

XD-ABL-224-A

1994 9/30/4 1

***Final Evaluation of A.I.D.'s Operational
Program Grant to CARE/Comoros
(OPG 602-002)***

***Anjouan Sustainable Agricultural Project
(ASAP)***

FINAL REPORT

***Mike Bess
Richard Pellek
Ahmed Djabir***

29 August 1994



AIDE AU DEVELOPPEMENT

CARE INTERNATIONAL AUX COMORES

B.P. 1183, MORONI, REPUBLIQUE FEDERALE ISLAMIQUE DES COMORES

● TEL: 73.13.57-FAX: (269) 73.13.57 ● TELEX: 264 CARECOM KC

COMORES - REDSO
FY 95-206

TO : Mrs. CHERYL ANDERSON KIAI
REDSO/ESA
NAIROBI

FROM : CLAUDE ST-PIERRE
CARE COMORES

DATE : NOVEMBER 1ST, 1994

SUBJECT : FINAL EVALUATION REPORT

Cheryl,

Please find attached 2 binded copies (english and french) of the final evaluation report.

Regards,

Claude StPierre

CLAUDE ST-PIERRE

TABLE OF CONTENTS

Abbreviations

- 1.0 Executive Summary
- 2.0 Monitoring and Evaluation
- 3.0 Agro-Forestry
- 4.0 Agronomy
- 5.0 Training and Extension
- 6.0 Community Development
- 7.0 Management, Administration and Finance
- 8.0 Conclusions and Lessons Learned

Annex 1: List of Contacts

Annex 2: Evaluation Programme

Annex 3: Bibliography (Documents Reviewed)

Annex 4: Evaluation Field Methodology Criteria

Annex 5: Evaluation Scope of Work

Annex 6: Revised Logical Framework with EOP Final Evaluation Indicators

Annex 7: Detailed Forestry and Agronomy Observations

List of Abbreviations and Acronyms

ADB	African Development Bank
AID	Agency for International Development
AIM	Anti-Erosion Measures (generally referred throughout text as LAE/"ligne anti-érosive")
AIP	Annual Implementation Plan (CARE)
ASAP	Anjouan Sustainable Agriculture Project
BAD	Banque Africaine du Développement (African Development Bank)
CADER	Centre d'Appui au Développement de la Production Agricole (pré-CEA)
CCCE	Caisse Centrale de Coopération Economique
CEA	Centre d'Encadrement Agricole (après-CADER)
CEFADER	Centre Fédéral d'Appui au Développement des Comores
cif	cost, insurance and freight
CNDRS	Centre National de Documentation Agronomique et de Développement
DRINE	Projet du Développement Rurale Intégré Nord Est Anjouan (FED)
DRS	Défense et Restauration des Sols
EOP	End of Project
FAC	Fonds d'Aide et de Coopération (France)
FADC	Fonds d'Appui au Développement Communautaire (World Bank financed)
FAO	Food and Agriculture Organisation of the United Nations
FC	Franc Comorien
EDF	European Development Fund
FED	Fonds Européen du Développement (European Development Fund)
FIDA	Fonds International pour le Développement Agricole (IFAD)
FMI	Fonds Monétaire International (IMF)
fob	free on board
FY	Fiscal Year
GDP	Gross Domestic Product
GFIRC	Government of the Federal Islamic Republic of the Comoros
GNP	Gross National Product
GRFIC	Gouvernement de la République Fédérale Islamique des Comores
IBRD	International Bank for Reconstruction and Development (World Bank)
IDA	International Development Association (World Bank)
IMF	International Monetary Fund
IRDA	Institut de Recherches pour le Développement Agricole
LAE	Ligne Anti-Erosive (Anti-Erosion Line)
LSCP	Anjouan Land and Soil Conservation Project
LOP	Life of Project
MDRPE	Ministère du Développement Rural, de la Pêche et de l'Environnement
NGO	Non-Governmental Organization
OPG	Operational Program Grant (AID)
PACD	Project Activity Completion Date
PADR	Projet d'Appui au Développement Rural (FAC)
PANSAC	Projet d'Appui à la Nouvelle Stratégie Agricole des Comores (FAC)
PAM	Programme Alimentaire Mondial (World Food Programme)
PAS	Programme d'Ajustement Structurel
PIC	Plan Individuel des Champs
PIE	Programme Intermédiaire d'Evaluation (CARE)

PIR Project Implementation Report (CARE)
PNUD Programme des Nations Unies pour le Développement (UNDP)
REDSO/ESA AID Regional Economic Development Services Organization
for Eastern and Southern Africa
RTA Regional Technical Advisor (CARE)
SDI Site de Développement Intensif
UNDP United Nations Development Fund
VANNA Projet de Vulgarisation Agricole du Nord et Nord
Ouest d'Anjouan
WFP World Food Program

FINAL EVALUATION OF THE CARE "ANJOUAN SUSTAINABLE AGRICULTURE PROJECT" (ASAP/VANNA)

1.0 Executive Summary

A team comprised of Mike Bess (economist, team leader), Richard Pellek (REDSO/ESA Natural Resources Advisor) and Mr Ahmed Djabir (Director General, Rural Development, MDRPE) conducted a final evaluation of the CARE/Comoros "Anjouan Sustainable Agriculture Project/ASAP" (Projet de Vulgarisation agricole du Nord et Nord-Ouest d'Anjouan) from the 9th to the 23rd of August 1994. The Final Evaluation Team was joined by Ms. Cheryl Anderson-K'ai (REDSO/ESA Project Officer), Mr. M. Malik (RFMC Financial Officer, Nairobi) and Mr. Claude St. Pierre, CARE/Comoros Country Director from the 17th to the 22nd of August.

The Evaluation Team met with all principal ASAP/VANNA Project officers, many Project extensionists, GFIRC (Government of the Federal Islamic Republic of the Comoros) officials, other donors, and farmers and others (Annex 1) during the course of the Evaluation program (Annex 2). Extensive documentation was reviewed (Annex 3). Visits were made to eight of the ASAP/VANNA Project's focus areas (SDIs/sites de développement intensif). Field visits, and interviews with farmers, members of associations, officials and others fit with selection criteria presented by the ASAP/VANNA Team and agreed upon by the Evaluation Team (Annex 4). Simple field questionnaires were administered and evaluated during the course of the Evaluation. The Evaluation methodology conformed to the "Scope of Work" as prepared jointly between CARE/Comoros and REDSO/ESA and provided to the Evaluation Team in both French and English (Annex 5).

The CARE/Comoros ASAP/VANNA Evaluation Team determined the following:

- Most targets, as set out in the ASAP/VANNA logical framework (including Amendment No. 4 to the Operational Program Grant/OPG) have either been met or exceeded during the life of the project (see Annex 6):
- The level of participation of farmers in defining their needs, in adopting (and adapting) the technical package provided by the Project has risen considerably since the Mid-Term Evaluation (December 1991);
- The competence, confidence, motivation and level of dedication of Project staff, at the level of both technicians (chefs de cellules et assistants) and extensionists (vulgarisateurs) level is high; and,
- The experience gained, the information and data collected, the training and skills imparted to farmers and other Project participants will continue to play an important role in rural development in the two zones (Ouani and Boungouéni) of Anjouan, and may also play an important role in the evolution of the GFIRC's agricultural sector strategy (supported in large part by the World Bank).

The ASAP/VANNA Project has developed an enormous information and data base ranging from market prices to farmer acceptance trials that are invaluable. The Team recommend that this data be maintained for future use (one possible future repository is the CNDRS (Centre National de Documentation et de Recherche Scientifique). Site development plans¹ exist for all sites, and "site development committees" ("comités de site") are active on fifteen of the Project's seventeen sites. Extensionists ("vulgarisateurs") have received considerable training in extension methodology and in participatory work. Their ability to interact with farmers has increased markedly since the Mid-Term Evaluation ("évaluation mi-parcours), as has their confidence and their comprehension of farmers' needs.

The Project's approach has remained adaptive and innovative. Most recommendations set out in the Mid-Term Evaluation, and incorporated in the ASAP Project Amendment (No. 4, March 1994), were adopted by the Project Team and put into action (Annex 6). The improvement in the Project's community approach since the Mid-Term Evaluation has been remarkable. Farmers participate more actively in setting out targets, in planning their production, and in evaluating the Project's performance than they did three years ago. Extensionists serve more as advocates of farmers' needs and agents for change than as purveyors of farmer inputs, as was the case in the past. The change in relations between farmer and extensionist over the past several years is considerable. Both work in a more participatory manner to identify needs and to set out solutions. It is hoped, that even with the closing out of the ASAP/VANNA Project, this increased farmer independence and motivation will continue to grow, at least among the best-placed, most-motivated, and most capable farmers..

As noted in the Mid-Term Evaluation, and as mentioned in various meetings with GRFIC and other officials, the ASAP/VANNA Project has developed a cadre of responsible national staff, with good esprit de corps. The Project has gone from five expatriate staff in 1990 to two today. This has been the result of a conscious decision on the part of Project Management, with support from CARE and USAID, to develop national capabilities, to develop a Comorean skills base which will hopefully be used to benefit rural development in the Comoros in the future..

¹ A "site" ("site de développement intensif/SDI"), as defined by the Project, is an area targeted by the Project as a focal point for extension. A site usually comprises between 300-500 farm families (500-700 parcels). The Project works with between 100 and two hundred farmers on each site (the limitation being that of personnel, materials, other inputs, logistics, etc.) There are 17 "sites" within the two zones (now called "CEAs/Centres d'encadrement agricole", formerly "CADERS/Centres d'appui au *développement* rurale") of Ouani and Boungoueni.

The Project's objectives, as set out in the goal statement (increased agricultural productivity, improved access to resources and greater crop diversity for target farmers) have largely been met as have the targets for farmers who did not participate directly in the Project.² Project-supported on-farm interventions have addressed, and generally succeeded in meeting, the Project's purpose (as set out in the Project Purpose statement). This has been achieved by demonstrating that stabilizing soils, improving soil fertility and diversifying farmers' crop base improves farmers' food security while also improving the on-farm environment.

In addition, the following conclusions were drawn by the Evaluation Team:

- Financial records of human and physical resources are up-to-date and transparent;
- Close-out procedures and transfer of valuable vegetative and other useful materials has been well considered by the ASAP staff;
- A special adoption survey (enquête d'adoption) of ASAP technical package survey was conducted in 1994, to answer the question of whether or not ASAP activities influenced farmers who were not a formal part of site activities. Results show that the degree of diffusion was about 32% for off-site farmers in step terrace activity; and both tree planting and live fencing at 30%. While tree seedlings were freely available for both on-site and off-site planting, cuttings were not. The high rate of diffusion may, therefore, have been due to using in place materials and merely copying the techniques; and,
- As ASAP matured, the Monitoring and Evaluation techniques became more sophisticated, especially as regards farmer participation on- and off-site. To accomplish this, the ASAP staff had to continually re-examine premises and assumptions, and respond accordingly.

During the first two years of the Project, ASAP/VANNA achieved its objectives of reducing soil erosion and protecting soils. However, it achieved few of its objectives for restoring soil fertility or of ensuring active farmer participation. Improved soil fertility has improved markedly over the past three years while farmers continue to practice improved soil protection measures.

² *The Project classifies farmers in the two zones of Boungueni and Ouani into three groups. There are seventeen sites in the two zones. Within each site (sur site), there are farmers who participate in Project activities. The number of on-site farmers depends upon their level of interest, Project capabilities, input availability, etc. There is a second category of farmers who have plots outside the seventeen sites (hors site), but within adjoining the sites. Many (and in some areas, most) on-site farmers also have plots outside the sites (hors site), and vice versa. Then, there are farmers who live in areas which do not have sites within their immediate range (eg, villages without any farmers, or with very few farmers who have plots on-site). These farmers are farmers classified as "sans site". These distinctions are very important with regard to determining to what degree the extension package has been disseminated outside immediate Project target areas.*

The Project's reorientation since March 1992, during the second year of the Project (with the new Project Manager), and after the Mid-Term Evaluation, led to more emphasis on community development. This, in turn, has led to an increasing level of participation by farmers in the Project's activities. Over the past two years, farmers have begun to discuss their problems, to work with extensionists and other Project staff, to analyze those problems, and to search for and find ways to address those problems.

This is one of the most important and remarkable aspects of the Project's evolution. The farmers visited by the Final Evaluation Team, appreciate this evolving participatory approach, and the Evaluation Team believes that these new approaches will continue to be applied by many farmers with or without the Project's presence. This demonstrates that farmers have "appropriated" the Project's messages, technical package and approach.

One important aspect of the Project's approach is the recognition that the Project cannot solve, and should not solve, each aspect of each farmer's or village's problems. Rather, the Project (an agriculture project) has served to help people to organize and to mobilize themselves to identify their needs and resources. Then, the Project has provided the guidance and whatever assistance possible to help farmers and communities resolve those problems. This has involved serving as a facilitator to help farmers and communities obtain assistance from other projects (eg, FADC, the "SANDUK" savings and loan project, etc.).

All extensionists (vulgarisateurs) operate demonstration plots. In addition, the Agronomy, and the Training and Extension, Units operate observation/test plots ("parcelles de suivi"). These are on-farm trial plots in which various activities take place (seed trials, new practices, new agroforestry mixes, etc.). While these serve some demonstration purposes, they are intended to provide good technical information. Finally, there are also farmer-managed trials on their own plots. The farmers themselves propose a particular activity they wish to try. The Project assists them in terms of training and providing inputs.

Text 1: Demonstration, Trial and Farmer Plots

Farmer training has not been limited to technical training (eg, protecting soils and restoring their fertility, providing improved seeds, etc.). The Project has also worked with farmers to improve on-farm management, to promote farmer and community organization (comités de site, comités villageois, associations, etc.). Each of these aspects of Project implementation has resulted in increased acceptance of the approaches promoted by the Project.

The ASAP/VANNA Project has developed extensive relations with other projects active in Anjouan. This has been the result of consultations, technical and logistical support, and training. During the life of the Project (LOP), the ASAP/VANNA Project has assumed certain responsibilities to help coordinate activities with other projects on Anjouan, and even to promote some of their approaches. This should be examined and reviewed by those involved in development at both a local (regional) and national level because the Project has worked as a liaison agent, as a facilitator, in order to build its credibility with farmers, thereby making it a more effective agent of agricultural change..

This coordination has resulted in more harmonization between different agencies active in Anjouan's rural sector, specifically in such fields as training, application of technical packages, extension, standardizing pricing policies (eg, for trees, cuttings, etc.) and agronomic research. Moreover, this level of coordination has served to prepare a base which could permit the development of an overall development plan for Anjouan. Such a plan could set the stage whereby all assistance provided to the rural sector in Anjouan would be coordinated, would disseminate information in the same general manner, and would follow certain guidelines to gauge the impact through consistent monitoring and evaluation techniques. The CARE ASAP/VANNA Project has helped set the stage for such projects and development in the future, and Government has openly endorsed and supported the Project's efforts in these areas..Annex 6 sets out the Project's (amended, March 1992) logframe with summaries of targets achieved. These are discussed in more detail in the following sections.

2.0 Monitoring and Evaluation

2.1 Objectives of the Monitoring and Evaluation Unit

The Project was charged with putting in place effective **monitoring and evaluation** systems under the Monitoring and Evaluation Unit ("**Cellule Suivi et Evaluation**"). These systems have corresponded to those set out in A.I.D.'s OPG of 1989. The targets for the Unit were revised in March 1992 following the Project's Mid-Term Evaluation. These included ensuring that communities have had input into the monitoring and evaluation system, making sure the monitoring and evaluation system provides accurate estimates of economic returns to the Project-promoted package, and ensuring that the Project's extension messages were refined each season according to the findings of the monitoring and evaluation system.

2.2 Monitoring and Evaluation Implementation

The primary tasks of the Unit have included data collection, monitoring and evaluation of progress on individual farmer's plots (PICs/"Plans individuel de champs") to Project and unit ("cellule") annual workplans. Monitoring plots ("parcelles de suivi") have been established on some farmers' plots (by the Agronomy and the Training and Extension Units) to measure the impact of Project-promoted interventions. These have served to experiment with and measure results from certain activities and experiment set out by the Project.

The Project has closely evaluated developments on sites and plots at the end of every season. It has then discussed these formally and informally on an annual basis with farmers and extensionists ("bilan"). The lessons learned, and the feedback obtained from, all these exercises has been incorporated into annual Project plans. These have been discussed each year, at the end of each season, at an annual session. Each Unit has set out its own plans in coordination with the others. Each Unit has provided the indicators by which its performance will be measured. These have then been incorporated into overall annual Project workplans.

The Monitoring and Evaluation Unit has tracked performance based on these indicators. If any particular Unit within the Project was shown as not meeting its set targets, the Project technical staff discussed the reasons, and how to adjust the targets accordingly. Discussions have been held with farmers and extensionists periodically to obtain information and feedback on Project implementation. Extensionists have been evaluated three times in a season. Their work is evaluated at the same time.

2.3 Achievement of Monitoring and Evaluation Targets

The Final Evaluation Team was impressed with the system the Monitoring and Evaluation Unit put in place. The M&E methodology as set out in 2.2, above, represents practical, appropriate and adaptive management at its best. The system has provided the Project with the necessary information by which to adapt and alter its strategies. It has generated information that has enabled farmers, extensionists, technicians and others to sit down, discuss issues, diagnose problems, and then adapt the information collection methodology to conform to on-the-ground requirements. The fact that the Unit has functioned so actively over the past year, and has generated such useful information over that time period, is laudable considering the untimely death of its Head in late-1993. The Project Manager, and the Unit Assistant have carried out the work until the present.

The Unit has generated a wealth of useful, relevant information. It will be a shame if this information were lost. One of the Project's recommendations is that CARE ensures that this information is passed on to the most appropriate authorities in the Comoros in order that it may be used in the future. The Project's database contains useful and reliable information from 1991 to the present. Previous information is useful, but less reliable, because sampling techniques and data collection methods were not as reliable as those obtained since 1991. The Team suggest that the Project and Government consider transferring this information to the CNDRS.

2.3.1 Adoption Survey

The Project has developed an extensive set of data for monitoring and evaluating Project activities. An "adoption survey" ("enquête d'adoption") was carried out in 1994 to judge the impact of the Project on farmers within site areas ("sur site"), off-site ("hors site") and in other areas ("sans site") of the two Project zones (Ouani and Boungouéni). The results of this survey are being analyzed at present, and were analyzed by the Evaluation Team. The Project PICs and "fiches de récapitulation" (see below), and other information (eg, 1992 Census) are being used to analyze results and to extrapolate to the zones covered by the "Adoption Survey".

"The principal objective of the survey was to measure the degree of adoption of the Project's technical package in those areas where little or no extension efforts were taking place in order to determine if farmers in the Project area (Ouani and Boungouéni CADER zones) undertook the recommended technical package...where they received no outside (Project) assistance; the degree of diffusion to farmers with no association with the Project; and the level of adoption of different technologies".³

Preliminary analyses is very encouraging. Seven hundred and thirty-three (733) farmers were interviewed. Three hundred and thirty-eight (338, or 46%) had plots on-site, and 650 (88%) had plots off-site. These two numbers reflect the extreme fragmentation of farmers' holdings, and the arbitrariness of delineating a "site" (ie, most farmers who work with the Project "on-site" also have plots off-site). Over 80% of the respondents knew of the Project. An interesting result of the survey was that less than 3% use WFP, Food for Work. This contrasts with a much higher number during the predecessor Anjouan Land and Soil Conservation Project, and with the early days of the Project.

Over 25% of the farmers have vetiver, and thereby practice anti-erosion techniques.⁴ When extrapolated to the Project area, this implies that some 2,500 farm families have planted anti-erosion lines (LAE). However, only 10% of the respondents said they trimmed their vetiver grass (a proxy for "maintaining" LAE). This low number is partly attributable to enumerator error (the question was physically placed where it was easy for the enumerator to miss it). However, it probably reflects that vetiver has few other uses (other than limited roofing material). Organic material was incorporated into farmers' soil in over 30% of the respondents' fields. Live fencing and agro-forestry are also practiced by over 30% of the farmers.

³. Draft "Adoption of ASAP Technical Package 1994 (Site - Off Site)", 15 August 1994.

⁴. The term "anti-erosion measures" (AIM) is used in original documentation primarily to refer to contour plantings, primarily of vetiver (later other) grasses. The French term is "ligne anti-érosif/LAE" and is what farmers, extensionists and Project staff use. The term LAE will be used for consistency throughout the remainder of the text.

While no questions were asked regarding crop diversification, it would be counter-intuitive that farmers would adopt other aspects of the Project's technical package (live fencing, trees, organic manure, "stabulation vache") without adopting improved seeds and plantings to ameliorate their farm production. When compared with other Project Monitoring and Evaluation results (PICs, "fiches recapitulatives, etc., see below), there is ample reason to believe that crop diversification has occurred by the same general order of magnitude as other elements of the "technical package".

From a Final Evaluation point of view, the "Adoption Survey", when combined with other M&E information, offers very useful information. In a strictly quantifiable sense, these data provide more than adequate indicators of achievements to date. Adoption of LAE has fallen short of the revised 1992 Logical Framework (approximately 2,500 versus the target of 3,000). However, step terracing (billon) has probably exceeded the target (over 3,000 compared to the target of 3,000). While step terracing (billon) was not originally cited as LAE, it definitely has soil stabilization characteristics as well as soil enrichment qualities. Likewise, increased soil fertility, hence productivity, has been adopted by more farmers than set out in the Logical Framework. Crop diversification and improved farmer returns are also within the range set out in the amended OPG.

However, the most important information provided by the "Adoption Survey" (and analyzed with the Project's other M&E instruments) is qualitative. It shows that more than 30% of all farmers who have not participated in the Project, have adopted the bulk of the Project's technical package. This shows that diffusion of Project-promoted techniques has occurred in areas outside the Project. This means that farmers have not only recognized the benefits of the package, but they have also acquired the means by which to acquire that package (eg, seeds, cuttings, plantings, seedlings, etc.) from sources other than the Project.

The Project works at several levels in terms of planning, and monitoring and evaluation. At the highest level, Project staff develop annual plans. Annual plans are the result of evaluation of the PICs and the "fiches recapitulatives", as well as feedback from farmers, discussions with extensions and farmers, results from demonstration plots, etc. These form the basis for annual site development plans. Site committees meet with extensionists and various Project technicians to set out these plans ("plans de site").

2. Project Planning

2.3.2 PICs and Fiches de Récapitulation

During the early stages of Project implementation, a format was designed (called a "PIC/plan individuel de champs). The PIC was designed to be administered at the end of each agricultural season to each farmer who participated with the Project. It was extensive and examined every activity promoted by the Project. A new Project Manager, who also took primary responsibility for Monitoring and Evaluation, arrived in early 1991 and began work to make the PICs more relevant to the Project (ie, to provide information more appropriate to reaching Project targets). The Mid-Term Evaluation Team worked with the Monitoring and Evaluation Unit to refine both the PIC and its methodology.

The Project has continued to refine the PIC and PIC methodology since 1991. It has provided more historical (intertemporal) measurements of farming systems, plantings, use of various components of the Project's technical package (billons, clotures, boutures, new plantings, new seeds, etc.), and both qualitative and quantitative measurements of how those techniques were being applied. Rather than being administered to every farmer participating with the Project, PICs have been administered on a random, scientific basis from among all on-site farmers. Between 400-500 PICs have been administered each season (PICs were administered to 537 participating on-site farmers at the end of the 1993-1994 season, out of more than 4,000 working with the Project). Project technicians (and the two Chefs de CADER) have overseen the survey implementation, and participate in its analysis.⁵

Then, the Project has administered another survey instrument called a "fiche récapitulative to all other on-site farmers who participate in Project activities (1,597 farmers in 1993-94). Key information which has been obtained from the PICs was completed on major Project indicators through the "fiches récapitulatives". Information has included LAE, tree planting, billons, etc.. This has provided more global information and an intertemporal means of 1) verifying the results of the PICs, and 2) of gauging the impact of the Project outside participating farmers' plots. Both the PICs and the "fiches récapitulatives" have been administered by the Project's extensionists. Extensionists have been involved, since 1991, in the design of the PICs and "fiches récapitulatives". They know the questionnaires and their use. Thus, they have been well-suited to administer them (which they do). They are then involved in verifying the results and in analyzing the findings.

⁵ As noted elsewhere, there are seventeen Project "sites". Each Project technician is responsible, in addition to his other day-to-day activities (eg, Agronomy, Forestry, etc.) for tracking the activities on two sites. The two Chefs de CADER (Boungueni and Ouani) are responsible for three sites each in their areas. The technicians visit each site at least once a week. They are, therefore, intimately familiar with all aspects of Project implementation on their sites (from community development, to forestry, from monitoring and evaluation to agronomy). This system was put in place by the current Project Manager and represents a very useful management, extension, accountability and M&E approach.

The qualitative social aspects of these results have been measured and discussed with all relevant staff and put together by the Community Development Unit. Technicians and extensionists have met with farmers and villagers to discuss results (eg, why terraces are or are not maintained, why farmers planted one crop rather than another, etc.). These meetings are called "réunion bilan", and have provided farmers and Project personnel with excellent means for identifying strengths and weaknesses to the approach.⁶

Some of the most important information provided by these two survey techniques are as follows. Farmers have increasingly diversified their crop base since 1991, both on-site and off-site (by a factor of 70%). The value-added has increased by a minimum of 25% on plots using the Project's technical package since 1991 (see 2.3.3, below). Over 25% of farmers on- and off-site have planted LAE over the life of the project. Other results are included in relevant sections below.

The information provided by these surveys addresses directly the concerns expressed by A.I.D. when it authorized the Project in 1989. Again, the information provided by these two survey instruments probably offers the most applicable intertemporal information available in the Comoros (indeed, many countries) on what farmers are doing, how they do it, why they do it, and how they change extension-supported methods. It also provides a timeline data base on how Project-supported messages are being adopted, and why (or why not) by farmers who do not directly participate in the Project (ie, "hors site").

2.3 Market Surveys and Farm Budget Analyses

The Project started collecting market price information in three markets in late-1990 and early-1991: Domoni, Ouani and Mutsamudu. The "market basket" surveyed includes manioc, bananas, ground nuts, breadfruit, peppers, taro, potatoes, ambérique, vohème, ambrevade, dry (shelled) maize, sweet potatoes, among others. This represents the most extensive inter-temporal information collected for farm market prices in Anjouan.

Each of the seventeen Project sites (SDIs) has a site committee (comite de site). Each site also has an annual plan (plan de site). These are drawn up with maps, with plans for planting, etc. However, fifteen of the seventeen site committees have developed site development programs ("cahiers de site") which go further than the "plan de site". The "cahier" is developed with the participation of the members of the site committees and site farmers. This sets out (see Section 7, below) who is responsible for what (eg, seeds, plantings, etc.). Further, six village development plans ("plans villagois") have been set up in areas that encompass both on-site and off-site areas.

3. Participatory Planning and Implementation

This information has been used in several ways. First, it has provided the Project and farmers with clear information on market trends. It provides clear indications of both the vulnerability of some farmers (who are not self-sufficient in food production), and

⁶. Several examples can be cited for how this increasingly participatory feedback mechanism yields positive results. At one time pineapple was promoted by the Project as LAE. After a round of PICs and "fiches recapitulatives" discussions were held with farmers. Farmer said that they did not like or want pineapple because it added acidity to the soils, and that it was not, in their view, an effective LAE. So, the Project dropped pineapple from its technical package. Several other examples can be cited (eg, the strong interest in Guatemala grass vis-a-vis vetiver).

the market value of production for those farmers who generate a surplus. It also provides information on market price fluctuations. The latter has been used to discuss with farmers, and other projects, the importance of stocking production, wherever possible, to sell on the market when prices are higher, rather than when every other farmer is selling (and the prices are lowest).

Additionally, this information has been used to calculate theoretical farming system models which enable the Project to determine how much value has been added to farm production over the life of the Project.

This information provided much of the basis for a good economic report produced in 1992, and is being utilized at present to update that report. Analyses of these results (with the qualifier that not all increased value can be attributable to the Project, but can also be the result of market and other forces) shows that under the worst case scenario (low production of Project-supported products and low prices for those products), farmers unambiguously realize returns that begin at 30% above traditional stock and practices. The middle case projections show returns of over 100% for manioc, sweet potatoes and ground nuts.

These results, when combined with the PICs, the "fiches récapitulatives" and the recent "Farm Production Survey", have provided sufficient information, in the Evaluation Team's view, to indicate a straightforward increase in returns to farmers who are able to generate a surplus. Results from other work (see "parcelles de suivi" and other technical sections, below) provide sufficient information that on-farm production has increased through Project interventions. In so far as farmers are producing surpluses (and this is very difficult to measure), then, they are realizing statistically significant returns that exceed original Project targets.⁷

⁷ *The Project could have set up a survey routine with test and control groups of farmers which could have provided more quantitative indicators of on-farm income, deficits and surpluses. However, the requirements for setting up and administering such a survey framework, in addition to the Project's other work, was not justified. It would have required a full-time team dedicated to this task alone. The Evaluation Team believe enough information has been generated by other surveys to provide good, statistically valid proxies for income and revenues in the Project area.*

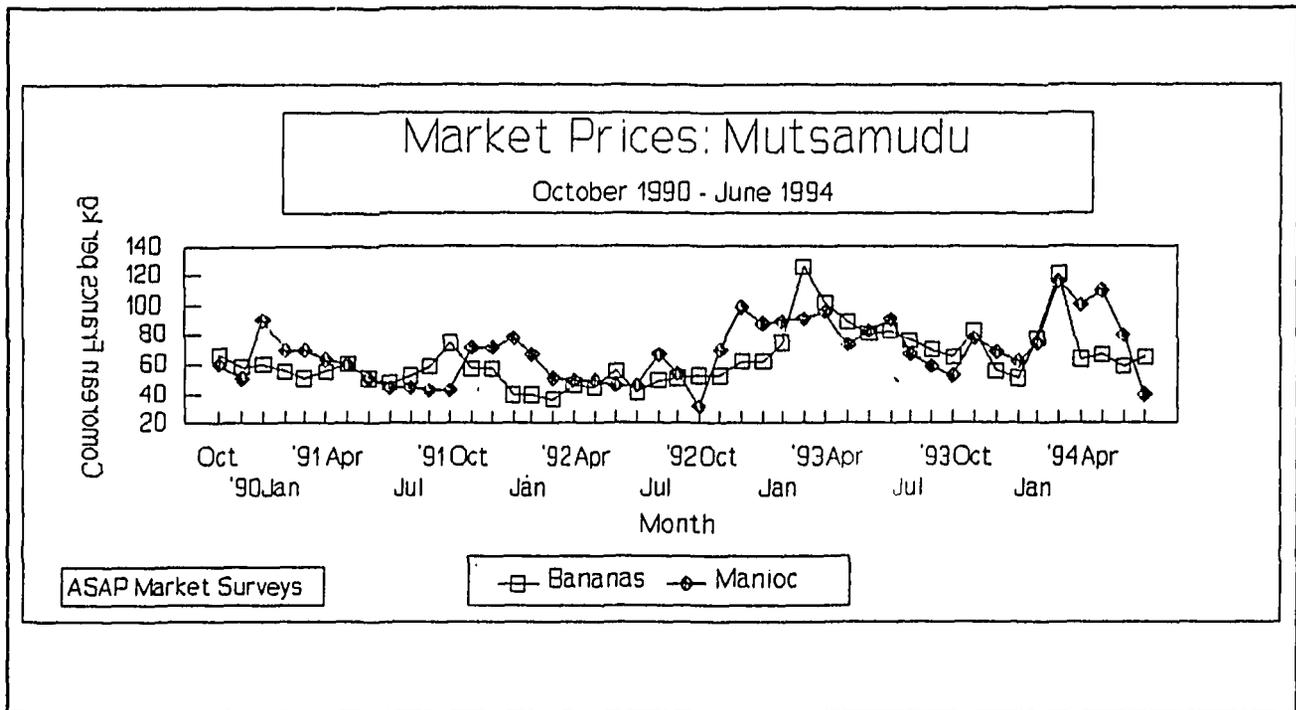


Figure 2.1: ASAP-Monitored Market Prices from October 1990-June 1994

2.4 Parcelles de Suivi

The Monitoring and Evaluation Unit has also worked with the Agronomy Unit to establish the protocols for monitoring plots ("parcelles de suivi") on farmers' plots. As discussed in more detail in Section 4.3, below, site selection has not been as rigorous as it should have been, soil samples have often been mixed, crops introduced will not reach maximum production until after the PACD, trees are mixed on the same site (eg, fast-growing and slow-growing), and farmers have sometimes been reluctant to continue to participate in the program. Nonetheless, valuable experience has been learned by Project staff through the exercise. More important, the Project's experimental trials have introduced some excellent and popular varieties of crops and trees which are being widely accepted by farmers.

3.0 Forestry

3.1 Project Forestry Objectives

The primary objectives of the Forestry Unit ("**Cellule Foresterie**") was to provide tree seedlings and cuttings to Project area farmers. The Unit was to establish both private and central nurseries to provide a variety of seedlings and cuttings to farmers in order to reduce soil erosion, to improve soil fertility, and to diversify on-farm production. Trees form an integral component of the Project's LAE measures, and also provide for soil enrichment, and diversification of on-farm production.

3.2 Forestry Implementation

The Forestry Unit is headed by a Comorean Forester, and assisted by another. The former "Natural Resources Unit", which was established at the start of the Project, and headed by an expatriate, was absorbed into the Forestry Unit in mid-1992. The Forestry Unit was charged with ensuring that seedlings, of a variety of types, were available when required. It established central and private nurseries to achieve these targets. The Unit was also called upon to produce and disseminate various fruit and indigenous tree seedlings. It was to ensure a seedling survival rate of 65%. The unit was also to ensure that over 200 km of LAE were established, and over 750,000 cuttings ("**boutures**" and "**clôtures**") were available to farmers on-site.

3.3 Achievement of Forestry Unit Targets

An effective **Forestry Unit** was established during the Project. Staff received both in-country and external training. Inventories of Anjouan's remnant indigenous forest resources were carried out. An arboretum was established in the Bounbouéni Zone comprising fifteen indigenous trees and five exotics for demonstration and training purposes. Training was provided to hundreds of farmers.

Nine private nurseries were operational by the last year of the Project (although virtually the sole customer for their production was the Project), along with seven central nurseries. The target of 1.2 million seedlings produced and distributed by the end of the Project (EOP) was exceeded by over 100,000 seedlings. Seedling survival was on the order of 55% on average, over the life of the Project. However, seedling survival increased consistently from the beginning of the Project to 65% during the 1993-94 agricultural season. Even though this was below the Project target, the survival rate is high by international standards.

The Project's objectives for producing and distributing cuttings was also exceeded both on- and off-site (by over 250,000). Targets for LAE were exceeded. This is remarkable given the history of using Food for Work (World Food Programme - Programme alimentaire mondiale/PAM) during the predecessor project (and during the first year of the project). Food for Work/PAM was used to remunerate farmers for planting LAE. This practice has since ceased..

Moreover, the most successful anti-erosion species in Anjouan is vetiver grass. While it stabilizes soils, is a robust and aggressive plant, it does not provide forage for livestock, for example, which is of growing importance to farmers. This has also led to farmers' reluctance to plant LAE. Nonetheless, Project targets for LAE were exceeded by nearly 20%.

The level of farmer acceptance of indigenous trees has been lower than targeted. While this could be cited as a shortcoming, it could also be cited as an improvement in the Project's approach. That is, a participatory approach does not force farmers to adopt techniques or approaches they do not wish to adopt. A longer Project time frame might have enabled the Project to reach this target.

Targets set for the production and distribution of fruit trees were exceeded by over 60%. While the Project encouraged diversification of fruit tree production and planting, farmers prefer breadfruit trees ("fruit à pain"). Breadfruit seedlings sell for over 200 Comorean Francs. Private nurseries prefer to produce these seedlings which command good prices as compared to other fruits which, by and large, farmers show little interest in.

The program of anti-erosion interventions, known variously in Project documents as "lignes anti-érosives (LAE) or anti-erosive measures (AEM), has been quite remarkable in the breadth of its coverage. More than perhaps any other visible feature, the LAE following contours, composed primarily of vetiver grass, marks the areal extent of ASAP and former project involvement in target communities. By implication, these lines demonstrate vividly the level of participation of community members in each site. Although other types of grasses, live fencing, gully plugs, and plot enclosures have also been used in the campaign against erosion, vetiver on the contours stands out because of its uniqueness. Due to the resilience of vetiver, the campaign has been very effective.

Over time, the anti-erosion program has evolved to include species most requested by the farmers. This indicates a feedback mechanism and willingness by ASAP staff to be responsive to the wishes of their client farmers. However, suitable grasses for erosion control strips have limitations of supply and suitability to the task. Pennisetum and Guatemala grass, both good forage species desired by farmers, are limited by fertility and edaphic circumstances. Neither forms a strong line when planted on the contour, and neither can withstand the range of growing conditions encountered throughout the Project area with the same degree of vigor as vetiver.

4.0 Agronomy

4.1 Project Agronomy Objectives

The main objectives set out for the ASAP/VANNA Project's **Agronomy Unit ("Cellule Agronomie")**, as set out in the amended Project Paper (1992) were to conduct station trials for various seeds and provenances, to work with farmers to carry out on-farm trials of various farming system practices (seeds, mixes, incorporation of organic materials, etc.), and to test and disseminate new techniques and technologies to farmers.

4.2 Agronomy Implementation

The Agronomy Unit is headed by a Comorean national. On-farm trials are set up on all seventeen Project sites. The Unit works with farmers and extensionists to set up over 30 demonstration plots. On-farm trials were conducted, and results analyzed. Farmers participated in pilot tests. New technologies, seed provenances, and approaches were tried and tested. Follow-up was conducted and results incorporated into plans. Good relations were established with international research organizations (eg, IITA, ICRISAT, etc.) to obtain new provenances and to test their results.

4.3 Achievement of Agronomy Unit Targets

Soils were stabilized and soil fertility was enhanced on at least 3,000 farmer plots, both on- and off-site. Agricultural production was intensified and diversified on over 1,600 farmer plots, on- and off-site. The variety of seeds, and the level of seed distribution grew over the life of the Project. New techniques, such as maintaining livestock on degraded plots to increase soil fertility (tethering livestock in fields to provide manure/"stabulation vache" and green/organic manure) were not only tried and promoted, but were enthusiastically accepted by farmers.

The Project has gained and imparted considerable agronomic information of value over the past four years. New crops have been introduced which have markedly improved on-farm food security, improved soil fertility, and provided the basis for increased farmer incomes. Tests have been carried out using different seed provenances, different combinations of crops and rotations, and different farming system techniques which provide an invaluable resource base for continued and future on-farm work in the Comoros.

The Agronomy Unit has worked intensively, and in an adaptive manner, with all other technical units of the Project. The Agronomy Unit has participated in the development and evolution of the Project's strong community development approach. Communities now define their needs, for seeds, for example, and the Unit provides seeds through the site committees ("comités de site"). The same applies for the other vegetative materials (eg, sweet potatoes and ground nuts).

The "Farm Production Survey" (see Section 2.0, above) demonstrates that over 85% of the farmers in the two Project zones of Ouani and Boungouéni know about the Project. Furthermore, the survey, augmented by the Project's "fiches de récapitulation"

(2.0, above) show that a sizeable portion (at least 30%) of farmers off-site have incorporated more than one component of the Project's agronomic technical package (eg, incorporation of organic material, new seed varieties, etc.).

However, early emphasis on technical aspects of demonstrating improvements in soil fertility have not been proven with chemical testing. Project reports do not show nor emphasize either the nature of baseline soil fertility data nor the positive impact of the improved cultural techniques, on the basis of monitoring a few chemical parameters. Nonetheless, yield increases as a proxy for improved soil chemical balance have been accepted as consistent and unambiguous over several years.

Unfortunately, selection of monitoring sites was probably not done consistently on a random basis, and any systematic selection of research and/or demonstration sites would be pre-disposed to biased results. Again, however, on-farm yields do provide strong support for the technical package. The Evaluation Team recommends that, in the future, more systematic, scientific and unbiased approaches be utilized to measure quantifiable results from on-farm trials (see Annex 7 for more detailed agronomic observations).

Some aspects of the technical package are not subject to verification in a quantitative way. Although soil fertility maintenance or enhancement was consistently maintained as a verifiably measurable objective throughout the course of ASAP, the imprecise way in which soil samples were taken and crop yield was analyzed does not permit the test results to be used in the way intended.

Research and demonstration parcels cannot readily provide useful comparisons of yield when the target crops chosen are perennial ones which take a few years to reach maximum production (eg, bananas). In several instances, it was related to the Evaluation Team, the target crops were changed after a few years of data collection. While this might be acceptable practice for annual crops, tree crops (including bananas) cannot be evaluated in terms of yield for at least several years. As these were established late in the Project, quantifiable results cannot be measured, although growth rates (as opposed to production levels) demonstrate better growth on demonstration parcels than off. This is not to suggest that the Project should not have introduced longer-term crops (eg, bananas) simply because there might not be a follow-on activity. It does mean, however, that trial results cannot be scientifically gauged at this point.

Crop diversification activities have been widespread. A range of introduced crops, including forestry and agroforestry species, are in evidence in virtually all sites throughout the Project area. In some cases, however, there was insufficient attention paid to putting appropriate crops in suitable niches. For example, in most places there was a melange of fast growing agroforestry species with slower growing ones, or outplantings of seedlings that produce dense canopies in fields where crop production is paramount.

The ASAP staff have provided a major service to the FIRC by importing crop varieties and germplasm lines that have--or could have--a significant impact on productivity. Detailed testing of the productivity potential of varieties of certain staple crops has yet to be elaborated, but the work should be carried on, in light of its critical importance.

5.0 Training and Extension

5.1 Project Training and Extension Objectives

The Training and Extension component of the ASAP/VANNA Project was considered to be an essential element for ensuring the longer-term sustainability of the Project. The predecessor project ("Anjouan Land and Soil Conservation Project/LSCP") had developed only a limited training syllabus, and was notably weak in training extensionists. CARE's ASAP Proposal to A.I.D. in 1989 placed far more emphasis on training of extensionists.

Furthermore, the concept of "training of trainers" was introduced in CARE's proposal. It was maintained that Project extension methods and means to adapt to changing circumstances could only be ensured if both a cadre of trained extensionists were in place and a cadre of trained farmers.

5.2 Training and Extension Implementation

An expatriate filled the position of Training and Extension Head during the first two years of the Project (1989-1991). Additionally, CARE provided an expert in the training of trainers for several months during 1991 and 1992. During this period, a Comorean assistant was being trained to assume the position as Unit Head. Needs assessments were carried out, and extensive training routines, protocols and aids were developed during the first three years of the Project.

5.3 Achievement of Training and Extension Targets

The Training and Extension Unit ("Cellule Formation et Vulgarisation") has evolved and improved considerably over the past three years. Training and extension have constituted a major area of focus during the life of the Project (LOP). An average of over 900 individual extensionist training sessions were held per year during the Project (an average of 25 per extensionist). This was considerably higher (by nearly 50%) than set out in the Grant Agreement.

Extensionists set up demonstration plots where farmers received training, and where new Project techniques and approaches were tested. Extensionists received training in farmer training (training of trainers). Training of trainers courses were also held with farmers. Seven farmers were training other farmers at the end of the Project. This all went far towards ensuring the longer-term sustainability of the messages and activities promoted by the Project. The Evaluation Team was impressed by the level of comprehension of both extensionists and farmers interviewed during the course of the Evaluation. It was obvious that not only had extensionists received training, but they clearly understood the most important messages conveyed through the training. Moreover, they were far more prepared to provide training to others than they were at the time of the Mid-Term Evaluation.

Farmer training exceeded Project targets. Over two thousand different farmers were trained in the 1993-1994 season alone, while the number of farmers trained by the Project averaged over 1,000 per year. In fact, only during the 1990-1991 season, when the Project was focusing on curriculum development, and training methodology and approaches, did the number of farmers trained per annum fall below 1,000. The number of farmers trained by the Project grew consistently from 1991-1992 to the last season, when over 2,000 were trained. Over 7,000 farmer training sessions were held during the life of the Project. While some farmers received training more than once, the Project came close to, if it did not exceed, its target of training 3,500 farmers.⁸

Training tools were developed and utilized extensively during the Project, particularly during the last half of ASAP/VANNA. Training was adaptive and designed to meet changing Project priorities and approaches. It was interactive and interdisciplinary.

⁸ Unfortunately, while records exist of all farmers who received training during the LOP, this information was not disaggregated to enable a definitive statement on the number of farmers trained. Taking the number of farmers trained during the past season (2,051) and assuming that one third of all the farmers trained in any one year did not receive training at other Project training sessions, this yields a figure of just over 3,700 different farmers who received training during the course of the Project. Discussions with Project staff, extensionists and farmers indicate that this figure is conservative.

The Training and Extension Unit cooperated particularly closely with, and benefitted from, the newly formed Community Development Unit ("Cellule Développement Communautaire") from 1992 to the present. Training and extension tools were designed and adapted, particularly in conjunction with the Community Development Unit to improve the Project's work with farmers and farmer groups. As the Project's approach became more community-oriented and participatory, the Training and Extension Unit and the Community Development Unit complemented one another.

Moreover, as the Project evolved, new extensionists were added. When the new Project Manager arrived in early-1991, he insisted that all extensionists should live in the area (site) where they were working, and that they should set up farm demonstration plots. Over a third of all extensionists are now women, which reflects more closely farming responsibilities in the Project area. It has also led to better communication of Project-supported messages and ideas to the target population. Furthermore, the growing involvement of women as extensionists has allowed for more adaptive dissemination of Project ideas. More important, this has provided the Project with improved feedback with regard to the effectiveness of the messages, the utility of the approaches, and the needs of the target population.

6.0 Community Development

6.1 Project Community Development Objectives

CARE's original Project Proposal (initial and revised) did not envisage the creation of a Community Development Unit ("Cellule Développement Communautaire"). There was a strong focus on participation set out in the Project Proposal and in A.I.D.'s OPG. The concepts of "sustainability" and of "self-sufficiency" were stressed by A.I.D. in its OPG as means to ensure the continuity of the Project's activities after PACD. It was visualized that the Training and Extension Unit would assume the major responsibility for involving communities and farmers in Project activities, with other Units providing technical support.

The Mid-Term Evaluation stressed the need for more explicit attention to the issues of community participation, needs identification, problem solving and feedback than was set out in the original documentation or in actual Project implementation. CARE and A.I.D. accepted the Mid-Term Evaluation's recommendations and amended the OPG in March 1992.

6.2 Community Development Implementation

An international community development expert was recruited after the Mid-Term Evaluation. The Project created a Community Development Unit in March 1992. Resources were programmed for this Unit, and it commenced work in earnest by mid-1992. The new Project Manager (early-1991) and the Mid-Term Evaluation Team realized that there could be no hope of "successful" dissemination of the Project's technical package unless individual farmers and farming communities "appropriated" those messages and packages. That is, it was realized that not only did farmers have to understand the importance of various aspects of the technical package (LAE and soil conservation measures, improving soil fertility and diversifying production), but they also had to adopt and adapt messages in such a manner that they would be theirs.

This meant that instead of simply teaching farmers what to do, or instead of merely showing them what and how to practice in terms of improved agricultural techniques, farmers needed to be able to define their needs, decide on the appropriateness of various activities/messages, practice them, and comment upon them. This called for extensionists, in particular, to evolve from being farmer teachers, to being farming participants.

This approach was beginning to manifest itself at the time of the Mid-Term Evaluation. Some extensionists realized the importance of such an approach. Project Management, A.I.D., CARE's RTAs (Regional Technical Advisors) and the Mid-Term Evaluators were convinced that such an approach had to take place, and take place quickly, if the Project was to achieve its quantitative and qualitative targets. In addition, such an adaptive, participatory approach needed to be well-established if the Project stood any chance of providing farmers with "self-sufficiency" by the PACD.

The new Head of the Community Development Unit worked with all Units to make this happen. He and his staff worked particularly hard with the Training and Extension Unit to retool extension training techniques. Considerable time was spent with the Agro-Forestry and Agronomy Units to work with them to adapt the "technical package" to meet and reflect better the needs and suggestions of farmers. End-of-season farmer evaluations ("bilans") of the technical package became sessions in which Project staff (technicians as well as extensionists) were critiqued, and often criticized by farmers. This was encouraged by the Community Development Unit, and adopted by the rest of the Project staff.

6.3 Achievement of Community Development Targets

The Project's logical framework was modified in March 1992 to reflect recommendations of the Mid-Term Evaluation. The Community Development Unit was established at that time, and its objectives (with verifiable indicators) were set out explicitly in the new log-frame.

The achievements of the Community Development Unit over the past two years cannot be over-emphasized. Its achievements are particularly remarkable considering the diversity of Anjouan's social economy, the island's socio-economic and cultural history, and farmers strong culture of independence.⁹ The Unit has worked with communities, farmers and other Units to prepare fifteen site action plans ("plans d'action des comités de site") out of the 17 sites where the Project operates.

6.3.1 Action Programs

The Unit has also worked with extensionists, other Project Units and farmers to prepare fifteen community action programs ("cahiers des comités de site"). The framework for these programs takes the form of a written template. The template is visual and sets out specific activities, such as soil protection, seed collection, plantings, and so on. They form an extremely useful tool. They are written in the vernacular (Shindzuani), using Arabic letters (which virtually all Anjouanais learn as children at Koranic schools).

The action programs for each site are completed by members of the site committees. They specify what actions need to be undertaken (eg, stocking seeds), who is responsible for the activity, when the activity is to take place, and how the "success" of the activity is measured. An action program ("cahier du comité de site") can have as many as twenty actions, representing erosion control, five or more types of seeds, and so on. This represents an extremely effective extension tool could serve as a good example for future rural development programmes in Anjouan.

These "action programs" enable farmers to define their needs, to plan their activities, to establish who is responsible for particular activities (eg, stocking seeds, collecting cuttings, etc.), and to participate in all aspects of managing their sites. These action programs also constitute one of the most important successes of the Project, and have provided one of the most important elements for enabling site committees ("comités de site") to handle their affairs. They enable farmers to interact better among themselves, to identify their problems, and to develop collective approaches to those problems. They also enable farmers better to interact with other agents, be they extensionists, donors or other government agencies. Moreover, the action programs for the site committees provides the framework by which to measure progress, to determine how well members of the community are taking responsibility, and to provide the background for making changes and adapting approaches.

⁹ *Anjouan's farmers have a long history of exploitation. Hundreds of years ago the island was turned into a slave economy. Then, colonialists turned most of the island into a plantation economy, with cloves, vanilla, ylang-ylang and coconuts playing the largest role in the island's economy. Hundreds of years of such history led to fragmentation of the island's social structure, and bred distrust and class consciousness between many farmers. Twenty years of Food for Work, and the collapse of prices for virtually all major farm commodities, in addition to a stormy post-colonial past has left Anjouan's farmers even further fragmented.*

The Unit has worked with other Project Units (particularly the Training and Extension Unit), extensionists and farmers to motivate and organize site committees ("comités de site"). As a result, this has expanded and improved the impact of committee and farmer training.

The Project's community development approach has also improved the distribution and utilization of various inputs, particularly seeds and vegetative material. This is especially important because actual farmer and site needs are now well-defined, with farmer participation, in such a manner that the right inputs, in the right quantities, are available when needed. Moreover, members of the site committees are not only responsible for identifying and defining those needs, but they are also responsible for ensuring that inputs are available when needed. This has resulted in the Project mobilizing farmers to become more self-sufficient by the PACD, in line with A.I.D.'s stated concerns and objectives set out in its OPG.¹⁰

6.3.2 Environmental Education

ASAP/VANNA's "Environmental Education Program" ("Programme d'Education Environnementale") has also been managed over the past two years by the Community Development Unit. The Program has been assisted by US Peace Corps Volunteers. Pedagogical tools have been developed, schools have been assisted, students have received training, and environmental groups have been formed and assisted through the Environmental Education Program. Over twenty schools have received assistance through this component of the Project. Over 1,000 students have received training through the Environmental Education Program.

Much of the Environmental Education Program has been used to support other Community Development Unit objectives, such as setting out village development plans ("plans villageois"). These have been developed in six villages, and represent the first time communities in the Project area have sat together to identify their problems, the possibilities to address those problems, to define resources, and to set out plans by which to mobilize and augment those resources.

The village development plans are well-thought out tools which have enabled the villages to set out their priorities. They identify needs ranging from decreasing soil erosion in the areas to protecting water sources. While these plans go beyond the Project's mandate of improving agricultural productivity and diversity, they address the real concerns of the communities. The Project's role in assisting communities to develop these plans has placed it in the role of development "facilitator".

This represents the type of adaptive management that must be in place if effective rural development is to take place, if a Project such as ASAP/VANNA is to create and maintain credibility with its constituents.

¹⁰ *It is interesting to note that there are three major responsibilities set out in the "cahiers de site" concerning provision (and availability) of inputs for the next season: seeds, planting materials (eg, sweet potatoes) and cuttings. In all fifteen sites, women have been selected by their site committees as the people responsible for holding and making available seeds. This did not occur because the Project suggested it or insisted upon it. This role of responsibility is one each committee has determined for itself, and reflects Anjouan's farmer social culture.*

As noted by Government officials and other donor representatives, ASAP/VANNA has helped to mobilize resources from other projects and sources to address these needs. It has thereby strengthened its ties with other important players, while also helping communities to develop links with others. This, in turn, has gone a long way towards achieving A.I.D.'s stated objective of "sustainability" by the PACD.¹¹

It can be said that a good part of the "sustainability" of the Project's interventions are due, and will continue to be due, to the activities of the Community Development Unit, in coordination with the Project's other Units.

7.0 Management, Administration and Finance

Administration of the Project has primarily been carried out on Anjouan, with strong support from the CARE/Comoros office in Moroni. The Project Manager has been responsible for overall management and financial tracking of day-to-day affairs. He also ensures coordination of all the Project's Units.

A Comorean has held the primary responsibility for personnel management (64 nationals in Anjouan) and Project logistics (vehicles, materials, etc.). Terms of reference and scopes of work have been drawn up for all Project staff (from drivers to technicians). Staff evaluations are carried out at least on an annual basis (extensionists are evaluated three times a year). Evaluations are reviewed between staff and Project Management.

One important aspect of the Project's adaptive management approach, and its evolution has been the assignment of each technician (and each of the two "chefs de CADER") to specific sites ("sites de développement intensif/SDIs"). That is, each Project technician and each CADER officer is responsible for overseeing all aspects of between two to three Project sites.

This ensures that they are involved in all aspects of Project development (from training to forestry, from agronomy to extension, from community mobilization to monitoring and evaluation), and that they are also familiar with the needs of their sites and site members. This has resulted in a marked improvement in overall Project coordination and effectiveness over the past three years..

Day-to-day financial affairs are administered in Anjouan, supported by the CARE/Comoros office (which maintains overall Project accounts).

¹¹. *The Chef de CADER of Boungueni presented the Evaluation Team with a report on how the Project has "facilitated" development in his area (nearly 7,000 farmers). These range from helping to mobilize farmers to protect a water source in Dzindri to helping identify financing (from CECI/FADC) for a water source in Moya, from helping to mobilize residents and donors to build schools in two villages (B.Vouani and Marahare) to working with Peace Corps Volunteers to set up environmental information centers.*

8.0. Conclusions and Lessons Learned

The ASAP/VANNA Project provides some excellent lessons at a number of levels. At a programmatic level, the ASAP Project offers important insights into the reasons projects are designed, who sets the agendas for project design, how priorities are set during design and at periodic points during implementation (eg, mid-term evaluations), and how global changes in donor, government and NGO priorities determine how projects evolve, whether they continue, and what support they receive.

Examining the history of the ASAP/VANNA Project yields good insights into adaptive management at both a project level and at a more micro-level (eg, staff, extensionists, farmers). The Project's history (particularly when tied in with its predecessor LSCP project) offers lessons on how effectively to carry out activities in the face of significant changes in external and more global/macro circumstances.

8.1 Key Assumptions and Expectations

A.I.D. and CARE essentially approached the ASAP Project (September 1989-August 1994) with different objectives. Careful reading of the Project documents shows that CARE viewed ASAP as a continuation of their previous project designed to augment a subsistence agricultural base. A.I.D., on the other hand, was cautious about committing itself through the Project to a longer-term process that would involve it in providing support where it believed Government should primarily be responsible (and should be held accountable).

The ASAP/VANNA Project was designed by CARE essentially as a humanitarian activity. A careful reading of CARE's ASAP Proposal and A.I.D.'s OPG reveal good insights into different project objectives at the design stage. While CARE's goal was to improve the economic well-being of area farmers, to increase their agricultural productivity and to stabilize their incomes through crop diversification, the purpose level statement sets out more explicitly the Project design strategy. The three main elements of the Project's purpose were to improve farmland productivity, to optimize farmer production, to improve farmers' capabilities to reverse environmental degradation.¹²

¹² *"The project is designed to address the pervasive problem of declining productivity of agricultural land which is primarily due to decreasing soil fertility and low crop diversity. By helping farmers to conserve and increase the fertility of their soils and by broadening the diversity of agricultural crops cultivated the project intends to ultimately increase the income of the project participants by 30%." (CARE/International, "Project Proposal, Anjouan Sustainable Agriculture Project", April 1989.*

At both a goal and purpose level, CARE's view of the Project was premised upon assumptions that:

- Anjouan's subsistence farmers were losing ground because of poor land-use management, with particularly grave consequences at both a micro- and macro-level;
- by stopping environmental degradation, and by adopting aspects of the new technical package (terracing, soil enrichment, improved seeds, diversified crop base, etc.), farmers could stabilize their production base, and could, at least, maintain their level of economic activity (CARE's first ASAP Proposal).

A.I.D., on the other hand, was clearly committed to ASAP serving as a means to improve farmers' incomes and to make them more self-sufficient. A.I.D. felt that ASAP/VANNA should not merely seek to help farmers "hold their own", but should set more ambitious targets of helping farmers to diversify their production to increase incomes. CARE, while altering the language of its "Revised Proposal" to reflect A.I.D.'s concerns, did not, in fact, alter substantively the Project design.

A.I.D.'s concerns are apparent in its OPG for the ASAP/VANNA Project:

"The ASAP Project represents a continuation and expansion of land and soil conservation efforts supported by A.I.D. through CARE since 1984 ..It is important to note that the design of this grant addresses the central problems encountered under the predecessor CARE OPG I Project. Project objectives at the purpose level are specified in quantitative terms subject to measurement, and the Project's monitoring and evaluation component will gather the baseline and time series data needed to make informed assessments of the project's success or failure. The extension services to be supported by the project are not themselves intended to be continued post-PACD, and thus are not vulnerable to the vagaries of GOC [GFIRC] budgetary support. Instead, the extension effort is designed to provide farmers with the knowledge and renewable inputs (e.g. seedlings and cuttings) they will need to continue to benefit from project-sponsored technologies post-PACD." ¹³

Further, A.I.D. stated that the ASAP/VANNA Mid-Term Evaluation "was to devote particular attention to assessing possible changes in Government of Comoros' ability and willingness to fund the recurrent costs of agricultural extension in light of the IMF Agreement expected to be put in place by then. The results of this assessment will inform A.I.D.'s decision as to whether to continue its involvement in the Comorian agriculture sector following completion of activities by this grant".¹⁴

¹³. (REDSO/ESA, "Operational Program Grant No. 602-0002-G-SS-9043-00", August 30, 1989, pp. 11-13)

¹⁴. *ibid*

The Mid-Term Evaluation carried out in late-1991 found that Government's "ability to assume more responsibility for Project-initiated activities and Project-supported staff, has diminished to the point where the Project must provide virtually all Project support". That is, the Mid-Term Evaluation examined one of A.I.D.'s key project design concerns, and determined that Government was unable to assume more than a passive role in implementing the Project. The Mid-Term Evaluation Team further noted that Government would not be able to pick up where the Project left off by PACD.

8.2 Key Lessons Learned

The Mid-Term Evaluation essentially endorsed A.I.D.'s concerns with regard to farmer self-sufficiency. Furthermore, the Evaluation approved of the approach the new ASAP/VANNA Project management had begun to adopt by mid-1991. This placed increased emphasis on community-based development, increased attention to farmer participation, and adaptive management and utilization of Project-promoted technical approaches. Furthermore, the Mid-Term Evaluation concluded that the Project was on track; it was well on its way towards achieving targets set out in the Project Paper. The ASAP/VANNA Project had also put in place the means to verify progress towards achieving Project objectives. That is, the Project scored high marks on most counts.

A.I.D. and CARE worked with Project staff further to reorient the Project towards a more participatory, community-based approach during early-1992. Both the goal and purpose statements were altered (reducing the number of farmer participants, and restating the definition of "increased productivity"). The Project Paper was amended. The log-frame was revised. A new unit (Community Development) was created, and an international professional was hired to head that unit. As set out above, the results have been remarkable. Perhaps for the first time in the Comoros, certainly for the first time in the Project area, farmers began to participate in decision-making in such simple areas as what crops to plant, how to manage resources beyond their own parcels (ie, collectively) and how to improve their well-being as a groups.

Two key lessons can be learned from this process. First, A.I.D. was probably unrealistic in holding CARE responsible for self-sufficiency if Government was unable to meet its obligations. It was apparent in 1989 (as the OPG already states) that there were serious concerns about whether Government had the will or ability to implement a rural extension program.

Second, CARE agreed to the targets set out by A.I.D. but without really altering its approach (as the "Revised Project Proposal" clearly shows). A.I.D. expressed serious concerns in the OPG regarding the Anjouan Land and Soil Conservation Project's inability to develop a more participatory, rural self-sufficiency approach, and made it clear that it expected quantifiable results from an effective, operational monitoring and evaluation system, to demonstrate changes.

What neither A.I.D. nor CARE acknowledged in mid-1989, when ASAP/VANNA was being finalized, was that five years might not be sufficient to realize these objectives. Moreover, while A.I.D. stated specifically in its OPG that there would be no A.I.D. support past the PACD unless Government had in place an effective rural extension program, neither CARE nor the Mid-Term Evaluation Team saw that as a real possibility when the Project was evaluated and reoriented in late-1991 and early-1992.

8.2.1 Technical Package, "Community Ownership" and "Sustainability"

The key lesson learned from Project implementation with respect to the "technical package" was set out clearly in the Mid-Term Evaluation. That is, an interactive, participatory environment needs to be in place if farmers are going to alter their behavior, change their production systems, and implement new approaches (eg, anti-erosion techniques, improved seeds, etc.). A traditional top-down approach does not work with farmers anywhere.

The Final Evaluation Team found that the Project had become much more interactive and participatory over the past three years. Today's technical package is essentially the same as that in place at the beginning of the Project's third year. It is a good technical package. It is now adapted more readily to meet specific farmer and site needs. It has evolved to meet those needs, and is, therefore, of much more use than it was three years ago. This is shown by the results of the PICs over the past three years, as set out in Section 2 (above). Certain farmers have "appropriated" the technical package. It is theirs, not the Project's. This is a major step towards realizing Project objectives. Given a more realistic Project implementation timeframe, "ownership" would probably have increased as dramatically as it has over the past several years.

The issue of "sustainability" is more difficult to determine. The prices of every traditional cash crop has fallen over the past ten years. The price of cloves, historically the most important to the Anjouan economy, has plummeted. This has resulted in a marked decrease in available on-farm disposable income. The farming systems that have evolved to replace plantation farm economies are subsistence. This, plus substantial environmental degradation, was what predicated A.I.D. to finance and CARE to implement both the LSCP and the ASAP.

While communities now plan out their farming systems, define their needs, determine who is responsible for growing and storing stocks (eg, seeds, cuttings, plantings), most lack the disposable income by which to acquire those inputs. Given Anjouan's rapidly growing population base, and in light of the decline in cash crops, little surplus can be generated to obtain inputs provided by the Project. Thus, while a few communities will be able to continue on with the approach set out by the Project (and "appropriated" by the farmers), others will not have the means or the organization to do so. As stated above, a longer, more realistic timeframe, with earlier development of a community-based approach, would have resulted in a less ambiguous verdict regarding the "sustainability" of the technical package.

8.2.2 Farming Systems Approach

The Evaluation Team endorses the farming systems approach developed and promoted by the Project. The systems approach addresses several key concerns. First, it addresses the issue of erosion. Second, it addresses the issue of declining soil fertility. Third, it responds to the need for a more secure production base by diversifying the crop mix. Finally, it supports an approach which examines rural poverty not merely as a result of lack of production or productivity, but as a result of a cycle of dependency, a history of mono-culture (cash crop production) and a lack of social or government infrastructure. By applying the farming systems approach, farmers have decreased erosion significantly, improved crop productivity by at least thirty per cent, and have diversified the crop production base in an important way.

8.2.3 Government's Counterpart Abilities

As stated at the beginning of this section, A.I.D. explicitly expressed in its OPG its concerns over Government's ability to serve as an active counterpart both during Project implementation, and at the PACD. A.I.D. had reason to be concerned, as was demonstrated when the CEFADER and CADER systems almost collapsed in mid-1991.

The lesson to be learned from this is that A.I.D. anticipated an inability of Government to play an effective counterpart role, yet funded the ASAP/VANNA Project in spite of that. To state that it would not fund any follow-on beyond PACD if Government was unable to improve its services does not imply that the ASAP/VANNA Project exercise should not have been funded, or that it was futile. It does, however, imply that more careful attention should have been paid to the alternatives (eg, a longer Project time frame, support to improve Government's capacity, etc.) rather than making a self-fulfilling prediction.

8.2.4 Environmental Education

As with Government's inability to support a rural agricultural extension program, it has also been lacked the means to support an overall education program. Teachers are underpaid. They go on strike. The country has suffered political turmoil and disruption during the course of the Project. Primary schools have been open for 7-8 months out the past 30.

Nonetheless, interviewees (Peace Corps Volunteers, Project staff, community leaders) have all felt that the Project's environmental education program has been worthwhile. It has led to greater awareness among students. Twenty schools have been assisted, over one hundred teachers and over 1,000 students have received environmental education. Six environmental associations have been assisted. Several were formed with the assistance of the Project.

However, the Project's most important impact has not been its formal school education program. Rather, it has helped farmers to mobilize to address problems that, in most cases, they already knew existed. The Project has helped six villages to set out community action plans which address environmental issues and concerns.

As pointed out by several interviewees, the issue of environmental degradation is hard to disguise to a farmer who watches his field wash away during a rainstorm, or to a community who witness the drying up of a water source. The key is to provide them with the means by which to address those issues. Often, no amount of individual activity will address the real issue. Someone who is downhill from a badly degraded mountaintop can only take so much action to tackle that problem before it becomes an exercise in futility. A woman who fills in gullies on her land at the bottom of the hill will sit and watch her efforts go to waste if fifteen farmers at the top of the hill do not engage in the same activities.

Where the Project has begun to make a difference, and what is unfortunately in its early stages, is to get at these more global, community-based approaches. It has helped farmers, committees and villages to start addressing those more global, community-related common issues. The Project scores high on its efforts in this direction, but, again, the issue of long-term sustainability is difficult to determine. There has just not been enough time to gauge how well these approaches have been appropriated by farmers, groups and communities. Highly individualistic farmers do not develop distinctly collectivist approaches to their common problems within the span of a few years. However, they can start to make move in such directions, and they have within the Project area.

8.3 Overall Conclusions

The Final Evaluation Team has determined that the Project's approach over the past two and a half years has been pro-active, and very much in the spirit in which A.I.D. directed it when it approved the Project in 1989. The ASAP/VANNA approach has not been marginalistic or humanitarian. It has not worked with farmers from the perspective of helping farmers "to hold their own". Rather, the Project, at virtually all levels, from site committee members to the Project Manager, have "bought into" the concept that far-reaching changes can truly be affected by collective action. The Project has helped to facilitate this growing understanding. This has manifested itself in directions as varied as farmer evaluations of Project-promoted activities, to encouraging farmers to think beyond subsistence to cash economy, to options that can not only arrest a deteriorating rural situation, but actually ameliorate that situation.

The Final Evaluation Team found that this community-based, participatory approach had not just been accepted as something new, something to be endorsed because it had been decided by CARE, AID and Project Management. At every level examined by the Team it was found that technicians, GFIRC officials, farmers, members of associations, had "bought into" the concept of community participation, and developing self-sufficiency with a great deal of spirit. Today some farmers' groups actually decide what they, as a group, will plant in the coming year. They decide who will be responsible for collecting and storing seeds, cuttings and trees. They set out plans of action to address collectively problems that affect the whole community (eg, erosion). This is a major quantitative and qualitative change from ten years ago when most farmers undertook soil protection and improvement measures on the basis of Food for Work, where rural remuneration was measured not in Comorean Francs but in WFP/PAM "rations".

There is a marked change in the ASAP/VANNA areas. One hears less about marginalized communities who are "holding their own" and more about communities who are taking control of their destinies, who are setting the pace and the agenda of development. While this may not seem particularly laudable in many parts of the world, it marks a major break from the cycle of dependency and apathy that has marked so much of the Comoros recent history.

This change in attitudes alone would be sufficient to judge the ASAP/VANNA Project a "success". But, farmers in and around the Project communities also protect their land better than they did five years ago (as measured, monitored and evaluated by the Project).

Farmers who have participated directly in Project activities, and farmers who have not (but who have learned from others) have better soil fertility than they had five years ago. The two zones of Ouani and Boungouéni now have a more diversified crop base than they had five years ago. A dozen new species of crops have been accepted and adopted by farmers in the areas. The quantitative and qualitative mechanisms as specified in A.I.D.'s OPG were put in place by the Project. Indicators set out in the OPG have been measured. Production, if not income, has increased on participating farmers' land by at least 30% from the most basic traditional crops (eg, manioc) to the most popular introduced varieties (eg, sweet potatoes).

The most important lesson to be learned from a project implementation point of view is that management must be flexible. It must be adaptive. It must recognize that farmers and communities are not locked in time. It must understand that communities change, economies change, and attitudes and capabilities change. An activity that started out with a marginalist, hold its own attitude, implemented with a young, fairly inexperienced national staff and a large contingent of expatriates, has evolved into a project with two expatriates and a dynamic, innovative and competent national staff. More importantly, it has evolved from a project which served as a purveyors of information and inputs into one that is a partner and facilitator in the rural development process.

In addition, the Project's local staff have spent considerable time and resources over the past year and a half to design a follow-on to ASAP/VANNA. Their efforts have met with no success thusfar. Nonetheless, they have the active support of Government. The Director General of Rural Development (Ministry of Rural Development, Fisheries and the Environment) is a participant on this Final Evaluation Team. He and his Minister have assured CARE/Comoros that this document will be presented to the Donors' Round Table on Agriculture and the Environment in Geneva, in early October.

The Final Evaluation Team believes the following should be considered when determining "lessons learned" from the ASAP/VANNA Project. The Comoros is still one of the poorest nations in the world. Anjouan is an overpopulated, poor island in the middle of the Indian Ocean in which most things not produced on subsistence farmers' land are imported. It has just signed its first IMF agreement after nearly six years of protracted negotiations. It is a country where Government's rural extension service has ceased to exist. The Comoros is a country in which every traditional cash crop (cloves, vanilla, ylang ylang) has lost real value since the Grant Agreement was signed.

It is difficult to comprehend how subsistence farmers can procure new varieties of seeds and other farm inputs to augment their production when there is no infrastructure to deliver them, and where they lack the disposable income with which to purchase them (all of which are imported).

Nonetheless, whatever "success" may be realized in the future will be attributable to the Project's decision in 1992, with both AID's and CARE's support, to focus strongly on community-based development. However, that approach is only two and a half years old. While it has yielded remarkable results in such a short period, time and experience do not permit any objective observer to predict with any certainty that the community-based approach can continue to show results in the absence of any Government or external agency support.

Thus, the major lesson to be learned from a programmatic point of view, is that unless a donor is willing to go in for the long-term when working in a country like the Comoros, then it runs the risk of building expectations among local people which cannot be met over the long-term. This reinforces a welfare dependent mentality which has been ingrained in Anjouan's society for decades, which, in turn, is built upon a history of many uncoordinated, short-term aid projects. The Evaluation Team believes it is unfortunate that, when the Project was demonstrating tangible results in line with those set out by A.I.D. in 1989, when self-sufficiency is actually something many extensionists and farmers actually believe is possible (and which was not obvious at the time of the Mid-Term Evaluation), it is now coming to an end, with no continuation, or follow-on support.

ANNEXE 1

List of contact

Nom	Organisation	Titre/Position
Abdou Bacar	ASAP/Projet VANNA	Assistant Technicien, Cellule Suivi et Evaluation
Ahamady Allaoui	ASAP/Projet VANNA	Chef de Cellule, Formation et Vulgarisation
Ahmed Mahamoud	ASAP/Projet VANNA	Vulgarisateur/Nyounguajou
Alaiddin Baco	ASAP/Projet VANNA	Vulgarisateur/Vouani
Amri Salim	APPN	Directeur
Assane Moussa	ASAP/Projet VANNA	Vulgarisateur/Nkourouni
Boura Said Ali	ASAP/Projet VANNA	Vulgarisateur/Moya
Dainane Said Ali	CADER/CEA	Directeur Boungoueni
Dhoihari Toiliha	IRDA	Responsable CE
Dhulkama. Mme	FADC	Directrice
Gauffin Paul	PDRINE	Formateur
Gold, Robert	ASAP/Peace Corps	Education Environnementale
Ibrahim Abdallah	ASAP/Projet VANNA	Chef de Cellule Agronomie
Ibrahim Mahadali	ASAP/Projet VANNA	Assistant Technicien, Cellule Developpement Communautaire
Kamal Abdou	ASAP/Projet VANNA	Vulgarisateur/Vouani
Mahamoud Said	ASAP/Projet VANNA	Technicien Assistant Cellule Foresterie
Said Mahmoud	PADR/PANSAC	Directeur Regional
Mohamed Abarhacan	ASAP/Projet VANNA	Vulgarisateur/Koki
Mohamed Ali di Gabou	ASAP/Projet VANNA	Vulgarisateur/Moya
Mohamed Moussa	ASAP/Projet VANNA	Vulgarisateur/Koki
Moulimati Haroussi	ASAP/Projet VANNA	Vulgarisateur/Nyounguajou
Nguyen Vu	APPN	Agrogestionnaire
Omady Sidy	ASAP/Projet VANNA	Chef Cellule Foresterie
Pellizzari Edoardo	PDRINE	Conseiller Technique
Ahmed Saindou	PDRINE	Directeur
Saindou, Kassim	MDRPE	Directeur Regional
Salim Ben Ali	ASAP/Projet VANNA	Administrateur
St. Pierre, Claude	CARE/Comoros	Directeur
Thembo Vhosi Thomas	ASAP/Projet VANNA	Assistant Chef de Projet
Victorson, Lane	ASAP/Peace Corps	Education Environnementale
Walters, Eddie	ASAP/Project VANNA	Chef de Projet

ANNEXE 2

Evaluation Programme

8th August 1994	Meeting between Team Leader Mr. Bess and REDSO officials.
9th August 1994	Dr Pellek and Mr. Bess arrive Moroni. Briefed by CARE/Comoros Director, Claude St. Pierre. Discussions, review documentation.
10th August 94	Continue discussions and document review. Joined by Evaluation Team Member A. Djabir, Dir. General for Rural Development (MRDPE). Discussions with Peace Corps Volunteer.
11th August 94	Arrival in Anjouan. Meet with Mr. Eddie Walters, Project Manager, and ASAP/VANNA Project Team.
12th August 94	Meet with ASAP/VANNA Project Team. Discuss and draft programme. Visit by all Evaluation Team members to Bazimini.
13th August 94	Mr Djabir visits Vouani, Dr Pellek visits Nkorouni and Mr Bess visits Nyongajou SDIs. Return, discuss results and review documentation. Interview key Project staff
14th August 94	Mr. Bess and Mr. Djabir visit Ouani SDI and Dr. Pellek visits Koki SDI. Interviews continue with key Project staff.
15th August 94	Meeting with FED Project staff. Interviews of key ASAP/VANNA Project staff.
16th August 94	Meetings with IFAD, FAC and FADC staff. Interviews with key ASAP/VANNA Project staff. Dr. Pellek departs for Moroni.
17th August 94	Meeting with WFP and FADC. Ms Cheryl Anderson-Kai (REDSO/ESA Project Officer) and Mr Claude St. Pierre arrive Anjouan. Discussions on Evaluation progress. Interviews.
18th August 94	Mr. Bess and Mr. Djabir write draft Executive Summary.
19th August 94	Mr. ST- Pierre and Mr. Bess Translate Executive Summary. Presentation of Executive Summary (French) to ASAP/VANNA staff. Discussions and revisions.
20th August 94	Complete discussions, update M&E information. Return to Moroni.
21st August 94	Continue writing Draft Final Evaluation.
22nd August 94	Mr. Bess, Ms. Anderson-Kai and Mr.St. Pierre discuss conclusions and recommendations. Mrs Anderson-Kai departs Nairobi
23rd August 94	Continue discussions on results, and complete main body of Draft Final Evaluation Report. Mr. Bess departs for Nairobi.
24th August 94	Continue writing report in Nairobi.
25th August 94	Mr. Bess meets with Dr. Pellek and Mrs Anderson-Kai at REDSO/ESA Nairobi to discuss lessons learned, recommendations and conclusions.
26th August 94	Continue writing report.
27th August 94	Complete Final Evaluation Report. Submit copy to CARE/Comoros.

ANNEXE 3

BIBLIOGRAPHY (Document reviewed)

- Abdallah Paune Kamaroudine "Les traditions culturelles aux Comores", Université de Paris, 1977.
- Bess, Mike et Louis Bockel "Evaluation mi-parcours: Projet Vulgarisation agricole nord nord-ouest Anjouan", décembre 1991, CARE/Comores
- Buck, Louise "Trip Report of Louise E. Buck: July 1988".
- CADER de Bourigoueni "Rapport additif au rapport final de l'évaluation projet VANNA", août 1994.
- CARE-Comores "Plan d'aménagement de la forêt d'Anjouan", projet VANNA (Kathryn Hunter et Mahamoud Said), décembre 1992
- CARE/Comores "Accord entre le Gouvernement de la République Fédérale Islamique des Comores et CARE-International pour l'exécution du Projet Vulgarisation Agricole du Nord et Nord Ouest d'Anjouan," 15 novembre 1991.
- CARE/Comores "Appui a l'autopromotion communautaire, comite de gestion de site - plan d'action de campagne agricole CADER des Ouani et de Boungweni", Projet VANNA
- CARE/Comores "Atelier de recyclage sur l'éducation environnementale", Projet VANNA (Thembo Vhosi, Tonya Barnes, Lane Victorson, Robert Gold, Mutui) juillet 1993
- CARE/Comores "Atelier de recyclage sur l'éducation environnementale", Projet VANNA (Thembo Vhosi, Tonya Barnes, Robert Gold, Omar Abdallah) décembre 1993
- CARE/Comores "Bilan de la campagne 1989-90 et objectifs de la campagne 1990-91", Projet VANNA, septembre 1990.
- CARE/Comores "Bilan des actions dans les parcelles de vulgarisateurs", Projet Vanna (Ahamadi Allaoui et Didier Lafrechoux), 22 août 1991
- CARE/Comores "Budget Prévisionnel. Année fiscale 1992 (1-7-91 au 30-6-92")
- CARE/Comores "Compte rendu de la réunion de coordination", various meetings, April 1989 to November 1st, 1991.
- CARE/Comores "Consultation des agriculteurs dans l'élaboration du statut et règlement interieur", Cellule Développement Communautaire
- CARE/Comores "Consultations des agriculteurs sur les travaux d'aménagement et de gestion des sites de développement intensif: Réunion bilan 1992-1993", Projet VANNA (Thembo Vhosi Thomas) juillet 1994
- CARE/Comores "Document de formation des vulgarisateurs, 1991/1992", Projet VANNA (Didier Lafrechoux, Ahamadi Allaoui et Bacar Dossar Mohamed), 1991
- CARE/Comores "Enquête préférence des arbres 91/92", Projet VANNA (Omady Sidy), undated.

CARE/Comores	"Enquete sur l'appréciation des espèces d'arbres", Projet VANNA (Laframboise et Sidy), juin 1990.
CARE/Comores	"Espèces et écosystèmes: Les ressources naturelles au service du développement", Projet VANNA (Bodard), octobre 1990.
CARE/Comores	"Evaluation du "L.S.C. projet" (OPG1), avril 1988, AID.
CARE/Comores	"Exercice d'analyse des besoins en formation des vulgarisateurs", Projet VANNA (Laframboise), avril 1990.
CARE/Comores	"Explication analyse du SWOT", CVF, undated.
CARE/Comores	"Fiche d'Enquête sur l'adoption du paquet technique, Campagne 1993-94"
CARE/Comores	"Formation des vulgarisateurs aux CADER de Ouani et Boungueni, juillet-août-septembre 1990", Projet VANNA, (Didier Lafrechoux et Ahamadi Allaoui), avril 1991
CARE/Comores	"La lutte contre l'érosion: Les techniques", Projet VANNA (Ahamadi Allaoui et Didier Lafrechoux), mars 1991
CARE/Comores	"Lancement de la campagne 1990/91", CVF, undated.
CARE/Comores	"Les courbes de niveau végétales et les terrasses", Projet VANNA (Veerkamp), mars 1989.
CARE/Comores	"Les réunions techniques site par site en 1990/91", Cellule Vulgarisation et Formation, undated.
CARE/Comores	"Méthode pour le choix des nouveaux S.D.I.", mars 1989.
CARE/Comores	"Politique de gestion du personnel national", Projet VANNA, octobre 1993
CARE/Comores	"Procédures d'approvisionnement", mai, 1992
CARE/Comores	"Protocole, parcelles de suivi (Parcelles d'essais paysans)1992-1993, Projet VANNA"
CARE/Comores	"Protocole, parcelles de suivi (Parcelles d'essais paysans)1993-1994 Projet VANNA"
CARE/Comores	"Protocole, Suivi des parcelles paysannes, Campagne 1991-92"
CARE/Comores	"Rapport de la formation des formateurs", Projet VANNA (Ahamadi Allaoui, Mohamed Bacar Dossar et Maureen Plaas), février 1992.
CARE/Comores	"Rapport de synthèse sur l'exercice d'analyse des besoins en formation pour les vulgarisateurs du Projet VANNA, Coordination du Projet/Cellule Formation", undated.
CARE/Comores	"Rapport de synthèse: Séminaire de réflexion de Mohéli", août 1990
CARE/Comores	"Rapport final mars 1992 a août 1994, Cellule Développement Communautaire", Projet VANNA (Thembo Vhosi, Amina Antoy, Ibrahim Mahadali, Lane Victorson, Robert Gold), août 1994
CARE/Comores	"Rapport final préliminaire: Cellule Agronomique période du projet 89/90 = 93/94", Projet VANNA (Ibrahim Abdallah) août 1994
CARE/Comores	"Rapport final préliminaire: Cellule Foret", août 1994
CARE/Comores	"Rapport final préliminaire: Cellule Formation Vulgarisation", août 1994

CARE/Comores	"Rapport final préliminaire: Gestion du personnel" Projet VANNA, août 1994
CARE/Comores	"Rapport sur un bilan de l'action, Paysan formateur", Projet VANNA 1993
CARE/Comores	"Recommandations de la réunion des forestiers d'Anjouan pour présentation au séminaire environnemental", 15 mai, Mutsamudu.
CARE/Comores	"Remarques sur l'étude de la stratégie agricole", undated.
CARE/Comores	"Réunions villageoises, diagnostic", Projet VANNA, 1994
CARE/Comores	"Rôles des techniciens affectés dans les sites", Projet VANNA (Didier Lafrechoux), 28 août 1991.
CARE/Comores	"Réunions villageoises, Diagnostic", 1994
CARE/Comores	"Synthèse des besoins de formation des vulgarisateurs", Projet VANNA (Lafrechoux et Alloui), juin 1990.
CARE/Comores	"Termes de référence: Evaluation du projet Vulgarisation agricole nord nord-ouest Anjouan", juin 1994
CARE/Comores	"Visites inter site 1989/90: Bilan et propositions d'améliorations pour la campagne 1990/1991 au CADER Ouani", 14 avril 1990
CARE/Comoros	"A Survey of Natural Forest Use", undated. ASAP Project Natural Resources Unit.
CARE/Comoros	"Anjouan Sustainable Agriculture Project: Amendment to Project Supplement - Natural Forest Management Technician", June 11, 1990.
CARE/Comoros	"Annual Implementation Plan", various issues.
CARE/Comoros	"Bi-annual Report", Feb 15th, 1990.
CARE/Comoros	"Bi-annual Report", May 15th, 1991.
CARE/Comoros	"Bi-annual Report", March 20th, 1991.
CARE/Comoros	"Bi-annual Report", March 26th, 1990.
CARE/Comoros	"Bi-annual Report", June 6th, 1991.
CARE/Comoros	"Bi-annual Report", September 6th, 1991.
CARE/Comoros	"Bi-annual Report", June 8th, 1989.
CARE/Comoros	"Budget Expenditures", various issues, 1989 - 1991.
CARE/Comoros	"CARE Project Implementation Report, (PIR) Mid-Season 1993-1994", April 1994
CARE/Comoros	"CARE Project Implementation Report, (PIR)", November 1993
CARE/Comoros	"Concept Paper: Primary Health Care Project".
CARE/Comoros	"Continuation of ASAP Project presented to REDSO ASAP Review Committee", May 27th 1992
CARE/Comoros	"Draft Adoption of ASAP Technical Package 1994 (Site - Off Site)", August 15th, 1994
CARE/Comoros	"Environmental Education Training Workshop for Teachers", ASAP (K. Hunter and Mohamoud Said), September 1990.
CARE/Comoros	"Preliminary Economic Analysis of the Technical Package Recommended by the ASAP Project in Anjouan", ASAP (Eddie Walters) 1992
CARE/Comoros	"Preliminary Project Implementation Report (PIR), 1993-1994 Agricultural Season", July 1994

CARE/Comoros	"Project Implementation Report", various issues.
CARE/Comoros	"Request for an Amendment to the Grant No. 602-0002-0-SS-9043-00", May 27th 1992
CARE/Comoros	"Semi-Annual Narrative Report: ASAP", August 1988.
CARE/Comoros	"Summary of Project Community Organization and Extension Strategy," February 1990.
CARE/Comoros and United States Peace Corps	"Memorandum of Understanding: Environmental Education", undated.
CARE/International	"Project Proposal: Anjouan Sustainable Agriculture Project (First Revision)", April 18, 1989.
CARE/International	"Regional Technical Advisors (RTA) Reports", various issues (Hetz, Hughes, Newby and Buck)
CARE/International	"Supplement to the Anjouan Sustainable Agriculture Project", New York, June 16, 1989.
CEFADER/CADER & PAM	"Compte rendu de la réunion de démarrage du Projet PAM 2545 Elarg. 2 'Assistance pour un Programme de Développement Rural Intégré", Mutsamudu, 12 janvier 1990.
CEFADER/CADER & PAM	"Compte rendu de la réunion de revue interne et de programmation 91 de Projet PAM COI-2545 Elarg. 2, "Assistance pour un Programme du Développement Rural Intégré", Tsembehu, 20 novembre 1990.
deDIVONNE, Philibert	"Insécurité foncière et groupements paysans sur les sites du Projet CARE Anjouan: Rapport provisoire", juin 1990.
Economist Intelligence Unit	"Madagascar, Mauritius, the Seychelles and the Comoros", various Annual Reports, 1990-1994
FAO	"Projet de Développement Rural de Nioumakélé-Anjouan", FAO Information Centre, February 1991.
Fasquel, Jean	<u>Mayotte, les Comores et la France</u> , Paris, 1991.
Gavitt, Christy	"Evaluation of AID's Operational Program Grant to CARE - Comoros", CARE/Comoros, April 1988.
Gold, Robert	"Environmental Resource Center Project for the Island of Anjouan", Peace Corps, 1994
Grosenick, Gerold., Sensenig, Barton	"Agricultural Sector Review: Comoros", Chemonics for REDSO/ESA, December 1988.
Hetz, Peter	"Trip Report: ASAP Comoros: August 1990", CARE/Nairobi.
Hughes, David	"Draft Technical Assistance Report, Anjouan Sustainable Agriculture Project, June 21st - 27th 1991", CARE International in Kenya
Hughes, David	"Technical Assistance Report: Anjouan Sustainable Agriculture Project, April 30th - May 10th, 1990", CARE/International in Kenya
Hughes, David	"Technical Assistance Report: May 1990".
Hughes, David	"Trip Report CARE Comoros Anjouan Sustainable Agriculture Project, May 18th - 23rd 1992", CARE International in Kenya
Hughes, David	"Trip Report on Technical Assistance Visit to Comoros Islands, November 11th - 14th 1991", CARE International in Kenya
Hughes, David	"Trip Report, CARE Comoros Anjouan Sustainable Agriculture Project, August 16th - 23rd 1993"

Hughes, David	"Trip Report, CARE Comoros Anjouan Sustainable Agriculture Project, October 5th-10th 1992, Draft", CARE International in Kenya
Hughes, David	"Trip Report: August 1991".
International Fund for Agricultural Development (IFAD)	"Preparation of the Phase I: IFAD", 1990.
International Monetary Fund	"Preliminary Remarks on a Structural Adjustment Program for the Government of the Federal Islamic Republic of the Comoros", 1991.
LaFramboise, David., John Veerkamp, Dan Stephens	"Project Proposal for Anjouan Sustainable Agriculture Project", April 1989.
Newby, Lenita	"CARE Comoros Anjouan Sustainable Agriculture Project Trip Report (June 8-20, 1991), CARE International in Kenya
Newby, Lenita	"Trip Report CARE Comores Anjouan Sustainable Agriculture Project, May 18-23 1992", CARE International in Kenya
Orstom, Robineau	Société et Economie d'Anjouan, 1966.
Plas, Maureen	"Training Needs Assessment Report for CARE-Comoros ASAP", ASAP January 3, 1992
Programme Alimentaire Mondial (World Food Programme)	"Rapport de la mission chargée de l'évaluation intermédiaire du Projet COMORES 2545 Elarg. 1, Projet polyvalent d'appui au développement rural et examen de la requête pour un deuxième élargissement (29 février - 11 mars et 9 - 28 avril 1988).
Programme Alimentaire Mondial (World Food Programme)	"Rapport de la mission de revue du Projet COMORES 2545 (Elarg. 2): Programme de developpement rural intégré (27 mai - 5 juin 1991), par J. Budarara, juin 1991.
Ratsimbazafy, Eric	"FNUAP: Etude de Marche sur les activités rémunératrices à l'intention des femmes et des groupements des femmes aux îles Comores - Projet de rapport final", décembre 1990.
REDSO/ESA	"Anjouan Sustainable Agriculture - Evaluation Scope of Work", October 1991.
REDSO/ESA	"Authorization of Comoros Anjouan Sustainable Project (ASAP, 602-002)", August 1, 1989.
REDSO/ESA	"Comments on REDSO/ESA Review Mid-Term Evaluation, Anjouan Sustainable Agriculture Project - OPG 602-002", Richard Pellek, Natural Resources Advisor, December 31, 1991
REDSO/ESA	"Grant No. 602-0020GOSS-9043-00 (Anjouan Sustainable Agriculture - Comoros) Amendment No. 04)", July 13,- 1992
REDSO/ESA	"Grant No. 602-0020GOSS-9043-00 (Anjouan Sustainable Agriculture - Comoros) Amendment No. 06", March 29, 1994
REDSO/ESA	"Grant No. 602-002-G-SS-9034; Amendment No. 5", September 11, 1992
REDSO/ESA	"Report on Trip to the Comoros, June 7-14, 1990", K.B. Paul and L.S. Waskins, June 26, 1990.
REDSO/ESA	"Trip Report to Comoros, January 11 -14 1993", A. Jeffrey, January 22, 1993

REDSO/ESA "Trip Report, Comoros - ASAP, December 8 - 13, 1990", -
Gregg Wiitala and Pat Fleuret, December 1990.

RFIC "Deuxième Conférence de Table Ronde des Partenaires du
Développement des Comores, Volume 3: La coopération
technique: Situation actuelle et perspectives". Genève 24-
25 juin 1991.

RFIC "Deuxième Conférence de Table Ronde des Partenaires du
Développement des Comores: Résumés des documents
destinés aux bailleurs de fond", Genève 24-25 juin 1991.

RFIC "Deuxième Conférence de Table Ronde des Partenaires du
Développement des Comores: Volume 1: Politique économi-
que, ajustement et développement" Genève 24-25 juin
1991.

RFIC "Etude de la stratégie agricole - l'appui institutionnel à
l'agriculture (Document provisoire, janvier 1991), Nb Edition
91.013. Ministère de la Production, du Développement
Rural, d'Industrie et de l'Artisanat.

RFIC "Consultation sectorielle sur l'environnement et l'agricultu-
re: Secteur agricole, synthèses sur la revue des projets
(document provisoire), Ministère du Développement rural de
la Pêche et de l'Environnement, Moroni, juillet 1994

United States State Department "UNDP Roundtable on Comoros Islands, Geneva, June 24-
25 [1991], No. 007529", 8 July 1991.

United States State Department "United States State Department, "Early Project Notification
for a Proposed IFAD Loan (EPN): Comoros: Small Producer
Support Project in Nioumaketle [Southeast Anjouan - Pre-
vious FAO Project Area]", No. 018583, October 11, 1991.

USAID "Annual Budget Submission FY 1992. Comoros, Djibouti,
Mauritius, Seychelles," July 1990.

USAID "Annual Budget Submission FY 1993", REDSO/ESA. July
1991.

USAID "Grant No. 602-002-G-SS-9034-00 (Anjouan Sustainable
Agriculture - Comoros) Amendment No. 01", April 20,
1990.

USAID "Grant No. 602-002-G-SS-9034-00 (Anjouan Sustainable
Agriculture - Comoros) Amendment No. 02", March 1,
1991.

USAID "Grant No. 602-002-G-SS-9034-00 (Anjouan Sustainable
Agriculture - Comoros)", August 30, 1989.

USAID "Grant No. 602-002-G-SS-9034-00 (Anjouan Sustainable
Agriculture-Comoros) Amendment No. 03", April 15, 1991.

USAID "Island Countries of the Indian Ocean. A Regional Profile"
July 1980.

USAID "Operational Program Grant to CARE-Comoros - Evaluation
Summary, FY 1984," March, 1984.

Veerkamp, John "Social Agroforestry Survey (Ouani, Boungoueni) ["Project
Baseline Survey"]", CARE/Comoros, 1988.

Wiitala, Greg., Fleuret, Pat. "Trip Report COMOROS-ASAP, December 8-13, 1990".

World Bank "Aide Mémoire de mission, République Fédérale Islamique
des Comores, Projet d'appui au secteur agricole. Mission de
suivi a l'identification du projet, 4 août 1994

- World Bank "Modalités de préparation du projet, Projet d'appui au secteur agricole, République Fédérale Islamique des Comores";, juillet 1994
- World Bank "Project Completion Report Islamic Federal Republic of the Comoros, First Education Project", January 5, 1990.
- World Bank "The Comoros, the Arduous Path to Economic Growth: The Need for Adjustment", August 14th 1987.
- World Bank "The Comoros: Problems and Prospects of a Small, Island Economy", Eastern Africa Regional Office, Washington, DC, July 1979

ANNEXE 4

Evaluation Field Visit Methodology Criteria
Diagnostic Monitoring and Evaluation of ASAP/VANNA Project Sites
August 1994

Site	Altitude	Site Selection Criteria	Level of Degrad	Adoption	Community Participation	Visited by:
CADER Ouani						
Bazimini	2	N	2	3	3	Bess,Djabir Pellek
Koki	2	N	3	2	2	Pellek
Kongani	2	N	2	3	3	
Monon	3	N	2	3	3	
Ouani	1	O	2-3	1	1 (Plan)	Bess,Djabir
Boudracouni	3	O	3	2	2	
Halingui	3	O	3	2	2	
CADER Boun- gueni						
Njamane	1	N	2	3	3 (Plan)	
Bimbini	1	N	3	2	2 (Plan)	
Nyongajou	2	O	3	3	3+ P/C	Bess
Kaweni	2	O	3+	2	2 P/C	
Nkourouni	1	O	3+	3	3 P/C	Pellek
Dzindri	2	O	2-3	2	2	
Vouani	1-2	N	2	3	3 P/C	Djabir
Band. Vouani	1-2	N	2	2	2	
Moya	2-3	O	2-3	1	1	
Boungoueni	2	O	3	2	2	

1. Altitude: 1 = lowest zone, 3 = highest elevation zones.
2. Site Selection Criteria: An "O" indicates an old site in which the Project's original site selection criteria were applied, while an "N" indicates a new site in which new criteria were applied.
3. Level of degradation: 1 = highest, 3 = lowest.
4. Adoption reflects the degree to which farmers on the sites have accepted the Project's technical package.
5. Community participation is gauged by several factors, including how far the site committees have come in setting out action plans, committee management plans etc.
6. The last column shows which members of the Evaluation Team visited which sites during the Final Evaluation.

Evaluation Scope of Work
Anjouan Sustainable Agriculture Project
CARE - COMOROS

I. Activity to be Evaluated

On August 30, 1989 a five year \$ 3.5 million grant (Grant No. 602-0002-SS-9043) was signed by the Agency for International Development (A.I.D.) with the Cooperative for American Relief Everywhere (CARE) to implement the Anjouan Sustainable Agriculture Project (ASAP 602-0002). ASAP is located on the island of Anjouan of the Federal Islamic Republic of the Comoros. The project Assistance Completion Date, is September 30, 1994.

II. Purpose of the Evaluation

The final evaluation, as required and funded by the Grant, is to be completed during the last year of the project. The timing and Scope of Work for this final evaluation are to be mutually agreed upon by CARE and REDSO/ESA, as shown by the clearance of this document.

The purpose of the final evaluation is to determine.

- a) the level of adoption, impact (in the local communities of Anjouan) and potential sustainability of the project technical package and
- b) the increased capabilities of the people of Anjouan to reverse environmental degradation.

The evaluation will be utilised by the Government of the Comoros (GOC) to determine GOC support for adoption of the technical package by farmers in other areas of Anjouan and the other islands of the Comoros, in general and continued environmental education in the schools of the Comoros.

The lessons learned will be publicised within A.I.D. for the purpose of designing similar projects for high rainfall, steep regions of countries in the tropics.

III. Background

U.S. assistance to the Comoros is based mainly on an humanitarian justification. The Comoros is a small island nation with a high population growth rate, and one of the least developed and poorest economies in the world.

ASAP designed to address the pervasive problem of declining productivity of agricultural land, is a follow-on grant from an initial \$ 3.5 million grant (Grant No. 602-0001-G-00-4001-00) signed by A.I.D. in 1984, with CARE for technical assistance to increase agricultural production. The ASAP project purpose as amended by Amendment No. 4 on July 13, 1992, is to: improve the productivity of farmland of 3,000 target area farmers by 1994, to achieve, acceptance and practice of a range of field management options that enable those farmers to optimise production, and to improve the people of Anjouan's capabilities to reverse environmental decline by increasing their awareness and promoting effective natural resource management practices.

A mid term evaluation, as required and funded by the Grant, was conducted in December 1991. The primary objective of the mid term evaluation was to assess progress toward achieving the project purpose. The major findings and conclusions were:

- a) The ASAP management team has a comprehensive knowledge of the project and is implementing a sound technical package within the focus areas of the project. Adoption of the project's technical package by participating farmers has been good but participating farmers are only slowly implementing the package on their land, outside the project's focus areas. Also, the "spread effect" to non participatory farmers has been limited.
- b) Due to the inability of the Government of the Comoros to assume greater responsibility for project initiated activities, the achievement of the project's goals and long term sustainability are probably unobtainable without a realignment of the project to more of a community participatory approach.

To address these major findings and conclusions, CARE engaged (March 1992) a Community Development Advisor to assist the project in increasing community participation to further develop and promote the ASAP technical package. And, the project goals and purpose were modified (Grant Amendment No. 4 on July 13, 1992), to reflect what is actually achievable during the remaining life of the project.

IV Statement of Work

The evaluation team will assess the various components of ASAP, addressing the following issues in particular.

- A. The ASAP technical package is composed of three principal elements, which, ideally, occur in sequence: anti-erosive measures, fertility enhancement, and crop diversification.

1. **Anti-erosive measures (AIM)**

The initial intervention is the installation of contour strips composed of a mixture of grasses and tree species, also the protection of the fields with live fencing, and possible establishment of woodlots in those fields inappropriate for cultivation. The evaluation team is to determine: (a) The number of farmers adopting, and quantity of AIM; (b) The composition of the AIM, and degree of maintenance, and; (c) an assessment of the effectiveness of the AIM.

2. **Fertility Enhancement**

Once soil conservation measures have been installed, cultivation can begin. The principal aspect of fertility enhancement is the incorporation of organic material. For tuber crops, organic material is incorporated into step terraces. Legume crops are planted on the flat. The project also encourages other means of fertility improvement such as green manure, mulching and livestock stabilization. The evaluation team is to determine: (a) the number of farmers adopting step terraces, and the quantity of step terraces; (b) an assessment of the practice in terms of increasing productivity; and (c) the level of adoption and effectiveness of the other fertility enhancement measures.

3. Crop Diversification

Through crop diversification farmers are being encourage to spread their risk, grow cash crops, improve soil fertility and stagger harvests on the terraces. The evaluation team is to determine (a) the number of farmers utilising crop diversification practices; (b) increased yields and income; and (c) increased fertility of the terrace.

B. The ASAP Farming System

The above three points; anti-erosive measures, fertility enhancement and crop diversification describe the technical package that the ASAP is introducing to the farmers of Anjouan. Extension agents, men and women from the focus area communities, will have been trained by ASAP in a systematized approach to introduce the technical package (including adoption to the particular locality and site), to the farmers and the communities. This is the farming system that ASAP will have implemented by the PACD. Inputs such as plant cuttings, fruit tree seedlings and seeds are to be supplied by privatized project developed nurseries. The evaluation team is to determine;

- a) adoption of the farming system by farmers and communities as a system "owned" by the farmers and the community, and therefore assess the potential for sustainability of the technical package and the farming system beyond PACD;
- b) the economic benefits (yield and income, both direct and indirect of the technical package and the farming system and compare the results with traditional farming practices;
- c) the environmental benefits of the technical package and the farming system in terms of reduced soil erosion and a declining rate of clearing of the remaining tropical forest;
- d) the number of farmers who have adopted the technical package and the farming system;
- e) the number of community associations formed or reinforced
- f) the number of privatised nurseries;
- g) the number of extension agents trained;
- h) the number of project farmers who utilised the technical package (or part of the technical package) and the farming system.

C. The ASAP Environmental Education Program.

Assess the effectiveness of the environmental education program in terms of impact on the school children taught, the environmental associations, and community awareness and involvement in environmental programs and natural resource management.

D. Lessons Learned

The evaluation team are determine the lessons learned during the implementation of the ASAP in terms of;

- a) development and implementation of the technical package
- b) community involvement in developing "ownership" and thus sustainability of the technical package.
- c) the farming system approach to agricultural development
- d) the almost total inability of the GFIRC to be an effective counterpart in the project's implementation.
- e) environmental education at a school and community level.

The evaluation report is to provide empirical findings to answer these questions, conclusions (interpretations and judgements) that are based on the findings, and recommendations based on an assessment of the results of the evaluation exercise.

V. Methods of Procedures

The evaluation team will review the project documents including the grant agreement and subsequent amendments, biannual reports, financial statements, special studies, consultant reports and the mid-term evaluation. Said documents are located at REDSO/ESA and the CARE/Comoros offices in Moroni and Mutsamudu.

Part of the evaluation team will meet initially in Nairobi with REDSO/ESA senior management and the REDSO/ESA Project Officer, for the three days of consultations and project documentation review. The team will then travel to Moroni for two days of consultations with the CARE Country Director and GFIRC officials of, Ministry of Rural Development Fisheries and Environment, then to Mutsamudu for initial consultations with the Governor's office of Anjouan and GFIRC officials, and ten days of field work. During the final week, the REDSO/ESA Project Officer and the CARE/Comoros Country Director will join the evaluation team to review the first draft and provide comments to the evaluation team. Two additional days will be available for the team leader in Nairobi.

Logistical support including appointment with GFIRC officials and surface transportation in the Comoros will be provided by CARE/Comoros. Laptop Computers and Supplies will be the responsibility of the consultants.

VI Evaluation Team Composition

The evaluation team will consist of a social scientist/agriculturist and two agronomists (one affiliated with the GFIRC) selected by REDSO/ESA, CARE and the GFIRC. The qualifications required of the consultants are as follows;

Social Scientist/agriculturist

The Social Scientist/Agriculturist will serve as the team leader. He/She will have ten years of experience working with development assistance programs. Five years of evaluation experience to include evaluations of agricultural and natural resource projects implemented by Non Governmental Organisations (NGOs). The team leader will be responsible for preparation of the draft and final report. Minimum academic qualification is a Master Degree in Social Science including areas of study in agriculture. Fluency in English and French at the FSI 3R3S level (minimum). Word Processing and Data analysis skills required.

Agroforester

A minimum of ten years working experience as an agroforester including the areas of soil conservation, agricultural community development and environmental education. Five years of evaluation experience to include evaluations of agricultural and natural resource projects, and project implemented by Non Governmental Organisations (NGOs). Minimum academic qualifications is a Master Degree in agriculture on related agricultural field including areas of study in agricultural economics. Fluency in English and French at the FSI 3R3S level (minimum). Word processing and Data analysis skills required.

Agronomist

The third member of the evaluation will be a representative of the GFIRC who will have the following qualifications. A minimum of five years working experience as an agronomist including the areas of soil conservation and crop development. Evaluation experience to include evaluations of agricultural and natural resource projects. Minimum academic qualification is a degree in agriculture or related agricultural field including areas of study in agricultural economics. Fluency in English and French at the FSI 3R3S level (minimum). Word processing and Data analysis skills required.

VII Reporting Requirements

The initial evaluation draft report, in both English and French, will be required on day 14 of the evaluation. This will enable review and response by the REDSO Project Officer, CARE/Comoros and ASAP staff, the CAARE/Comoros Director and the REDSO Project Officer.

The final draft report will be required on day 18 of the evaluation. The team leader will debrief REDSO/ESA upon return to Nairobi. Written comments will be provided by REDSO/ESA and CARE/Comoros within ten days of receipt of the final draft report. The final report in English (spiralled and 3.5 inch computer diskette) will be due within ten days of receipt of comments from REDSO/ESA and CARE.

The draft and final reports will be submitted in the following formats:

- Executive summary
- Project Identification Data Sheet
- Table of contents
- Body of the Report
- Appendixes (scope of work, list of persons interviewed, itinerary, list of documents reviewed and list of abbreviations)

Annex 6
Summary of Project Logical Framework and Achievements

Narrative Summary (NS)	Measurable Indicators (OVI)	EOP Achievements
Goal:		
1 By 1994, to improve the economic well-being of 3,000 project area farm families in terms of increased agricultural productivity, improved access to resources and stabilized income through crop diversification.	1.1 3,000 farmers have adopted the entire technical package.	1.1 Nearly 2,500 farmers have adopted anti-erosion measures and soil enrichment measures.
	1.2 6 village-based forest management plans are developed and implemented by EOP.	1.2 6 village-based forest management plans were developed and implemented by EOP.
	1.3 Greater diversity of food and cash crop species present in treated and non-treated fields.	1.3 Diversity of food and cash crop species present in treated and non-treated fields of greater than 30%.
Purpose:		
1. To improve the productivity of farmland of 3,000 target area farmers by 1994 to achieve acceptance and practice of a range of field management options that enable those farmers to optimize production, and to improve the people of Anjouan	1.1 3,500 farmers have adopted step terraces with incorporation of organic matter.	1.1 Nearly 2,500 farmers have adopted step terraces incorporating organic matter (billion).
	1.2 A 25% increase in net value of production on treated versus untreated fields.	1.2 An increase in net value of production on treated vs. untreated parcels. (35-80%)
	1.3 Same as Indicator 1.3 for Project Goal	1.3 Marked increase in crop diversification.
	1.4 3,000 farmers managing Anti-Erosive measures	1.4 Over 250 farmers trimming vetiver; over 2,500 farmers using LAE and/or step terraces and/or organic enrichment (billions)
	1.5 1,000 students receive environmental education in elementary schools.	1.5 More than 1,000 students received environmental education.
	1.6 Same as Indicator 1.2 for Project Goal	1.6 Six village-based plans.

	1.7 3 environmental associations by EOP	1.7 Six environmental associations formed and assisted.
1 Effective monitoring and evaluation system	1.1 Communities have input in the M&E system.	1.1 All 17 of 17 sites have site plans, 15 have committee action plans ("plans d'action"), 15 have committee management plans ("cahiers de site"), and six have village management plans ("plans villageois"), annual farmer and site M&E meetings ("réunions bilan")
	1.2 System provides accurate estimates of economic return of technical package.	1.2 Various surveys, follow-ups, etc. show economic returns on tech. package. of more than 40% (up to 150%) for major crops.
	1.3 The extension message is refined each season according to findings of M&E system.	1.3 Project management, technicians, extensionists & farmers participate in annual and other M&E, discussions (action plans, cahiers, bilans, etc.), design plans, etc.
2 Effective agroforestry support	2.1 4 central nurseries at EOP	2.1 6 central nurseries at EOP
	2.2 7 central nurseries at mid-term	2.2 7 private nurseries
	2.3 9 private nurseries at EOP	2.3 9 private nurseries at EOP
	2.4 6 private nurseries at mid-term	2.4 2 private nurseries at mid-term
	2.5 1,200,000 seedlings produced by EOP	2.5 Over 1.3 million seedlings produced by EOP
	2.6 65% seedling survival rate after 1 season	2.6 65% survival rate by EOP
	2.7 20,000 fruit trees sold by EOP	2.7 Over 37,000 fruit trees produced by EOP
	2.8 200 km of anti-erosive lines established.	2.8 242 km anti-erosive lines established by EOP
	2.9 750,000 cuttings planted	2.9 Over 1 million cuttings planted
3 Effective agronomic support	3.1 25 station trials conducted by EOP	3.1 30 station trials (annual "parcelles de suivi") by EOP

	3.2 15 farmers participating in on-farm trials by EOP	3.2 17 farmers participate in on-farm trials last season of Project
	3.3 20 farmers participating in farmer-managed trials by EOP	3.3 17 farmers participating in farmer-managed trials
	3.4 5 technologies tested and diffused to farmers	3.4 13 technologies tested and diffused to farmers.
4 Strengthened training and extension	4.1 3,200 extensionist training days by EOP	4.1 4,663 extensionist training days at EOP
	4.2 Development and edition of training plan	4.2 Training Plan completed & edited 1992
	4.3 3,500 farmers trained by EOP	4.3 Over 3,500 farmers trained by EOP through 7,099 farmer training sessions.
	4.4 7 extensionists paid by GFIRC in each CADER by EOP	4.4 No extensionists paid by GFIRC by EOP
	4.5 150 staff training days by EOP	4.5 245 staff training days by EOP
	4.6 20 extensionist run demonstration plots at EOP	4.6 17 extensionists ran demonstration plots last year of Project.
5 Improved Natural Forest management	5.1 6 community forest management plans developed and implemented	5.1 6 community forest management plans developed & in various stages of implementation
	5.2 Natural Forest Management Plan is and accepted by GFIRC.	5.2 Natural Forest Management Plan completed, not yet adopted by GFIRC
	5.3 Forest inventory is finalized	5.3 Forest inventory finalized
	5.4 15,000 endemic species seedling produced by EOP.	5.4 No farmer demand for endemic species. Arboretum established. 8,290 endemic tree seedlings produced
6 Enhance community participation and organization	6.1 10 site (or village) committees established and operating	6.1 17 site committees established and operating at EOP
	6.2 60% farmer to farmer reimbursement rate for seed and vegetative material	6.2 20% reimbursement to Project for cuttings, comités de sites managing seed & cuttings reimbursements in 15 of 17 sites

	6.3 10 farmer groups organized to address agricultural issues	6.3 15 farmer groups organized to address agricultural issues.
7 Increased Environmental awareness	7.1 20 pilot schools by EOP	7.1 20 pilot schools by EOP
	7.2 Environmental education officially part of national curriculum	7.2 Environmental education included locally, and at Teachers Training level, but not yet by GFIRC
	7.3 600 teacher training days	7.3 545 teacher training days and 1,850 students trained by EOP
	7.4 3 environmental associations created and active on Anjouan	7.4 6 environmental associations formed & assisted

Detailed Forestry and Agronomy Observations

Despite the early ASAP emphasis on a Natural Resources Unit which presumably fed into agroforestry applications, there continues to be a certain level of dependency on exotic species and imported seed. Although the former Natural Resources Unit identified over 100 species of plants in surrounding forests, few of the indigenous species have been amenable to mass reproduction and distribution through the Project.

Farmers in general prefer the exotics because of their fast growth. Highest farmer priority is on multiple use species, *bois de service*, which includes utilization for poles, tools, saw timber, forage and fuelwood.

Privatization of nurseries has exceeded the target numbers. About half of the annual seedling production now comes from privately run nurseries, but virtually all of the output from them is purchased by the Project, the only buyer of consequence. When the Project ends, the nursery operations will come under the supervision of the CEAs. Private management will continue, for the most part.

An obvious risk to smooth transition of the nursery system is the interruption of imports. As the Project closes, there may be a void in services whereby tree seed is no longer available to continue nursery operations in the same manner as was done in the past. Since some or even most of the species are exotic, they do not always produce seed, or viable seed, or enough seed from second generation trees to meet future needs. On the other hand, a few species which were once imported in large quantities are imported only when conditions are unfavorable. For example, *Acacia auriculiformis*, a fast growing and popular species that was once imported, now produces sufficient viable seed from local sources to make imports unnecessary.

All indications are that the levels of stocks of local species are inadequate to meet needs, yet some of the slow growing local species are rejected by farmers. Also, that true demand is masked by cost and availability factors. There are promising results with a few indigenous species during the current growing season, but it is premature to say how much planting stock could be expected in the future.

As long as seedlings are made available to farmers at no cost, the apparent demand remains high. Since the Project buys all of the output from private nurseries, there is an incentive to have private nurseries. Seedling production in the near term will be transferred to the Centre d'Encadrement Agricole (CEA) system, financed by the World Food Program. The decision to continue with forestry seedling production underscores the importance that FIRC places on continuing to meet the demand for seedlings. A transfer of buyers from one institution to another, however, postpones the day when farmers decide to raise and plant trees on their own. Some people believe that average Comorians do not put a high priority on personal forestation of the land, and certainly not with their limited disposable income. Even fruit trees are currently difficult to sell through the Project because production and labor costs are considerably higher than for forestry seedling production. Fruit tree production in ASAP dropped dramatically after it was announced that the Project would not purchase fruit trees from the producers.

Forestry has traditionally been a function of central and local governments, and has usually employed trained foresters to operate nurseries to meet their needs. In this respect, the private nurseries may be in direct competition with the FIRC, but under the circumstances whereby government payrolls are being trimmed, privatization may well be the best solution.

Early emphasis on technical aspects of demonstrating improvements in soil fertility have not been proven with chemical testing. Project reports do not show nor emphasize either the nature of baseline soil fertility data nor the positive impact of the improved cultural techniques, on the basis of monitoring a few chemical parameters. However, yield increases as a proxy for improved soil chemical balance have been accepted as consistent and unambiguous over several years. Unfortunately, selection of monitoring sites was probably not done consistently on a random basis, and any systematic selection of research and/or demonstration sites would be pre-disposed to biased results.

future date, conduct a benefit/cost analysis of the improved techniques as a way to validate the methodology.

Commentary

Measures of soil fertility are conducted in ASAP headquarters with a small field test kit. Nitrogen, phosphorous, potassium and pH are the only chemical parameters evaluated. In principle, at least two samples per selected plot and two plots per site have been taken per year for the past three years. Results have indicated that there is an increase in fertility by using improved methods of cultivation under ASAP, but the sampling methodology itself is subject to question. The two soil samples per plot, in some cases, have been mixed to form a composite, and the composite samples have been recorded on a year-to-year basis. Unfortunately, it appears that the composite samples have been composed of soil taken from ground with the traditional practices and composited with soil where improved practices have been implemented. The melange of soil fertility characteristics would seem to be the median values of both systems, rather than a comparison of the practices. In other cases, it was explained to the Evaluation Team, the composite came from a mixture of soil from one treatment with green manure, and the other from green manure + chemical fertilizer. Nothing was said about soil samples under traditional cropping practices.

In yet another site situation, it was reported that only one sample was taken from the plot with traditional techniques, and one from each plot with various levels of improved techniques. Statistical reliability cannot be attained with such limited sampling. One indicator of apparent fertility has been the difference in yield between/among plots where traditional practices have been compared with improved practices. Yield as a proxy for fertility status indicates that the improved practices lead to bigger harvests, however, when relatively nutrient and/or soil moisture poor plots are chosen to demonstrate the traditional practice; and relatively nutrient and/or soil moisture rich sites are chosen to represent yields from improved techniques, it leads to skewed results. Such was the case in at least three consecutive parcels where yield is monitored and where soil samples had been taken on an annual basis.