilities listed above, a sub-set of objectives was developed for the 1993 Workplan which was then linked directly to planned workplan activities. These sub-objectives included 1) Improve ISRA institutional capacity to work with ONG's, farmers' associations, etc., in diffusing selected NRM technologies 2) Improve the circulation of information between ISRA and its potential clients regarding its capabilities relevant to the diffusion of NRM-based technologies 3) Implement liaison activities aimed at supporting NRM related activities carried out by clients 4) TA implements effective and efficient short and long term planning with ISRA and 5) TA understanding and familiarity with ISRA personnel, procedure, and functions to be accomplished with review of written documentation, on site visits, interviews with staff at Bambey, interviews with partners of ISRA jointly identified

PLANNED WORKPLAN ACTIVITIES

As described above, a sub-set of objectives was developed which would facilitate the development of a strategy for implementing the outreach program. This strategy reflected the goal of the advisory/outreach program to assure the institutionalization of two basic functions: the flow of information and services from ISRA to potential clients and research collaborators, and the flow of services, information and requests from clients and research collaborators to ISRA. The objectives of the outreach advisor, in this context, are to establish in conjunction with key ISRA staff, systems and procedures which will promote this mutual exchange of information and services.

It has been intended that the Outreach Advisor work closely with the Natural Resource Planner and ISRA counterparts in order to inventory already existing collaborative research activities (on-station/on-farm), other technologies which are ready for the consumer market, and those which would be field-tested with farmers. There are three primary client groups for ISRA information and services; the private sector, NGO's, and farmer associations.

The strategy employed to achieve the stated goal and its related objectives as discussed above, has been collaborative and stressed participatory approaches to prioritization of tasks, planning, and implementation. It was planned that regular visits to ISRA research centers would provide a foundation of understanding regarding

staff scientific objectives as well as research and technology goals and plans. Selection of on-going collaborative activities were to precede field visits throughout the project zone. Such visits would facilitate familiarity with ONG's, farmer associations, and GIE's which are currently working with ISRA. Seminars and workshops involving the technical assistant, ISRA staff, and collaborating institutions were to have been employed in understanding the nature of ongoing work and the plotting of new strategies. Likewise, short-term technical assistance were to be considered for training and assessments in such areas as the development of methodologies for on-site negotiation of contract requirements, procedures and requirements for contract texts involving the private sector, and gender-sensitive approaches to the identification and execution of applied research and the introduction of new technologies on the farm level.

On-going monitoring has been envisioned that would use criteria developed with concerned parties, so that for example, farmers collaborating with ISRA on the diffusion of improved seed varieties assist in the identification of crucial measures of success or problems in implementation.

The following activities were identified to address the second level of objectives included: 1) With ISRA staff, establish sets of criteria by which to assess the management abilities and institutional capacities relevant to the awarding of grant contracts 2) Establish a grants working committee (English: GWC; French: CGO/Comité de Gestion des Octrois) within ISRA which will develop field procedures for assessing potential grantees 3) Within the GWC, establish ISRA in-house procedures for the management of grants.

Activities which would be internal to ISRA and that were targeted for the first year included:

- establish a calendar of meetings with potential clients aimed at information sharing,
- establish a data base using computer capabilities and a separate library for potential partners,
- design methodology for recording and organizing data,
- develop criteria for categorizing clients, and
- feed selected data to UNIVAL for inclusion in an ISRA newsletter.

Other critical activities which were considered external to ISRA included:

- expand field of potential partners and improve client ability to benefit from ISRA services,
- develop a simple methodology of short-term training in proposal preparation,
- develop proposal guidelines (length, crucial information, sign-offs, etc.),
- carry out local workshops (for example, by arrondissement) on proposal preparation,
- clearly define the role of ISRA researchers in field-based grant implementation activities, and
- develop audio-visual materials which can be purchased by potential users (general public, private firms, NGO's) which explain ISRA functions (for example, one in French, one in Wolof).

4.2 WORK UNDERTAKEN DURING THE PERIOD

Throughout the course of the first year, several plans were made for extended field trips to rural areas in the project zone. However, very few field trips were actually accomplished. This lack of mobility reflects three conditions that had an overriding effect on project implementation in the first year: the presidential elections and concerns about security; unanticipated delays in the initial implementation schedule due to heavy administrative duties of ISRA staff; and various managerial tasks connected with project start-up that required the presence of the Outreach Advisor in Dakar. In particular, the development of the protocols for the Collaborative Research Grants program, which required coordination of effort from various ISRA participants, turned out to be a lengthy process. In retrospect, the participatory nature of the development of the grant protocols was time consuming and labor intensive, but it proved to be time well spent. In the process of working on the grant program good working relationships were formed, as well as more solid understanding of the participants' roles in NRBAR implementation and planning. Since collaborative research projects actually received funding in the third quarter of the year, monitoring and start-up visits were accordingly later in the year than expected. The third and last quarters are expected to have the most intense field activity to date.

4.2.1 ACHIEVEMENTS

The Outreach Advisor was able to successfully establish a close working relationship with UNIVAL. To date, a SOW is in the process of review for authorization to bring in short term technical assistance in public awareness, media use, and public relations for natural resource management issues in general and ISRA in particular. Working relationships were also forged with FONGS and CONGAD; both organizations are now represented on the Grants Review Committee. It is expected that as the program broadens to include more PVO's, the working relationship with FONGS and CONGAD will become more significant. Initial meetings have been held with the PNVA Research Director, and it is anticipated that once project monitoring begins this rapport will also become more important.

The OA worked with other CID and ISRA team members on the review of the Natural Resource Management Inventory, and will participate with the NRP at selected NRP Working Committee meetings. By collaborating closely with the NRP, the OA has been able to transmit important information to grant applications regarding NRBAR project goals, objectives, and implementation concerns. Similarly, the OA worked closely with the project administrator in developing the financial procedures and guidelines for the collaborative grants programs, in providing guidance to grantees, and in planning orientation and synthesis workshops for the coming year. Currently, the OA is working with the NRP in preparation for the development of a management information system that will facilitate the management of data coming in from the field through field activity reports, technical reports, and monitoring visit reports. This data should assist in the assessment of impact that the research work being implemented under the collaborative grants program may be having.

Orientation activities went well, although not exactly as planned. Numerous visits to Bambey, to various offices at Hann, and attendance at various and numerous meetings were crucial to a better understanding ISRA and its personnel. The OA office was established at Bambey, although to date certain office equipment, such as a computer and telephone, have not been installed. In each case, however, steps have been taken to furnish these materials. They are expected to be installed by the end of the fourth quarter. As noted above, field visits are expected to increase in the third and fourth quarters. The OA residence in Thiès has proved very beneficial in establishing good working relationships with various NGO's and other development agencies, including but not limited to SODEVA, FormeAction, Tostan, World Vision, Peace Corps, CRDI and FONGS. A SOW has been prepared and an advertisement will be published, during the third quarter, in order to have a study carried out of development organizations working in the project zone and involved in GRN activities. Discussions have begun among NRBAR personnel (CID and ISRA) regarding the development of criteria for assessing NGO performance in technology transfer.

The OA met with the homologue on repeated occasions in order to develop parameters for the collaborative grants program as well as other programmatic aspects such as the identification and selection of short term technical staff and planning monitoring of collaborative grants activities. The OA also worked with the short term technical assistance on the development of the NRBAR monitoring and evaluation plan.

Criteria for categorizing clients, methodologies for data collection and organization, and short-term training for proposal preparation will all be linked to the local short-term technical assistance mentioned above in the context of a short term study of NGO's in the project zone.

Meetings with UNIVAL have proceeded satisfactorily and discussion of the role of UNIVAL has made good progress; a TDY is planned in the last quarter to assist in social marketing and communications strategy; a short term training course is also being considered for the UNIVAL Director in these fields.

4.2.2 DIFFICULTIES

One of the greatest difficulties in project implementation during this first year has been in the area of management planning and decision making. This has been primarily due, it seems, to the loaded schedule of key personnel with whom the OA should interact on a regular basis. The OA has not as yet begun visits to project sites that are not currently active with ISRA, but this is expected to begin during the third and fourth quarters. Difficulties stemmed from the unavailability of an uninterrupted block of time that could be spent in the field away from office related duties.

Some difficulty was encountered in identifying, assessing, and contracting for local short term technical assistance. The series of sign-offs, clearances, and reviews required has been one that requires repetitive meetings in order to assure that everyone is "on board." The chronology of reviews and sign offs was not always clear, and occasionally personnel changes or absences (due to competing official duties) also slowed down the process.

In-house training for grants management has not taken place to date, the difficulty being the same as defined above, lack of availability of relevant participants, which led to a slip in the time frame for authorization of the protocols. Since the authorization and clearance of the protocols was of paramount importance, this has been left to the third and fourth quarters. Further, ISRA/NRBAR has not yet defined where specifically the responsibility for grants administration (program side) will be located.

The Outreach Advisor had difficulty meeting with ISRA sociologists. It seems that time and location have been the greatest constraints. The development of criteria for categorizing clients and other client related data collection activities are directly linked to the lack of field time and failure to contract local TA to carry out related studies during the first two quarters.

4.2.3 WORK PLANNED JUL - DEC 1993

JULY The first two weeks of July will be spent working on the biannual report, follow-up for SOW/TDY work related to UNIVAL and NGO studies, and on the development of NRBAR team preparation plans for the 1994 work plan. The second two weeks will be devoted to the biannual plan, meeting with a counterpart at UNIVAL and the OA homologue, and filling in as Acting Chief of Party.

AUGUST The first two weeks of August will also include COP duties. In addition, the OA hopes to make a field trip to Kaolack, Koumpentoum, Tambacounda and Kolda in order to meet with various NGO's and farmer associations. The last ten days of August will be spent on annual leave.

SEPTEMBER The first ten days will be spent on annual leave. The second half of the month will be taken up with field visits and meetings with UNIVAL and homologue counterparts.

OCTOBER This month will be characterized by preparation for the next cycle of grant funding. Protocols will be reviewed, and presentations will be given at NGO assemblies such as FONGS and CONGAD. A meeting is also scheduled for grant recipients of the 1993 cycle for review of lessons learned and project progress. Sometime between the end of October and the end of November, it is hoped that the Gender study and the UNIVAL TDY will be achieved.

NOVEMBER At least two field trips should take place during this month. In addition to the TDY's mentioned above, other significant tasks will be the acceptance, review, and selection of grants for the collaborative grants research 1994 funding cycle. Some preparation for the 1994 Work Plan will also probably take place.

DECEMBER This month should include at least one field trip, project start-up activities for new grantees (such as meetings to review reporting and disbursement requirements, and follow-up to the earlier TDY visits. The month of December will also include work on the 1994 Work Plan.

4.2.4 COMPARISON OF 4.2.3. WITH WORKPLAN AND JUSTIFICATION OF DEVIATION

The only deviation from the original 1993 work plan in the activities briefly described above is in the timing and scheduling of their implementation, particularly the activities having to do with NGO inventories, visits, and field visits. An additional difference has been the regularity of meetings held at the station level with ISRA staff, and with counterparts. The reasons for this deviation have been described above under 4.2.2, "Difficulties."

4.3 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In conclusion it can be stated that the year has gone fairly well; most of the objectives were achieved or are in the process of being achieved. In response to the empirical realities, adjustments have been made which, it is believed, will in the long run result in greater sustainability of the activities being promoted. Much of the work is in fact a process of institutionalization and formalization of practices which already exist, but are not coordinated or do not exist in a logical framework. ISRA does already, for instance, work with NGO's in the field, and some researchers have excellent rapport with certain farmers' associations. The significant difference that this sector of the project focuses on is measurable determined institutional change, as opposed to coincidental institutional change. Steps have been taken to correct whatever discrepancies have existed between the original work calendar and current plans. It is estimated that by the end of the year, although the work calendar has been adjusted, most if not all of the major objectives for the 1993 year will have been accomplished.

It is recommended that the NRBAR team increase joint planning and complementarity between project components. Additionally, the OA component will understandably need to spend much more time in the field than during the first three quarters of Year I of the project. Coordination between development agencies and NGO's will need to be increased, particularly in the areas of monitoring and data collection in order to provide quality data that can be applied to the MIS and GIS systems that are expected to be put in place by NRBAR. More realistic goals should also be accepted in terms of the regularity of meetings between CID technical staff and their homologues (counterparts). Planning with this difference in mind, rather than planning as though ISRA staff are most often available as originally planned, can significantly benefit the project.

5. FINANCIAL MANAGEMENT

The aim of this facet of the project is to strengthen ISRA's financial management system by:

- (a) developing adequate financial systems at ISRA,
- (b) increasing the effectiveness of the computerised accounting system,
- (c) strengthening indirect cost accounting processes,
- (d) generating timely financial analyses in forms appropriate to decision-makers at all levels, and
- (e) developing a system for tracking all donor and Government of Senegal contributions.

The Stage 1 work on the financial management study, implemented by ISRA and Ernst and Young, was completed and the final report is being drafted by Ernst and Young.

The CID Financial Advisor was recruited as scheduled in March, 1993, and arrived at post on 28 June, 1993. Within the first few days after arrival, productive planning meetings were held with financial units of ISRA and USAID, and with Ernst and Young.

Work planned for the Financial Advisor during the July to December 1993 period includes:

JULY: orientation, meeting key participants, and reviewing the Ernst and Young documentation.

AUGUST: continue activities begun in July and prepare output table summarising results of document review.

SEPTEMBER: participate in 1994 ISRA budget preparation, commence learning of ISRA systems, assist ISRA in development of SOWs for consultations in Computer Systems and Human Resource Development.

OCTOBER: participate in meetings with ISRA and Ernst and Young, to finalise the Action Plan for Stage 2 of the Ernst and Young contract. Assist ISRA in resolving outstanding accounting problems.

NOVEMBER: assist with the workplan for accomplishing the accounting for 1993. Continue with resolution of outstanding accounting problems.

DECEMBER: continue with the 1993 accounting workplan and the resolution of accounting problems. Review the proposed computer tool for the management of financing agreements.

6. PROJECT SUPPORT ACTIVITIES

During this initial period of the project, considerable emphasis was placed on establishing appropriate project support structures, in order to ensure an efficient administrative implementation of the project during the five years' project life.

All facets of the project support program are being successfully implemented, including meetings schedules and reporting exercises, with highest priority being placed on those activities which directly complement institutionalisation of the four programmatic thrusts. Major support activities to date include: close collaboration of ISRA, CID and USAID staff in the production of the 1993 Workplan (approved by USAID), the Procedures Manual (approved by USAID), the Monitoring and Evaluation Plan (presently being reviewed by USAID), and ISRA's long-term training plan (approved by USAID).

Following the format of the NRBAR 1993 Workplan (pages 38-43), project support activities completed to date may be summarised as follows:

The CID COP has:

(a)planned and participated in regular meetings with project collaborators, and has compiled project reports as anticipated (see attached list),

(b)participated in a ISRA/USAID inspection visit to project sites, during April,

(c)administered offices and facilities, and supervised technical assistance and local staff, including the management (drafting SOW, logistics, recruitment, reporting, etc.) of 3 TDYs to date,

(d)reviewed results of, and make recommendations from, the 1992-93 technology inventory study and the (Phase 1) financial management study which were locally commissioned by USAID,

(e)participated in the April USAID Project Implementation Review by assisting with drafting of the PIR report,

(f)(the audit of CFA expenditures has not yet occurred),

(g)established, managed, effected payments on, and controled, the NRBAR local currency account,

(h)developed project performance indicators during the first half of the year, with TDY assistance,

(i)developed a draft monitoring and evaluation plan for the project, with the assistance of a TDY,

(j)(the Annual Joint Review is not due until October),

(k)scheduled and managed (developed training plan, begun to identify/place trainees and monitor progress) all in-country aspects of NRBAR training, in close collaboration with other NRBAR team members, and collaborated with the CID NRBAR Coordinator for all foreign training matters, most importantly on the ISRA/NRBAR long-term participant training plan, and proposals for an ISRA/NRBAR short-term training plan,

(l)assisted ISRA in developing a system for, help manage, and implement the collaborative research grants program,

(m)completed the development of the NRBAR inventory system, and

(n)completed project start-up/orientation activities such as French training, housing and office establishment, and familiarisation with ISRA and USAID procedures.

Activities of the Project Administrator have focused on the above logistical and administrative support, with a minor element of technical support, as follows:

(o)administered the housing and local facility needs of the technical assistants,

(p)undertook procurement and management of local project materials, including administration of vehicles,

(q)provided personnel services for CID NRBAR staff, and office staff supervision,

(r)provided translation services for a large volume of minor documents,

(s)provided all necessary clerical and secretarial services, partly through supervision of the Assistant Administrator and through contracting out peak work loads,

(t)provided accounting and financial management services for local currency transactions, partly through supervision of the Assistant Administrator,

(u)-(x)discussed with BAME and SG their programs for finalising a database on existing ISRA infrastructure, completing a synthesis of existing ISRA data on cereals production and marketing in the NRBAR project zone, completing an existing unit cost study for ISRA's research activities, including the services of M. Hanibal Muhtar as a TDY, and assisting with the study of research impact in BAME.

The activities of the CID NRBAR Coordinator, the CID Deputy Director responsible for NRBAR, and other U.S. based project support staff is described in the report "U.S. Based Activities of the NRBAR Project for the Period July 1, 1992 to June 30, 1993", and has focused on management, administrative and logistical support, summarised as follows:

(y)recruitment: (1)was completed for the Financial Advisor, David Holmes, from Howard University, and for the Project Administrator, Anne Williams Sidibé, (2)was completed for the monitoring and evaluation TDY, Bill Roberts, from Tennessee State University, and (3)further short-term consultants are currently being recruited in the areas of:

Gender Analysis of Natural Resources Technology
Geographical Information Systems
Agricultural Research Micro-Economics
Agricultural Research Impact
Agricultural Research Priorities
Social Marketing and Public Relations,

(z)logistics: Shipping of unaccompanied air freight, sea freight, and personally owned vehicles was arranged for long-term employees. Travel arrangements for long-term staff and their families were made. Procurement and testing of 10 computers was completed at OSU, and these, together with associated equipment, arrived in Dakar in May,

(aa)procedures manual: Dr. Kearns worked with the Project team to develop a first draft of a procedures manual during a trip to Dakar in January/February, 1993,

(ab)technical backstopping: Technical information relevant to the project was collected and sent to Senegal in the areas of: research impact indicators, monitoring and evaluation, small-farm extension, farmer participation in research, women in development, farming systems in Senegal, ethnographic information on Senegal, and rural development in Senegal,

(ac)networking: (1)contact is being maintained with all project collaborators through distribution of biannual reports, annual workplans, monthly updates and by letter, telephone and personal meetings, and institutional profiles are being developed at OSU for each collaborating institution, and (2)David Acker visited Catholic University Leuven and INTSORMIL to assist with GIS and ISRA's cereals seeds for research trials, respectively,

(ad)visits to Senegal: the CID NRBAR Coordinator visited Senegal in May, and is expected to return in October, as scheduled,

(ae)contracting: (1)subcontracts with Howard University, DAI, Tennessee State University and Oregon State University were finalised, (2)subcontracts developed under the Collaborative Research Grants were processed at OSU, and (3)necessary financial and management reports were compiled and sent to the USAID Contracting Officer,

(af)participant training: (1)placement and administration of 14 long-term participant trainees has begun,

(ag)communication: constant communication is maintained with the ISRA/NRBAR office, in order to expedite the above tasks.

Additional tasks performed by Oregon State University, the Consortium for International Development, Howard University, Development Alternatives, Inc. and Tennessee State University in support of the NRBAR Project were:

- contract negotiations in Washington DC in July, 1992, between USAID and CID, together with a meeting with Julius Coles, Senegal Mission Director to discuss the project and the Mission's philosophy on project management,
- an initial orientation of long-term TA staff in Washinton DC in August, 1992,
- a preliminary visit to Senegal by David Acker and the CID COP in early September, 1992, to initiate field activities, and
- the development of management tools, such as "a contract required approvals and notification checklist" to assist NRBAR managers.

Also, OSU made a number of contributions from its own resources to enhance project implementation and to support ISRA:

- collected Horticulture, Agricultural Economics, and Statistics journals for donation to ISRA libraries,
- donated 4 back-up printers and two typewriters for use in the NRBAR office,
- continues to pay for on-going language training for all long-term technical assistants utilizing non-project funds.

The above activities have been supported by participation in numerous meetings and the writing of numerous reports, as follows:

MEETINGS

Apart from the continuing informal technical and administrative meetings between project collaborators, a number of formal project meetings were held during the period, as follows:

WEEKLY

A weekly coordinating meeting was held between the CID COP and the USAID Project Officer.

MONTHLY

Coordination meetings were held between the ISRA Scientific Director, the USAID Project Officer and the CID COP, with a frequency of more than once per month. A TA meeting was held approximately every two weeks.

LAUNCHING WORKSHOP

This was successfully implemented during 21-23 January.

U.S. SIDE MANAGEMENT TEAM MEETING

The annual management team meeting of the U.S. side has been arranged for 28 and 29 July at Oregon State University.

PROJECT IMPLEMENTATION REVIEW (PIR) MEETINGS AT USAID

Compiled the PIR together with the PO in April.

USAID PROJECT COMMITTEE MEETINGS

Provided input to two USAID Project Committee meetings.

ANNUAL JOINT REVIEW

This is being arranged for October.

AUDIT MEETINGS

These have not yet been held.

TDY MEETINGS

For the three TDYs, the CID COP participated in initial planning meetings and in a final presentation meeting with ISRA/USAID.

OTHER MEETINGS

Planning meetings were held with KI and INTSORMIL, and with NRI (represented by the British embassy/Dakar)

REPORTS

MONTHLY REPORTS

NRBAR Monthly Reports have been produced in English and in French, and distributed to all collaborators, from October to June. The Project Administrator has compiled separate monthly financial reports of FCFA expenses, and these are sent directly to OSU by courier, for incorporation into the CID Monthly Financial Report for the project. Copies of the CID Financial Reports have been sent to USAID/Dakar.

MONTHLY COORDINATION REPORTS

The CID COP has compiled a report of the proceedings of each monthly coordinating meeting.

USAID ADMINISTRATIVE DOCUMENTATION

Assisted with drafting and submitting the necessary project documents to USAID for project implementation actions, including the contract amendment for computer purchases.

TRIP REPORTS

When TAs travel overnight on project business, they have written trip reports.

PROCEDURES MANUAL

This (ISRA NRBAR Document 93/4A) has been compiled and approved by USAID; a French translation is presently being finalised.

BIANNUAL REPORTS

This is the first Biannual Report (ISRA NRBAR Document 93/5A).

PERIODIC PROGRESS REPORTS

A project summary (ISRA NRBAR Document 93/1) and a report of the launching workshop (ISRA NRBAR Document 93/2) have been written, as well as short Progress Reports dated 19 November, 1992, and 30 June, 1993.

REPORTS OF INSPECTION VISITS

A report of the April ISRA/USAID inspection visit was written.

PROJECT IMPLEMENTATION REVIEW (PIR) REPORTS

Written contributions were made by CID NRBAR staff to the April PIR.

INVENTORY AND PROCUREMENT REPORTS

An inventory report was compiled and submitted to ISRA and USAID.

The Annual Report of Government Property in Contractor's Custody will be prepared in conjunction with the next inventory. The Commodity Procurement Plan for the life of the project will also be prepared in the next six months.

TRAINING REPORTS

Progress of participants in short and long term training will be reported as part of the Biannual Reports.

WORKPLANS AND BUDGETS

The 1993 workplan (ISRA NRBAR Documents 93/3 and 93/3A) was completed in February, following adequate review by ISRA, USAID and all collaborators at the Launching Workshop.

TRAINING PLANS

A NRBAR long-term training plan, covering the life of the project, was developed in May and approved by USAID, and the compilation of an initial NRBAR short-term training plan is being arranged for October.

At least 90% of the effort of the COP/RP and 95% of the effort of the Project Administrator has been spent on project support activities, as detailed above. The equivalent levels of effort in the area of project support for each of the Outreach Advisor and the Natural Resources Planner were approximately 30%.

There have been no substantial difficulties to date in implementing the project support program.

Project support activities for the July to December period are expected to be in accordance with those indicated in the 1993 workplan, with major emphases on planning and implementation of training, and on the project review and 1994 planning process.

7. PROJECT RESOURCE COMPONENTS

In order to achieve project objectives through the above programs, the project has been invested with seven types of resources. Progress on the use of each type of resource is summarised below:

I. RESEARCH PROGRAM SUPPORT: in view of the priority need for ISRA to establish appropriate natural resources management research trials for the 1993 season, the emphasis to date has been on developing the "Collaborative Research Grants" program and the "Grants for Research in Senegal" program.

Policies and protocols for the collaborative research program have been developed, and have been put into operation. ISRA has awarded collaborative research grants to three teams consisting of both ISRA researchers and non-governmental organisations to undertake natural resources technology research. These processes were finalised at an ISRA NRBAR grants workshop held in June. The grants were awarded as follows:

-Title: Valorisation des ressources naturelles (C-011).
Principal Investigator: Madiagne Diagne, CNRA/Bambey.
Associated researchers: Aminata Badiane, CNRA/Bambey, Saliou Diangar, CNRA/Bambey, and Demba Farba Mbaye, CNRA/Bambey.
NGO: RODALE: Amadou Makhtar Diop and Amadou Diouf.

-Title: Amélioration de la fertilité des sols (C-002).
Principal Investigator: Aminata Badiane, CNRA/Bambey.
Associated researchers: Philippe Robert, CNRA/Bambey.
NGO: WINROCK: Thomas Osborn and Alfonse Faye.

-Title: Valorisation des technologies agroforestières mises au point par la recherche et transfert en milieu réel (C-005).
Principal Investigator: Malainy Diatta, CNRF.
Associated researchers: Alphousseynou Bodian, CRA/Kaolack.
NGO: OSDIL: Ousseynou Diop and Amadou Fall.

For the funding category titled "Grants to ISRA Researchers", policies and protocols for the "Grants for Research in Senegal" program have been developed, and have been put into operation. ISRA has awarded research grants to four of its research teams to develop specific natural resources technologies. These processes were finalised at an ISRA NRBAR grants workshop held in June. The grants awards were as follows:

-Title: Etude sur l'utilisation agricole des écailles de poisson fumé comme amendement organique des sols du Sénégal (R-004).
Principal Investigator: Mamadou Ndiaye, CNRA/Bambey.
Associated researchers: Désiré Yandé Sarr, CRA/Kaolack, and Mamadou Sidibé, ISRA/BAME

-Title: Valorisation du potentiel pastoral pour le développement de systèmes céréaliers performants et viables en zone subhumide du Sénégal: la haute-Casamance (R-010).
Principal Investigator: Mouhamadou Moustapha Sissokho, CRZ/Kolda.
Associated researchers: Adama Faye, CRZ/Kolda, Richard Didier, CRA/Tambacounda, and Mour Gaye, CRA/Tambacounda.

-Title: Etude de l'Impact de la recherche: le cas des unités expérimentales de Thyse-Kaymor-Sonkorong et Koumbidia (R-003).
Principal Investigator: Désiré Sarr, CRA/Kaolack.
Associated researchers: Matar Gaye, CRA/Kaolack, and Mamadou Sidibé, ISRA/BAME.

-Title: Influence des itinéraires techniques sur la conservation des sols de plateau au milieu paysan (Basse-Casamance) (R-009).
Principal Investigator: Mankeur Fall, CRA/Djibélor.
Associated researchers: Alioune Fall, CRA/Djibélor, and Souleymane Badiane, CRA/Djibélor.

ISRA is presently drafting proposals for appropriate site studies and sabbaticals, some of which will be implemented before the end of 1993.

II. SUPPORT FOR ISRA'S NATURAL RESOURCES PROGRAM: these funds are expected to be released directly to ISRA by USAID in 1995 or 1996 following ISRA's financial certification. The process of certification has just begun, following the arrival of the NRBAR financial advisor in June, 1993. A natural resources plan for ISRA is also needed prior to release of funds, and this is presently being formulated. For 1994, in view of the need to increase the level of natural resources management research activities as soon as possible, a method of temporarily increasing the level of funds in the Grants for Research in Senegal category as been developed and agreed with ISRA and USAID.

III. LINKAGES TO INTERNATIONAL RESEARCH INSTITUTIONS: these funds are expected to be released directly to ISRA by USAID in 1995 or 1996 following ISRA's financial certification. ISRA is presently drafting proposals for appropriate visits and for developing institutional linkage structures, some of which will be implemented before the end of 1993, and funded through the NRBAR training component.

IV. PERSONNEL: all long-term ISRA and CID personnel have been recruited and assigned. CID and ISRA personnel have established rapport and have formed productive collaborative teams in order to implement project activities. Communications and rapport between the CID/ISRA team and USAID have also been well established. Three short-term consultants (TDYs) have been employed to date and these have played crucial roles in developing the procedures manual, the long-term training program, and the monitoring and evaluation plan:

-Name and Dates of Consultant: Bill Roberts, 27MAY93 - 22JUN93

ISRA Unit responsible: CG

Area of Work: Monitoring and Evaluation, Impact

Accomplishments: drafted M/E plan for NRBAR, assisted with ISRA M/E planning at CG, assisted with planning of ISRA historical impact study, and related work.

-Name and Dates of Consultant: David Acker, 16MAY93 - 25MAY93

ISRA Unit responsible: DS

Area of Work: NRBAR Training Plan for Long-Term Trainees, project administration

Accomplishments: interviewed and prepared training dossiers for 17 candidates, revised NRBAR Long-Term Training Plan, assisted with project administration.

-Name and Dates of Consultant: Jean Kearns, 19JAN93 - 4FEB93

ISRA Unit responsible: SG

Area of Work: Procedures Manual, NRBAR start-up administration

Accomplishments: produced a first draft NRBAR Procedures Manual, participated in the séminaire de démarrage and in initial administrative activities of project.

V. TRAINING: ISRA has developed a life-of-project training plan for NRBAR long-term participant trainees, which details criteria for candidate selection, training policies, description of the selection process, an implementation plan with budget, and detailed dossiers for each candidate for M.S. and Ph.D. training. USAID has approved the plan, and the following 5 Ph.D. and 9 M.S. candidates are presently being prepared for, and are being placed at, U.S. universities:

-Name of Candidate and ISRA unit: Samba Sall, DRCSP

Subject of training: Ph.D., Agricultural Economics

-Name of Candidate and ISRA unit: Alioune Fall, DRCSP

Subject of training: Ph.D., Agricultural Engineering (Soil/Water)

-Name of Candidate and ISRA unit: Ibrahima Thomas, DRPF

Subject of training: Ph.D., Forestry Management

-Name of Candidate and ISRA unit: Abdoul Aziz Mbaye, DRCSI

Subject of training: Ph.D., Virology

-Name of Candidate and ISRA unit: Mamadou Diop, DRSPA

Subject of training: Ph.D., Animal Science

-Name of Candidate and ISRA unit: Mamadou Lo, DRCSP

Subject of training: M.S., Agronomy

-Name of Candidate and ISRA unit: Mour Gueye, DRCSP

Subject of training: M.S., Agronomy

-Name of Candidate and ISRA unit: Mamadou Lamine Sonko, DRCSP

Subject of training: M.S., Livestock Production

-Name of Candidate and ISRA unit: Abdourakhmane Tamba, DRPF
Subject of training: M.S., Forest Management

-Name of Candidate and ISRA unit: Mariama Barry Gerard, DRPH
Subject of training: M.S., Freshwater Fisheries Economics

-Name of Candidate and ISRA unit: Moustapha Kebe, DRPH
Subject of training: M.S., Natural Resources Economics

-Name of Candidate and ISRA unit: Tanou Baba Galle Ba, DRCSP
Subject of training: M.S., Soil and Water Management

-Name of Candidate and ISRA unit: Mohamadou M. Cissoko, DRSPA
Subject of training: M.S., Animal Science

-Name of Candidate and ISRA unit: Bassirou Diaw, DRPH
Subject of training: M.S., Fisheries and Meteorology

In addition, there have been four Short-Term Training events in Senegal: (1)the January launching workshop which successfully brought together all potential collaborators for two days to discuss the first annual workplan, (2)the May training meetings between candidates for long-term training and NRBAR personnel which successfully established the basis for implementing the training plan, (3)the June grants committee workshop which successfully finalised the grants protocols and selected grantees for 1993/94, and (4)the June 30th public exposition of ISRA's research results, which included a successful display of ISRA's work on natural resources technologies. ISRA is presently drafting proposals for foreign short-term training activities, some of which will be implemented before the end of 1993. ISRA is presently negotiating with three Senegalese educational institutions for implementation of the women's B.S. program; it is expected that a specific program will be put in place following the conclusion of the present ISRA study of the needs of female technical staff.

VI. ISRA DIRECT SUPPORT: ISRA continues to provide the necessary physical support, and the necessary staff time and resources, to successfully implement the project.

VII. USAID DIRECT SUPPORT: virtually all furniture and equipment has been supplied, the technology inventory study and the first phase of the financial management study have been successfully implemented, and all USAID project staff are in place.

8. FINANCIAL STATUS

The financial status of the project is summarised in the attached Expenditure Report. Total project expenditures to 30 June, 1993, of \$971,379, equivalent to 6% of the \$15,617,714 contract budget, are at approximately the expected level for this stage of the project. Average monthly expenditures during the April-June 1993 period were \$279,858, and this level is expected to be maintained for the remainder of 1993; total expenditures for the period July to December, 1993, are therefore estimated to total \$1,679,148. The revised total expenditures for 1993, of \$2,650,527, are 10% less than annual expenditures predicted at the beginning of the year.

A CID contract modification was effected, to provide an additional \$55,000 funding for purchase of NRBAR computers and associated equipment. The total value of the CID contract has thus been increased to \$15,672,714.

**NATURAL RESOURCE BASED AGRICULTURE RESEARCH PROJECT (NRBAR)
Contract #685-0285-C-00-2329-00**

**Expenditure Report
June 30, 1993**

TOTAL NRBAR BUDGET & EXPENDITURES

<u>Budget Line Items</u>	<u>Contract Total</u>	<u>Cummulative Amount Expended</u>	<u>Total Budget Remaining</u>	<u>Percent of Total Budget Remaining</u>
SALARIES AND WAGES	2,036,405	165,562	1,870,843	92%
FRINGE BENEFITS	415,572	39,923	375,649	90%
ALLOWANCES	909,287	136,713	772,574	85%
TRAVEL/PER DIEM	1,545,324	67,234	1,478,090	96%
EXPEND/NON-EXPEND EQUIP	212,000	49,965	162,035	76%
SUBCONTRACTS	4,254,127	210,278	4,043,849	95%
OTHER DIRECT COSTS	543,749	59,200	484,549	89%
RESEARCH GRANTS	90,000	0	90,000	100%
TRAINING	2,922,677	19,774	2,902,903	99%
INDIRECT COSTS	<u>2,688,573</u>	<u>222,730</u>	<u>2,465,843</u>	<u>92%</u>
TOTAL	<u><u>15,617,714</u></u>	<u><u>971,379</u></u>	<u><u>14,646,335</u></u>	<u><u>94%</u></u>

At June 30, 1993 \$971,379 (25.8%) of the \$3,758,000 obligated had been expended.