

A.I.D. EVALUATION SUMMARY - PART I

PD ABN-667
42804

1. BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS.
2. USE LETTER QUALITY TYPE, NOT "DOT MATRIX" TYPE.

IDENTIFICATION DATA

A. Reporting A.I.D. Unit: Mission or AID/W Office <u>USAID/SENEGAL</u> (ES# _____)		B. Was Evaluation Scheduled in Current FY Annual Evaluation Plan? Yes <input type="checkbox"/> Slipped <input type="checkbox"/> Ad Hoc <input checked="" type="checkbox"/> Evaluation Plan Submission Date: FY ____ Q ____	C. Evaluation Timing Interim <input type="checkbox"/> Final <input type="checkbox"/> Ex Post <input type="checkbox"/> Other <input type="checkbox"/>
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D. Activity or Activities Evaluated (List the following information for project(s) or program(s) evaluated; if not applicable, list title and date of the evaluation report.)

Project No.	Project /Program Title	First PROAG or Equivalent (FY)	Most Recent PACD (Mo/Yr)	Planned LOP Cost (000)	Amount Obligated to Date (000)
685-0302	Kaolack Agricultural Enterprise Development Program	09/92	9/30/97	\$8,000	\$8,000

ACTIONS

E. Action Decisions Approved By Mission or AID/W Office Director	Name of Officer Responsible for Action	Date Action to be Completed
<p>Action(s) Required</p> <ul style="list-style-type: none"> - No new ABEs should be selected. Emphasis should be placed on strengthening the existing 56 ABEs. - The Program's approach should emphasize three activity areas: AG/NRM technology promotion, income-generation, and training/information. - Design and choose income-generating activities based on market surveys and business plans, as well as beneficiaries' input. - Women's participation in income-generating activities should be increased/enhanced through more training and access to information. 	KAED	2/96
	KAED	2/96
	KAED	2/96
	KAED	2/96

(Attach extra sheet if necessary)

APPROVALS

F. Date Of Mission Or AID/W Office Review Of Evaluation: NOVEMBER 1995		(Month)	(Day)	(Year)
G. Approvals of Evaluation Summary And Action Decisions:				
Name (Typed)	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission or AID/W Office Director
Signature	David DIOP		Soukka Ndiaye	Anne M. Williams
Date	2/6/97		2/6/97	

A

ABSTRACT

H. Evaluation Abstract (Do not exceed the space provided)

This five-year Activity aims at developing viable agriculture-based enterprises (ABEs) through the use of sustainable agriculture and natural resources activities in the Kaolack Region in order to increase ABE members' incomes. USAID/Senegal provided an \$ 8-million grant to AFRICARE, a US PVO, to implement the Kaolack Agricultural Enterprises Development (KAED) Activity under a cooperative agreement. The Ministry of Women, Children and Family is the Government of Senegal (GOS) line Ministry.

The purpose of the evaluation was to review progress, technical approach, relevance to SO#2, constraints, sustainability and make recommendations.

The major findings and conclusions are:

- The Activity addresses the major concerns of the rural populations, however, its management by objective approach is not very efficient;

- Fewer and fewer ABEs exceed 50 members, with women making up over 80%.

This particular make-up does not affect the choice of ABE activities;

- Despite training programs under KAED, ABE members lack sufficient management skills to conduct income-generating activities;

- ABEs lack data on soil fertility and crop distribution;

- ABE's proceeds from income-generating activities, although positive, are insufficient;

- Women's involvement in the Activity is severely constrained by socio-cultural factors;

- There is no formal and reliable baseline data collection system; the information generated is generally underutilized.

The major recommendations include:

- No new ABEs should be selected. Emphasis should be placed on strengthening the existing 56 ABEs;

- The KAED approach should emphasize three activity areas: AG/NRM technology promotion, income-generation, and training/information;

- Demonstration farm committees should be set up to collect useful information on soil productivity;

- Design and choice of income-generating activities should be based on market surveys and business plans, as well as beneficiaries' input;

- Women's participation in income-generating activities should be increased and enhanced through more training and information;

- A formal and reliable baseline data collection should be established to ensure access and utilization of information system by all users, including KAED beneficiaries.

Lessons learned :

- Income generating ABEs are a good way to promote rural entrepreneurship; and,

- Without adequate baseline data and benchmarks established early on, data collected during implementation is difficult to use to assess impact.

COSTS

I. Evaluation Costs

1. Evaluation Team		Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (U.S. \$)	Source of Funds
Name	Affiliation			
SENAGROSOL	CONSULT			
Mamadou Daffe	Agronomist/Team Leader	685-0302-0-00-		PD&S
Soukeye Gueye		5314-00	\$18,368	685-0294
Thiongane	Sociologist			
Issa Dabo Ndiaye	Ag/Economist			
2. Mission/Office Professional Staff		3. Borrower/Grantee Professional		
Person-Days (Estimate) _____		Staff Person-Days (Estimate) _____		

B

A.I.D. EVALUATION SUMMARY - PART II

SUMMARY

J. Summary of Evaluation Findings, Conclusions and Recommendations (Try not to exceed the three (3) pages provided)
Address the following items:

- | | |
|--|--|
| <ul style="list-style-type: none"> • Purpose of evaluation and methodology used • Purpose of activity(ies) evaluated • Findings and conclusions (relate to questions) | <ul style="list-style-type: none"> • Principal recommendations • Lessons learned |
|--|--|

Mission or Office:

USAID/SOT2

Date This Summary Prepared:

2/6/1997

Title And Date Of Full Evaluation Report:

TECHNICAL EVALUATION OF THE KAED PROJECT
(NOVEMBER 1995)

Background

KAED is based in Kaolack, a region characterized by natural (low soil fertility, soil salinization, acidification and erosion), human resource (education deficit) and institutional (input and market) constraints. In addition to the lack of credit, the lack of basic education and training translates into a cost ineffective level of production, a limited use of alternative NRM practices, and stagnant production.

KAED was thus designed to contribute to increasing food security and to provide additional income opportunities through agriculture and agriculture-based enterprises.

Purpose and Methodology of the Technical Evaluation

The purpose of the evaluation was to review progress, technical approach, relevance to SO#2, constraints, sustainability and to make recommendations.

The technical evaluation covering the period from August 18, 1995 to September 25, 1995 was conducted by a three-person team from Senagrosol Consult, a local consulting firm. The evaluation team included an Agronomist/Team leader, a Sociologist and an Agro-Economist. The team held entry meetings with USAID SOT2 team and AFRICARE Representative in Senegal, discussions with KAED staff and partners in Kaolack, reviewed KAED documentation, visited KAED sites, and conducted farmer interviews.

Purpose of Activity Evaluated

The purpose of the Activity is to establish and/or support viable agricultural/agro-industrial enterprises which utilize environmentally sound practices in the Kaolack Region of Senegal.

Findings and Conclusions

- The Activity addresses the major concerns of the rural populations, however, its management by objective approach is not very effective;
- Fewer and fewer ABEs exceed 50 members, with women making up over 80%. This particular make-up does not affect the choice of ABE activities;
- Despite training programs under KAED, ABE members lack sufficient management skills to conduct income-generating activities;
- ABEs lack data on soil fertility and crop distribution;
- ABE's proceeds from income-generating activities, although positive, are insufficient;
- Women's involvement in the Activity is severely constrained by socio-cultural factors;
- There is no formal and reliable baseline data collection system; the information generated is generally underutilized.

Principal Recommendations:

- No new ABEs should be selected. Emphasis should be placed on strengthening the existing 56 ABEs through training;
- KAED should do more to promote entrepreneurship based on agriculture and natural resources management activities;
- Demonstration farm committees should be set up to collect useful information on soil productivity;
- Design and choice of income-generating activities should be based on market surveys and business plans, as well as beneficiaries' input;
- Women's participation in income-generating activities should be increased/enhanced through more training and access to information;
- A formal and reliable baseline data collection should be established to ensure access and utilization of the information system by all users, including beneficiaries.

Lessons learned

- Income generating ABEs are a good way to promote rural entrepreneurship; and,
- Without adequate baseline data and benchmarks established early on, data collected during implementation is difficult to use to assess impact.

ATTACHMENTS

K. Attachments (List attachments submitted with this Evaluation Summary; always attach copy of full evaluation report, even if one was submitted earlier; attach studies, surveys, etc., from "on-going" evaluation, if relevant to the evaluation report.)

TECHNICAL EVALUATION OF THE KAOLACK AGRICULTURAL ENTERPRISE DEVELOPMENT PROJECT

COMMENTS

L. Comments By Mission, AID/W Office and Borrower/Grantee On Full Report

USAID and AFRICARE concurred with the findings, conclusions and major recommendations of the technical evaluation. Mission's letter dated November 21, 1995 approving the fourth annual work plan (October 1995-September 1996) of KAED requested AFRICARE to address the evaluation concerns. Per letter dated January 31, 1996, AFRICARE agreed to implement the specific recommendations made by the Evaluation Team beginning with the fourth annual work plan.

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SENAGROSOL
CONSULT

USAID
REP. 95.002

**TECHNICAL EVALUATION
OF THE KAOLACK AGRICULTURAL
ENTERPRISE DEVELOPMENT PROJECT
(K A E D)
(685-0302)**

November 1995

EXECUTIVE SUMMARY

The KAED technical evaluation was conducted by the SENAGROSOL-CONSULT firm on behalf of USAID/Senegal. A team, composed of one agro-economist, one agronomist/soil scientist and one woman sociologist, was assigned to this evaluation the purpose of which was to analyse the Project technical approach, to assess its achievements and contributions to the Mission's Strategic Objectives (especially SOs 2 and 3), and to make appropriate recommendations.

METHODOLOGY

After reviewing the Project background documentation, the evaluation team had discussions with the USAID KAED officers to clarify their expectations, and with the AFRICARE representative to Senegal. In Kaolack, the team held working sessions with the Project coordinators and program specialists. A total of 16 agricultural-based enterprises (ABEs) were visited and the team had discussions with members of 13 of these ABEs as well as with the Project village extension agents, technical services and other projects of the Kaolack Department. The debriefing sessions held after our field investigations, allowed to discuss findings and to note comments from USAID and KAED officers.

ANALYSIS OF PROJECT ORGANIZATION

- Institutional Dynamics

The Project focuses are relevant since they are responsive to the rural population's major concerns. However, the Project should concentrate on reinforcing the achievements of existing ABEs rather than select additional ones. A diagnosis of the Project agents' skills, and prioritization of their tasks, should allow to provide better training for ABEs. To foster improved communication within the Project, periodical meetings and the circulation of reports should be instituted, especially between agents and technical staff.

The Management by Objectives (MBO) approach developed by the Project presents a drawback: it requires as many approaches as existing activities. Strategic planning, following the choice of an angle of attack, is needed to ensure greater efficiency.

- Organization at the Field Level

The Project strategy is to promote strong organizations able to be well-positioned on the rural market. The Project is currently working with 57 ABEs which all have designated leaders,

activity management committees and GIE status. For the selection of ABEs, the Project had used a rather arbitrary process for the first year, but has subsequently developed and used criteria which now allow for a transparent selection of villages. The types of existing members. There are fewer and fewer ABEs with over 50 declared members, but real numbers often exceed this figure. It is also worth noting that over 80% of AE members are women, even though this evolution did not affect the choice of activities.

find.

With respect to its strategic approach and to the type of organization to develop, the Project should choose an angle of attack between its two major focuses of Natural Resource Management (NRM) and Income-Generating Activities. Then the other focus could become a support component.

recomm

With respect to empowerment modalities, a lot of ABEs do not obtain enough information on the costs of the infrastructures and equipments granted by the Project. Their management and negotiation skills are often rather low. They talk about reinvesting profits in the creation of additional enterprises but hardly of dividend-sharing which is an essential aspect of the life of an enterprise. We believe that discussing dividend-sharing would be much more of an incentive for members to engage in NRM activities, and consequently to ensure the sustainability of ABEs. This is all the more important as, due to constraints to access to agricultural inputs and implements, farmer strategies are beginning to evolve, and there is now increasing interest in enabling agricultural and NRM practices.

find.

The evaluation team believes that the participatory approach adopted by the Project, allows for increasing AE involvement in the Project programming activities. This approach is relevant to NRM, but it is necessary to delineate its various stages and to develop indicators for the population's ownership of the management of activities. In this regard, the Project's most important asset is the development of rural entrepreneurship based on agriculture and NRM activities, a window of opportunity still underutilized. This entrepreneurship may concern such income-generating activities as trade, savings and credit, improved seeds, agricultural implements, compost and fodder sale, etc. Consequently, the Project should provide ABEs with the management skills required for the conduct of these activities.

find.

recomm

recomm

ANALYSIS OF THE AGRICULTURE AND NATURAL RESOURCE MANAGEMENT COMPONENT

The 4 ha or so Collective Demonstration Farms (CDFs) on which AE members are trained in sustainable cropping and NRM technologies, served as sites for the implementation of this component. Soil productivity management, crop management and farm management were the major sub-components examined by the evaluation team.

Major constraints to the implementation of these sub-components include:

find. - the lack, at the level of ABEs, of benchmark data on soil fertility factors for concerned sites; and the likely empirical distribution of crops on existing soils, which makes it impossible to assess the value added of technologies used on these farms;

- the insufficient growth of quickset hedges and windbreaks on most demonstration farms in general, and on first generation demonstration farms in particular, in addition to the current lack of "salane" in many Project villages. However, concerning windbreaks specifically, the establishment of 38 village nurseries has encouraged individual planting among some second generation AE members in certain villages; *find.*

- the deficiencies noted in individual composting and *Acacia albida* (kad) planting despite the importance of both product and species for AE members and non-members;

- the confining of water erosion technologies (andropogon planting and rock line building actions) to demonstration farms while the problem is sometimes more acute at the inter-village level;

- the lack of farm economic management training, and of sensitization to the importance of entrepreneurial activities directly based on the commercial valorization of certain NRM technologies such as compost or cattle feed resources (hay-making, purchase of stocks of groundnut leaves, cattle cowpea, etc.). In fact, for the Project, it would seem that the farm is for NRM technologies, and the enterprise for income-generating activities only.

From the analysis of the above implementation achievements and constraints, the team recommends that the Project:

With Respect to Soil Productivity:

- create Demonstration Farm Committees to collect and review data needed for the establishment of cropping patterns responsive to the ability of existing soils, and for more effective demonstration of the impact of technologies on the productivity of these soils; *Recommend.*

- plant, in villages where salane does not exist, quickset hedges using thorny species or other species adapted to this technology and existing in the zones concerned;

- continue awareness/sensitization actions by developing initiatives to promote AE or AE members who perform outstandingly

in windbreak planting or maintenance actions. This may be done by giving in-kind bonuses like agricultural implements, the establishment of a nursery, etc.

- diffuse rainy season upland composting among farmers while initiating, for ABES located in favorable zones, sensitization actions to interest them in compost production and sale;

- focus on the natural regeneration of "kad", while encouraging the planting of other species on sites where kad does not grow well;

- diffuse the andropogon technology on individual farms presenting real erosion problems, while developing, in close relation with interested CERPs, a plan to identify sensitive sites on village lands at risk (of erosion), and thus allow to better orient soil restoration actions which AE members may wish to undertake on their individual farms.

With Respect to Crop Management

Given constraints to technology adoption, the team recommends that the Project take measures which can help overcome these constraints. To this end, technical and material support may be provided to ABES to intensify cropping and acquire adapted and efficient agricultural implements.

recom

With Respect to Farm Economic Management

The team recommends that the Project provide AE members with training in the economic management of their farms, especially through their CDFs. This training should also be focused on the implementation of a strategy to transfer technologies from CDFs to the individual farms of members and non-members of existing ABES, by putting greater emphasis on the development of income-generating activities valorizing NRM technologies such as compost, fodder reserves, etc.

recom.

ANALYSIS OF INCOME-GENERATING ACTIVITIES

The promotion of entrepreneurship through the development of income-generating activities, contributes to increasing and diversifying the Project target beneficiaries' income. The types of income-generating activities currently considered by the Project include cattle-fattening, cereal bank, forest/fruit tree nursery, market gardening and cereal mill. Eight ABES have actually started their activities and the activities of another eight ABES have been programmed.

fid.

The cattle-fattening activity is at its second operation in the Ida Mouride and Keur Yoroduou ABES. The cereal bank activity has completed its first operation in the Taiba Niassène AE. The

first operation under the forest/fruit tree nursery activity is underway in the Thiomboy Sérère AE. Market gardening only started in the form of a rainy season activity in the Diama Thiéwy and Ndiouffène Péréthi ABEs, funded from these ABEs' own resources. The mill activity was launched two months ago in the Bouchara, Ngouye Diaraf, Kouyan Kandji and Barone ABEs.

The team's findings are as follows: the financial results of the various operations are on the whole positive, but below business plan forecasts; the Project approach to promoting entrepreneurship remains relevant; proceeds from income-generating activities may perhaps be used to fund NRM-related activities, but this will have to be supported by adequate sensitization. find.

The team's conclusions can be summarized as follows: the choice of activities is based more on the opinions and wishes of target beneficiaries than on marketing surveys and business plans; the Project overall grants and contribution to credit facilities certainly arouse ready interest in proposed activities on the part of target beneficiaries, but their durability is uncertain; the credit terms negotiated by the Project with CNCAS and ACEP are specific and limited in time; the participation of beneficiaries in the development of income-generating projects remains insufficient; the training of beneficiaries in technical and project management, as well as their sensitization to the need to acquire self-funding capacity, are still not effective enough. find.

The team's recommendations in light of the above are: To consider, as appropriate, the wishes of beneficiaries concerning income-generating activities, but to make final choice on the basis of financial profitability considerations; to develop and implement projects in conformance with existing marketing surveys and business plans; to involve beneficiaries in the development of their projects by utilizing their skills and abilities in the construction of basic infrastructures; to gradually return, by the PACD, to standard credit terms; to maintain the collective form of credit with the constitution of a joint and several guarantee, while encouraging increased labor and capital productivity through gradual individualization of income-generating activities; to increase the beneficiaries' awareness of the need to use proceeds from income-generating activities, for example to gradually build their own guarantee funds and depreciation allowances to be deposited with CNCAS and ACEP; to provide beneficiaries with additional training in technical implementation and management of income-generating projects; to conduct a systematic evaluation of completed operations, especially to correct such unavoidable shortcomings as occurred in the Project early life.

ANALYSIS OF TRAINING ACTIVITIES

The strategy here is to train Project agents to replicate training among ABEs. The Project management team explained that it was after distortions were noted in the replication process that an "in situ" training strategy was adopted. Under this strategy, the program specialists go to the field to give training in presence of the agent concerned.

Concerning functional literacy training, classes were started in all Project villages. The villages participate by identifying training needs and in implementing training. There is a genuine interest in the activity which shows notable results, and there is even some informal replication of it in certain villages. There is also an appropriate trainee monitoring system; but the Project should give attention to the impact of this training on the conduct of activities, as well as develop appropriate manuals and messages.

The fact of selecting the facilitator in the village itself, and the relatively low compensation rate for this facilitator, are conditions favorable for the continuation of the activity by the ABEs themselves, and therefore, for its sustainability.

The new "in situ" training strategy certainly has advantages, especially in terms of the accuracy of conveyed messages, but it is not easy for the program specialists to be able to cover a large number of villages and at the same time perform duties related to the design/planning and monitoring of training application under the implementation of activities specific to their programs.

The training packages concerned agriculture and NRM for 77%, and management/accounting for 10%. However, most agriculture and NRM themes are not unknown to farmers following the work of several extension structures in the Peanut Basin. Nevertheless, there are still real deficiencies in management training, the farmers being very little knowledgeable of the mechanisms and economic workings of underlying market processes, and of basic book-keeping. The time the agents devote to training seems limited, while training should remain at the center of the Project work.

Concerning management, although management training is offered, there are shortcomings in the development and use of management tools. The evaluation team recommends that, in view of the recognized importance of entrepreneurship, greater emphasis be placed on management-related training. For all trainings in general, the Project should develop materials which the ABEs would be able to use at any times.

ANALYSIS OF WOMEN IN DEVELOPMENT ACTIVITIES

Various training packages were diffused which had a direct impact on women's working conditions and socio-economic living standard. There have also been interventions to alleviate the burden of women's chores. However, there remain many constraints of a socio-cultural nature resulting in a lack of access to land and to inputs and in overworking conditions, which limit women's participation in Project activities. Other constraints which also account for this situation include: the lack of knowledge of their rights, the fear to break the rule of submission and disobedience vis-à-vis the husband, and the lack of information on applicable procedures.

The evaluation team recommends that a gender analysis be conducted to better identify women's specific needs, and to guide the selection of crops to grow, of techniques to diffuse, and of income-generating activities to undertake, according to women's experiences. The Project should also develop a program to further sensitize, train and inform women and Rural Councils (responsible for land management) on the various areas of concern to them, in order to increase their participation in Project activities.

Concerning income-generating activities, the Project should give more attention to cereal mills through the development of business plans and marketing surveys. This should include the development of a management system with a built-in profit-computing mechanism, which would be different from the GOS Community Development Directorate's system. Financial profitability should also be monitored according to the same principle as for other income-generating activities.

ANALYSIS OF THE MONITORING/EVALUATION INFORMATION SYSTEM

The Project information system proposes to cover Project background/general information, diagnosis/analysis information, and technical management information needs. Its strategy is based on the use of internal expertise and resources, and of external expertise, as needed. The Project achievements here can be summarized as follows: For background/general information, a market monitoring survey; for diagnosis/analysis information, various RRA surveys and studies/surveys (marketing surveys and business plans); for technical management information, a baseline survey of the zone benchmarks, periodical data for field activity monitoring, and various Project team reports.

The evaluation team's findings include: There is no formal and reliable baseline data collection system; the information generated by the system is generally underutilized; the system allows to monitor Project activities, but not to evaluate them and assess the Project real impact.

Our conclusions can be summarized as follows: The information system has a wealth of baseline, study/survey and internal report data; except for the benchmark situation of the Project zone established by SENAGROSOL/CONSULT, there are no other benchmarks against which to measure the Project real impact on covered villages; the beneficiaries little benefit from the information system, for example for the appropriate implementation of their income-generating activities; resources allocated to the information system are inadequate.

The following recommendations are in order: To establish a formal and reliable baseline data collection system; to ensure that the information system is judiciously utilized by all users, including Project beneficiaries, by improving the circulation of information; to establish quantified benchmarks at Project villages for all Project components; to increase resources allocated to the Project, especially for baseline data collection (field agents) and processing (data-processors); to use external expertise, as needed, for ad hoc Project monitoring/evaluation actions.

LIST OF ACRONYMS

ACEP	Credit Institution for Small and Medium Enterprises, initiated and previously funded by USAID
AE	Agricultural Enterprise
API	Assessment of Program Impact
CARITAS	International Christian Charity NGO
CDF	Collective Demonstration Farm
CERP	GOS Rural Outreach Centers
CNCAS	Senegal's Agricultural Credit Bank
CPSP	Country Program Strategic Plan
GIE	Economic Activity Group (for income/profit)
GOS	Government of Senegal
ISRA	Senegal's Agricultural Research Institute
KAED	Kaolack Agricultural Enterprise Development Project
NGO	Non-governmental Organisation
NRM	Natural Resource Management
PNVA	GOS Nationwide Agricultural Extension Program
PAGERNA	Self-Promotion and NRM Project
POGV	Village Organization and Management Project
RRA	Rapid Rural Appraisal
SERAS	Senegal's Animal Resource Marketing Company
SISMAR	Mechanical & Agricultural Equipment Construction Firm
SONACOS	Senegal's Oil Producing & Marketing Company
SO	Strategic Objective
WID	Women in Development

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4 GENERAL CONCLUSIONS AND RECOMMENDATIONS

1. INTRODUCTION

1.1 Study Context

The Africare Kaolack Agricultural Enterprise Development Project (KAED) is being implemented under a Cooperative Agreement signed with USAID/Senegal on September 25, 1992. With an LOP funding of \$8 million for a five-year period, the project aims at developing viable agricultural and agrobusiness enterprises, using sustainable production methods.

KAED is based in Kaolack, a region characterized by both natural constraints (low soil fertility, saline and acid soils and waters along valleys, and erosion in many areas) and institutional constraints. The latter constraints, resulting from the abolition by the GOS of its Agricultural Program and credit component in 1980, have entailed difficulties for farmers to acquire agricultural inputs and implements. Thus, due to a lack of both credit and training, many GIEs were unable to raise current production levels to a cost-effective level, to use NRM methods which can reverse the degradation processes, and to increase production in a sustainable manner.

KAED was therefore designed to contribute to increasing food security in the Kaolack region, and to provide additional activities and income opportunities for its population in the agricultural and agrobusiness sectors. KAED should create conditions for GIEs to have access to credit and to be able to use improved NRM practices required to increase yields and incomes on a sustainable basis.

In this prospect, KAED should contribute to the achievement of the objectives of the USAID/Senegal CPSP for 1992-97. Specifically, it should contribute to the achievement of the Mission Strategic Objectives (SOs) by increasing incomes generated from NRM and market liberalization. The project will also contribute to the achievement of the CPSP Targets of Opportunity by enhancing credit and WID.

To conduct a technical evaluation of this project, contract No. 685-0302-0-00-5314-00 dated August 18, 1995 was signed between USAID/Senegal and SENAGROSOL-CONSULT. The purpose of this contract was mainly to evaluate the technical activities conducted by the project to contribute to the achievement of the Mission SOs, and to propose orientations supporting these SOs, as appropriate.

1.2 Summary of Scope of Work (SOW)

Our SOW can be summarized as follows:

- to review and analyze the project technical approach, and to

evaluate its relevance to the Mission's SOs;

- to review progress made in the various project components in contribution to the achievement of the Mission's SOs, and to verify if these SOs will be achieved during the life of the project; if not, to make recommendations for the revision of the project objectives and components;

- to analyze major constraints to project implementation, and to make recommendations to overcome them;

- to assess the project efforts to promote sustainable activities, and to make recommendations for future improvements;

- to assess the ability of the project monitoring system to provide information required for USAID/Senegal IPA, and to make recommendations, as needed; and

- to determine the level of participation of both men and women in project activities, and to provide tangible evidence of the disaggregated impact for men and women; from this analysis, to identify the major constraints to effective participation by men and women in the activities of agricultural enterprises (AE), and to indicate possible ways to maximize this participation in the project future activities.

1.3 Methodology and Implementation

After reviewing the project background documentation and analyzing the SOW, the team, comprising one agro-economist, one agronomist/soil scientist and one sociologist, first decided to make sure that we had a clear understanding of the results expected from the study. To this end, we met with the USAID/Senegal project team, and the AFRICARE representative to Senegal.

Afterwards, we made in-depth investigations in the field. We visited the project site in Kaolack from 8/24 to 9/6/95, had a working session with the project management team, then met with the specialists of the various project components/programs. This allowed us to collect preliminary information on the status of the project implementation. We also visited regional technical services, other funding institutions and projects which could be considered as potential partners.

The team visited the villages of the project intervention zone in order to observe its achievements. This was based on a schedule taking into account the geographic distribution of existing ABEs as well as the need to cover all project activities.

In sum, the team visited the infrastructures and current activities of 16 ABEs (instead of the 12 initially planned) but

was able to have in-depth discussions with only 13 ABEs. These discussions were supplemented by those held with the field/extension agents working with the villages visited. During these visits, the baseline data needed for the evaluation was collected from the documentation available with these ABEs.

The evaluation team also met with the local units of the GOS extension/technical services and with projects intervening in the visited areas.

Finally, to share its preliminary findings and impressions with the project management team (including extension agents), USAID and AFRICARE, following its investigations, the team held debriefing sessions both in Kaolack and Dakar, during which additional information and clarifications were provided.

2. PROJECT DESCRIPTION

KAED is a five-year, USAID-funded (\$8 million) project intervening in the Kaolack region. It is implemented by AFRICARE with the GOS Ministry for Women, Children and Families as line Ministry.

The project goal is to increase the productions and incomes of the rural population through sustainable use of natural resources. It is related to the Mission's strategic goal of increasing the incomes of the rural private sector derived from natural resources.

2.1 Overall Objectives

The project objectives respond to the priorities of the GOS New Agricultural Policy as well as they contribute to the Mission's related development objectives, i.e. increased agricultural production in zones of reliable rainfall, increased value of tree production¹, increased liberalization of markets. The Mission's targets of opportunity, i.e. gender disaggregated impact, democratization, credit, are also considered in the definition of the project following objectives:

- to increase the basic skills and knowledge of the rural population through management/accounting training; technical assistance in the areas of agricultural production, livestock, NRM; and information on appropriate technologies;
- to promote ABEs owned and managed by women by allowing them access to appropriate technologies and infrastructures required to reduce time spent on low productivity tasks;
- to stimulate the adoption and use of viable technologies at the level of each AE through the establishment of demonstration farms;
- to increase resources controlled by ABEs through the provision, construction and acquisition of infrastructures essential to the implementation of the activities they have selected; and
- to facilitate access to bank credit.

2.2 Strategy

¹Strategic Objectives 2 and 3 were consolidated into: "increased crop productivity in zones of reliable rainfall through improved NRM."

The project strategy is to increase income through the use of sustainable cropping techniques, and the establishment of agricultural enterprises. The emphasis will be on NRM training, the establishment of appropriate infrastructures and credit.

The project direct target population is mainly composed of the AE members. The indirect target population are the inhabitants of the AE villages, who will benefit from extended technologies and from increased economic activities. Another indirect target population, to a lesser degree, are the inhabitants of satellite villages who will benefit from the project moderate impact.

The project is developing three intervention focuses:

- technical assistance to increase the population's knowledge;
- direct financial assistance (grants) for the acquisition of rural development infrastructures; and
- indirect financial assistance to facilitate access to credit.

The project is based on two major components;

- enhancement of productivity and NRM; and
- implementation of income generating activities.

2.3 Expected Project Outputs

The expected end-of-project outputs are:

- 72 ABEs cultivating 288 ha, using sustainable NRM techniques;
- 72 established ABEs a large number of which owned and managed by women, and engaged in enterprise activities;
- ABEs intensely using infrastructures, inputs and improved technologies in order to generate enough profits to amortize equipment, continue operations (and/or fund an additional enterprise activity) and provide compensation to members;
- Yields increasing up to 75% for farms and 50% for market gardens, through the use of environmentally sound technologies;
- 3,600 farmers assisted by the project, who have acquired skills in management and farming techniques, and are credible with credit institutions as well as input marketing and commodity transport services;
- 50,000 other individuals living in project villages, who will

benefit from increased incomes, increased availability of goods and services, and increased knowledge of improved farming methods; and

- about 300,000 inhabitants of satellite villages, who will benefit from moderate project impact, through contacts with the project agents and beneficiaries.

The project will also encourage the organization of AE federations.

2.4 Project Implementation

To implement project activities, a technical team was formed comprising a Project Manager/Coordinator, a deputy Project Manager/Coordinator, a training coordinator and 16 agents.

The project technical team and agents must submit monthly reports to the project management. The project must submit quarterly reports to USAID and to the GOS Ministry for Women, Children and Families (MWCF).

Collaboration with the agents of the CERPs for joint monitoring of project activities, was initially planned; collaboration was also planned with ISRA for use of research findings. It was also planned to work with the following institutions: GOS regional technical services, PNVA, SONACOS, SISMAR, SERAS, PAGERNA, CNCAS, ACEP, CARITAS, etc.

For the implementation of the project, AE members will be assisted by project agents with training and preparation of annual programs. Indicators will be developed with ABEs in order to measure performance.

3 ANALYSIS AND EVALUATION OF PROJECT IMPLEMENTATION

3.1 Project Organization

3.1.1 Analysis of Institutional Dynamics

3.1.1.1 Implementation Strategy

For the implementation of the project, the KAED officers have adopted a management by objectives approach, and established several integrated programs. In this strategy, the project agents play an important role as they are responsible for overall assistance to the population (training, monitoring, support/counseling etc.). These agents are assigned to the "arrondissements" (loci villages) to be closer to the population and are each given a motorcycle for their trips.

The project has a participatory approach in its interventions for the population who must be involved at all stages of the implementation of activities.

3.1.1.2 Description and Critical Analysis of Project Achievements

The project actually started its activities in March 1993. Initial supervision was provided by Africare/Dakar and Africare/W, with few prerogatives for the Kaolack office. This dependency and changes which occurred in the project management staff, have caused delays in the implementation of project activities. Problems related to low decision-making authority for the Kaolack staff, have caused misunderstandings with the officials of certain regional institutions, over financial procedures and regulations related to trainings provided. This situation has, from the start, created distrust and difficulties in the working relations with certain regional technical services. However, for about two years now, certain management and decision-making aspects have been assigned to the Kaolack office. Although certain financial management aspects are still handled by Dakar, these measures have been beneficial, and now allow to reduce implementation delays.

The selection of the 12 field/extension agents and their training in agriculture/NRM, cattle-fattening, management/accounting, survey and communication skills, were completed during the first three months. These agents work in the field to assist, train ABEs and monitor their activities. One agent is assigned to each "arrondissement" to cover 4 to 6 villages. For the "arrondissements" of Maka Yop, Paoskoto and Malem Hoddar which are too large, two agents are assigned.

The specialists for the agricultural development, economic development, WID, NRM, and training programs, assist the field agents in supporting ABEs. A data analyst is responsible for

collecting and processing project monitoring data. There is also an administrative and financial unit, and support staff. A project coordinator/manager and a deputy project coordinator/manager supervise the project technical, administrative and financial management.

The project organigram has been changed over time, which has affected the organisation of the work and the conduct of activities in the field. Now the program specialists report to the project coordinators with whom they hold weekly programming meetings. Most of the time, these programs are referred to the agents concerned. There does not seem to be formally established links or periodic meetings between program specialists and agents. The latter seem to be reporting more to the coordinators than to the program specialists. For example, the monitoring sheets which serve as reports, are directly given to the data analyst who enters and processes them for the coordinators. The data is not systematically referred to the program specialists who can however obtain it at request.

In March 1995, an annual workshop was organized with the participation of project beneficiaries, for the evaluation of the project and programming of its activities. The workshop results should be used to support the development of the project annual workplan.

The project workplans which are annually submitted to USAID for approval, are among the most important project monitoring instruments. These plans have so far been in line with the Project Paper, and have always been approved, with a few comments.

3.1.1.3 Conclusions and Recommendations

a) Conclusions

Delays in project start-up have resulted in relatively slow project implementation. To make up for these delays and achieve quantitative results, the project has accelerated implementation. However, on observation, the first generation ABEs which are now three years old, are still at a relatively low level of implementation of their own activities. One can wonder if the new ABEs will be able to conduct activities by 1997. At this level, it is in fact the sustainability of activities and the appropriateness of selecting other ABEs for 1996 which is at issue.

The way reports are prepared and circulated within the project, poses a problem at several levels. The fact that monitoring sheets serve as reports does not allow to monitor farmer initiatives efficiently since the data to be collected follow a specific line. Between specialists and agents the

information does not circulate in a formal way, the agents reporting directly to the coordinators, which does not allow to establish supervisory links between agents and technical staff.

It seems to us that a management by objectives approach presents a drawback: it requires as many approaches as activities while under a strategic planning system, the strategy must be global, focusing one component, the remaining components becoming support activities.

b) Recommendations

For the evaluation team, the idea of selecting additional ABEs to complement the 72 initially planned, must be discarded, and the project must work towards reinforcing the existing ones by supporting them in the development and implementation of empowerment plans for the implementation of activities.

Concerning project agents, a diagnosis of their skills should be made or fine-tuned, as needed, in order to provide them with improved training especially in the area of management where a lot of deficiencies were noted. Furthermore, although all agents contend that they can bear their workloads, it is necessary to prioritize their tasks to allow them to devote more time to training, especially in areas where farmers are not very knowledgeable.

To avoid a sectoral and compartmentalized vision of the organizational dynamics, periodic meetings of the entire project team should be instituted to improve communication within the project.

In addition to monitoring sheets, reports describing the various programs should be prepared by the agents to facilitate closer monitoring by the specialists, and to enable the agents to better play their role as **facilitators** in collecting information and guiding farmer initiatives. The circulation of reports between the various levels will also enhance the circulation of information.

Finally, given the drawbacks of a management by objectives approach, the evaluation team recommends that the project use a strategic planning system. This approach would allow to establish a program which would strengthen farmer control over their markets. This control of market processes which is in fact one of the major challenges for farmers, could help them to better orient productions and improve their income. As a matter of fact, the level of income, the appropriateness of selected activities and crops, the sustainability of enterprises, will be contingent upon the management capacities which will be acquired by the project beneficiaries. Information and training should help resolve these aspects.

3.1.2 Organization at Field Level

3.1.2.2 Implementation Strategy

The project strategy is to promote the rural private sector by strengthening the capacities and skills of formed groups. Each group must be legally recognized, once selected. Assistance to ABEs should also allow, through surveys and Rapid Rural Appraisals (RRA), to diagnose the ABEs' capacities to manage their enterprises and to confirm their choice for income-generating activities. AE members must transfer the technologies learned in demonstration plots to their own plots, and determine their infrastructure and credit needs. Based on human resource skill levels, appropriate training will be provided by the project. An annual program will be developed and implemented by each AE, and will serve as bases for the monitoring and evaluation of activities.

3.1.2.2 Description and Critical Analysis of Achievements

The project is currently working with 57 ABEs represented each by 7 to 9 members. In most of these ABEs, committees (for sale, purchase, stocks, nurseries, etc.) are set up to manage activities. The project assists ABEs in obtaining legal recognition. The following are the steps of the process for the establishment of ABEs:

a) Selection of ABEs

The selection process has evolved over time. The project had a rather arbitrary approach for the initial year, which seems to have resulted in insufficient support for its dynamics and for some of its components (e.g. poorly maintained demonstration plots; abandonment of the village of Mabo - because the criteria related to the status of the demonstration plot were not observed). This situation has changed now because criteria for the selection of villages were developed and are being considered. Baseline surveys are being conducted to identify villages which can meet the criteria, and a selection committee was set up. This has brought transparency in the selection of villages.

b) Types of ABEs

Several types currently exist:

- 7 pilot ABEs established in 1993, with high average membership level. They are generally composed of both men and women with a majority of men;
- 15 second generation ABEs established in 1994 with a lower average membership level. They also include men and women

with a majority of women; and

- 36² third generation ABEs which started work with the project in 1995. They mainly include women's groups, some of which open to men.

AE Characteristics

(All these ABEs have a 4 ha demonstration plot)

Descript. parameters	pilot ABEs	2nd gen. ABEs	3rd gen. ABEs	Total ABEs
Nb ABEs	7	15	36	58
Total Nb of members	469	716	1,742	2,927
Nb women	217	630	1,397	2,244
% women	46%	88%	80%	77%
Nb men	252	86	345	683
% men	54%	12%	20%	23%
Av. Nb of members	67	48	48	50
Nb of cereal storage units	1	2	4/2	7
Nb cattle fattening activities	3	5	11	19
Nb market gardening activities	2	4	6	12
Nb mills	0	4	15	19
Nb nurseries	1	0	0	1

The type of AE in place has changed both in number and in gender membership. There are increasingly fewer ABEs with over 50 members, and over 80% of members are women. Women's groups are often associations grouping almost all women of a village, involved in community activities. The project has helped them form GIEs. ABEs are increasingly choosing cereal mills to

² One AE was dropped after the RRA session for lack of cohesion

generate income³.

c) Characteristics of ABEs

Women currently constitute 80% of AE members. There is an evolution towards the formation of women's groups some of which are fairly dynamic. However, many groups are rather involved in community activities, which makes them ideal targets for activities requiring labor input such as certain NRM actions. Thus, many women's groups have planted trees, and some have experience in seedling production.

However, concerning income-generating activities, in most cases it is men who seem to possess information on the AE (e.g. Mbarocounda, Taiba Thialène, Keur Lahine Guèye, Ida Mouride), decide on orientations and manage activities once they have started.

The number of members recorded on the GIE records does not reflect the enterprise's reality because the number of actual members is much larger. Often all of the village inhabitants are considered as members. This has not yet posed major problems except in the monitoring of activities with many people considered as non-members being in fact undeclared members of the group. However, when the ABEs envisage to distribute profits, this situation may pose problems and considerably reduce profit shares.

d) Preparation Mechanisms

An enrollment contract between the project and the AE, defines the responsibilities of each party. This contract is signed in presence of the GOS local authorities.

There is a real effort to capitalize on past experiences within the project, and activities seem to be better managed at the level of newly enrolled villages. For the 1994/95 season, AE members were involved in the programming of project activities through a self-evaluation workshop. However, an effort remains to be made in the areas of environment diagnosis and preparation/programming.

The project is developing a participatory approach by giving ABEs the liberty to choose their leaders, crops and income-generating activities. However, the project must follow the various phases and stages underlying the participatory approach. At each of these stages, the genuine empowerment of ABEs, rather

³ These income-generating activities should be confirmed by the RRA training sessions

than mere involvement, is inevitable to ensure the autonomy of the enterprises. With respect to these major issues of approach, strategy and type of organization to put in place, the project should define a clear angle of attack between its two major focuses so that one focus be support activities. For example, the project should consider the fact that while NRM activities require a strategy based on the broadest possible participation, for community and even inter-village activities, a strategy based on smaller groups is generally recommended for enterprise and credit activities. At this level, the concepts of profitability, transparency, joint and several guarantee, should prevail. The issue of individual initiative support should be considered if profits are to be maximized.

e) Incentives for ABEs

Farmers are more interested in income-generating activities. The project was forced by its beneficiaries to provide credit this year, despite the risks of unprofitability indicated in business plans.

The other incentive issue is related to the gains members can derive from activities. It is therefore important that the project encourage discussions on the programming of activities et profit sharing. This would much more motivate members to engage in activities, and ensure the sustainability of enterprises.

Farmer strategies have started to evolve and are showing an interest in NRM, even if projections in these strategies mostly target access to agricultural inputs and implements. However, given constraints related to such access, farmers are becoming more open to enabling agricultural and NRM practices.

Third generation ABEs are showing real interest in demonstration farms. Their members' commitment to demonstration farm activities remains partly related to prospects for access to income-generating activities and credit under the project. However, discussions with farmers have revealed that continued soil degradation is one of their major concerns. However, they are still to be convinced that there are alternatives to fertilizers to restore soils, which is a challenge the project intends to take through mechanisms for the adoption of the technologies which will be developed.

f) Empowerment Modalities

Few ABEs have enough information on the costs of the various project-subsidized infrastructures and equipments. As for market information, only the Taiba Niassène AE has good information on the sub-region cereal market, and uses it in its transactions.

Management capacities are often rather poor; the tools for proper management of an enterprise exist for only a few ABEs such as Diama Thiwey. Problems related to a lack of management transparency and to the choice of certain individuals for certain positions remain critical. Increased sensitization to the importance of such choices is needed to help remove constraints.

In addition to marketing actions, ABEs should also have the required negotiation capacities. The evaluation team has noted this deficiency during purchases of sheathes and sales of seedlings to the project. Virtually none of them was able to give indications on the number of seedlings, prices, etc. Even when equipment was delivered, they would sign delivery vouchers without demanding a copy for their records. The interface of the project in certain negotiations, including purchases (for example nurseries) may prove detrimental to ABEs. We have also noted a low negotiation capacity in the field. Indeed, for project-provided nursery inputs, and for the sale of seedlings to the project, transactions are made sometimes without the ABEs knowing the related amounts.

ABEs often talk of re-investing profits in other enterprises, but there is little discussion on profit-sharing. Even at the project team level, this idea seems to be discarded. However, profit-sharing is an essential aspect of the life of an enterprise.

g) Relations with other structures

The project intervenes in a region which hosted and is still hosting several structures. Efforts to meet and work with other institutions should be increased. An analysis of the various approaches to credit and to capitalization of other experiences in the region, would help improve the implementation of activities. In the field, the project should consider working with projects and structures operating in similar activity areas or in the same zones. Collaboration with the other structures is perceived by the project as a source of solicitations on their part.

3.1.2.3 Conclusions and Recommendations

a) Conclusions

The definition and use of clearly established criteria have ensured an objective and appropriate choice of most second and third generation groups. The participatory approach used by the project allows to increasingly involve ABEs in the programming of activities. This approach is appropriate to NRM. However, it is important to define the various stages in this approach as well as indicators of the ownership of the management of activities by the population (for example, these indicators should show that

after an X period of work in a village, the ABEs involved should be able to conduct Y activities). For enterprises, the approach should focus on the concepts of profitability, and be rather based on smaller groups.

An adequate preparation of activities by ABEs ensures well-controlled implementation mechanisms and processes. The lessons which ABEs can learn from this preparation and the ABEs capacity to replicate these activities on their own, should be assessed on a regular basis.

The diligence of its actions for community groups, compared to other structures whose processes are considered lengthier, has enhanced KAED's popularity in the area. However, this should not result in precipitate implementation which would ignore necessary stages.

Greater involvement of ABEs in the identification and choice of actions would enhance their strategies and lead to diversified income-generating activities. This suggests that there is still a gap between the participatory approach rhetoric and real practice in the relationship between the project and ABEs.

The project's major asset and window of opportunity remains the development of rural entrepreneurship which is still under-utilized, but which can over time ensure improved NRM. If properly used, this approach will have the double advantage of meeting the population's needs on a sustainable basis, by increasing their income, on the one hand, and of preserving the resource base from which this income is derived, by using enabling practices, on the other hand.

In addition, targets have evolved without any concurrent evolution of demonstration farm crops towards, for example, market gardening techniques, or without income-generating activities being extended to include areas in which women have proven expertise.

The evaluation team believes that the choice of an angle of attack is crucial. The strategy and approach to be developed by the project, and the allocation of human and material resources, will be a function of the angle of attack chosen. Concerning training, information on technologies and counseling activities, there currently is much more emphasis on NRM activities than on income-generating activities. This lack of entrepreneurship strengthening is not conducive to the growth of ABEs which could remain sustainable after the end of the project. The strengthening option would allow the project to undertake strategic planning of its activities in relation with the population.

b) Recommendations

For the evaluation team, the choice of new ABEs which would follow the same process as the first ones, is not recommended. If the project were to select more groups, it would better use already established GIEs to reinforce them.

The team does not intend to question membership levels even if its considers them too high relative to the prospect of giving priority to entrepreneurship. However, the project should not necessarily oppose a credit system managed by the group which would receive the credit on its behalf then redistribute it to formed sub-groups.

The range of income-generating activities should be extended. The project could consider involving trading enterprises (for items upstream and downstream production), and savings and credit enterprises in which women already have some expertise. As a matter of fact, many women's groups work in these sectors with limited funding which may not allow them to make good profits but which nevertheless lead them to establish management modes interesting enough for the project to draw and improve upon.

For the preparation of activities, it seems to us of paramount importance that each AE succeeds in designing its own program including the major activities to be conducted, resources required and resources available, implementation means, etc. For this preparation to be done in optimal conditions, the team recommends that the project choose agricultural and NRM-based entrepreneurship as angle of attack. The following table could help clarify the approach, strategy and organization, and improve the preparation process.

Level of organization	Prerogatives
Federation of ABEs	- Management of guarantee funds - Organization of training sessions - Information of ABEs on markets - Support to conduct of inter-village NRM actions, negotiations with structures working with ABEs

AE	<ul style="list-style-type: none"> - Conduct of NRM actions in villages - Definition of techn. adopt. mechanisms - Request for and distr. of credit to sub-groups - Programming of AE activities and distribution by sub-group
AE sub-groups	<ul style="list-style-type: none"> - Conduct of income-gen. activities using NRM techno. - Adoption of techno. on their farms and activities - Joint and several guarantee, and credit repayment - Distribution of profits, providing for a percentage for AE fund.

Such a choice will imply a specific approach for each organizational level, while maintaining solidarity at the level of the AE and AE federation to be established.

The evaluation team believes that one way of ensuring the sustainability of ABEs and maintaining the motivation of their members, is to assure that the latter benefit from generated financial profits. A lot of revolving credit fund experiences are currently conducted by AE members using income from demonstration farms. The project should reinforce this process by establishing a system for individual credit to members.

For the various activities, all stages should be clearly delineated, including all the elements to be handled by the AE. An empowerment plan should be developed including verifiable (measurable) progress indicators usable for an impact evaluation.

The evaluation team recommends that the project focus more on agricultural and NRM-based entrepreneurship (ABEs to sell compost, fodder, improved seeds, services such as transport, rental of agricultural implements, etc.) which can be a good window of opportunity to use and develop. Thus the bases for socially, economically and environmentally sound management would be established for farmers who would then strive to acquire management skills to explore all AE windows of opportunity related to NRM.

For pilot ABEs, the project should start testing their capacity to replicate their activities.

Communication being an essential dimension of the participatory approach, the project should obtain other

communication supports such as, for example, video cassette players and monitors.

3.2 Agriculture and Natural Resource Management

The project agriculture and NRM component reflects the Mission's consolidated strategic objectives 2 and 3, i.e. increased agricultural production thru improved NRM. The project corresponding program consists in undertaking actions to sustainably increase soil productivity using adapted technologies and the value of tree production thru increased planting of trees and protection of the vegetative cover. It should contribute to the achievement of the Mission Strategic Objectives aiming at:

- increasing to 45,000 the number of rural households adopting agricultural technologies and practices and improved inputs to increase soil productivity;
- planting or survival of 3,000,000 trees, and protecting 2,000,000 ha to help regenerate trees.

Specifically, this component should help create conditions for the introduction, extension and diffusion of:

- intensive and enabling farming practices thru reduced crop areas, diversified crops and increased use of efficient farming techniques;
- adapted agro-forestry and soil restoration technologies.

3.2.1 Analysis of Implementation Strategy

The strategy implemented for this project component consisted, from the first year, in having GIEs turned ABEs, establish collective demonstration farms (CDF) over 4 ha allocated by the Rural Council. For the project, one reason for this legal allocation of land is to link farm life to AE life. This strategy was gradually improved with the implementation of the project three development phases and, in this regard, third generation ABEs have generally performed better in terms of the implementation of criteria related to selection, participation and incentives for the population. (see section on Organization).

The modalities defined for project intervention on CDFs consist in:

- providing close assistance and support to ABEs for effective implementation and control of their activities, including practical appropriate training in the project main intervention areas;

introducing and conducting operations to extend enabling agriculture and NRM practices by involving in the design and implementation processes such partners as ISRA, the services of the GOS Directorate of Agriculture (PNVA) and Directorate of Water and Forests, while giving the GIE members the liberty to choose locations, crops and species to plant;

providing, at the start-up of CDFs, support to ABEs in the form of grants, seeds, mineral fertilizers and crop protection products.

It should be noted that the practice of collective farms is known and traditionally used in the project zone, the purpose generally being to create income sources for involved groups, and to contribute to their social and economic self-promotion. Labor organisation on these traditional collective farms is the same as that instituted for CDFs. However, the latter are different in terms of their legal status and roles as sites for learning and diffusion of enabling agriculture and NRM practices and formal management tools.

The technical evaluation team noted that the implementation of the project strategy has generally allowed to create conditions for technology learning, but does not include a specific mechanism for the transfer of technology from CDFs' to the AE members' privately-owned farms. Indeed, at the end of the third year of implementation of project activities in the field, the project team, aware of the current limits of its interventions for technology transfer, recognized that this was one of the major unresolved issues, and indicated that this transfer could only occur over time, as the impact of diffused technologies can be assessed only in the long term, especially as farmers are currently unable to assess accurately the value added of these technologies. The team also indicated that they did not want to fail like many projects which tried to precipitate adoption.

Without disagreeing with this opinion, the evaluation team believes that the project, in relation with ABEs, should focus more on developing mechanisms to take technologies from collective farms to AE members and non-members' privately owned

⁴ One question related to this transfer issue is whether collective farms are the most appropriate vehicles for the adoption of technologies on individual farms. In other words, do farmers concerned feel motivated enough to engage in learning and adopting practices via collective farms? One can answer this question by saying that some extension programs having used individual farms or the farms of contact farmers, did not either do better in the adoption of extended technologies.

farms. One major mechanism could be to provide more support to ABEs in developing income-generating activities based on NRM valorization technologies, which should both increase income and improve access to technologies enhancing soil productivity.

3.2.2 Description and Analysis of Achievements on Demonstration Farm Productivity Management

3.2.2.1 Demonstration Farm Land Management

At the end of the third year of the implementation of project activities in the field, 57 CDFs were created, of which 7 in 1993 (1st generation), 15 in 1994 (2nd generation) and 35 in 1995 (3rd generation). Out of this number, 32 CDFs were already formally allocated land by Rural Councils and had a legal status while allocation procedures are underway for the remaining ones/3.

Our visits to the field revealed that most sites allocated for CDFs are located at over 2 or 3 km from dwelling places, and are mostly marginal lands many of which with very low useful depth (below 50 cm). For sites with relatively deep soils, the constituent land unit is degraded Dior, for which existing data indicates an organic matter content below 0.5% for a highly granular structure. This unit sometimes co-exists with highly compact Dek soils, hard to use but relatively richer in minerals and organic matters. We also often noted during these visits that the use of certain technologies, like the application of organic manure, depended more on the distribution of crops than on the soil fertility factor.

3.2.2.2 Quickset hedge Management

All demonstration farms were planted with "salane" (*Euphorbia balsamifera*) with varying results. Data available at the project indicates that the total length of quickset hedges for 27 of the 57 CDFs is 18,965 meters. For most villages concerned, all "salane" seedlings, with a few exceptions, were provided by the project but planted by AE members. At Bouchara (2nd generation) and Taiba Niassene (1st generation), "salane" hedges were reinforced with barbed wire.

Due to planting conditions (planting period and seedling condition), hedges show a more or less identical state of insufficient growth. All of them often show more or less large empty spaces and need to be replanted to obtain the efficiency desired for the protection of plots. Our visits to the 16 CDFs revealed varying "salane" quickset hedge growth levels not only among CDFs of different generations but also of the same generation. In all visited plots, hedges were not yet fully "closed" and the required replantings will have to be done using plant cuttings from CDFs.

It should be noted, however, that in all visited CDFs, it was mainly first generation CDFs which paradoxically showed most deficiencies relative to expected efficiency, the second and third generation CDFs showing a more favorable hedge growth. This may be partly due to the arbitrary selection of first generation villages and to the implementation of the project new participatory sensitization/awareness approach.

For many project villages, the presence of "salane" remains marginal and most "salane" seedlings were provided by the project. The problem of unavailability of this plant in some villages is so acute that there will be, over time, constraints to the adoption of this technology. Therefore, one wonders whether the CDF nursery alone will be enough to provide both AE members and non-members with "salane" seedlings to plant around their farms. This boils down to the issue of the appropriateness of choosing this technology relative to its sustainability. This sustainability is all the more uncertain as the level of efficiency reached by the hedges will certainly not motivate AE members and non-members to voluntarily put substantial effort into the collection of "salane" at sites far-removed from their regular work places.

3.2.2.3 Windbreak Management

Windbreaks are usually planted in all CDFs. Data provided by the project, indicates for 1994 a total number of 10,103 seedlings planted with 6,070 survivors, or 60%.

Windbreaks are generally made up of 2 separate lines planted 2 meters apart in quincunx along the inner farm perimeter. The first line is 1 meter from the "salane" quickset hedge. The most common species for this first line is the *Acacia holocerricea*, or rarely the *Acacia nilotica* or *Anacardium occidentale*, while the "*Prosopis juliflora*" is most common for the second line. The seedlings used for windbreaks in the 7 first generation AE CDFs seem to have originated from the region's private sector nurseries. It was mainly from 1995 that a major nursery program was implemented in different ABEs, thus allowing, thru an internal marketing system, to provide seedlings for new CDFs and saplings for the old ones. Project data indicates that 38 village nurseries were established which produced 127,184 seedlings in 1995 including 29,975 *Acacia holocerricea*, 21,331 *Anacardium occidentale*, 18,407 *Acacia nilotica*, 15,520 *Parkinsonia aculeata*, 11,842 *Prosopis juliflora*, 11,670 *Eucalyptus* sp. and 10,855 *Acacia alba*.

As indicated above, the *Acacia holocerricea* for the first line and *Prosopis juliflora* for the second line, are the most commonly used species for windbreaks. While the former (*Acacia holocerricea*) does not seem to pose major adaption problems, the

case is not the same with *Prosopis juliflora* and *Acacia nilotica* or *Leucena*. Some other species like *Parkinsonia aculeata* are increasingly being used in third generation AE CDFs.

The team noted the substantial effort made to reinforce tree production, including the establishment of nurseries. However, despite this effort, the results achieved are average for CDF windbreaks with often gross deficiencies in growth levels; Except for Ndioufène, the deficiencies noted during field visits were more noticeable on first generation AE CDFs than on second and third generation ones.

While the project team blames this situation on the fact that most first generation ABEs were selected on arbitrary criteria (which did not probably factor in incentives for members), the evaluation team, on the other hand, believes that the project strategy has not yet fully addressed the issue of the choice for AE members between income-generating activities and NRM actions conducted on CDFs. In this regard, the project should look into the lack of interest which AE members show vis-à-vis CDF activities as soon as income-generating activities are initiated.

3.2.2.4 Organic Manure Management

Given the current level of soil degradation in the project zone, the use of organic manure and its impact on crops, is one of the most productive practices. AE members believe that the compost technology presents much more interest for them, even if the scope of ongoing activities is still limited. The project has diffused this technology to all ABEs, including thru the compost pit and foldyard manure technologies. The applications recommended by the project are 2 - 5 tons per ha for compost, and 3 - 7 tons for manure.

For most farmers, the impact of the foldyard manure technology practiced on cereal farms, is well-known.

Compost pits are installed either near compounds or near demonstration farms. Very often, a maximum of 2 pits are installed for each AE. Cereal crops are generally covered, but application levels are not well-defined.

3.2.2.5 Farm Plantings Management

Intended to increase farm fertility, plantings are exclusively with "Kad" (*Acacia albida*) set 20 x 20 m apart inside the farm. Available data indicates that 3,661 seedlings were planted with 1,883 survivors, while the production of village nurseries amounted to 10,855 seedlings.

Our visits to the various CDFs revealed major kad growth problems at many sites. In fact, it was extremely difficult to

locate seedlings on the various planting lines, and it was only at Ndioufène that certain planted seedlings have reached a significant growth level. Due to encountered difficulties, the project team seems to have decided to focus more on kad-assisted natural regeneration than on kad planting. It is also envisioned, in areas where kad does not grow well, to replace it with other species like *Acacia nilotica* and *Acacia senegal*.

3.2.2.6 Water Erosion Control Actions

a) Andropogon Planting

One erosion control action undertaken by some ABEs under the project has consisted in planting one line of *Andropogon Gayanus* on runoff contour lines located on some CDFs, such as those at Ida Mouride, Diam Thiéwy, Taiba Thialène and Mbaracounda where it was explained to us that plantings had followed contours determined on CDFs. In order to familiarize AE members with this technology, training was provided (thru the use of slope triangle) on how to determine contours. AE members say that they have no doubt as to the efficiency of the technology because wherever it was applied, runoff was stopped and the impact of erosion reduced. We should however note that the use of this technology on some sites seems to us of a pedagogical interest only, as there did not seem to exist any real need related to the condition of soils on these sites.

b) Rock Lines

This technology was observed on one farm only, the one at Ngouye Diaraf where rock lines were built in 1994 with fairly convincing results. The environment is gradually being restored around those sites where degradation called for this action. However, the evaluation team is not certain that the problem is definitively resolved as no comprehensive diagnosis was made in order to measure the magnitude of the degradation process in affected areas. Erosion problems must be very often addressed comprehensively to achieve comprehensive solutions.

c) Mulching

Used to reduce the impact of evaporation and erosion on soils, this technology consists, after harvests, in spreading over the groundnut farm the stalks of the sorghum which was planted on it 6 to 8 m apart. It should also allow to increase organic matter content by incorporating the straw into the soil.

Derived from the Sérère practice of "Ndonat" (planting lines of cereal crops in legume crops), this technology which was established in the village of Diam Thielly only, is at its first year of implementation in most ABEs where it was introduced. If its impact meets expected results, its adoption should pose no

particular problem, its technical feasibility being within the reach of farmers.

3.2.3 Conclusions and Recommendations

3.2.3.1 Conclusions

The current management of CDF land productivity is largely related to the fact that no descriptive benchmark information on soil geomorphology was prepared on the sites concerned, and the distribution of crops on existing soils was only based on past experiences. Consequently, nothing at this point in time allows to determine the added value of the technologies implemented to increase the productivity of these soils.

The planting of salane on CDFs, besides its low impact, poses a real problem relative to the possibilities of transferring results to the farms of AE members living in areas where this plant does not grow well.

Planting actions in general, and windbreak planting actions in particular, despite the constraints they pose, are certainly among those project actions which could produce significant results and make a real impact on the project zone. Indeed, in several 2nd generation villages, seedlings of *Acacia holocericea*, *Anacardium occidentale*, *Prosopis juliflora* and *Acacia albida* were distributed to AE members to plant on their individual farms. For example, the evaluation team ascertained that at the village of Tiaba Thialème, three members of the AE have used *Acacia nilotica*, *Parkinsonia aculeata* and *Acacia holocericea* for windbreaks on their own farms. In some other villages like Diama Thiewy, Mbaracounda, etc., the nursery activities undertaken by groups, have allowed to distribute large quantities of seedlings for individual farms or collective reforestation actions.

As for compost, it remains without doubt a valid technology, for the project zone soil and climatic conditions. However, its sustainability and extent of adoption will largely depend on the conditions in which it will be diffused. As a matter of fact, the level of effort required for digging pits and watering for dry season composting, as well as problems related to the transport of the product, severely limit possibilities for individual production.

Kad (*Acacia albida*), presents for most farmers a real interest and utility for soil fertilization. However, the difficult and slow growth of transplanted trees are a real obstacle to an extensive adoption of the technology.

Mulching is one of the technologies which could most successfully on sites presenting real erosion problems, and the possibilities for its adoption are great as the product is often

available and the only cost involved is to find it, take it out and implant it. This implantation is all the easier to do as AE members have received appropriate training in it.

3.2.3.2 Recommendations

The project team should further train ABEs in addressing constraints to the productivity of their farms. One appropriate mechanism would be to establish at all ABEs **Demonstration Farm Committees (DFC)** which would be charged, among other things, to collect the data needed for sound farm productivity management. Data on fertility factors should, for example, allow for cropping patterns responsive to the ability of soils, and to better demonstrate the impact of technologies in order to facilitate their adoption. The project should also undertake actions to provide more technical support to DFCs in order to better orient crop distribution on CDFs. The DFCs could take initiatives for the adoption of technologies by organizing collective or group work on individual farms. They could also produce compost on a collective basis.

The project should envision, for villages badly lacking in salane, to establish quickset hedges using thorny plants or any other plants adapted to this technology and existing in the zones concerned.

While continuing its awareness and sensitization actions, the project should develop initiatives to **promote** ABEs or AE members that have demonstrated outstanding performance in the establishment and maintenance of windbreaks or other technologies. Such promotion which should neither be a conditionality nor an incentive, could contribute to the increased sustainability expected from planting actions in AE villages. It could be in the form of prizes like agricultural implements, nurseries, etc.

The evaluation team recommends that the project further moves towards the diffusion of swath and rainy season pits for increased access to this technology whose value is recognized by all farmers who have tested it. In this regard, the project should initiate awareness actions for ABEs located in favorable areas, to generate interest in the production and sale of compost. Some material support could be provided to this type of enterprise whose replication would increase farmer access to this product which is already considerably marketed in the Niayes market gardening zones.

Concerning the planting of trees on farms, the project should focus more on the natural regeneration of Kad (*Acacia albida*) while encouraging the plantation of other species on the sites where this species does not grow well.

Concerning water erosion control, the project should

replicate Andropogon plantings on individual farms facing erosion problems. In high (erosion) risk village lands where it intervenes, the project should develop and implement a plan to identify high risk sites in order to better guide soil protection and restoration actions which AE members may wish to conduct on their individual farms. This plan could be developed in close relation with the CERPs concerned. It is all the more important as it could provide Rural Councils with tools to implement their NRM programs. It would also help resolve erosion problems at the level of the entire zone concerned.

3.2.4 Description and Analysis of Demonstration Farm Crop Management

3.2.4.1 Extended Cropping Techniques

During the first three years of the implementation of project activities, implemented crop programs have included groundnut, millet, corn, sorghum and, incidentally, water melon and cowpea. For each crop, data sheets covering varieties, ecological zones, soil preparation, farming techniques, etc., were developed. Crop monitoring data sheets were also developed to monitor the various operations related to soil preparation, cultivation, fertilization, protection, harvesting.

Various techniques designed to improve cropping conditions on individual farms were extended to CDFs by the project extension workers. They include: use of improved seeds; improved use of mineral fertilizer; 3-seedling thinning on millet; planting spacing; weeding and hoeing.

Most of these techniques which had been diffused by such extension structures as SODEVA and the GOS agricultural services, are well-known in the project zone. However, for the project team, they are still relevant for at least two reasons: One is that previous extension efforts did not necessarily reach the current generation of farmers partly composed of women most of whom were not often targeted by previous extension efforts. The second reason is the project intervention methods are different from those previously used in this that the project approach consists in totally involving extension workers in the extension of techniques to CDFs. In this respect, the expected results should necessarily be different from those previously obtained.

Concerning mineral manure, it was produced using the grant provided by the project in the first year. The funding needs for the following years were met by using income generated from the farm. The application rate used is usually half the rate recommended, and varies between 75 to 125 kg/ha according to crops.

New application rates are currently being extended

Type fertilizer	Quant. per ha	Crops concerned
6-16-10-2S	75 kg	Groundnut
12-8-8-5S	75 kg	Millet
7-12-23-1S or 14-23-14-5.1S	75 kg	Corn
10-26-26	125kg	Vegetables

The evaluation team believes that the adoption of mineral manure on CDFs seems to be more related to its income-generating potential than to the pursuit of a sustainable increase in productivity. Therefore, we believe that the use of mineral manure is mainly related to the actions undertaken by the project for AE access to credit.

3.2.4.2 CDF Crop Management

The project data indicates that the 22 first and second generation AE CDFs have cultivated a total of 85 ha, of which 47% for groundnut, 29% for millet, 17% for corn, 6% for sorghum, and 2% for cowpea. Average yields obtained from first generation CDFs were for 1993 and 1994 respectively the following:

- 856 kg and 732 kg for groundnut;
- 1,319 kg and 1,400 kg for millet;
- 1,143 kg and 1,321 kg for corn.

The net proceeds from the sales from first generation CDFs were for 1994: CFAF 2,220,481, for corresponding costs of CFAF 707,474. It should be noted that for 1994, these costs were supported by the ABEs concerned. As for second generation ABEs, the net income they derived from their CDFs were for 1994: CFAF 3,181,000, for costs supported by the project in the amount of CFAF 2,251,165. For these ABEs, the highest income was obtained by the Goudié AE, in the amount of CFAF 607,680, and the lowest by the Kouyane Kandji AE, in the amount of CFAF 45,000. Input costs for the 15 second generation ABEs ranged from a minimum of CFAF 103,600 for Keur Palibé to a maximum of CFAF 273,995 for Keur Kouthièye.

It should be noted that, for a number of visited CDFs, the growing of crops did not seem to have always respected the ability of existing soils. The same crops are often mechanically replicated on the sites and there are real adaptation problems on some farms. While this situation can be explained by the project option to give AE members the freedom to choose their own crops, it also clearly shows a lack of technical support for

farmers concerned. This is all the more obvious as, due to yet another lack of any benchmark data on the productivity of farmed lands, it will probably be not easy to assess the specific effect of technologies on yields, even though farmers concerned have directly observed on vegetating cereal crops the positive effect of some cropping techniques.

3.2.5 Conclusions and Recommendations

3.2.5.1 Conclusions

Based on our observations on CDFs and on our discussions with members of visited ABEs and the staff of agricultural and research services intervening in the region, we concluded that part of the 1960-1970 farming population was actually renewed over the 1980-1990 period. This situation did warrant continuing the extension of a number of technologies which some farmers already knew. In this regard, it is interesting to note that the PNVA is overall extending the same technologies in the same zone, but with a different approach.

However, the evaluation team believes that the non-transmittal of farmer acquired information from one generation to the next, is more due to constraints which appeared in the late 1980's than to the renewal of the farming population. These constraints which are mainly related to difficulties of access to inputs, to a lack of implements, to increasingly lower rainfall, and low land productivity, etc., have resulted, among other things, in overcrowded cropping calendar, the generalization of dense plantings, and the expansion of cropping areas.

3.2.5.2 Recommendations

In view of the above situation, the evaluation team recommends that the project moves towards further optimization of the approach to AE members' adoption of the technologies extended on CDFs. To this effect, the team encourages the project to seek solutions to the constraints confronting CDFs because if such constraints are allowed to linger on, they could annihilate every undertaken effort. Things to be considered should include the provision of technical and material support to AE for the intensification of their farm activities and the acquisition of adapted and efficient agricultural implements.

3.2.6 Description and Analysis of Farm Economic Management

Relative to the project basic orientation, one aspect that the evaluation team thought should be given priority in the extension package is the inclusion of **Farm Economic Management** in the project training modules. However, our various discussions with the project team revealed that the project team did not consider this aspect. For example, there was no indication

anywhere that a formal committee was set up for the management of demonstration farms, just as sales, purchases, and warehouse committees were formed under the income-generating activities. The consequence of this situation is that the ABEs, (except for two or three) cannot present any accurate statement of their CDF operating costs, as no actual record was made of farm labor time, valued revenues from investments in quickset hedges and windbreaks. Even the quantities of applied fertilizers were often not recorded.

3.2.7 Conclusions and Recommendations

3.2.7.1 Conclusions

The evaluation team notes that the project team does not consider the demonstration farm as part of the enterprise to be built, the demonstration farm being assimilated to an entity established only for NRM technologies. Therefore, it would seem that enterprise activities did not start until after the infrastructures required for certain targeted areas such as cattle fattening, market gardening, cereal mill, cereal warehouse, and incidentally the nursery, were in place.

3.2.7.2 Recommendations

To correct this situation, the evaluation team recommends that the project management encourage the establishment of demonstration farm committees, and take appropriate measures to train ABEs in the economic management of their farms which should be considered as part and parcel of ABEs. This should be done by ensuring that the technical training provided be followed by economic training. This approach should allow the project to not only pursue its entrepreneurial orientations but also to meet the need to use NRM technologies. Support should also be provided to ABEs to help them undertake entrepreneurial activities directly based on the valorization of NRM technologies, such as compost production (at zones where raw materials and water exist), or enterprises based on the valorization of cattle feed resources (haymaking, purchase of stocks of groundnut leaves, cattle cowpea etc.).

3.3 Income-generating Activities

3.3.1 Implementation Strategy

Income-generating activities are collectively conducted within ABEs. Activities likely to be considered are identified on a participatory basis using the RRA method. This approach allows to determine the needs of the target beneficiaries, occasionally taking into consideration possible predispositions for certain activities. The final selection of activities is made following the conduct of a marketing survey and the development

of a business plan both of which are decision-making tools to assess activity relevance and profitability.

The project assists in removing major constraints to the launching of activities by providing basic investments and the revolving fund. Concerning basic investments, the infrastructures and equipments are provided by the project in the form of grants (direct assistance). The construction of infrastructures must be preceded by a technical study in which beneficiaries participate. Construction works are contracted, and the beneficiaries contribute in kind.

Concerning the revolving fund, it is supplied by proceeds from the activities of the demonstration farms and by a bank loan. In this regard, the project assists ABEs in the cultivation of the demonstration farms by providing inputs in the form of grants. The project facilitates AE access to credit (indirect assistance), by helping them form GIEs, which are enabling legal frameworks for this purpose, and by negotiating more flexible credit terms with banking institutions. Thus, protocols of agreements were signed between the project on the one hand, and CNCAS and ACEP on the other hand. Under these protocols, the project deposited with these two institutions a guarantee fund covering respectively 70 and 75% of the ABEs' estimated borrowing ceiling. The initial loan is not subjected to a deposit by the AE. However the latter is required to support on its own funds the payments for opening a savings account (CFAF 25,000) and a current account (CFAF 50,000), as well as the insurance fees (CFAF 16,000) and loan documentation costs (CFAF 25,000). The other terms can be summarized as follows:

- CNCAS: interest rate 13%; maximum repayment period 2 years; return 3% interest on guarantee funds for good debtors; repayments at due dates; 10% personal capital contribution for second loan; maximum 21 days to process loan application.
- ACEP: interest rate 16%; maximum repayment period 2 years; repayments at due dates or according to production cycle; automatic renewal of credit for sound ABEs.

Credit is given to ABEs on a collective basis, according to the principle of "joint and several guarantee".

The promotion of the self-management of AE income-generating activities will require AE member training in accountancy and management. The training modules developed for this purpose are focused on the preparation of a forecast operating account, the maintenance of a cash journal and inventory journal.

For the conduct of technical operations and the management of other operations, ABEs receive the assistance of the project

field agents, and the supervision of the managers of the different project components.

3.3.2 Description of Project Achievements

There are currently five income-generating activities developed by the project. They include:

- cattle-fattening
- cereal bank
- market gardening
- forest and fruit tree nursery
- cereal mill

Those ABEs having actually started their activities are exclusively first and second generation ABEs. The recently created third generation ABEs are still undergoing preliminary studies.

The status of the implementation of income-generating activities can be summarized as follows:

3.3.2.1 Cattle fattening

Cattle fattening is ongoing in 2 ABEs, those at Ida Mouride and Keur Yorodou. These two ABEs are at their second operation which started in July 1995 and will continue until September-October. The initial operation began in February 1995 and ended in June 1995.

Each AE has received credit from CNCAS in the amount of 4 million⁵ CFAF over a 9-month period, with due dates set for November 5, 1995 for Ida Mouride, and January 12, 1996 for Keur Yorodou. The infrastructures and equipments provided by the project include for each AE, 1 well, 1 basin, 1 cowshed, and 1 manual pump, for a total cost of CFAF 8,021,364 for Ida Mouride, and CFAF 6,767,262 for Keur Yorodou. In addition, each AE has received from the project a set of materials and tools for a total amount of CFAF 94,100.

For the Ida Mouride AE, the initial operation was a mixed one and concerned 28 heads of cattle and 10 sheep. The second operation, exclusively cattle-based, concerned 47 heads of cattle (46 of which were purchased and one born during the initial operation).

For the Keur Yoroduou AE, the two operations are exclusively

⁵ Business plans provided for a CFAF 5.300,000 loan against funding needs estimated at CFAF 14,285,250 including a CFAF 8.985250 project grant.

cattle-based. The initial one concerned 25 heads (including two births), and the second one 34 heads (of which 32 were purchased).

Illustratively, the real and simulated operating accounts⁶, respectively for the initial and second operations, were established from baseline data collected at the Ida Mouride AE, and show as follows:

Table No1: Real and simulated operating accounts, respectively for the 1rst and 2nd cattle-fattening operations conducted by the Ida Mouride AE

Item.	COSTS (CFAF)		PROCEEDS (CFAF)	
	1rst	2nd	1rst	2nd*
Purch. animals	3,095,400	3,721,225	3,876,300	150,000x46 =6,900,000
Feed	644,700	29,250		
Vet. care	125,000	10,000		
Transport	54,000	184,000		
Guard services	18,000	45,000		
Watering	6,600	-		
Market costs	18,350	154,000		
Amortizat.	259,704	129,852		
Fin. costs	-	420,000		
TOTAL	4,221,754	4,693,327	3,876,300	6,900,000
	BALANCE		-345,454	+2,206,673

* For the 2nd operation, the calf born during the 1rst operation has not yet reach fattening age.

In sum, the 2 cumulated operations considered over 9 months may give a positive result of CFAF 1,861,219, while the business plan forecast operating account anticipated a CFAF 6,213,716 result over a 6 month-period (December-May).

It is important to note that 6 other ABEs are already programmed for cattle-fattening. These are the Ndioum Gainth 1rst

⁶ It is important to note that these accounts do no include the cost of labor put by the 75 AE members into the activity.

generation ABEs, and the 2nd generation ABEs at Taiba Thialène, Mina Santhie, Goudié, Ndiambour and Keur Ayib.

The Ndioum Gainth AE should have started at the same time as Ida Mouride and Keur Yorodou, but its loan application was rejected by CNCA because some of its members belong to delinquent GIEs or village associations.

3.3.2.2 Cereal Bank

This activity is operational in one AE only, i.e. the one at Taiba Niassène. The latter has received a CNCAS loan of 4 million CFAF over 9 months, with due date set for November 5, 1995. The infrastructures and equipments were provided by the project for a total amount of 3,450,000 CFAF. They include a 1,000 ton (15m x 7m) storage unit. The project has also provided tools for an estimated CFAF 305,000. The operation started in February 1995 and ended in July 1995.

The real operating accounts for the 1st operation, established from data collected at the AE, are as follows:

Table No2: Real operating account for the 1st cereal bank operation conducted by the Taiba Niassène AE.

COSTS (CFAF)		PROCEEDS (CFAF)
Item	Amount	Amount
Millet purchase	3,273,736	4,406,013
Corn purchase	726,250	
Guard services	20,000	
Transport	19,530	
Amortization	169,002	
Financial costs	420,000	
TOTAL	4,250,268	4,406,013
	BALANCE	+155.745

For this operation, the business plan forecast operating account shows a positive result of CFAF 1,328,833 over a 6 month period from December to May, and of CFAF 858,833 for the same duration but from June to November (unfavorable because purchases occur during the hungry period, and sales during the harvest period).

Two other 2nd generation ABEs are programmed to benefit from the same activity, i.e. the Segré Gatta and Mbaracounda ABEs.

3.3.2.3 Forest and Fruit Tree Nursery

Only one AE, Thiomby Sérère, is benefitting from this activity. The activity has actually started but under rather special conditions compared to other ABEs. The AE did receive infrastructures and equipments in the form of a CFAF 3,884,977 project grant. They include 1 well, 1 basin, 1 manual pump and wire fencing. The project also provided tools in the amount of CFAF 288,000. However, the AE did not receive CNCAS credit. Instead, the project gave a CFAF 289,600 reimbursable agricultural credit in the form of inputs (sheathes and seeds...). For the 1st operation, the AE produced a total of 25,758 seedlings whose unit sale price was said to be CFAF 70. The real operating account for this first operation, put together from data collected at the AE is as follows:

Table No3: Real operating account for the first nursery operation conducted by the Thiomby Sérère AE

COSTS (CFAF)		PROCEEDS (CFAF)
Item	Amount	Amount
Input purchase	170,020	1,803,060
Amortization	487,920	
TOTAL	657,940	1,803,060
	BALANCE	+1,145,120

The business plan forecast operating account shows a positive result of CFAF 2,050,711 for the 1st operation.

It is important to note that the AE sold 17,002 seedlings, most of which were purchased by the project to supply 16 other ABEs, according to a program aimed at providing 1,500 seedlings per AE.

3.3.2.4 Market Gardening

This activity did not actually start in any AE. Six ABEs were scheduled to benefit, including 2 which are already ready to start, i.e. the Djama Thiéwy and Ndiouffène Péréthie ones. These ABEs have already received infrastructures and equipments for respectively CFAF 11,231,591 and CFAF 8,543,260. In addition, each have received from the project tools worth CFAF 337,900.

Pending the favorable period for launching this activity, these ABEs are involved in rainy season market gardening. Thus, the market garden established by the Djama Thiéwy AE is already 50% planted with "jaxatu" and hot pepper. The Ndiouffène Péréthie garden has already been plowed, and is about 1/4 planted with

eggplant nurseries. For these operations, the two ABEs have reportedly decided to not request for CNCAS credit for the first operation, and to, instead, use the proceeds from their demonstration farms.

To avoid possible marketing difficulties, the project provided support to the ABEs to create a weekly market in the close surroundings of the villages concerned.

3.3.2.5 Cereal Mill

Four ABEs are involved, and actually started the activity, i.e. Ngouye Diaraf, Kouyane Kandji, Barone and Bouchra, which are all 2nd generation ABEs. Each received from the project a total grant comprising 1 mill, 40 liters of fuel and 4 liters of lubricant. The ABEs provided the required shelters.

The real operating account for the Bouchara mill, established from data provided by the AE, is as follows:

Table No4: Real operating account for the Bouchara AE mill

Item	COSTS (CFAF)		PROCEEDS (CFAF)	
	1rst month	2nd month	1rst month	2nd month
Fuel	42,000	24,000	158,130	113,000
Lubricant	3,600	3,600		
Millers (2)	30,000	26,000 7,000		
Repairs		10,000		
Shelter rental	10,000	25,000		
Amortizati on (1.5 M/5 years	25,000			
TOTAL	110,600	95,000	158,130	113,000
	BALANCE		+47,530	+17,400

The management of mills is governed by the following principle: 1/4 of net proceeds for maintenance and repairs; 1/4 for millers' compensation; 2/4 for depreciation allowance. The project has sensitized ABEs to the need to open a savings account to deposit the depreciation allowance.

3.3.3 Critical Analysis

3.3.3.1 Strong Points

The project is gradually succeeding in introducing a spirit of entrepreneurship among its recipient population. To date, 8 ABEs have already started their income-generating activities, and another 8 are programmed.

The identification of income-generating activities through a participatory approach, allows to respond optimally to the population's needs, and to increase their interest in project achievements of which they are the primary beneficiaries. Access to credit has been made much easier, through the project assistance in turning ABEs into GIEs on the one hand, and in obtaining concessional credit terms from CNCAS and ACEP (reduced interest rate, diligent processing of loan applications, implicit grace period related to repayment of total credit at due date) on the other hand.

By totally supporting infrastructure, equipment and tool costs in the form of grants, the project has been removing major constraints related to investment costs which could have impeded the development and launching of income-generating activities.

By implementing marketing surveys and business plans for the various income-generating activities identified, the project has provided decision-making tools for choosing activities on the basis of objective sustainability and profitability criteria.

Proceeds from demonstration farms certainly contribute to increasing the potential for funding income-generating activities, and constitute for such activities as market gardening and nursery which do not require substantial revolving funds, stopgaps for credit.

The empowerment of ABEs for the conduct of technical operations and the management of income-generating activities through training provided by the project to AE members, should help in the rapid ownership of these activities and hence, in their sustainability.

The income-generating activities allow ABEs to develop among them a sense of initiative. Likewise, a sense of respect for commitments made is also developed through the success achieved in implementing the revolving credit fund⁷.

⁷ This credit is given by AEs to their members to purchase agricultural inputs for their own farms or for secondary income-generating activities.

The food products derived from income-generating activities, contribute to meeting the food needs of the population of the project zone, and thus to improving their food security. Moreover, when the income-generating activities reach their maximum profitability level, they will help increase the project beneficiaries' income and purchasing power which was badly hit by the devaluation of the CFA franc.

3.3.3.2 Weak Points

There has been a significant delay in the development of income-generating activities. As a matter of fact, after 3 years of project implementation, only 8 ABEs were able to start such activities.

Collectivization of income-generating activities does not seem to be the best way to foster entrepreneurship in terms of maximized profit-making. In fact, it is generally recognized in the project zone that collectivization does not offer an enabling environment for effective individual productivity. It can also create constraints to the management of individual businesses (lack of labor time).

Access to credit remains subjected to the special terms granted by CNCAS, and to certain facilities offered by the project (e.g. guarantee fund). However, it would be illusory to believe that this situation can continue after the PACD. Thus, sustainability is greatly compromised. In addition, although CNCAS seems to be playing the game, it is nevertheless somewhat skeptical as to its end. This is demonstrated by the fact that it has taken few risks in it, and has expressed a wish to exert control over the conduct of the operations it has funded (request made to the project to jointly assess completed operations).

As for ACEP/Kaolack, despite the protocol of agreement signed between its headquarters in Dakar and the project, it does not yet seem to accept the terms proposed to it, including, for example, the selection of ABEs eligible for credit. They say they must "control the game". In fact, even the project itself is also showing some reluctance related to the method of calculation of its interest⁸.

It is clear that the ABEs support the project as demonstrated by the implementation of income-generating activities. However, this support seems to be related to the immediate advantage provided by project in-kind (or cash) grants,

⁸ ACEP is said to calculate its interest using, not the conventional method of compound interest, but rather another method which maintains interest on the initial capital, even after partial repayment of the credit.

and to easy credit access. There is no tangible evidence of genuine commitment, such as the existence of a joint and several guarantee built from the members' own funds.

Marketing surveys and business plans are not properly used for judicious selection of activities. As a matter of fact, the infrastructures required for certain activities were designed and executed before the development of these marketing surveys and business plans. Also, activities are implemented without always taking account of the business plan forecast budgets.

The ABEs are not adequately involved in the design and execution of basic infrastructures and equipments. This results in long delays in the execution of works, certain infrastructures being unresponsive to needs (e.g. the Ida Mouride fattening shed which is badly protected against bad weather conditions) while others are left unused (e.g. basin and pump of the Keur Yorodou wells. The brackish water of the old wells is used to water the cattle. It is preferred to the fresh water of the new well).

The initial cattle-fattening operations occurred at periods which were rather unfavorable for good financial profitability. The real operating accounts speak for themselves. It would seem that the project meant to honor its commitments towards its beneficiaries. This may have been a commendable gesture, but it remains that the risk of a financial deficit was foreseeable, which could have jeopardized the repayment of credits and therefore led to some disaffection on the part of the beneficiaries.

The first nursery operation implemented, did not take account of the potential markets represented by retailers, Rural Communities, NGOs and village associations. Only the project exclusive needs for seedlings for other ABEs, were considered.

ABEs are insufficiently skilled in the implementation and management of income-generating activities. Profitability standards are rarely followed. The same is the case with cattle-fattening, for example concerning the weight of animals to purchase, and the monitoring of certain performance parameters. Likewise, cash and stock journals, if any, are generally poorly maintained.

ABEs do not seem to receive adequate counseling on the most efficient way to use proceeds from income-generating activities, including the need to strengthen or diversify them through self-financing. Some AE members tend to think that proceeds are mainly intended to solve personal problems related to social events and/or agricultural production (input purchase). This can be a source of conflicts--detrimental to the sustainability of the ABEs.

The way mills are currently managed seems to be more fitting to an action for relieving women of their chores than to real financial profitability, as demonstrated by the hardly motivating results obtained from the first operations. Also, this may reflect the fact that the selection of recipient villages and ABEs did not follow related profitability standards. The primary criterion remains the availability of grains in order to reach a rate of equipment use which satisfies these profitability standards.

3.3.4 Conclusions and Recommendations

3.3.4.1 Conclusions

The implementation of income-generating activities is without doubt a valid means to promote rural entrepreneurship. In this regard, the project approach to achieving one of its major objectives, is relevant. However, profitability, or in other words "profit maximization," remains the basis of any enterprise. From this perspective, the project actions show notable deficiencies.

For the selection of activities, it is very good indeed to involve beneficiaries. However, considering the ABEs' current development state, their opinion should not be dominant. Such decision-making tools as marketing surveys and business plans should have fully played their roles. For now, they seem to be largely under-used by the project both in making decision and implementing activities, although they provide most useful information on the technical conduct of operations and the illustrative financial plans of these operations on the one hand, and on the potential for marketing products from income-generating activities on the other hand.

The fact of tying project grants to the establishment of GIEs, rather than work directly with existing GIEs, does not always durably guaranty the solidarity sought through a collective credit system.

The credit facilities granted by CNCS to ABEs are certainly limited in time. Indeed, the project covering a substantial portion of risks through a guarantee fund, as well as the insurance underwritten by ABEs, largely contributed to the granting of such facilities. This situation can certainly not be durably maintained. Admittedly, sound entrepreneurship is also related to a capacity to adjust to the credit terms commonly practiced by banking institutions, rather than to transient facilities.

The project overall infrastructure, equipment and tool grant also follows the "same" project logic of facilitating the development and implementation of activities. However, this

practice may prove detrimental to the entrepreneurship the project wishes to foster among its beneficiaries. As a matter of fact, an enterprise depends first and foremost on investments, and its profitability also largely depends on related costs. The ABEs tend to consider investments as free gifts offered by the project, and the project itself does not think differently since depreciation allowances are never included in result accounts.

Infrastructure construction has always been contracted, with the AE members' participation. This participation remains insufficient because the ABEs certainly possess real capacities untapped by the project. In fact, certain AE members have been employed by project-contracted firms. Thus, the ABEs would certainly benefit if a special provision for priority use of their skills was included in the contracts signed between the project and these firms. This would provide ad hoc employment to AE members, but more importantly, could allow ABEs to participate more substantially in construction works.

The continuous training offered by the project contributes to providing and/or improving the skills of AE members in the technical conduct and implementation of income-generating activities. The cascade approach used by the project presents the advantage of a rapid replication, which produces greater impact. However, while this approach can be efficient if the modules cover simple and practical topics, it can likewise be of limited efficiency if topics are more technical (technical conduct of activities, management etc.). In the latter case, the level of knowledge of the project field agents could be a major constraint to accurate understanding of these topics and accurate transmission of related messages to beneficiaries. Appropriate training like the one the project gives to its agents is no doubt a necessary condition which, to be sufficient, must be reinforced by practice in related areas. Clearly, the deficiencies noted in the technical conduct and management of income-generating activities are largely related to this.

The need for a self-financing capacity for ABEs is not yet clearly reflected in the project awareness actions. Entrepreneurship implies a management mode oriented towards sound use of the income generated from conducted activities. Therefore, the ABEs should envisage to diversify their income-generating activities (this is being done on an individual basis with the revolving credit fund), and to renew and/or expand existing ones after a definite period of time (re-investment). The latter does not seem necessary to them.

3.3.4.2 Recommendations

The above conclusions call for the following recommendations:

The ABEs are and can be involved in the identification of income-generating activities, but final selection of the latter must be guided by marketing surveys and business plans.

Investments must not be made until after the conduct/development of marketing surveys and business plans, and in conformance with related standards.

The ABEs should be effectively involved at all levels of the development of their activities. Also, their participation in the design and implementation of infrastructures should be encouraged. Thus, for construction works, their skills and capacities should be utilized to the extent feasible.

A collective credit system remains unavoidable. However, it is important to gradually return to the credit terms commonly applied by banking institutions, before the PACD. While credit can be given on a collective basis, it is generally admitted that individualization of income-generating activities ensures more productivity, and consequently, more profitability. To this effect, the AE members could contribute, each within his/her means (without any restrictions), to the payment of the capital contribution required for credit. Once received, the credit would be prorated to each member on the basis of their respective contributions, but at an interest rate slightly higher than that of banking institutions, in order to be able to cover AE management expenses.

ABEs should be more sensitized concerning the use of proceeds from income-generating activities. It is important that they be able to gradually build their own guarantee fund, as well as depreciation allowances to be deposited in a savings account.

To anticipate post-project difficulties, it is important to start considering the establishment of a federation of the project recipient GIE/ABEs. The responsibilities of this future federation could include, inter alia, the management of the project guarantee fund domiciled at CNCAS and ACEP.

The AE training in technical conduct and management of income-generating activities, should be strongly reinforced. The resources and staff time allocated to this training are rather limited relative to its importance.

A systematic evaluation of the operations undertaken under the income-generating activities, should be conducted. This would allow, for example, to measure gaps between forecast and real operating accounts, and to correct certain deficiencies in both technical conduct and operations management.

3.4 Training

The objectives of the training program are:

- a) To improve the rural population's basic skills and knowledge, to increase their agricultural productivity and income, while ensuring sustainable natural resource use;
- b) to enable the rural population to manage agricultural enterprises through training in NRM, marketing, management and accounting;
- c) To contribute to the literacy of the population.

3.4.1 Implementation Strategy

Training is pivotal to the sustainability of project activities, and allows the replicability of these activities by the population. One important aspect of training is its practical application under the various AE activities.

Training must be continuous and sustained as each stage in the life of the enterprise corresponds to a level of knowledge that is required for proper operation.

Prior to their selection, the project field agents received three-month training in all project aspects. The selected agents are mainly responsible for training the population. According to the Kaolack project personnel, it was after distortions were noted in the dissemination of the training package that an "in situ" training strategy was adopted. The specialists go to the field and give training in presence of the field agent concerned.

As for functional literacy training, classes exist in all project villages. In each village, a native of the village (preferably a member of the AE) is trained to provide training. The village contributes the shelter, and the project provides materials for 20 individuals, writing boards and manuals, the facilitator's compensation (CFAF 10,000/month for 12 months).

The villagers contribute by identifying training needs and participating in the implementation of actions for which the project takes into account farmers' knowledge and know-how.

3.4.2 Description and Analysis of Achievements

The identification of training needs indicates a real effort to involve farmers early in the development of the training program. The survey conducted for this purpose, has allowed to define the overall training package, taking account of each program.

A more in-depth diagnosis would allow to determine at each zone farmers' priority concerns and levels of know-how in the different project activity areas. Periodically updated, this diagnosis would also allow to monitor the evolution of needs and to assess the impact of provided training.

From the cascade system which showed many distortions, the project has moved to an "in situ" strategy where the specialists themselves give training in presence of field agents. Obviously, the latter strategy has advantages, including the accuracy of messages, but it is not certain that the specialists can cover a large number of villages and at the same time accomplish the design and monitoring of the application of the training given by field agents under the implementation of the activities specific to their programs.

Several training packages were extended to AE members between July 1993 and August 1995. These included the following subject areas:

- NRM (on nursery, compost/manure, the role of quickset hedges and windbreaks, entrenching and contour lines, etc.);
- group dynamics (KAED objectives, conduct of meetings, rules of procedure, members' roles);
- agricultural technologies (thinning planting, plowing and weeding techniques, etc.);
- Management and accounting (book-keeping, record-entry/keeping, etc.);
- Soap making techniques; and
- Technical training: cattle-fattening, cereal storage, market gardening (staking), cereal mills.

Training areas	Nb sessions	%
NRM	230	49%
Ag. technologies	48	10%
Group dynamics	133	28%
Manag. techniques	49	10%
Tech. training	12	3%
Soap making	13	3%
Total training	474	

Training in agriculture and NRM accounted for 77%, and management/accounting for 10%, although most agriculture and NRM themes are not unknown to farmers following the intervention of several structures which extended them in the Peanut Basin. As for management, the farmers have limited knowledge of economic mechanisms and underlying market processes.

Training to the rural population was mainly given by project agents (90%), with the intervention of program specialists (23 times), the personnel of other services (21 times) and trainer-farmers (9 times). An average of 20 training sessions were given per agent per year for three to six assisted villages, which remains relatively low (except for such villages as Taiba Niassène, Keur Yorodou, Ségré Grata, Ida Mouride, etc., where there were more than 20 sessions. However, one can wonder whether this training was actually applied, given the techniques used in conducting such activities as compost, management, etc.

Women's participation in this training remains significant (65%). However, compared to their proportion in the composition of ABEs (77% of total membership), one can ask oneself certain questions. This situation can be related to the fact that it was the male-dominated pilot ABEs which were given more training.

There is also a strong presence of non-members (15%) which is more related to problems specific to membership level realities than to the interest of non-members in AE activities.

Concerning literacy training, the project started classes in 56 villages and currently has 230 trainees in first generation villages, and 500 in second generation villages. For third generation ABEs, we have not been able to obtain all related data.

The facilitator's project-supported compensation is CFAF 10,000 per month for a 12-month period. The ABEs have been showing genuine interest for literacy training which has given tangible results and gained ground in certain villages: at Diama Thiéwy, a former high school student has started a class in the neighboring village of Thyssé with 49 trainees paying each CFAF 500 per month.

The manuals used by facilitators are those of the women's groups promotion project. The messages diffused are those of the groups in general, and while they remain close to the project concerns, should be used differently.

There is in the different classes a good system for monitoring student progress. The ABEs maintain various books on student attendance, evaluation, etc.

3.4.3 Conclusions and Recommendations

a) Conclusions

Significant efforts were made by the project in the area of training and literacy training.

The choice of the facilitator in the village itself, and his relatively low compensation are conditions conducive to the continuation of the activity by ABEs themselves, and therefore, to its sustainability.

The time that the project agents devote to training seems limited, because training must have a central role in project activities in general and in the work of the project agents in particular.

The project focuses more on agriculture and NRM-related themes, to the detriment of economic management.

There are serious deficiencies in management training and record-keeping. Our discussions with the project team revealed that it was the specific level of training which did not allow them to put in place the appropriate tools. In fact, the latter are used in a few ABEs only (e.g. Diama Thiéwi). However, in almost all visited ABEs, there are at least a few members who can read and write and who could have kept management records under the control of the project field agent. It is important that ABEs be introduced to management as early as the establishment of demonstration farms.

b) Recommendations

Given the importance of entrepreneurship under the project, training should be more focused on management-related aspects.

Concerning literacy training, real progress has been made. However, improvements could be made in the functionality or relevance of this training (development of messages on project activities, basic management training related to demonstration farms and income-generating activities, preparation in local languages of data-sheets on technologies diffused through demonstration farms and other income-generating activities). On the whole, for all trainings, the project should work towards developing training materials which the ABEs could use at any times. More importantly, this would increase awareness of the importance of written documentation in the life of an enterprise.

As for management, field agents should devote more time to management training to correct the serious deficiencies noted in the field.

3.5 Women in Development

3.5.1 Strategy

The program strategy is to involve as many women as possible in the activities of the project which should help reduce the burden of their chores by providing adequate infrastructures. The savings in work time would facilitate and further more productive participation of women's groups in the rural development of the region of Kaolack.

Special attention should be given to the effective participation of women in the various project activities. The program should identify women's assets and constraints in order to improve this participation.

Using a major outreach and training program, the project should focus on:

- the identification of problems encountered by women in implementing their activities;
- seeking solutions to these problems; and
- assistance/counseling to effectively and concretely orient women in the development of sustainable and economically profitable agricultural enterprises.

3.5.2 Description and Critical Analysis of Achievements

Various training packages were implemented which had a direct impact on women's working conditions and socio-economic living standards. They include literacy training, nursery establishment and tree planting techniques, NRM, marketing and micro-project management, formation of mill management committees, soap-making techniques, improved energy use.

There were also interventions for alleviating the burden of women's chores:

- 4 millet mills established to generate income;
- female members of 9 ABEs participated in artisanal soap making training; and
- improved ovens were made in 3 villages.

For cattle-fattening, we noted in the field that women were confined to cleaning and water-fetching chores, although they were stake-holders for the implementation of this activity.

For technology transfer, a few constraints were noted:

- inputs are often managed by men. It is men (spouse, father or brother) who, every rainy season, allocate plots to women, which are often different from those of the previous season; often women give their seeds to their husbands, and it is at the time of manual weeding that they receive their designated plots;
- a lot of women mainly do rainy season market gardening, an area in which the project does not extend improved technologies;
- overworking does not allow women to adopt certain technologies. On all (men's and women's) farms in general, women handle a large share of manual labors such as weeding, hoeing and thinning, in addition to household chores and the maintenance of their own farms.

There is a sustained presence of women in the project different training actions. This reflects their desire to change their lots by introducing innovations in the conduct of their activities. Women are also receptive to environment protection practices, and the project could conduct several activities in this area for them.

The grain mill activity is increasingly being selected as a favorite income-generating activity. Grain mills are managed according to the same principles as for mills offered by the GOS Community Development Directorate (which provided mill management training). The latter's management is governed by a community-based management principle. However, if mills are to really become income-generating activities rather than activities to merely alleviate the burden of women's chores, their management mode will have to be revisited.

This mill management mode should include a computation of profits in order to better assess economic profitability and guide ABEs. Confusions were noted in the field in the use of depreciation allowances. The Bouchara AE which we visited, has not yet opened a bank account, and is planning to use depreciation allowances to fund other activities. This confusion could compromise the replacement of mills over time.

3.5.3 Conclusions and Recommendations

a) Conclusions

In natural resource management, land constitutes a major stake. Despite the law on the national domain which allows any individual (man or woman) to be allocated land, very few women actually request for land. This is related to several constraints:

- lack of knowledge of their rights;

- socio-cultural considerations related to fear to violate the standard rule of obeying one's husband; and
- lack of information on the procedures to follow.

The village of Mabo is a concrete example of the difficulties which women encounter in this area. Despite a CFAF 200,000 payment and the application of project-diffused technologies on their demonstration farms, women were dispossessed of their plots, which terminated their work with Africare.

Other constraints related to overwork, lack of water in villages, etc., remain critical to participation.

The removal of these constraints to participation clearly requires a long, difficult and taxing process which implies the questioning of certain beliefs and practices, but will bring change.

For the evaluation team, the lack of business plans for mills while such plans exist for all other activities, indicates that the activity is not considered as one really intended to increase income. Profits are not computed and there is no mechanism to assess economic profitability.

During our field visits, we observed interesting revolving credit fund experiences among several women's groups. Some women's groups, like the one at Malem Serigne which succeeded in giving its members credit between CFAF 15,000 to CFAF 20,000, are beginning to gain some experience in this area. The project should help them to have access to bank credit. It is important to note that these groups succeed in using their credit on an individual basis while maintaining solidarity among the group.

b) Recommendations

Women's specific needs are in general access to inputs to undertake income-generating activities, and the alleviation of the burden of their chores. However, it is important to safeguard their strategic interests, and for this purpose, to conduct a gender analysis to define these interests.

With respect to enterprises, it is important that women engage in productive business opportunities, be able to obtain credit to fund their activities, be involved in local NRM (or have access and control over resources), should the context for decentralized NRM be clarified.

Technological packages diffused on demonstration farms should also include crops grown by women such as vegetables.

Technologies to be diffused could include: improved vegetable seeds, transplanting techniques, fruit tree windbreaks, low land cultivation, etc.

The project should consider creating for women savings and credit unions, trade and service enterprises to extend the range of income-generating activities to include other areas in which women have expertise. The project credit system should also further women's access to bank credit.

In order to give the mill activity the nature of an enterprise, the project should develop a system which relies on financial profitability, including studies and business plans.

3.6 Project Monitoring/Evaluation Information System

3.6.1 Implementation Strategy

The information system revolves around three items. The first item proposes to periodically provide data to guide and support certain project activities, especially income-generating activities. The second item is meant to produce diagnostic data to inform the decision-making process. The third item is designed to provide data for the periodic monitoring and evaluation of project activities.

For the development of the system, the project uses, as needed, both internal and external expertise. Within the project, design work is handled by the specialist of the relevant project component, in collaboration with the data analyst. Baseline data is collected by the project extension agents, then processed and findings analyzed by the data analyst. For data processing, the project has a 230 Mo micro-computer and SPSS and DBASE software.

3.6.2 Description of Achievements

3.6.2.1 Under the Information/Support Data Item

The project is undertaking a market monitoring survey primarily aimed at following the evolution of agricultural commodity prices in order to provide useful information to ABEs on appropriate periods for their business transactions. This survey concerns 11 weekly markets selected by the project extension agents. Marketing data is collected on a fortnightly basis⁹.

⁹ At the beginning of the survey, data was collected on a weekly basis.

3.6.2.2 Under the Diagnostic Data Item

The project undertook various types of surveys, including:

- RRA surveys to understand the socio-economic realities of project villages, and to identify income-generating activities of possible interest to the population. 23 villages (1st and 2nd generations) were already surveyed, and 35 others (3rd generation) are being surveyed;
- surveys to identify the population's training needs;
- surveys to identify forest species adapted to the needs and realities of the project zone;
- specific technical studies, including one for the Keur Yorodou well;
- specific cross-cutting studies, including studies on household consumption patterns and a strategy for funding targeted ABEs; and
- marketing surveys and business plans to assess the appropriateness and profitability of the income-generating activities planned for ABEs.

All surveys were implemented by the project technical team according to the above-described strategy and organization. As for studies, the project contracted external expertise to conduct them.

3.6.2.3 Under the "Project Management" Data Item

The project commissioned a baseline survey to establish benchmarks for the project zone. This survey covered 12 villages (6 1st generation ones, and another 6 2nd generation ones). Data collection sheets were designed to monitor the evolution of field activities in the different AE villages, and that of certain performance indicators. Monthly reports covering various project activity areas (including coordination), annual reports the latest of which dates back to 1993/1994, and multi-annual reports, were also prepared. The last two types of reports are submitted to USAID for approval. A monthly summary report of the field agents' activities is prepared by the project data analyst on the basis of the reports sent by these field agents.

3.6.3 Critical Analysis

3.6.3.1 Strong Points

The project has a rather remarkable data bank built upon

work done by both the project technical team and external expertise. The existing information system as designed and currently operating, is responsive to project needs under the three above-described items. The various project reports allow to monitor project technical and administrative implementation. The project existing computer equipment and tools are adequate for the operations to be performed for the current needs of the information system.

3.6.3.2 Weak Points

The system does not allow to assess the project direct and indirect impact at the level of project villages. Indeed, there are no systematically established benchmarks at this level which is in fact where impact can be assessed with a sufficient degree of reliability. The RRA surveys, despite the considerable volume of information they generate, do not include quantified data which can be used as benchmarks. This is however understandable because this information is not predestined for monitoring and evaluation purposes.

The system does allow to monitor the implementation of project operations and field activities, but is of limited efficiency in assessing project outputs, due to the lack of benchmarks against which to measure project performance. The absolute data established by the project as the outputs of some activities, can have no real value in the absence of benchmarks and targets.

The survey for monitoring project field activities may pose a question of reliability in this that the same individuals who are responsible for the implementation of these activities also collect the related data. Thus, not only do they have to be both judge and judged as it were, but also to perform regular duties as trainers and advisers.

The system does not include a formal survey unit composed of survey agents, controllers and supervisors to monitor markets, which challenges the reliability of the data. Also, the choice of markets to be monitored does not seem to meet specific criteria (typology), nor was the bi-monthly timing determined on the basis of any variability in the indicators used, including prices.

The information provided by the market monitoring system, is often not communicated to ABES which should be the primary users.

3.6.4 Conclusions and Recommendations

a) Conclusions

The project existing information system includes a wealth of baseline data and various internal reports needed for project operations and implementation. However, there is much room left for improvements to be able to cover all the needs of such a project.

As a matter of fact, the performance of ABEs in terms of application of improved agricultural practices, NRM, yield and income increase, etc., are assessed in absolute terms, in the absence of benchmarks against which to measure the positive variations imputable to actions undertaken under the project.

The information system is not fully and judiciously used. This was noted in the analysis of income-generating activities, in terms of inadequate use of marketing surveys and business plans in selecting and conducting these activities. This is also confirmed by the deficiencies noted in the use of the findings of the marketing monitoring survey. In fact the latter is very useful for ABEs in the implementation of their income-generating activities, since it may contribute to increasing knowledge of weekly market trends.

The project monitoring/evaluation can be undertaken otherwise than by an internal information system. In fact, the assessment of the project impact requires a level of effort of such magnitude that the existing system would find hard to achieve.

Major constraints are related to the limited resources the project has allocated to its information system. Indeed, as already mentioned, this system does not provide for a team of specialists in the field, and the data processing personnel is more than limited.

b) Recommendations

The above conclusions call for the following recommendations:

- The importance of the market monitoring survey for the conduct of income-generating activities by ABEs, requires its formalization by the project. To this effect, markets should be selected objectively, taking into account the different types of markets existing in the project zone. In addition, the timing for information collection should be set on the basis of an analysis of the variations over time of the indicators used.

- The findings of the market monitoring survey should be reported and the reports periodically transmitted to field agents to be communicated to ABEs.
- The market monitoring survey should be extended to include other commodities produced elsewhere, in order to identify other income-generating activities than those known to the recipient population.
- The project should move towards a more judicious use of its information system, including marketing surveys and business plans in selecting and conducting income-generating activities.
- Given the information system's limited resources, the project should use external expertise to conduct surveys for the monitoring/evaluation of its performance.
- The project field agents cannot in any way combine their tasks as trainers/advisers with data collection tasks. Should the market monitoring survey be formalized, the agents who would be assigned to it, could also collect baseline data for the monitoring of project activities.
- The information system which is a tool essential for the project and for other decision-makers, should receive more significant resources from the project. In this regard, in addition to a team of field agents who would serve as data collectors, it will be necessary to increase material and human resources for data processing.
- The information of the project personnel both at the central and field levels should be reinforced. To this end, the field agents' reports should be sent to the specialists of the various project program/components. Conversely, the specialists' monthly reports should be read by field agents.

4. GENERAL CONCLUSIONS AND RECOMMENDATIONS

Our analysis of the technical activities implemented under the project has led us to the following major conclusions and recommendations:

- On Project Organization

The evaluation team has noted that the project is considered as an example for its hard work. It is clearly willing to perform better, and has taken specific actions to overcome obstacles. In addition, it is giving sustained attention to the population's concerns, and is making efforts to take into account the ABEs' knowledge and know-how.

However, the ABEs' level of empowerment still remains low; activities are not sufficiently planned on a collaborative basis, and there are no plans for their monitoring by the ABEs and at the level of these ABEs. To correct this situation, the evaluation team believes that the project agents' assistance should mainly consist in training the population in the development of empowerment plans. It seems now more judicious to better train existing ABEs to strengthen their achievements than select others.

Workshops for programming all of the AE activities, including implementation schedules, the individuals in charge, required resources, and ways and means, should be systematically organized at the level of each AE. These workshops would also help to better determine people's skill levels to ensure more targeted training.

The issue of the choice of an angle of attack for the project has been at the heart of all our discussions with the project management. In this regard, to achieve improved strategic planning of project activities, it seems to us crucial that the project focus on the development of rural entrepreneurship, a window of opportunity still underutilized and which can, over time, ensure improved NRM. This approach, if used along with effective AE empowerment, will have the double advantage of meeting the population's needs by increasing their income, and of preserving durably the resource base --which is the source of this income-- by using enabling practices.

Therefore, the evaluation team recommends that the project focus on entrepreneurship based on agricultural and NRM activities, which would then become its angle of attack. To this effect, the project should give farmers an understanding of the basics of sound management in social, economic and environmental terms. Then the latter would concentrate on acquiring management capacities in order to explore all AE windows of opportunities in direct or indirect relation with NRM. For example, the range of income-generating activities could be extended to include

trade enterprises and savings and credit unions in which women have some expertise. Indeed, many women's groups intervene in these sectors and have succeeded in establishing interesting management modes.

For each activity, a time-line should be set, including all of the elements to be undertaken by the AE. An empowerment plan and program should be developed for each AE, including verifiable progress indicators for impact assessment purposes.

There is no question of reducing the number of group members even though we believe that it is too high relative to a focus on entrepreneurship. However, it is possible to develop a system whereby credit will be managed by the group which will contract it on its behalf and redistribute it to the sub-groups formed.

- On Agricultural and Natural Resource Management Activities

The evaluation team has noted that the lack of benchmark data on fertility factors for demonstration farm site soils, makes it now difficult to determine the added value of the technologies applied. In this regard, we recommend that the project management team further train ABEs in considering constraints to the productivity of their farms. One appropriate mechanism would be to establish, at the level of each AE, a demonstration farm committee whose responsibilities would include, among other things, the collection and discussion of any information needed for proper farm management.

The evaluation team has also noted that the lack of adoption of most previously extended agricultural techniques is mainly due to the existence of such bottlenecks as difficult access to agricultural implements, inputs and credit. We recommend that the project approach to optimizing farmer adoption of such techniques, be based on seeking solutions to these constraints which, if allowed to persist, could jeopardize all the efforts made. In this connection, the ABEs should be supported to intensify their productions and obtain appropriate and efficient agricultural implements.

Concerning quickset hedges, the evaluation team has noted a real shortage of "salane" (*Euphorbia baslmifera*) for most villages concerned, which adversely affects the adoption of this technology. In this regard, the choice of this technology raises the issue of its sustainability which is all the less assured as the level of efficiency reached by the quickset hedges cannot guarantee that the AE members and non-members will be prepared to volunteer significant effort to collect salane far from their regular work places. In these conditions, the team recommends that the project encourage instead the establishment of quickset hedges using thorny plants and other plants adapted to this technology for those villages where salane is badly lacking.

Concerning the management of established windbreaks, the team has noted that the results obtained are generally of an average level. However, in many villages (38), the nursery activities undertaken by the groups have allowed to distribute large quantities of seedlings for individual farms or for collective reforestation action.

Based on the above, the team recommends that the project, while continuing its awareness/outreach actions, develop initiatives to promote ABES or AE members who perform outstandingly in windbreak or other planting or maintenance activities. This promotion may be through an in-kind bonus in the form of agricultural implements, nursery, etc.

Concerning the implementation of erosion control activities in village lands, it is recommended that the project, in close relation with the CERs or farmers concerned, develop and implement plans for identifying sensitive sites in order to provide better guidance.

Concerning soil fertilization, the team recognizes that compost is without doubt a valid technology for the soil and weather conditions of the project zone. However, its sustainability and extent of adoption will largely depend on the conditions in which it will be diffused. Indeed, the hard work involved in digging pits, watering for dry season composting, as well as problems related to carrying the material, are major constraints to the adoption of this technology. Therefore the team recommends that the project moves further towards the extension of rainy season "Andean" composting.

The economic management of demonstration farms is little considered by the project team. It would look as though the CDF is not part of the enterprise to be built, and constitutes a separate entity established for NRM technologies. The evaluation team believes that one way of correcting this situation is that the project develop farm economic management modules to serve as comprehensive management tools for demonstration farm committees.

Among other responsibilities, these committees should handle all issues related to the transfer of technologies to the AE members' individual farms. To this effect, the project should provide them with the support required to inform and sensitize AE members to engage into the window of opportunity of entrepreneurship based on the valorization of natural resources, such as compost, fodder reserves, etc. This support could be provided through the implementation of technical and financial studies on the feasibility of this type of enterprise in favorable zones.

- On Income-generating Activities

The development of income-generating activities is without doubt a good means to promote rural entrepreneurship. In this regard, the project approach to achieving one of its major objectives, is relevant.

The ABEs can be involved, as they already are, in the identification of income-generating activities, but final selection should be based on conducted marketing surveys and established business plans. In this regard, the evaluation team believes that related investments should not be made until after the completion of these surveys and must adhere to the standards developed therein. The team believes that the ABEs should be effectively involved in the development of their activities at all levels.

Furthermore, the credit facilities granted by CNCS to ABEs are certainly limited in time. Indeed, the project covering a substantial part of the risks through a guarantee fund, as well as the insurance underwritten by ABEs, largely contributed to the granting of such facilities. This situation can certainly not be durably maintained, and the ABEs must be prepared to develop a spirit of entrepreneurship by developing a capacity to adjust to the credit terms commonly used by banking institutions.

The project infrastructure, equipment and tool grants can prove detrimental to the spirit of entrepreneurship it wishes to develop among its beneficiaries.

With respect to credit use, its individualization could lead to increased productivity and profitability for income-generating activities. To this effect, the AE members could contribute, each within their means, to the payment of the capital contribution required for credit. Once received, the credit could be prorated to each member on the basis of their respective contributions, but at an interest rate slightly higher than that of banking institutions, in order to be able to cover AE management expenses. Repayments would be on an individual basis within ABEs, but on a collective basis to banking institutions through the ABEs.

The evaluation team believes that a systematic evaluation of the operations undertaken under the income-generating activities, should be conducted. This would allow, for example, to assess gaps between forecast and real operating accounts, and to correct certain deficiencies in both technical conduct and operations management.

Finally, to anticipate post-project difficulties, it is important to start considering the establishment of a federation

of the project recipient GIE/ABEs. The responsibilities of this future federation could include, inter alia, the management of the project guarantee fund domiciled at CNCAS and ACEP.

- On Training

The evaluation team has noted the significant efforts made by the project in the area of training and literacy training. The choice of the facilitator within the village itself and the relatively low compensation for his services, are conditions favorable to the continuation of this activity by the ABEs themselves, and to its sustainability. However, there remains a lot to do in the area of training management and programming to ensure the autonomy of ABEs in terms of their capacity to manage their activities on their own.

In view of the above conclusions, the evaluation team recommends that:

- the project management team move towards developing its own teaching materials to further strengthen the achievements made, and better diffuse project messages; and
- the project agents devote more time to training and, for this purpose, prepare time budgets in order to be aware of, and strictly respect the lengths of time they must give to the different activities their support.

- On Women in Development (WID)

Women are currently confronted with many constraints of all kinds, and one will not overcome all of these constraints by merely focusing on responses to women's own needs. In this regard, the evaluation team recommends that a gender disaggregated approach based on a clear identification of the roles of both men and women in different activities within their societies, be developed in order to factor in women's strategic stakes and ensure their participation in the development of the project zone. The results of this approach would allow to promote productive participation of both men and women in undertaken activities.

- On the Project Management Information System

The project existing information system includes a wealth of baseline data and various survey/study and internal reports needed for project operations and implementation. However, there is room for improvements in order to cover all of the needs inherent in such a project. As a matter of fact, the performance of ABEs in terms of application of improved agricultural practices, NRM, yield and income increase, etc., are assessed in absolute terms, in the absence of benchmarks against which to

measure the positive variations imputable to actions undertaken under the project.

The information system is not fully used. This was noted in the analysis of income-generating activities, in terms of inadequate use of marketing surveys and business plans in selecting and conducting these activities. This is also illustrated by the deficiencies noted in the use of marketing monitoring survey findings which are very useful for ABEs in the implementation of their income-generating activities.

The evaluation team believes that the major constraints to the implementation of the established system, are related to the limited resources allocated by the project. The system does not provide for a team of specialists in the field, and the data processing personnel is more than limited.

The evaluation team recommends that the project use the services of external expertise to conduct performance monitoring/evaluation surveys. In addition, the information system should obtain more significant resources in terms of both field agents (for data collection) and other human and material resources for data processing.

The importance of market monitoring surveys for the conduct of income-generating activities by ABEs, requires its formalization by the project. To this effect, markets should be selected objectively, taking into account the different types of markets existing in the project zone. The timing for information collection should be set on the basis of an analysis of the variations over time of the indicators used. In addition, the survey findings should be communicated to interested ABEs.

Having also noted that the project field agents find it hard to fulfill responsibilities as trainers and baseline data collectors, the evaluation team recommends that the agents assigned to formal market surveys also collect baseline data for the monitoring of project activities.

ATTACHMENTS

- ATTACHMENT 1: SCOPE OF WORK (SOW)
- ATTACHMENT 2: LIST OF DOCUMENTS REVIEWED
- ATTACHMENT 3: WOMEN'S STRATEGIC STAKES
- ATTACHMENT 4: LIST OF PERSONS CONTACTED AND ABEs VISITED

ARTICLE III - PURPOSE OF THE TECHNICAL EVALUATION.

The purpose of the technical evaluation is procured under this contract to assess the extent to which the project as designed and implemented contributes to achievement of the Mission's Strategic Objectives #2 & 3, targets of opportunity in the area of credit and special concern (WID). In addition, the evaluation will identify technical and other constraints, and recommend technical and or other improvements to facilitate project's attainment of these objectives.

Key project strategies and assumptions will be reviewed and analyzed. The evaluation should recommend appropriate actions to be taken by the project in order to contribute to the Mission's strategic objectives.

Special attention will be given to the project's main components and monitoring methods to identify early corrections needed.

The ultimate purpose of the technical evaluation is (1) to provide guidance to USAID and Africare for making decisions concerning more effective implementation of KAED's three main components in keeping with the Mission's strategic objectives and (2) to recommend a course of action for preparing the design of the mid-term evaluation.

ARTICLE IV - SCOPE OF WORK

The evaluation team shall:

- Review and analyze the project technical approach and assess its appropriateness to the Mission's strategic objectives.
- Assess the progress achieved by the project components towards the attainment of the Mission's strategic objectives and determine whether they can be completed during the life-of-project. If the proposed activities do not significantly contribute to the Mission's strategic objectives, the evaluation team shall make recommendations as to how the project objectives/ component should be revised.
- Analyze the major constraints to project implementation and provide recommendations on how to address those constraints.

- the types of baseline data that need to be put in place in order to assess performance of ABEs in applying improved agricultural and NRM practices resulting in yield and income increases;
- the impact that the project components will have on achieving the Mission's strategic objectives;
- the market, credit and economic studies and/or database collection/analysis which the project should undertake to better assess the needs of the ABEs and measure the impact of project activities on an on-going basis;
- the economic impact of the project on rural economies and measures to accelerate short-term benefits;
- in conjunction with the team Ag. NRM Specialist, assess the reliability of the input supply, the direct financial assistance and the extension delivery system, and their adequacy for the project to achieve sustainability;
- in conjunction with the team sociologist, suggest strategies strengthening ABEs' income, farmers' productivity and short-term financial returns.

In her or his quality of team leader, the Agricultural Economist will be responsible for assigning responsibilities associated with the evaluation.

The Agronomist/NRM Specialist will examine and evaluate the methodologies used by the project to extend the agricultural and NRM intervention packages to farmers. Particular attention should be given to soil, crop and natural resource management practices introduced by the project. It should be determined if progress is being made in improving the soil structure in the demonstration fields. She or he will appraise the quality of training provided to the ABEs' members regarding the use of environmentally-sound NRM techniques, estimate the likelihood of farmers adopting the agricultural and NRM practices used in the collective fields in their own fields, and recommend new agricultural and NRM measures which conform to the Mission's strategic objectives.

The Sociologist will have extensive farmer organization and WID experience. She or he will examine the effectiveness and sustainability of the approaches used by the project to organize and involve farmers, men and women, and villages in the project areas. She or he will assess the assumptions, objectives and intent as outlined in the project multi-year plan and use relevant

ARTICLE VIII - PERIOD OF PERFORMANCE

It is anticipated that the evaluation will be conducted from April 17, 1995 through May 19, 1995. The English version of the report will be submitted no later than June 16, 1995.

Following is the proposed work schedule which may be revised as approved by the COTR, prior to the start-up of the evaluation:

<u>Day 1-2</u>	The evaluation team meets USAID staff and AFRICARE Representative in Senegal for entry meeting (review of evaluation outline, schedule, logistics, and collect documents).
<u>Day 3</u>	Evaluation team leaves for Kaolack. Africare/KAED staff briefs team.
<u>Day 4-5</u>	Site visits of demonstration fields and lucrative activities and ABEs' and interviews of field agents.
<u>Day 6-10</u>	Team continues site visits and interviews.
<u>Day 11-12</u>	Team continues site visits and final observations.
<u>Day 13-17</u>	Team submits draft preliminary report and continues site visits as needed.
<u>Day 18</u>	Team submits first draft to COTR.
<u>Day 19</u>	Team briefs USAID on technical evaluation findings and USAID provides feedback.
<u>Day 21</u>	Team revises the first draft based on USAID comments.
<u>Day 26</u>	Team submits revised second draft to COTR. Team Leader meets with USAID to discuss comments on second draft.
<u>Day 27-31</u>	Team Leader revises second draft and finalizes French version of report.
<u>Day 31</u>	Contractor submits final report in French.
<u>4 weeks later</u>	Contractor submits English version of final report.

PART I
SECTION D

PACKAGING AND MARKING

ARTICLE I - REPORTS

Pursuant to the clause of this contract entitled "Reports" (AIDAR 752.7026, Alternate 70), the cover page of all reports prepared by the Contractor (see Section C of this contract) shall include the organization name, project title/subtitle (Senegal Project Development & Support - Technical Evaluation of KAED), the project number (685-0294) and the contract number (RFP No. Senegal 95-002).

As appropriate, also note on the face page of the report and, when feasible, on the binding (1) "one volume only" or (2) "volume 1 of 2, volume 2 of 2, etc."

END OF SECTION D

PART I
SECTION F

DELIVERIES OR PERFORMANCE

ARTICLE I - PERIOD OF CONTRACT

The effective date for performance of this contract is the date of the Contracting Officer's signature on the Cover Page (SF 26), and the estimated* completion date is eight weeks after the effective date. *(An exact completion date will be inserted when the contract is awarded).

ARTICLE II - OPTION TO EXTEND THE TERM OF THE CONTRACT - SERVICES FAR 52.217-9 (MAR 1989)

A. The Government may extend the term of this contract by written notice to the Contractor within the period of contract specified in the Schedule; provided, that the Government shall give the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.

B. If the Government exercises this option, the extended contract shall be considered to include this option provision.

ARTICLE III - STOP WORK-ORDER, FAR 52.212-13 & (ALT.I) (AUG 1989)

A. The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either -

1. Cancel the stop-work order; or

for providing the personnel in the Contractor's proposals (and/or best and final offer) which is accepted by A.I.D. through award of this contract. Such individuals are considered key personnel. Unless failure to provide the personnel included in the Contractor's proposals for the key personnel positions specified above is beyond the control, and without the fault or negligence, of either the individual or the Contractor, failure to provide such key personnel may be considered non-performance by the Contractor. Prior to diverting any personnel assigned to key positions named above to other programs, the Contractor shall simultaneously notify the Contracting Officer and the COTR reasonably in advance and shall submit justification (including budget implications) to permit evaluation of the impact on the program. No diversion shall be made by the Contractor without the written consent of the Contracting Officer; provided, that the Contracting Officer may ratify in writing such diversion and such ratification shall constitute the consent of the Contracting Officer required by this clause. Proposed substitutions must be submitted simultaneously to the Contracting Officer and the COTR not later than 30 days after the diversion of any of the approved individuals. Failure to do so may be considered non-performance by the Contractor. The listing of key personnel positions may, with the consent of the contracting parties, be amended from time to time during the course of this contract to either add or delete positions, as appropriate. See Section C.

C. The Contractor personnel shall observe a six-day workweek during performance of the services required. No premium pay is authorized.

ARTICLE V - ILLUSTRATIVE LEVEL OF EFFORT

A. This is a completion type contract. Therefore the level of effort set forth herein is illustrative and will be used only to measure the Contractor's input.

1. Base Period

<u>Position Title</u>	<u>No. of Person-weeks</u>
Agricultural Economist	5
Agro-NRM Specialist	4
Social Scientist	4
<u>Total Level of Effort:</u>	13

ATTACHMENT 2

LIST OF DOCUMENTS REVIEWED

1. Plan multi-annuel de Africare/KAED, 1992.
2. Evaluation de l'impact du programme USAID/Sénégal, mars 1995.
3. Composante crédit du projet KAED. 17 février 1995
4. Proposition pour une stratégie de financement des entreprises à base agricole (EBA) ciblées par Africare dans le cadre du KAED (étude Crédit).
5. Plan annuel Septembre 1992-Octobre 1993, soumis en mars 1993.
6. Plan annuel Septembre 1994-Octobre 1995, soumis en novembre 1993.
7. Plan annuel Octobre 1994-Septembre 1995.
8. Troisième publication de fiches techniques sur les carrés de rendement, le compost, les techniques de réunion, soumis par AFRICARE.
9. Cinquième publication des documents bruts élaborés par les consultants lors de la formation initiale, sur les techniques de fabrication et d'utilisation du fumier. Guide d'apprentissage de dressage des bovins.
10. Document sur l'étude de marché, par Cheikh Tidiane SOW, Responsable du développement économique des EBA. Septembre 1994.
11. Premières séries de fiches techniques (arachide, maïs, souna, sorgho, niébé) par AFRICARE - Août 1993.
12. Plan de formation et de perfectionnement des populations rurales et agents de projet Ousmane BA, spécialiste de la formation, Mars 1994
13. Résumé du CPS de l'AID/Sénégal pour 1992 - 1997.
14. Rapport semestriel Octobre 1994 - Mars 1995.
15. Rapport mensuel de mai 1993.
16. Rapport semestriel Avril 1993 - Septembre 1993.
17. Rapport semestriel Octobre 1993 - Mars 1994.
18. Rapport annuel 1993 - 1994. Soumis en novembre 1994.
19. Rapport de synthèse sur les bases de données par AFRICARE - Astou DAKONO : Analyse de données. Août 1995.

20. Processus de diffusion des technologies par effet tâche d'huile : le cas des villages environnants des unités expérimentales de Koumbidia et Thyse-Kaymor-Sonkorong : I.S.R.A - Cheikh DIOUF - Ousseynou DIOUF - Amadou NDIAYE - Siaka SECK - Mamadou THIAM
21. Attitude des paysans des unités expérimentales face à l'introduction de technologies et pratiques culturelles - ISRA - Cheikh DIOUF - Ousseynou DIOUF - Amadou NDIAYE - Siaka SECK Octobre 1994)
22. Technologies de gestion des ressources naturelles et niveaux d'adoption dans les villages des unités expérimentales de Koumbidia et Thyse Kaymor-Sonkorong - ISRA -Matar GAYE - Désiré Y. SARR - Cheikh DIOUF - Ousseynou DIOUF - Amadou NDIAYE - Siaka SECK - Novembre 1994.
23. Test de l'effet du compost sur la productivité du mil en parcelles paysannes - ISRA - Manièvel SENE - Désiré Yandé SARR - Mamadou THIAM - Février 1995.
24. Synthèse des Activités du Programme de la Gestion des Ressources Naturelles - AFRICARE - Cheikh Tidiane TOURE.
25. Rapport Mensuel d'Activités - AFRICARE - Astou DAKONO - Mai 1995.
26. Rapport Mensuel d'Activités - AFRICARE - Etienne BADIANE - Mai 1995.
27. Fiche de suivi de culture (9 exemplaires).
28. Document sur le champ de démonstration - Source : Staff technique du projet - Représentants EBA - Mai 1994.
29. Fiche de suivi de cultures (4 exemplaires).
30. Fiche techniques de fabrication et d'utilisation de fumier ; Guide d'apprentissage de dressage de bovins - AFRICARE - M. SECK.
31. Synthèse des activités du programme de développement agricole - AFRICARE - Etienne BADIANE - Août 1995.
32. Semi-Annual Project Report - AFRICARE - March 94.
33. Rapport Semi-Annuel du Projet - AFRICARE - Avril-Septembre 1993.
34. Semi-Annual Program Performance Report - AFRICARE - October 1994 to March 1995.
35. Rapport Mensuel d'Activités - AFRICARE - Mai 1995 - présenté par Mme Jeanne Marie KOITE : Spécialiste promotion de la Femme.
36. Convention entre CNCAS ET AFRICARE - 17 Février 1995.
37. Protocole d'accord entre l'ACEP et AFRICARE concernant le Programme d'Appui aux Entreprises à base agricole (E.R.A).
38. KAED Project Credit Program - AFRICARE - April 1995.

39. Semi-Annual Project Report from AFRICARE - September 93.
40. Monthly Project Report from AFRICARE - prepared by Kaed Project Staff - May 1995.
41. Caractérisation des exploitations agricoles dans la zone d'intervention de l'Association Régionale des Agriculteurs de Fatick (ARAF) - ISRA - Janvier 1995.
42. Etude Diagnostic du village de Taïba Niassène - AFRICARE - Aminata KANE - Gourèye CAMARA - Serigne DIOP - Abdou Karim DIALLO - Coumba DIALLO - 29 Novembre 1993.
43. Etude Diagnostic du village de Keur Taïbe - AFRICARE - Astou DAKONO - Amy FAYE - Alpha DIALLO - Cheikh DIOUF - Mamadou Moustapha NIANG - Août 1994.
44. Etude Diagnostic du village de Taïbe Thiallène - AFRICARE - Amy FAYE - Martin D. NZALE - Cheikh T. TOURE - Dabel BA - Octobre 1994.
45. Etude Diagnostic du village de Diama Thiewy - AFRICARE - Mme Nafissatou - Ousmane BA - Aimé Seyni WADE - Etienne BADIANE - 29 Novembre 1993.
46. Etude Diagnostic du village de Mbarocounda - AFRICARE - Astou DAKONE - A Alpha DIALLO - Cheikh DIOUF - Octobre 1994.
47. Etude Diagnostic du village de Thiomby Serrer - AFRICARE - Marie Louise DIOUF - Dabel BA - Cheikh Tidiane SOW - Mamadou THIOUB - 31 décembre 1993.
48. Etude Diagnostic du village de Ida Mouride - AFRICARE - Astou DAKONE - Amy FAYE - Alpha DIALLO - Cheikh DIOUF - Mamadou Moustapha NIANG - Novembre 1993.
49. Etude Diagnostic du village de Bouchra - AFRICARE - Amy FAYE - Etienne BADIANE - Soukèye THIONGANE - Aimé Seyni WADE - 23 Septembre 1994.
50. Second Annual Draft Work Plan and Budget - AFRICARE - September 1993 - October 1994.
51. Fourth Annual Draft Work Plan and Budget - AFRICARE - October 1995-Septembe 1996.
52. Third Annual Draft Word Plan and Budget - AFRICARE - October 1994-September 1995.
53. Synthèse des Activités de Formation de AFRICARE présenté par M. Ousmane BA : Spécialiste de la Formation - Février 1995
54. Rapport Mensuel d'Activités de AFRICARE présenté par Ousmane BA - 27 Mai 1995.
55. Synthèse du Programme Promotion de la Femme et de ses Activités de AFRICARE présenté par Mme Jeanne Marie KOITE : Spécialiste - Août 1995.
56. Plan Stratégique, 1992-97 : USAID - Février 1991.
57. Rapport Mensuel du Projet de AFRICARE présenté par Staff du Projet - Juillet 1995.
58. Assessment of Program Impact : USAID/Dakar - March 1, 1995.
60. Documents de synthèse : Etude des sept EBA Pilotes par Africare/KAED - Novembre-Décembre 1994.

61. Plan d'Affaires : Projet de Banque Céréalière/EBA de Taïba Niassène par Africare/KAED - Novembre-Décembre 1994.
62. Plan d'Affaires : Projet Maraîcher/EBA de Diama Thiewy par Africare/KAED - Novembre-Décembre 1994.
63. Etude de Marché Embouche : Bovine et Ovine / EBA de Keur Yorodou ; EBA de Ida Mouride ; EBA de Ndioum Gainth par Africare/KAED - Novembre-Décembre 1994.
64. Etude de Marché Produits : Maraîchers / EBA de Thiomby Serere, EBA de Ndiouffène Perethie, EBA de Diama Thiewy par Africare/KAED - Novembre- Décembre 1994.
65. Rapport mensuel d'activités de AFRICARE présenté par Boubacar SOW Spécialiste Programme Développement Economique - 30 Janvier 1995.
66. Rapport mensuel d'activités de AFRICARE présenté par Boubacar SOW - 26 Août 1995.
67. Rapport mensuel d'activités de AFRICARE présenté par Boubacar SOW - Février/Mars 1995
68. Rapport mensuel de AFRICARE présenté par Boubacar SOW - Juillet 1995.
69. Rapport mensuel d'activités de AFRICARE présenté par Boubacar SOW - 26 Mai 1995.
70. Synthèse du programme de développement économique de AFRICARE présentée par Boubacar SOW - Août 1995.
71. Plan d'Affaires : Projet Pépinière et Maraîchage / EBA de Thiomby serere de Africare/KAED - Novembre/Décembre 1994.
72. Etude Consommations des Ménages / EBA DE Thiomby serere ; EBA de Ndiouffène Perethie ; EBA de Diama Thiewy de Africare/KAED - Novembre/Décembre 1994.
73. Plan d'Affaires : Projet Embouche Bovine et Ovine / EBA de Ida Mouride de Africare/KAED - Novembre/Décembre 1994
74. Etude du marché de céréales dans la région de Kaolack / EBA de Taïba Niassène de Africare/KAED - Novembre/Décembre 1994.

ATTACHMENT 3

AREAS	STRATEGIC STAKES
HUMAN RESOURCES	<ul style="list-style-type: none"> - Training/literacy training - Reproduction management to limit population growth - Participation/empowerment in Rural Communities under the Regionalization process - Alleviation of the burden of women's chores - Mentality change, departure from certain socio-cultural values and behaviors - Informaton/communication to exchange experiences, ideas, etc. - Legal aspects, law on National Domain.
ORGANIZATIONS	<ul style="list-style-type: none"> - Strong and well-structured women's organizations (group dynamics strenghtening) - Groups of reasonable size so that each member be involved in operations and empowered - Organizations supporting and encouraging individual initiatives while maintaining forms of solidarity - Groups able to diagnose the different problems of their environments, to set objectives, and to act accordingly with assistance, as needed. Empowerment plan.
NATURAL RESOURCES	<ul style="list-style-type: none"> - Village water supply (wells, bore-holes, water lift and transport, retention dykes, anti-salt dykes, etc.) - Easier, clarified and secured access to land ownership - Development of certain resources, low-lands, forest stands and tree plantations in order to limit degradation and enhance profitability - Operations-research/information on the evolution of NRs and technologies used

ACTIVITY	<ul style="list-style-type: none"> - Increasing yields and income - Marketing support and organization - Diversification of activities: cattle-fattening, tree production, product processing, supply services, equipment rental, etc - Crop diversification in certain localities - Development of entrepreneurship - Use of appropriate NRM technologies - Easier access to bank credit, and establishment of intermediary credit structures within women's means - Income management between reinvestments, repayments, expenditures, savings, acquisition of real assets - Study of women's activity sectors to identify profitable windows of opportunity - Marketing surveys - Research on adapted varieties especially for vegetable, rice and tree production, and reforestation.
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ATTACHEMENT 4

LISTED OF PERSONS CONTACTED AND ABEs VISITED

USAID

- Mr François FAYE : Membre de l'équipe USAID
- Mr Mamadou BA : " " " "
- Mr Mamadou NDAW : " " " "
- Mr Sounka NDIAYE : " " " "
- Mr DANSOU : " " " "
- Mme Marie DIOUF : " " " "

AFRICARE Dakar

- Mr Robert SMITH : Représentant AFRICARE Dakar
- Mme SECK : Responsable administratif AFRICARE

Siège du Projet :

- Mr Mc HUGH : Coordonnateur du Projet
- Mr NIANG : Coordonnateur Adjoint du Projet
- Mr Boubacar SOW : Spécialiste Développement Economique
- Etienne BADIANE : Spécialiste Développement Agricole
- Mme Astou DAKONO : Analyste de données
- " Marie J. MBAYE : Spécialiste Volet WID
- Mr Cheikh T. TOURE : Spécialiste GRN
- Mr Ousmane BA : Spécialiste de la formation du Projet

Maka Yop :

- Mr Aimé S. WADE : Agent de projet
- Mr Dabel BA : Agent de projet

Kaffrine :

- Mr Ibrahima DIAW : Eaux et Forêts
- Mr NDiamé GUEYE : Agent du PNVA - Adjoint Chef de Secteur
- Mr Serigne DIOP : Agent de Projet

Médina SABAKH :

- Mr Alpha DIALLO : Agent de Projet

Paoskoto :

- Mr Mamadou THIOUB : Agent de Projet
- Mr Damas Martin ZALE :

Keur Yorodou :

- Mme Amy FAYE : Agent de Projet

Gandiaye :

- Mr Karim DIALLO : Agent de Base

Kaolack :

- Mr KOUROUMA : Directeur Technique POGV
- Mr Cheikh T. LO : Inspecteur départemental de l'Agriculture
- Mr NDiogou GUEYE : Inspecteur des Eaux et Forêt
- Mr Ousmane SY : Directeur du CNCA
- Mr Mamadou O. SAKHO : Inspecteur régional de l'Elevage
- Mme Fatimata SARR : PAGERNA
- Mr Désiré SARR : Chercheur - Responsable Station ISRA Kaolack
- Mr Babou NDOUR : Chercheur ISRA Kaolack

- Mr Cheikh MARONE : Responsable ACEP Kaolack

EBA VISITES :

- Gouye Diéry
- Ida Mouride
- Taïba Thialène
- MBaracounda
- Malem Serigne
- Bouchra
- Diama Thiewy
- Keur Lahine Guèye
- Taïba Niassène
- Sanguil
- Thiomby Sérère
- Keur Taybe
- Keur Yorodou
- Ndiouffène Périthie (CD)
- NGouye Diaraf Mouride (CD)
- Goudié (CD)