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NOTICE OF RECORD

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CORRECT PROJECT TITLE IS: CARE OPG II

VERIFIED BY: Luise Little
AFR/PD/IPS

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CLEARED BY: Luise Little for Gwen Campbell
CHIEF, AFR/PD/IPS

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2. COUNTRY/ENTITY COMOROS	3. PROJECT NUMBER 602-0002
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4. BUREAU/OFFICE REDSO/ESA	5. PROJECT TITLE (maximum 40 characters) ANJOUAN SUSTAINABLE AGRICULTURE
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6. PROJECT ASSISTANCE COMPLETION DATE (PACD) MM DD YY 08 31 94	7. ESTIMATED DATE OF OBLIGATION (Under 'B' below, enter 1, 2, 3, or 4) A. Initial FY 89 B. Quarter 4 C. Final FY 94
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8. COSTS (\$000 OR EQUIVALENT \$1 =)						
A. FUNDING SOURCE	FIRST FY 89			LIFE OF PROJECT		
	B. FX	C. L,C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	430		430	3,500		3,500
(Grant)	(430)	()	(430)	(3,500)	()	(3,500)
(Loan)	()	()	()	()	()	()
Other U.S.						
1.						
2.						
Host Country		-0-	-0-	-0-	130	130
Other Donor(s)						
TOTALS	430	-0-	430	3,500	130	3,630

9. SCHEDULE OF AID FUNDING (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) SS	213	020				3,500		3,500	
(2)									
(3)									
(4)									
TOTALS						3,500		3,500	

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To improve the productivity of 1,000 hectares of farmland in target areas of the Comoros by 1994, and to achieve acceptance and practice of a range of field management actions that enable farmers to vary crop mixes and optimize production.

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PROJECT PROPOSAL

ANJOUAN SUSTAINABLE AGRICULTURE PROJECT

(First Revision)

Country: Comoros

Period: 1989 - 1994

Contact Person: Director
CARE Comoros

Prepared by: David LaFramboise
John Veerkamp
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Date: April 1989

BEST AVAILABLE DOCUMENT

1.1 EXECUTIVE SUMMARY

The Anjouan Sustainable Agriculture Project (ASAP) is located on the island of Anjouan in the Federal Islamic Republic of the Comoros. 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 Comoros has been active in the Comoros archipelago since 1984 when Phase I of ASAP and a Garage Apprentice Training Workshop Project were started, both with funding by the United States Agency for International Development. CARE's presence is particularly important given that very few non-governmental organizations exist locally which can provide the technical assistance and donor linkage furnished by CARE. The need for technical assistance and training is particularly acute given the dearth of well-qualified nationals in the Comoros.

Phase II of ASAP is to begin in mid-1989 depending on when remaining funds from the first USAID grant are finished. The new grant is to be for a period of five years.

Per capita income in the Comoros is estimated at \$300, life expectancy is 48 years, infant mortality is 122 per 1000, the annual population growth rate is 3.3 percent, and literacy is 15 percent. The project participants are all small farmers whose domestic economy revolves around their subsistence and cash crop harvests. The project will impact on approximately 4,275 small farmers.

The implementation goals of the ASAP are to improve the productivity of 1000 hectares of farmland of the target area farmers by 1994 and to achieve acceptance and practice of a range of field management options that will enable 4,275 farmers to vary outputs in response to market

conditions and subsistence needs. If these goals are achieved it is assumed that farmers' income will increase by approximately 30%, thereby allowing participants to invest in themselves and their families via schooling, family health care, better nutrition, etc..

CARE's counterpart in the ASAP is the GOC Federal Center for Rural Development (CEFADER). On Anjouan several other projects exist which also implement agricultural development activities. One is funded and managed by the European Development Fund (FED) and the other by the United Nations Food and Agriculture Organization. The ASAP project is steadily increasing its technical and training liaison with these projects. Coordination on a national level will also be increased with the finalization of a national strategy for agricultural development which is currently financed by the United Nations Development Program.

The ASAP is budgeted for \$3.5 million over five years via a USAID grant and GOC contributions are estimated at \$25,000 per year.

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1.3 LIST OF ABBREVIATIONS

ADB	African Development Bank
ASAP	Anjouan Sustainable Agriculture Project
BDPA	Bureau pour le Developpement de la Production Agricole
CARE	CARE International
CADER	Centre d'Appui pour le Developpement Rural (Regional rural development center)
CEFADER	Centre Federale d'Appui pour le Developpement Rural (Federal rural development center)
CNDRS	Centre National de Recherche Scientifique
EDF	European Development Funds
EOP	End of Project
FAO	Food and Agricultural Organization
FFW	Food for Work
GOC	Government of Comoros
IG	Intermediate Goal
IMF	International Monetary Fund
LOP	Life of Project
LSCP	(Anjouan) Land and Soil Conservation Project
NFT	Nitrogen Fixing Tree
PIE	Project Implementation and Evaluation
RTA	Regional Technical Assistant
UNDP	United Nations Development Program
UNFPA	United Nations Fund for Population Activities
USAID	United States Agency for International Development
WFP	World Food Program

2. PROJECT OVERVIEW

2.1 Setting

The Comoros islands are situated in the Channel of Mozambique roughly halfway between Madagascar and the African mainland. The Federal Islamic Republic of the Comoros became independent from France in 1975. The archipelago is composed of four islands with a total land area of 2237 km². Its population density is one of the highest in Africa, with 165 persons/km². The island of Anjouan has the highest population density in the archipelago with 287 people/km² or 611 people/km² of arable land (UNFPA, 1982).

The islands are of volcanic origin, Anjouan possessing the most rugged topography, reaching to 1596 meters on Mount N'Tingui. Rainfall is generally abundant and varies from 700 mm per year in the driest areas to some 4000 mm in the central highlands. The high rainfall combined with steep slopes results in a high erosion potential once the natural vegetative cover is removed.

During the colonial period plantations were established on the more fertile and flatter parts of the island, forcing farmers to grow their food crops on the steeper slopes. The enormous population increase (from 15,000 inhabitants at the beginning of the century to 175,000 today) has led to an ever increasing pressure on the land, resulting in severe erosion and land degradation through overcultivation.

The country's economy relies heavily on agricultural and cash crop production. Although individual farmers grow their own food crops, they depend upon cash crop production in order to supplement income for the purchase of additional food and other needs. The dependence on three cash crops (ylang-ylang, cloves and vanilla) with declining world market values has resulted in a decrease of average farmer income. This in turn has led to the need for farmers to produce more of their food by intensifying land cultivation.

Due to increasing population pressures and degrading agricultural soils farmers are forced to clear and cultivate more land in order to produce staple crops. Virtually the only arable land left is in the fragile forest highland environment, and this is rapidly disappearing due to relentless clearing by farmers.

In 1980 a national rural development organization, Centre Federale pour le Developpement Rural (CEFADER), was established. Part of CEFADER's mandate has always been to develop agriculture. The M'Remani area of Anjouan was the first to profit from the creation of one of CEFADER's regional offices, called CADER's (Centre d'Appui au Developpement Rural). Prior to this there had been agricultural development inputs from the French BDPA in M'Remani. The first projects on Anjouan (ADB/FAO/UNDP/EDF) began in this area. Only in 1984 were the two CADERS of Ouani and Boungoueni established. Soon after CARE/USAID began implementation of the five year "Land and Soil Conservation Project" (LSCP) in these two CADERS, covering the northern and western parts of the island.

This proposal is a logical continuation and expansion of the LSCP. Successful activities and lessons learned have been included in the design of this follow-on project. In addition the project will address the need for increasing available information on indigenous species use and for diversifying crop mixes. It will also seek to define a strategy for the preservation of forest ecosystems while still allowing appropriate agricultural activities in those areas. This attention to highland forest ecosystems is in recognition of their vital role in the watersheds in which the ASAP focus areas are located.

The Anjouan Sustainable Agriculture Project (ASAP) will continue to collaborate with the other projects on the island to promote sound, sustainable agricultural systems on an island wide basis. Of particular importance are the Agricultural Sector Strategy Studies being undertaken with UNDP financing. These studies will focus on ten critical areas of Comorian agriculture and in early 1990 will present policy recommendations to the GOC. CARE will actively assist and inform the Agricultural Strategy Project as it proceeds with the studies and will seek to adjust its activities to adhere to the recommendations of the study.

The GOC is currently carrying out structural readjustments with the IMF and World Bank. Due to their financial difficulties the GOC's ability to fully contribute to and participate in project activities during and after the project is unclear. Therefore counterpart capacity will be a critical factor to be assessed during the formative evaluation which will occur during the second year of the new project.

2.2 Statement of Problem

The major constraints directly confronting target area farmers are those of soil erosion, decreasing land productivity and increasingly limited land availability. These problems are interrelated and their combined effects result in a degradation of the farmers' resource base. As income levels fall the standard of living declines and this ultimately results in an increase in the level of poverty.

From the farmers' perspective the most vital consideration is that of decreasing agricultural production. With his fields annually producing less staple food crops the farmer must expend more of his income on supplementing the family diet from outside sources. In addition, a sudden price decline for the traditional export crops has resulted in a decrease in disposable income for the farmer. This drain on the farmer's limited economy results in an inadequacy of investment in more beneficent enterprises such as the purchase of improved agricultural equipment or seeds. Investments in health or education are also overshadowed by the most essential need of obtaining the necessary sustenance to continue daily activities.

The project area covers approximately half the island with a total surface of some 20,000 hectares. Of this area only about half is arable. Of this arable area 30% is occupied by plantations of cash crops. The remaining limited area is relied upon to at least partially support the food requirements of 70,000 people, or roughly 10 people per arable hectare. From the baseline survey produced during the LSC project (Veerkamp, 1988) it is seen that 8 persons is the average family size with average total holdings of 3/4 hectare per household. This means that there is really no practical room for expansion of the agricultural area without encroaching upon marginal areas further than at present. However the declining productivity of the fields drives the farmer to do just that, while at the same time over-cultivating already poorly-productive land.

The over-cultivation of marginal or exhausted land is part of a vicious cycle which increases erosion and consequently decreases soil fertility. Through poor agricultural practices the land is often completely denuded and given over to monocultures such as cassava or mountain rice. Given the topography of the island, these crops are primarily cultivated on steep slopes, often in excess of 60%. The clearing of land for crop production leaves no protection against the elements and soil loss due to sheet

and gully erosion is severe. The erosion is accompanied by soil compaction which reduces infiltration of rainwater into the soil and thereby greatly reduces the flow of rivers and streams.

As fertility declines so do crop yields. This reduction in productivity propels the farmer to expand the land area under cultivation and reduce the fallow period on present fields as appropriate farm land becomes more difficult to obtain. Over-cultivation leads to increased erosion, decreased productivity, and the need to cultivate more land. At best it becomes more difficult for the farmer just to sustain a given yield year after year.

At lower altitudes the natural vegetation on Anjouan has been almost totally replaced by crops, exotic trees and pantropical weeds. Even on the steepest slopes the natural shrub vegetation has been destroyed and shrubs like Lantana camara, originally introduced for perfume distillation, dominate. Undesirable species such as ferns, imperata grass and Psidium sp. (wild guava) colonize the most degraded parts.

At higher altitudes the natural forest remains on the steep slopes and many forest trees are still left on the less steep slopes. Encroachment has been severe, however, and an estimated 60% of the forest existing 15 years ago has been brought under cultivation. Even though many trees remain, there is virtually no natural regeneration and it is just a matter of time before these trees will die and either an open area will remain or other, exotic tree species will be planted.

The above presents a dire picture for the near future if traditional agricultural practices continue to be applied. Those problems of direct consequence to the farmer are then again exacerbated when a rapidly growing population (3.3%, World Bank 1987) is taken into consideration. It has already been demonstrated that there is little if any room for expansion of the agricultural area, while there will be a dramatic increase in the population level in the near future. Clearly a more productive and sustainable agricultural system is called for to meet the needs of an expanding population.

2.3 Needs Assessment

As explained above the island of Anjouan is very mountainous, with a high population density and a virtual total dependence on agriculture. The enormous population increase over the last decades has led to an ever increasing pressure on the land. This, combined with traditional agricultural methods, has led to severe erosion and soil degradation. The need for erosion control is generally recognized and various projects have been working in this domain, including CARE's LSC project.

Originally the LSCP placed an emphasis on erosion control. But as the project evolved it shifted from pure erosion control measures towards soil restoration and improved farming methods. This responded more effectively to the farmers' need for directly increasing field productivity. This change in strategy was also adopted by CEFADER, WFP and other projects on an island-wide basis.

The ASAP continues and expands upon the basic interventions promoted by the LSC project. The above described trends towards agriculture and soil restoration are reflected in the present proposal and the name of the project.

In addition, due to increasing clearing of forest land by farmers it is difficult to protect the remaining natural ecosystems, which are critical components of the watersheds in which the project operates. These ecosystems are also potential sources of useful local species which could be incorporated into the project's agricultural interventions. Expansion of project activities will reflect the need to develop management plans in which these natural ecosystems will be utilized in the most nondestructive and sustainable manner possible. This will help protect many species of useful indigenous flora and fauna. In order to do this the critical components of the system must be identified, the data organized and documented, and relevant information made available to all pertinent decision makers, from the farmers to government representatives.

By broadening the project scope, the needs and priorities of the individual farmers, the community and the government are addressed. Ongoing dialogue with farmers over the years of the LSC project have revealed that individual farmers see an increase in production as their first priority. On the other hand the community and the government place more emphasis on erosion control and watershed protection.

All aspects of the new ASAP have been discussed with all key parties: the Minister of Production, the Director and Assistant Director of CEFADER, the CEFADER representative on Anjouan and CADER directors. As in the past, yearly activity plans will be co-designed and co-signed by CARE and the Ministry of Production to insure mutual understanding of project goals and activities and the obligations of both parties. Dialogue with farmers is a continuous process which ensures that the project adjusts regularly to their needs and expectations.

The project's activities follow the general strategies agreed to with other Anjouan-active agencies (GOC, FAO, UNDP, WFP) in the November 1987 roundtable meeting. The project will also adapt its interventions to incorporate recommendations from the Agricultural Sector Strategy, currently being prepared by UNDP/FAO with the help of the other donors.

2.4 Time Frame

ASAP activities are designed to build upon the experiences gained during the LSC project and to expand upon proven interventions. Therefore there is reasonable assurance that the ASAP will be able to achieve its intermediate goals over a five year period.

Over the five year life of the ASAP 4,275 farmers, who with their families represent a third of the target area population, will have been directly involved in project activities. One sixth of the available arable land in the target area will have been improved. Banks of planting materials, in the form of established grasses and trees which provide both cuttings and seed, will have been established in all focus areas.

While it is hoped that the GOC will be able to financially support ongoing extension service after EOP there is not yet any assurance to that effect.

Thus, the project is designed to emphasize replicability of its interventions at the farmer level. By EOP spontaneous lateral spread of project interventions via farmer-to-farmer transmission should be firmly established and underway.

3. PROJECT DESCRIPTION

3.1 Final Goal

The final goal of the project will be to increase the income of 4,275 target area farmers by 30% on a sustainable basis by the year 1997.

Obviously the final goal will not be measurable within the time-frame of the proposal. Instead success will be determined by attainment of the intermediate goals which are preconditions to the ultimate success of the project.

3.2 Intermediate Goals

As the primary constraint felt by farmers at the present time is the low productivity of the land the project must address this need in order to assure farmer participation. Therefore the first intermediate goal of the project is to improve the productivity of 1000 hectares of farmland of the target area farmers by 1994.

Once the productive capacity of the farmland has been increased a satisfactory production of staple crops will be more assured. The farmer will then be more favorably inclined to diversify total production and to try new crops. The second intermediate goal of the project is to achieve acceptance and practice of a range of field management options that enable 4275 farmers to vary outputs in response to market conditions and subsistence needs.

The project Final and Intermediate Goals are developed further in Appendix B - Project Schematics.

3.3 Project Strategy

The proposed strategy is based on the experience gained during the project's first phase. Some of the most pertinent lessons learned are given below.

The LSC project emphasized erosion control and initially focussed on one major intervention: the planting of vetiver grass (Vetiveria zizanioides) on the contour lines, supplemented with trees, mainly filao (Casuarina equisetifolia). Farmer adoption of this intervention was, even with the incentive of WFP-food rations, very low.

This intervention did not address the farmers' most strongly perceived problem, which is low production, mainly due to low soil fertility. The project increased its effectiveness by shifting from pure erosion control measures towards an integrated agricultural approach.

The intervention package gradually shifted from the above-mentioned vetiver/filao system towards an agroforestry system which included a choice of grasses and trees to plant on the contour lines. In this way erosion control was combined with the production of fodder, green manure, firewood, food and cash crops and thus became more interesting to the farmer. Field fencing and the improvement of agricultural practices between the contour lines were further steps towards an integrated approach. An emphasis was placed on soil restoration and fertilization through the use of green manure, cover crops and more leguminous crops. This diversification increased farmer participation as it allowed him or her to make his/her own choices.

The project will respond to land use problems which can be addressed by the farmers themselves. Techniques employed and proven under the LSC project will be promoted and expanded upon to achieve the following outputs:

- a reduction in soil erosion and degradation
- an increase in soil fertility and total field productivity
- an increase in the diversity of crops and other plant species
- an increase in farmer knowledge and awareness of environmental problems and market fluctuations, and in the solutions proposed to counteract these problems.

In addition the project will employ a Natural Resources Technician for two years. This person will identify indigenous species in the natural forest environment which can be incorporated in the agricultural interventions in focus areas and will develop a sound management plan for the forest ecosystem. This technician will also serve as liaison with the GOC and other projects on matters related to natural forest management and exploitation. The information obtained from these activities will also be valuable in guiding the future course of the Agricultural Strategy Studies currently being undertaken by the UNDP.

At first the project worked with interested farmers in the entire project area. This approach led to a dispersion of efforts and low effectiveness. In 1987, a consensus was

reached with the GOC and other projects to adopt a focus area approach on an island wide-basis and this has proven to be successful. Groups of farmers can be more effectively approached and motivated than individuals, since group sessions and excursions allow for improved communication between farmers and project staff and among farmers themselves. In addition this approach allows for more regular and intensive exchange of information among farmers within each focus area due to the close proximity of their fields. The focus area approach also greatly facilitates logistical support, such as the distribution of trees and grasses. Furthermore, the erosion control and soil restoration measures are more effective if executed on a number of adjacent fields, as this will result in more comprehensive and complimentary protection of the watershed.

Focus area selection is based on fulfilling critical requirements. These are; 1. accessibility, 2. visibility, 3. favorable land tenure situation, 4. willingness of farmers to participate, 5. of sufficient size 6. watershed-based or otherwise delimited by naturally defined boundaries.

Due to gradual intensification of activities the number of extension agents working with the project has increased over time. Consequently CARE has incrementally hired extension agents for both CADERs to supplement the GOC extension service and insure sufficient coverage of participating farmers. Due to the GOC's financial difficulties it is not foreseen that CEFADER will be able to sustain the current extension network. Therefore the project's long term extension strategy relies on farmer-to-farmer transmission of techniques to promote project activities after EOP. This level of communication is already operational in veteran focus areas.

3.3.1 Community Organization

The successful focus area approach will be pursued. This will enable the project to reach target area farmers through common activities, such as visits and demonstrations and will create a group spirit around the focus areas. This is important, as group formation on the village level is very weak in the Comoros. In addition, most of the project farmers live clustered in primarily coastal villages that are often far (up to an hour's walk or more) from their upland fields. As a consequence farmers who come from separate villages but have adjoining fields may cultivate in the same focus areas. For this reason community organization will of necessity be based on focus areas rather than village groups.

Since CADER's and the project have been working in the area for five years, most people are aware of its activities and approach. However, for focus area development initial contact with the community has been and will continue to be through village meetings.

As part of the group extension process the project will facilitate the formation of small representative committees for each focus area. These committees will serve to enhance communication between the villages and the project and also among villagers. Other kinds of group formation will be stimulated around common interests, such as marketing of agricultural products or the procurement of external agricultural inputs. A sociologist consultant will visit the project in November 1989 and will examine alternative extension structures, many of which are group-oriented, such as theater, radio programs and videos. This consultancy will address the issue of exploring community structures as suggested by the Chemonics consultancy to the LSC project.

The formation of village committees and common interest groups is also pertinent to the long term sustainability of the project after EOP. Such groups can provide a local forum for exchanges of technical knowledge, organization of cooperative activities, coordination of watershed management activities, etc. They will also greatly facilitate future contact between the villagers and GOC extension services or new development projects.

A new experimental community-related component of the project will explore the potential for implementing an environmental education training program for primary and secondary school teachers. It is proposed that the project train teachers (at the nearby Patsy Teachers' College) in basic environmental education and provide them with materials to incorporate into their curricula. The "Pied Crow" educational magazine produced in conjunction with CARE Kenya will be a useful source of material for curriculum development. Follow up of teachers could be performed by either project staff or perhaps by Peace Corps TEFL volunteers (on a part time basis). The intent of this component would be to increase young students' environmental awareness and via them to increase their communities' understanding of environmental issues. Such educational activities, if successful, would naturally dovetail with the field-level extension efforts of the project at large.

The project's training technician will be responsible for ascertaining whether this component is feasible and viable within the framework of this project. The RTA for Non-Formal Education will be requested to review this proposed activity in the fall of 1989. If it is concluded that this activity is worthwhile then a short project plan with specific goals, activity targets and a budget should be prepared and reviewed by the entire project staff, the country director, and collaborating GOC representatives before implementation is begun. Much work remains to be done in developing this nascent idea but it is a promising initiative worth pursuing on an experimental basis.

3.3.2 Service Development And Implementation

The establishment of nurseries and distribution of vegetative material to project participants is an essential service which the project provides. In most of the intervention areas no nurseries exist other than the projects' and villagers' access to appropriate planting material would be extremely limited without project assistance. The project not only produces seedlings for focus areas but also harvests cuttings on distant parts of Anjouan to satisfy the high demand for live fences and terrace supports. After seedlings and cuttings have become established in the focus area local demand can be satisfied by harvesting cutting and seeds from the first generation of plants. Therefore the operation of nurseries is most critical to new focus areas and only during the early years of implementation.

Currently the project sells fruit trees on a small scale. Some fruit trees are also provided for on-site planting as incentives to farmers who participate in the project, but once private fruit tree nurseries are established in an area the project will cease with fruit seedling production for sale. Fruit trees will only continue to be produced for training purposes and when testing a new species or variety. However the project will continue to have input in fruit tree production through assistance to private nurseries. Once the individuals are identified this assistance will be in the form of training sessions to introduce improved techniques (grafting, budding, etc.), increased accessibility of inputs and the organization of commercial groups to take better advantage of market opportunities.

In conjunction with local GOC authorities and other projects' staff, ASAP will also work to promote the

establishment of a standard island-wide policy concerning fruit tree production, sale and distribution. Quality control of the seedlings will be better maintained through a close collaboration with other producers as new or improved varieties are identified.

3.3.3 Staff Development, Training and Extension

3.3.3.1 Staff Development and Training

Staff development and training will focus primarily, but not exclusively, on the extension agents. The latter are the key to project success as they form the link between project staff and resources and the project participants. To maintain this link the extension agents must be able to effectively communicate with the target area farmers. The project training technician will prepare and conduct extension agent training sessions on communications skills and informal education techniques. Follow up and evaluation on extension agents' communication/education skills application in the field will be performed by project technicians and supervisors with guidance from the project trainer. In support of this will be the visit by the RTA for Non-Formal Education in fall 1989. The visit will be focussed on the project's various educational and extension activities.

In an effort to better reach and elicit responses from women farmers more female extension agents will be sought for recruitment if adequate personnel can be identified. This has proven difficult in the past in the Boungoueni CADER area, while conversely the Ouani CADER has the highest percentage of female extension agents in the country (6 out of 13 are women). A higher proportion of women have received formal education in the more urban environment of Ouani than in the rural Boungoueni area.

The other project technicians will collaborate with the project trainer to further develop the project's technical training materials and program. Visits to other parts of Anjouan and collaborative training efforts with other organizations undertaking similar projects will be continued and reinforced to the extent practicable.

The Monitoring and Evaluation Technician will assist in training where it concerns the surveys. Extension agents will be trained carry-out the information gathering. Some of the agents have already received such training under the

LSCP but modifications to the training program will need to be made depending upon the type of information sought.

Visits to successful projects in the nearby Indian Ocean and in East Africa (Kenya, Rwanda, Uganda, etc.) will be planned as opportunities are identified. Participants in these visits would be a mix of CARE international and national staff and CADER or CEFADER employees who are associated with the project. Such trips can significantly broaden the development horizons and innovative capacity of Comorians who have never profited from exposure to projects outside of the Comoros. Considerable funds have been budgeted during years 1-2-3 of the project for third country training visits. The assistance of the CARE East African Regional Technical Assistance Team will be sought in identifying specific visit opportunities. Given the logistical complexity of organizing such visits their regularity will probably be limited to one or two per year.

Each project technician will have at least one technical assistant with either training or experience in their project technical capacity. The project technicians will be responsible for training their assistants to continue to implement project interventions during absences or turnovers of expatriate technical personnel. In addition, technicians will be responsible for identifying appropriate short-term (6-10 weeks) educational opportunities for their assistants and arranging for their attendance.

To assist in the close monitoring of extension agents' activities in the field, two Regional Supervisors (one for each CADER) will be employed and trained in extension and follow-up techniques. By working closely with the Assistant CADER Directors they will be able to better organize project-related CADER activities and assure that the agents' activities consistently conform to project plans.

By placing emphasis on the training of national staff ASAP will be better able to assure continuity in supervisory and technical positions. This is no small consideration given the relatively high rate of turnover in the past of expatriate personnel. In addition, with adequately educated assistants the project technicians will be better able to maintain a consistent approach to interventions over the entire project area. Another important consideration is that by training national staff rather than employing an abundance of expatriate personnel, there will be more technical competence available to GOC/CEFADER if they choose to continue interventions after EOP.

CADER staff formation will benefit directly through participation in the training programs, visits, etc. as well as indirectly through close association/collaboration with project personnel.

3.3.3.2 Extension

Focus areas will be selected by community members during village meetings. Farmers will be invited during these sessions (field visits, etc.) to express their problems and needs and to give their opinions on proposed interventions. If measures are proposed that are not yet part of the intervention options, their possible integration into the project activities will be considered and discussed with the farmers. Regular contact with the farmers as a group, or with delegations appointed by them, will assure a continuous dialogue. The general interventions proposed by the project will have options that will allow the farmer to adapt the measures to his/her own needs.

Farmer training will be done at two levels: the group and the individual.

Group level training will be used to introduce the range of intervention options that may be applied in a specific focus area. These training sessions will include field days, demonstration field visits, exchange visits to other focus areas and CADERs, one day seminars on specific topics, hands-on training sessions on improved practices, etc. Since these common training sessions are very important to create and sustain a group spirit among farmers, they will be continued on a regular basis and upon demand by farmers. When farmers with common interests within one focus area, or within several focus areas, are identified, training sessions will be organized on specific topics for these groups.

Training at the level of the individual farmer occurs via regular contact between the extension worker and the farmer. Of note is that the extension workers live in the communities they serve. Since they either walk or, at most, ride a bicycle to their focus areas they are readily accessible to their farmers. Initially, the farmer and the agent identify problems in the field and choose the interventions to be undertaken. A formal field development plan is mutually designed to best respond to the problems and needs as perceived by the farmer and identified by the extension agent. An example of the field plan used in the LSCP is included in Appendix **.

Extension workers will be taught to use dialogue and guided discussions to help farmers make decisions during field assessments. Such interaction, if properly guided by the extension worker, constitutes a form of decision-making training for farmers. Follow-up visits focus on training farmers to manage the interventions in their fields. Extension agents also work to familiarize farmers with CADER services, marketing structures and other useful opportunities that may help farmers obtain assistance in areas not covered by the project.

A program of extension for the general community will also be developed. This will involve the use of posters, video cassettes, etc. to convey general messages such as the need for tree planting, protection of the forest, and watershed related issues. Emphasis will be placed on those villages involved in focus areas, but the propaganda will be made available for general distribution throughout the island. Peace Corps volunteers will assist in transmitting these general environmental messages.

3.3.4 Project Management

Since the ASAP is a logical continuation of the LSC Project certain activities inherent to new projects do not pertain here. These include start-up activities, hiring of basic support staff, initiating liaison with GOC and other donor organizations and finding suppliers. An organigram of the Anjouan office staff is in Appendix H. Job descriptions for all international staff positions are in Appendix D. The following management functions will take place during the life of the project:

- expanding the office facility,
- ordering vehicles and technical materials,
- maintain liaison with GOC counterparts
- hiring additional national personnel,
- supervision of personnel,
- maintenance, control and inventory of project materials,
- preparation of the annual budget and its control,
- liaison with other projects, institutions, organizations,
- preparation of trimesterly reports to CARE/USAID and annual reports to counterparts,

Management responsibilities will be delegated among the various project technicians, according to their specific assignments and skills. CADER and CARE staff will

collaborate in the supervision of extension agents. The CADER will be responsible for supervising workers involved in on-station activities, such as nurseries and demonstration fields. The CADER supervisory staff will be responsible for assuring timely reporting to WFP and CEFADER. They will also be responsible for the control and distribution of FFW rations. An organigram for technical field staff is in Appendix H.

3.4 Technology Issues

The technical options offered to the farmer comprise a broad range of species and intervention techniques. There is no set or strictly defined package as the range of possible interventions are designed to be as adaptable as possible. Although certain basic techniques, such as contour line plantings and fencing, will be promoted in all focus areas the farmer is allowed flexibility in species choice and decisions affecting the direction and intensity of future interventions. The various components of the intervention plan are described below under the broad headings of Soil Conservation, Agricultural Diversification, and Nursery Production/Forestry Issues.

3.4.1 Soil Conservation

3.4.1.1 Planting On The Contour Lines

The LSC project activities concentrated primarily on the establishment of contour strips for erosion control. The strips were composed initially of vetiver grass and filao trees. However this intervention as such was not readily adopted by the farmer as he/she saw it as a loss of cultivable land (10-20% of total field surface) which did not offer sufficient compensation in increased crop yields. The most critical concern from the farmer's point of view was and still is the decreasing productivity of the land due ultimately to a reduction in soil fertility.

Project staff recognized the latter constraint and began developing a broader technical package that would more fully respond to farmers' concerns. A diversification of species has been promoted over the past two years in order to address a wider range of problems and farmer participation has consequently improved.

The planting of contour strips, composed of a mixture of grasses and tree species, on sloping terrain will be maintained as the initial intervention undertaken on a given field. The distance between the strips varies as a function of the slope of the field. It has been found that maintaining a vertical separation of 1.5 meters between strips provides a satisfactory compromise between the technical consideration of reducing erosion and the farmer's concern of losing cultivable land.

The grasses provide a solid barrier to run-off from rain on exposed soils and consequently reduce the incidence of sheet erosion and gullyng. Vetiver (Vetiveria sp.) is the most commonly used grass, primarily as it is the most easily obtainable and the best known species. The project will increase production of other grass species that could be planted as alternatives to vetiver while also furnishing secondary products such as fodder or medicines. Experience has shown that the use of pineapples in the low story of the contour line plantings is greatly favored by the farmers.

Trees are planted along the contour strips at a spacing of 30 to 50 cm. immediately on the uphill side of the grass strips. These serve to reinforce the strips and act to restore soil fertility through the mining of soil nutrients which are brought to the surface through the leaves. Primarily nitrogen-fixing tree (NFT) species such as Leucaena leucocephala, Calliandra calothyrsus, Pterocarpus indicus (sandrakon) and Gliricidia sepium will be planted and these will further act to increase soil fertility. As the trees grow and develop they will begin to cover a greater percentage of the field. The farmer will then prune back the trees thus providing himself a ready source of secondary products such as forage, firewood, poles, etc. The species to be used coppice readily and repeatedly. Farmers will be encouraged to include fruit and spice trees along the contours at wide spacing so as not to occupy too great an area of the crop land while increasing the diversity, hence total productivity, of the field.

A third component of the contour line plantings will be shade tolerant cash crops, such as vanilla and pepper vines, which can use the trees as climbing supports while profiting from their soil enriching capabilities. This third component will greatly enhance the value of the contour planting.

In addition to serving as an erosion barrier the contour strips will have beneficent effects also as low windbreaks, thus raising the moisture level and modifying the temperature in the micro-environment. As a secondary consideration, a well-established contour line will assist in delineating the farm plots for the monitoring of more advanced interventions and facilitate the control of crop association patterns and rotations for the farmer.

In all instances species choice is dependent not only upon technical considerations of viability but also upon farmers' needs and desires. Through one-on-one contact with the extension agent the farmer becomes directly involved in the decision making process while the agent gains a fuller understanding of the farmer's particular situation. The project thereby increases the farmer's level of participation and responsibility while assuring that he/she has a greater understanding of the value of a given intervention.

Of note is that contour line plantings of both trees and grasses is the only on-site intervention that is indemnified with WFP rations. The rate of remuneration in the early stages of LSCP was one family ration per five meters of grasses planted on the contour. As the ration payment is supposed to be in compensation for a full day's work, this rate was deemed somewhat excessive. Project staff played a major role, in collaboration with CEFADER, WFP, and other projects' personnel, in forming an island-wide policy to reduce the rate of payment to a more justifiable level of one ration per 100 meters of grasses and trees planted along the contour. This is a clear indication of improvement in the programming of food assistance on Anjouan.

Although the island-wide policy is to gradually decrease the importance of food rations as an incentive to adopt proposed interventions, in the near future food rations will continue to be distributed for contour plantings. This is justifiable as a risk compensation to farmers for the 10-20% of the land that is immediately lost to agricultural production. As the farmers' primary concern is agricultural production rather than erosion control the initial planting of contour strips represents a loss of productive potential. The contour strips will not prove beneficial to the farmer for two or more years. However, once this form of alley-cropping on the contours becomes well-established and its benefits are proven in a given focus area, farmers will be more apt to adopt the interventions without the added incentive of WFP rations. Appropriate demonstration by example will act to insure horizontal farmer-to-farmer spread, hence sustainability, of the interventions.

3.4.1.2 Terraces

The contour strip plantings will retain a certain amount of soil and natural terracing will result over time. To accelerate this process the project will promote a system of passive terracing over several years. Rather than construct wide bench terraces at a given time, a gradual and less labor demanding series of small step terraces will be employed as described below.

The end result of the project will be to promote the construction of terraces between the planted contour strips. Experience has demonstrated however that it is not feasible to assume that the full terraces be built within one season. It requires a high level of labor input from the farmer which, given the present low intensity of cultivation, is not likely in most cases. In addition, with the vertical distance of 1.5 meters between contours, much less-fertile sub-soil would be exposed. Through a gradual process of step terrace development over two to four years the desirable end result may be attained without demanding an excess of labor input while allowing sufficient time for enrichment of the soil.

Two to three rows of step terraces will initially be built between contour strips. Organic matter (weeds, manure, ash) will be incorporated into the terraces as they are constructed. The terraces will have a back slope (see diagram Appendix G) with a small canal at the rear to allow for greater infiltration of water into the soil. The downhill faces of the intermediate temporary terraces will be supported by sturdy herbaceous plants such as pigeon pea (Cajanus cajan).

Over the years tilling of the field will gradually move soil down the slope and thereby level out the terraces. The trees planted at the contour strip will support the full bench terrace as it is built up. This gradual process of terrace development allows for full establishment of the trees planted on the contour before they are called upon to act as a major support for the weight of the terrace. A full terrace is thus formed gradually over several seasons with minimum effort on the farmer's part. The full terrace will have the same form as the previous step terraces (i.e. backsloped with an infiltration canal).

3.4.2 Agricultural Diversification

Part of the problem facing the farmer is over-reliance on a limited number of crops both for home consumption as well as for market. The reasons for this are different when considering subsistence crops as opposed to cash crops.

In regards to subsistence crops the determining factor is primarily the fertility of the land. When a new field is cleared from fallow (or the forest) there is initially a diversity of crops in a given area. The mixture may include taro, banana, pigeon pea, cassava, sweet potato, and groundnuts in varying combinations. As the soil is depleted of nutrients the field typically undergoes a change from mixed agriculture to a monoculture such as rice and, ultimately, cassava. Decreasing fertility thus acts to limit not only total production but also the choice of crops which can be produced in a given area.

The solutions to this problem are the soil conservation and restoration measures outlined above. An increase in soil fertility will naturally lead to a greater diversity of production as the land will support more nutrient-demanding crops. Through a methodical application and maintenance of the appropriate intervention techniques the improved agricultural system will yield a sustainable production of diverse crops and will help alleviate pressure to clear new lands.

The project will also promote agricultural diversity by encouraging the cultivation of less common crops such as yams, sorghum and legumes into the focus areas. Many such crops are found scattered throughout the project area but are rarely integrated into stable heterogenous cropping systems. By acting as a source for seed and plant materials the project will assist farmers in obtaining and producing those crops to which they may not otherwise have had access.

The lack of diversity of the cash crops usually produced stems from two different sources;

- A limited market structure concentrating on a few important export crops,

- Limited availability of alternative crop material.

The limited market for crops other than the traditional cash crops (cloves, ylang-ylang, vanilla) offers no incentive to the farmer to diversify production if there is

no assurance of a buyer. On the other hand, with the recent negative changes in prices for the major exports, alternative crops must be produced to assure economic stability both on an individual or on a national level.

While the project cannot have any direct effect on national policy which is currently being determined by GOC with assistance from the UNDP Agricultural Strategy Project, staff will participate in inter-agency discussions and offer opinion and information where it can be of service. What the project will more directly affect are the number of options available to the farmer. As with subsistence crops the project will increase the availability of plant materials to the farmers in order that they may diversify total on-farm production. Project staff will monitor current market trends and will adjust plant material production and distribution accordingly.

3.4.3 Nursery Production/Forestry Issues

As was discovered in the early stages of the LSC project, offering a fixed package of interventions, such as the vetiver/filao solution, does not create sufficient interest in the intervention to promote adoption and sustainability. To reach the greatest number of farmers the package must be flexible enough to respond to a wide range of different situations and needs. Of necessity there must then be a sufficient variety of species to be promoted and produced by the project.

Project nurseries initially concentrated on the production primarily of filao in plastic bags. Production was subsequently diversified to include a variety of fast-growing exotic NFTs, fruit and indigenous species. Upwards of 40 species have been produced in project nurseries. A few species, however, still account for a large percentage of total production. These are filao, Leucaena, and Calliandra.

In addition there have been some advances in means of plant production. Efforts have been made to find simpler and less costly ways to produce seedlings rather than sustaining total reliance on the imported plastic bags. Solutions such as the use of locally made banana leave pots and the production of bare-root seedlings have been employed in order to design a system of plant production which can be directly replicated by the farmer. The use of these propagating systems is however limited by species' considerations.

Although some species will of necessity dominate the production of seedlings due to their desirable characteristics for certain interventions, project nurseries will continue to diversify the number of species produced in order to immediately respond to changing needs. More appropriate plant production methods will be stressed to decrease dependence on outside sources.

Nursery planning must then be consistent with the idea of promoting a diversity of species and products wherever appropriate. Species' choice will be determined to a large extent by the desired characteristics sought for any given intervention or planting scheme as seen in light of farmers' preferences. Consideration will also be given to indigenous tree species that will be identified to have value for diverse secondary products or as important habitats/forage for desirable fauna. Species with the capability to fix nitrogen will be favored for their soil enriching properties. Where specific production is required from non-NFTs, such as may be the case with cash crops and indigenous forest species, the desired species will be mixed in various agro-forestry configurations with NFTs. Monocultures will be discouraged in all cases.

The production of useful indigenous species will be increased and their use in the interventions encouraged. Data obtained from the base-line survey and information gathered through surveys of natural forest ecosystems will be valuable in deciding which species to promote and how to best utilize them.

The LSC project sold fruit trees with a moderate degree of success. Fruit trees may continue to be produced in project nurseries as incentives for focus area participants only if it can be determined that this does not compete with any private commercial nursery efforts.

Ideally every focus area should have a nursery to satisfy its requirements and facilitate logistical concerns involving distribution. However, space, topography and/or water limitations may prohibit the creation of a nursery in a given focus area. Where this is the case a centralized nursery that could serve two or more focus areas will be established. Experience in the LSC project has shown that having a too diffuse village nursery network may be counter-productive in that management becomes difficult and production suffers. Therefore the project will only create and support focus area or larger centralized nurseries.

Nursery production will be supplemented by the planting of cuttings and the use of direct-seeding as these are techniques readily replicable at the farmer level. Great interest has been demonstrated by the farmers in the use of planting Gliricidia and sandragon cuttings as fencing and on the contours. Cuttings are also used in the nursery to provide shading for the germinating seedbeds. Although trials of direct-seeding have not proved promising in the past, due largely to plant loss to foraging snails, research into this technique's practicability will continue.

3.4.4 Demonstration Fields

The demonstration fields established during the LSC project will be continued. Their purpose will be to:

- Assess the viability of different tree and crop species under varying conditions,
- Test the practicality of various cultivation methods,
- Demonstrate to farmers the intended results of proposed interventions,
- Provide for the multiplication of seeds and planting materials,
- Provide information on crop yields under controlled conditions.

Demonstration fields will be added as the number of focus areas increases. Ideally each focus area should have a demonstration field. In addition the area in Boungoueni CADER will continue to be used for the above stated purposes.

3.5 Sustainability

The following section discusses the sustainability of the project at three levels; institutional, community and farmer.

From an institutional perspective it is unlikely that the GOC will be able to financially sustain the extension network developed by the project. The project will nevertheless continue to strongly encourage the government to develop and maintain a core of extension personnel in

each CADER. Training of GOC extension personnel will contribute to the extension capability (but not capacity) of CEFADER. Third country visits to projects which, even after EOP, show strong counterpart support will help reinforce CEFADER staff understanding of the importance of ongoing extension service. The capacity of the GOC to sustain an extension service must be carefully assessed during the project's formative evaluation at the end of year 2.

At the community level the ASAP project will seek to develop the focus area committees as decision-making and educational bodies which can operate after EOP as suggested in section 3.3.1. Very little groundwork in community organization has been laid, and Comorian society exhibits few examples of functional community groups working in development activities. It is likely however that the focus areas will furnish a central activity around which community members can be grouped and organized. If and when focus area farmers expand their group activities into marketing, transport or linking with other projects or services then the role of the committees will be reinforced. Such expansion into viable group-based ventures will be encouraged.

Given the climate of institutional uncertainty and the relatively experimental nature of community-based actions, the project relies most heavily on the farmers themselves as the key to sustainability. Their ability to continuously manage and adapt their interventions and the replicability of the interventions through farmer-to-farmer transmission are crucial to the long term success of the project.

Therefore, the technical interventions are designed in such a way that:

- They do not require outside inputs, such as fertilizer, insecticides, pesticides, seed supplies, tools, etc.
- They are sustainable by the farmer without outside assistance such as Food For Work,
- They can be adapted to adjust to fluctuating markets and local agricultural conditions

Thus, the interventions can be maintained and improved upon by the farmer without outside assistance. The interventions are simple enough that farmer-to-farmer

technology transfers can occur once the following conditions are met:

- A core of focus area farmers have adopted the system and proven its advantages over traditional cropping systems (critical mass is reached),

- Sufficient planting material is locally available,

In respect to the availability of planting materials, the project will put increasing emphasis on tree species that are easy to raise and do not require costly propagation methods. Direct seeding, stumping and the use of cuttings are methods of plant production that can be easily replicated by farmers without assistance once they have learned the techniques. By introducing large quantities of these tree species, as well as grasses and other crops, in the focus areas, a stock of planting materials will be provided for future use.

3.6 Project Counterpart Contributions

In the LSC Project the GOC had agreed to gradually take on CARE hired extension personnel but this "obligation" was never met. For the ASAP the contributions of the GOC via CARE's counterpart, CEFADER, will be in the form of in-kind provision of housing, office space, and counterpart personnel. This contribution is both substantial, especially considering the financial means of the Comoros, and useful to the project. The value of the housing and office space provided is \$26,000 per year, or \$130,000 over five years. The counterpart personnel provided are the CADER directors and assistant directors, nursery supervisors and laborers, etc.

3.7 Project Constraints

Several potential constraints to successful project implementation have been identified and are discussed below.

3.7.1 Land Tenure

A complex and often mixed indigenous land tenure system complicates intervention strategies by diminishing personal incentive for improvement of communal lands. Sharecropping is also widely prevalent and results in lowered impetus for investing of labor in land improvement. The sharecropper

will not exert extra efforts to improve land on which he/she only farms temporarily. Conversely, the large landowner is under no pressure to develop land which will either be farmed anyway or left under fallow. The large landowner usually has outside sources of income more important than the agricultural production from his fields.

The problems presented by sharecropping on large landowners' holdings is difficult to circumvent, other than by outright exclusion from focus areas. Consequently, as improvement of large landowners' fields brings no direct benefit to the poor farmer the project will not establish focus areas on sharecropped fields.

Land tenure systems will thus be carefully assessed before choosing focus areas. A 30 day consultancy by a sociologist will take place at project inception to assist ASAP staff in monitoring and adjusting for land tenure constraints. Existing information such as the LSCP baseline survey and the Chemonics Agricultural Sector Review (Grosenick and Sensenig, 1988) will be reviewed. The consultant will assist also in the preparation of the ASAP baseline survey which will examine land tenure systems in depth, including gender related land tenure issues. Situations where participating farmers will either not benefit from improvements to land or where special incentives would be necessary to motivate participants will be excluded from focus area selection. Land tenure problems are generally more pervasive in the Ouani CADER area than in the Boungoueni CADER.

3.7.2 Urban Population

Past project efforts to work with or establish community groups for activities related to focus areas have met with difficulty for two reasons. One is that farmers working in the same focus area often come from several different villages which are at a distance from the focus area. This renders it difficult to undertake community based extension activities relating to the focus areas. The second constraint to community based extension is that few examples of operational community groups exist on Anjouan.

3.7.3 Fluctuating Market Prices

While the project can have no direct influence on world market prices for agricultural export commodities, it will work to instill resilience in the local farmers' economy. This will be done through the diversification of their crop production and by teaching farmers to adjust their

agricultural production in response to fluctuating market prices. Project staff will monitor market trends and maintain contacts with large exporters and government agencies associated with pricing of export commodities to insure that the project remains well-informed on current trends. In June 1990 and June 1991 the RTA for Small Enterprise Activity Development will spend two weeks assisting the project in developing mechanisms to allow the project and eventually farmers or farmer groups to monitor and respond to fluctuating agricultural markets. The project M&E Technician will be responsible for this aspect of the project.

3.7.4 Food Rations

Food-For-Work has been widely and indiscriminately used in Anjouan for years by many projects and agencies. Over-reliance on FFW rations as an incentive has created a farmer mentality that associates all development work with the need for compensation. Little distinction is made between private and public works. The GOC, CARE and other projects on Anjouan, working with the WFP, have decreased the ratio of rations per task in an effort to gradually wean the farmers away from expecting payment for improving their own land. Project staff will continue to work closely with the WFP and other agencies in order to assure that a reasonable food strategy continues to be applied.

The project's FFW strategy is linked to the island wide strategy for two reasons. One is that the project operates via the CADER system which in turn functions as the local distributor of FFW. The second reason is that farmers in the project area are well aware of FFW distribution occurring in other areas and would balk at any brusque stoppage of FFW. Currently FFW is used for only one on farm task, which is the planting of contour lines with grasses. The other uses of FFW associated with the project are as follows:

- purchase of vegetative materials
- payment of nursery and demonstration field workers and CADER workers.

4. MONITORING AND EVALUATION

4.1 Introduction

There is an increasing focus on monitoring and evaluation activities in the ASAP. A new staff position for a monitoring and evaluation technician has been created and several consultancies are planned. The monitoring and evaluation technician will concentrate primarily on developing monitoring and evaluation methodologies, training project personnel to apply them, following up application of the methodologies in the field, and compiling data and reports. There are two planned consultancies associated with monitoring and evaluation. The first is for a sociologist who will assist with the follow-up survey to the social agroforestry baseline assessment of 1986. This consultant will also survey alternative extension structures (see also section 3.3.1). The second is for an agronomist who will assist in the design of a field productivity baseline survey and follow-up productivity surveys. Scopes of work for these consultants are found in Appendix E.

The ASAP also intends to take advantage of the findings of CARE Kenya's Agroforestry Monitoring and Evaluation Methods Project on which a report is being prepared by Agnes Ngugi, due out in 1990.

4.2 Baseline Data Collection Plan

Two major baseline data sets are needed in order to measure the project's progress towards its intermediate goals.

1. Social Agroforestry Survey Baseline Data

The Social Agroforestry Survey executed by the LSC project in 1986 provides substantial data on farmers' attitudes and practices but must be updated at the beginning of year 1. Follow-up surveys will be undertaken in years 1, 3, and 5. Information will thereby be regularly added to the data base which will be the basis for the mid-term evaluation in year 2 and the year 5 final evaluation.

Additional questions pertaining to land tenure and farmer organization and marketing will be added to the first year's survey. These revisions will be undertaken with the assistance of the sociologist consultant in November 1989.

2. Field Productivity Survey Baseline Data

In order to be able to measure an increase in production, a baseline survey on farmers' field productivity is needed at the beginning of year 1. In addition, first time fields in a new focus area will be surveyed and a number of them will be randomly selected and baseline data gathered. The initial baseline survey done during the first year will include fields with farmers applying project interventions and fields where farmers are not applying these interventions. This is important since the application of project interventions (i.e. the planting of contour lines) will begin to influence field productivity even during the first year. As the project identifies sites which are to become new focus areas baseline data will be collected one season before interventions start.

A review of the baseline data to be gathered and the monitoring methodology to be used in surveying productivity will be undertaken with the agronomist consultant before the productivity baseline survey is carried out. The consultant should come in October and November of 1989 for a maximum of five weeks.

4.3 Monitoring Plans

Monitoring activities include both periodic follow-up surveys to the baseline surveys and ongoing data collection in all participants' fields which will enable the project staff to regularly assess progress and constraints. Strategic and activity plans can thereby be adjusted according to feedback from the field. The following set of monitoring tools has been developed during the last years of the LSC project and will continue to be used in the ASAP.

4.3.1 Mapping and Photographs

Once a focus area has been chosen and the farmers have been contacted a map of the area indicating field boundaries and field ownership information (name of farmer and owner) is prepared. At the same time, before actual interventions start, a series of photographs is taken of the focus area and of a number of fields. These photographs will help effectively to demonstrate the development of the focus area over subsequent years. The basic map will be prepared by the extension agents and will be related to the available maps and aerial photographs of the island by the project technicians. The photographs will be taken by project technicians after the map has been prepared, in order to be able to relate photographs more easily with certain fields. The sociologist consultant will review

current project methodologies for assessing land tenure and will suggest revisions and improvements. The consultant will also design training sessions for project extension staff in monitoring of land tenure and other critical areas relating to land use. One reference document of considerable value is the FAO land tenure study of 1986 (TCP/COI/4503A).

4.3.2 Individual Field Plans

In order to be able to follow the development of individual fields, to determine quantities of planting materials needed and in order to solicit as much as possible farmer participation in determining the interventions to propose, individual field plans are developed. These plans (Appendix I) are simple. However, they will effectively show the changes in the field and are an adequate monitoring tool. After each planting season the plans will be collected from the extension agents and the difference between planning and the work effectively carried out will be determined. Once the causes of the differences (if any) are established (e.g. lack of planting material, sudden lack of farmer interest due to other activities) the project can adapt its intervention methods to these changed conditions. The extension agents will be responsible for establishing the individual field plans.

4.3.3 Surveys

A small survey will be executed every second year (year 1, 3 and 5) in order to determine changes in farmers knowledge and attitudes. These surveys will be small follow-up surveys to the 1986 Social Agroforestry baseline survey. Since these surveys will be undertaken both in villages with and without a focus area, differences will be revealed. Appendix J shows an example of such a small survey. However, some adjustments will have to be made since the survey was designed before the focus area approach was well established. Questions will also be added pertaining to IG 2: on marketing and farmers' responsiveness to market opportunities. These changes and the determination of the sample size will be done by the sociologist consultant together with the project's monitoring and evaluation technician. The consultancy by the sociologist is planned for five weeks starting in November 1989.

4.3.4 Monitoring of Field Productivity

It is extremely difficult to measure the exact production in farmers' fields and to relate this production to previous yields and to other fields. This is primarily due to the following factors:

1-The extreme differences between fields and even within one field with respect to soil fertility and soil depth,

2-The extreme differences between fields in microclimate, slope, exposure and altitude,

3-The difficulties in determining realistic field surface areas. Field boundaries are rarely straight or clearly defined. Also a high percentage of a field may be unavailable for crop production because of rock outcrops and large trees. This makes it very difficult to establish "per hectare" yields.

4-The varying cropping patterns: a whole range of different crops may be planted together, for example bananas, cassava, corn, sweet potatoes and pigeon peas,

5-The fact that the total production of a field includes a large variety of products, for example firewood, fodder, coconuts, coconut leaves for thatching, etc.,

6-Harvesting is not a one-time exercise but an ongoing year round process: manioc is continuously harvested, maize is eaten off the cob whenever it is ripe, pigeon peas are harvested over several months, coconuts are harvested the whole year round, etc.

7-The LSC project had great difficulties in assessing exact crop yields in its demonstration fields, since workers took most of the crops before they could be measured. Even though they were paid they saw it as their right to do this, since they were working the field. With the increased personnel in ASAP more intensive supervision of workers should solve this problem.

Nonetheless, it is important to obtain a relative idea of field productivity and changes therein. In order to do this a set of factors will be measured in a representative number of fields. Those factors will include:

-Field size and general description of the field (slope, altitude, soil quality and depth, climate, etc.)

-Field history: crops grown, problems encountered, fallow periods, useful species naturally growing during fallow periods, etc.,

-The species and varieties of crops currently present, including trees, fence, etc.

-The number of plants of each crop,

-Cultivation methods, including time of planting and harvesting, crop association, etc.

-An estimation of the quality of each crop will be made by the extension agents. The latter may be done on a scale of 1 to 5, 1 being a very poor crop, giving no yield, 5 is the best possible crop, with no diseases, well managed and giving a good yield.

A certain number of fields will be closely followed during the life of the project in each focus area. In addition a number of fields will be chosen outside the focus areas to be used as control plots in order to compare the differences between treated and untreated fields and to eliminate outside factors; natural catastrophes or the large scale introduction of a new crop by another agency. For example, a large scale free distribution of ylang trees may affect farmers inside as well as outside the focus areas. An extraordinary drought may affect yields in such a way that focus area farmers produce less than the previous year but still more than farmers outside the focus area.

The monitoring of potential production can be done in the CADER/project demonstration fields. The increased personnel in ASAP and the fact that a number of personnel have been trained already in the LSC project will make it possible to more closely control the demonstration fields. In this way crop yields can be measured and an impression can be gained of the productivity of crops under optimal management conditions. These yields will then be classified as 5 on the scale to be used in the monitored farmers' fields.

The collection of the data in the demonstration fields will be the responsibility of the monitoring and evaluation technician, his assistant and the demonstration field supervisors. For the surveys in farmers' fields the extension agents will be involved since they provide the direct link between farmer and project.

It is important that a comprehensive and uniform monitoring system be established during the first year of the project, since real production increases are gradual and will be more evident the longer that fields are monitored.

4.3.5 Daily Monitoring of Activities

For the regular monitoring of activities of the extension agents, the nurseries, the demonstration fields, the distribution of planting materials, etc. a system of regular reporting has been established by the LSC project.

For nurseries and demonstration fields weekly reporting is also done. In addition, extension agents report informally during their biweekly meetings and prepare written reports on a monthly basis.

A system of regular field, nursery and demonstration field supervisory visits by project and CADER personnel already exists and will be continued.

4.3.6 Monitoring of Markets

The monitoring and evaluation technician, with assistance from the RTA for Small Enterprise Activity Development, will develop a means for monitoring local markets for the agricultural products produced by project participants. These monitoring mechanisms should be developed such that the farmers themselves, after EOP, will be able to continue to monitor markets and adjust the production accordingly. This may involve reinforcing or if need be creating community based groups of farmers to coordinate marketing of their agricultural produce. The SEAD RTA should come in for two weeks in June 1990 and two weeks in June 1991 to assist with this activity.

4.4 Evaluation Plans

Two evaluations will be done during the life of the project. Detailed evaluation plans will be developed during the course of the project by the monitoring and evaluation technician with assistance from the various consultants who will visit the project. The broad lines of the evaluations are discussed in the following sections.

Project evaluations will primarily measure progress towards the intermediate goals. Since the final goal will only be reached well after the EOP, it will not be possible to measure the rate of success of the project by measuring attainment of the final goal. It is assumed that the final goal will be reached if the IG's are attained.

4.4.1 Mid-Term Evaluation

At the end of year two a formative (mid-term) evaluation will be executed by REDSO/CARE/GOC and outside consultants. The RTA for Agriculture and Natural Resources or for Non-Formal Education will participate in this evaluation. This evaluation will have three major goals:

A. To evaluate project impact at the farmer level by surveying the number of farmers successfully adopting and adapting the proposed interventions. This will also involve evaluating the efficacy of the project's extension approach and technical package and assessing the farmers' own indicators of success and how they measure increases in productivity themselves. By the end of year two the project should show significant levels of meeting farmers' own needs and expectations.

Benchmark measures to be used regarding project impact at the farmer level include the following:

- At least 680 hectares of fields treated during years 1 and 2.
- At least 2,500 farmers adopt, maintain and manage at least one project intervention.
- At least 200 hectares from years 0 and 1 are progressing into the second stage of intensive agricultural interventions (step terraces, introduction of new crops, etc.). Given that no Food-For-Work is given for second stage interventions this can be taken as a clear indication that farmers perceive that the interventions respond to their needs and expectations.

B. To evaluate the institutional capacity of the GOC to sustain project interventions. By 1992 the GOC should be fully implementing structural readjustment decisions and should be able to set its priorities accordingly. An assessment must be made of the extent to which the GOC is capable and committed to supporting the full project infrastructure after EOP.

Benchmark measures to be used regarding the institutional capacity of the GOC will include the following:

- Ouani and Boungoueni CADER Directors spend at least 50 % of their time on project associated activities.
- Ouani and Boungoueni CADER Assistant Directors spend at least 75 % of their time on project associated activities.
- At least five permanent extension agents employed by CEFADER work full time on project activities in each CADER.

C. To review the Agricultural Sector Strategy recommendations, due out in early 1990, and assess their effect on the project.

4.4.2. Final Impact Evaluation

A final impact evaluation will take place at the end of the project. This evaluation will be executed by REDSO/CARE/GOC and outside consultants. Based on this evaluation further recommendations will be made to GOC on how to continue activities in the most practicable fashion.

Estimates for evaluation costs are provided in Appendix F (Budget).

4.4.3 Evaluation Questions

This section covers suggested evaluation questions which should be covered in both the mid-term and final evaluations. Additional questions will certainly be included as detailed evaluation plans are developed by the monitoring and evaluation technician and consultants. Given the broad nature of these questions benchmark criteria will not be set at this time.

4.4.3.1 Evaluation questions pertaining to IG 1:

1. What percentage of the farmers contacted by the project have adopted at least part of the proposed options? This question pertains to the most basic project interventions: the establishment of a contour line, fencing, etc. Since WFP-food rations are given for basic contour line planting, some farmers will be motivated by this rather than by the project's proposals.

2. What percentage of the farmers who applied at least one intervention are maintaining and managing these interventions? Since there are no further WFP incentives for additional measures, the number of farmers that are adopting and adapting additional measures more accurately reflects the project's success.

3. Does the diversity of food and cash crops as well as supporting crops (windbreaks, fences) increase in the treated fields? By how much? This is an indication of adoption of the intervention by the farmer and of an increased capacity of the field to sustain more biomass. It is also an indication of increased sustainability of the

system, since it will usually be more resilient to market fluctuation, pests, climatic stress, etc.

4. What percentage of farmers progress to advanced agricultural stages of the interventions proposed by the project? Here the validity of the project's proposed interventions is evaluated. If early interventions are successful, farmers will maintain them and will be open to further improvement upon those interventions.

5. Is the production in the field increasing in the farmer's perception? What increases do they report for total field production three to five years after the interventions were started? The project will provide as many options for the intervention components as possible, and it is the farmer himself/herself who will choose what will be grown in the field. Due to the 2-3 year lag in achieving real increases in field productivity this question will only be evaluated in the final impact evaluation.

When evaluating IG 1 it must be taken into consideration that crop yield is only one aspect of a field's productivity. To truly evaluate field productivity the whole range of products of the field must be taken into account. Fodder, firewood and construction wood must be included if an accurate estimate of the production value is to be made. However, it is very difficult and time consuming to accurately measure exact quantities (see below). Also it is difficult to attach a precise market value to all aspects of production, since there is no set market for, for example, fodder. Also, some influences will be indirect: increased availability of high quality fodder will lead to larger, healthier animals and thus more income. The fact that women may save time in collecting firewood in their own field instead of having to look for it elsewhere may have a positive social or economical influence, even if they do not directly earn or save money from the production itself.

Though it is possible and very interesting to study the above-mentioned effects in detail, such studies would go well beyond the scope of the project. Since the farmer is considered the most capable person to judge the advantages of the interventions he/she implemented in the fields, farmers' own measures of success will be surveyed as one of the most important evaluation indicators of overall project success.

4.4.3.2 Evaluation questions pertaining to IG 2:

1. Do the target area farmers respond more quickly to market opportunities ;than non-target area farmers? Since improved fields will be capable of producing a broad range of different crops, farmers will have the opportunity of producing crops for the market that they could not produce before. Are farmers taking advantage of this opportunity? Are they marketing products they did not before? How much time does it take to adopt new crops?
2. Are farmers organizing into farmer groups or cooperatives for marketing their produce, in order to take advantage of market opportunities? This organization may take the form of cooperatives, groups of farmers organizing transport of their produce together, etc..
3. Is the diversity of crops produced in a field increasing? This increase must be monitored over time and not on a one time basis. Given good prices for one product a farmer may decide to use most of his/her field for one crop in a given year. However, the fact that he/she will be able to change to another crop the next year, if this would be more advantageous, reflects the sustainability and flexibility of the system and the farmers' ability to adapt.

4.4.3.3 Evaluation questions pertaining to additional consequences:

1. Which extension methods are the most successful? What factors contribute to this? Village meetings, individual follow-up and demonstration fields are all factors to be taken into consideration.
2. Are the capabilities of extension workers recognized by farmers and will they be consulted even if not working for the project/CADER? This question is especially important in the light of the possibility that most of the project extension agents will not be employed in the CADER system after project completion due to lack of funding.
3. Have project interventions been adapted by farmers outside the target areas? Which factors contributed to this wider adoption of interventions? It may be, for example, that farmers in a nearby region adapt a certain intervention because they are in direct contact with target area farmers and because the planting material they need is available.

4. Which options have been the most successful? Which factors contributed to this success? For example, it may be that fencing with *Pterocarpus* cuttings is very successful in some regions because cuttings are freely available and result in a decrease of theft in the fenced fields.
5. Which farmers in an area have been reached more successfully than others? What factors played a role in this? It may be, for example, that farmers with less than 2 fields and more than 5 dependents are more receptive because they are under more pressure to increase production.
6. Can new farmers adapt the project's interventions without the project's help after the EOP? Have the minimum conditions for this been met, i.e. is planting material for contour line strips and fencing available?
7. What has been the effect of stimulation of farmer's participation with WFP-rations and changes in the quantities of rations. What has been the effect of other incentives, like tools and planting materials?
8. Have the nurseries produced the species required by farmers? Nursery production should reflect farmers' demand.
9. Did the demonstration fields serve their purpose? Were the interventions shown adequate? Were they used intensively for visits by farmers?
10. Has the project had an effect on establishing and reinforcing community groups? What kind of groups? In what kinds of activities have they become active? How stable are the groups and are they likely to remain active after EOP?
11. To what extent have women effectively participated in the project? Do they actively participate in decision making in the farm fields, and/or at the level of the focus area? What specifically has their role been? What constraints exist relating to their participation in the project.

4.5 External Reporting Requirements

The normal PIE format will be used for internal CARE-reporting as far as monitoring of project activities goes. Mid-term and final evaluations will be presented in separate reports.

For USAID/REDSO purposes a project activity report will be prepared on a bi-annual basis in February and August. A quarterly financial report for USAID will be prepared in November, February, May, and August showing cumulative expenditures against the USAID grant categories.

Reporting to CEFADER/GOC and WFP of project activities will be done through the CADER reporting system on a quarterly basis (every 3 months). Since in this case CADER and project activities are intermingled, a separate project activities report will be prepared annually for the GOC.

5. PROJECT MANAGEMENT AND IMPLEMENTATION

5.1 Schedule of Activities

5.1.1 Broad Scope of Activities

5.1.1.1 Focus Area Development Plan

The bulk of project activities implemented on a new focus area can be divided into two general categories;

Early intervention activities concern identification of the focus area, organization of farmers, and the implementation of soil conservation and restoration techniques such as planting of the contour lines and the introduction of fencing.

Once well-established, the early interventions are followed by more agriculturally-oriented techniques. These include terracing, crop associations and rotations, the introduction of new crops, etc.

On the average a focus area covers about 50 hectares, although in actuality they vary according to region and topography. Over the initial two years of activity the project will treat all of the focus area with the early intervention techniques. It is expected that not all farmers will have fully implemented the entire range of options but that all will have participated in at least one activity.

Beginning with year three of focus area interventions two divergent activities will result; 1. the further progress of the previously treated fields into intensifying agricultural production, and 2. the replication of early intervention techniques onto contiguous fields producing a spreading effect of the focus areas at the rate of 10 hectares per year. In this manner all phases of project

interventions will be represented over an enlarging focus area by year three. The following table illustrates this process over the LOP.

	1988-89	89-90	90-91	91-92	92-93	93-94	Total
	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
	#FA:#Ha	#FA:#Ha	#FA:#Ha	#FA:#Ha	#FA:#Ha	#FA:#Ha	#FA:Ha
Old FA	8 : 200	8 : 200	8 : 80	8 : 80	8 : 80	8 : 80	8 : 720
# Ext.Ag	32 :	32 :	16 :	16 :	16 :	16 :	
New FA 1	:	2 : 50	2 : 50	2 : 20	2 : 20	2 : 20	2 : 160
# Ext.Ag	:	8 :	8 :	4 :	4 :	4 :	
New FA 2	:	:	4 : 100	4 : 100	4 : 40	4 : 40	4 : 280
# Ext.Ag	:	:	16 :	16 :	8 :	8 :	
New FA 3	:	:	:	2 : 50	2 : 50	2 : 20	2 : 120
# Ext.Ag	:	:	:	8 :	8 :	4 :	
Totals	8 : 200	10 : 250	14 : 230	16 : 250	16 : 190	16 : 160	16 : 1080
# Ext.Ag	32 :	40 :	40 :	44 :	36 :	32 :	

Year 0 is 1988 and the focus areas begun during Phase 1 of the project will be continued throughout Phase 2 activities. The 200 hectares developed under Year 0 do not figure in the total for hectares improved during Phase 2 activities.

5.1.1.2 Growth of Extension Capacity

Also evident in the above table is the number of extension agents required for each year of project activity. The agents will initially work in teams of 4 for the first two years of activity in the focus areas. After the initial intervention phase has passed two agents will remain in the focus areas to continue interventions and to promote expansion of the area, while others will be reassigned to new focus areas. The number of agents employed by the project will peak in year three, as will the number of new hectares receiving improvement.

Recruitment for new extension agents will occur prior to the intensive training period of June-August, when field activities are minimal. This scheduling will permit new agents time to familiarize themselves with the Project and CADER staff and to benefit from the training sessions before implementing activities in the field. The assignment of agents to the focus areas will maintain an equilibrium of new and experienced agents among the focus areas.

5.1.2 Year One Activities

The schedule of activities for Year 1 is shown in schematic form in Appendix C. Note that the project is to begin immediately upon termination of the LSC Project. Therefore, May 1989 is considered as Month 1 on the charts. This is a logical beginning point for project activities as one cycle of training-organization-implementation will have been just completed.

Some activities pertinent to ASAP, such as the selection of new focus areas and the ordering of project materials, will have been begun prior to project implementation as a continuation of LSC Project activities.

Activities such as the programming of third-country visits by project technicians with counterparts, and training courses for project personnel are not included as their occurrence depends on the opportunities that arise. Also the intensity of certain activities, such as training and monitoring, vary according to the availability of appropriate personnel. The following summary of project activity supposes the timely arrival of project expatriate personnel and the availability of qualified nationals to fill the technical positions.

- May 1989: Preliminary contacts with villages proposed for new focus areas determine method of organization. Planting season draws to an end and monitoring of interventions leads to decisions affecting implementation of techniques and future focus area development. Preparations are made for extension agent training, and necessary materials produced or procured. New nurseries and demonstration fields are established. Recruitment, hiring and training of new personnel begins. Necessary commodities are ordered. Evaluation of extension agents' performance takes place. Office capacity is expanded to accommodate new personnel.
- June '89: Village meetings clarify goals and expectations, define possibilities, and establish project personnel in new focus areas. Intensive extension agent training session begins. Monitoring of past interventions continues. PIE and CADER/Project quarterly Activity Plan are prepared. Project trainer explores potential for TOT component.
- July '89: Extension agent training continues. Nursery activities intensify to meet production requirements

during planting season. Monitoring and internal evaluation of past season's focus area activities is formalized. Materials procurement continues as needs are identified. Negotiations begin with Ministry of Education officials concerning the development of the Training of Teachers component for Patsy Teacher's College. Negotiations will continue through actual implementation in November.

Aug. '89: Intensive extension agent training session is completed and the agents receive the necessary materials to begin work in their focus areas. Organization of farmers through village meetings is begun. AID bi-annual report is prepared.

Sept. '89: Village meetings continue, farmer groups are organized and farmer training begins with group visits to more advanced focus areas. Extension agents begin implementation of interventions in focus areas. Assistants are trained for the laying-out of contour lines. Agents begin individual contact with farmers to formalize field plans. Training of teachers program begins at the Patsy Teacher's College. CADER/Project quarterly Activity Plan is prepared.

Oct. '89: Focus area farmers groups are organized around common interests. Small and large group visits are organized to demonstration sites. Extension agents continue development of field plans. Planting activities (grasses, Gliricidia cuttings) may begin on certain focus areas necessitating the procurement and distribution of planting materials. Production in the demonstration fields intensifies (until March). First trimester PIE is prepared.

Nov. '89: Activities intensify in focus areas as more farmers begin work in fields. Field visits and monitoring of extension agent activities are continued until the end of the planting season. Field plans are completed and submitted. Distribution of planting materials increases.

Dec. '89: Site preparation and other activities in the field intensifies. Seedling distribution may begin depending upon rains. Small group visits to demonstration sites are performed regularly until the end of the season. Extension agents may receive periodic practical training as need for reinforcement of knowledge is identified. Training of farmers moves from emphasis on groups towards a more individual

orientation. CADER/Project annual plan is formalized and quarterly Activity Plan is prepared.

- Jan. '90: Full implementation of distribution and planting activities. Visits to focus areas continue to monitor effectiveness of project interventions and agents. Office inventory is updated.
- Feb. '90: Bulk of activities remains centered on focus area plantings and monitoring of interventions. Second PIE and AID bi-annual reports are prepared.
- Mar. '90: Intensity of planting activities in the focus areas declines as rainy season ends and farmers leave fields. New sites for focus areas, nurseries, and demonstration fields are chosen. Baseline survey is begun in new areas. CADER/Project quarterly Activity Plan is prepared.
- Apr. '90: Effectiveness and results of interventions are analyzed. New nurseries and demonstration fields begin to be established. Preparations are made for the recruitment of more extension agents and the intensive training sessions. Initial contacts with farmers at new focus areas are made.

5.2 Community Management

The transition phase for project activities begins during year 3 of project activities. At this point the number of agents working in an area is halved. The remaining agents' primary goals will be to continue the agricultural development of the original focus area fields while simultaneously promoting a lateral spread of early intervention activities outward from the "core" area. The logistics concerning the availability and distribution of planting materials will have been facilitated by the establishment of plant material sources in the focus areas.

Prior to reaching this stage the project area farmers will have had a direct influence in the decision making process concerning the types of interventions undertaken in their fields. As explained in the strategy section, the final choice of technique and species type is the result of the farmers' interactions with the extension agents. From the initial steps of project activity, the farmer will have participated in all decisions affecting his field. The ultimate responsibility for implementing the chosen interventions will rest with the farmer, given adequate guidance from the extension agents.

The kinds of decisions faced by the farmer during the implementation of the project will be:

What intervention and species options will best respond to the farmer's needs?

What level of investment (i.e. labor, time) is the farmer willing to devote towards implementing the proposed interventions?

How effectively can the farmer manage and maintain the interventions?

How rapidly does the farmer intend to advance from one stage to another?

On a broader scale, community involvement will develop in the initial years of activity around the core of farmers having fields in the focus areas. The organization of focus area committees to assist with overall focus area organization will be encouraged. The project will explore the potential for developing marketing cooperatives. These farmer groups could profit from the increase of agricultural and cash crop production. Such experiences would also enable the project and farmers to determine the path of further diversification of production in response to market trends and supply.

The interventions proposed by the project will be replicable and sustainable at the farmer level. Continued input of GOC extension services would be desirable upon project completion to offer guidance as new species and techniques become available or viable in certain focus areas. CARE will not initiate any new focus areas after year 3 of the project. Two years will suffice to fully establish interventions with farmers who commence in year 3.

5.3 Staffing Plan

5.3.1 International Staff

5.3.1.1 Project Manager

The project manager is responsible for representing the project at the highest levels on Anjouan. As such, he will maintain close contact with the CEFADER Anjouan antennae chief and the local representatives of other agencies active on Anjouan. The project manager will also continue to closely collaborate with the CADER directors and assure that a cohesive annual plan is established for joint CADER/Project activities. The annual plan

will be updated with greater precision at the beginning of each quarter in order to very clearly define the roles, goals and expectations of each party.

The project manager is the immediate supervisor of the project technicians and office staff.

At project start-up the project manager position will be filled by the project forester. The PM position encompasses both a team leader and an administrative role. The team leader/administrative function of the PM is not linked to the PM's technical position. In the future other project technicians could become PM after the departure of the current forester. They would then assume the team leader/administrative responsibilities of PM.

5.3.1.2 Forester

The Forester is responsible for the management and establishment of the nurseries as well as for supervising all tree planting activities. He is the direct supervisor of the Forestry Assistant. The Forester will be responsible for participating in Forestry committee meetings and representing the project's interests at such. He will work in close collaboration with the other project technicians in order to assure that project activities are complementary.

5.3.1.3 Agronomist

The Agronomist is responsible for the establishment and management of the demonstration fields. He/she will work closely with the training technician to develop a program for the use of the demonstration fields in villager and extension agent training. He/she will work in close collaboration with the other project technicians in order to assure that project activities are complementary. The Agronomist is the immediate supervisor of the Assistant Agronomist.

The Agronomist is also responsible for the supervision of a CADER-level CARE-hired regional supervisor who will oversee focus area activities. In addition the Agronomist will work in close collaboration with the Assistant Director of Boungoueni CADER and be responsible for the supervision, organization and execution of project activities that CADER.

5.3.1.4 Training Technician

The training technician will be responsible for the development and execution of a training program for both extension agents and focus area farmers. He/she will work in close collaboration

with the other project technicians in order to assure that training activities incorporate all aspects pertinent to project activities. The Training technician is the immediate supervisor of the Training Assistant.

As for the Agronomist, the Training Technician is also responsible for the monitoring, organization and execution of project activities in the assigned CADER. He/she will work in close collaboration with the Ouani CADER Assistant Director and be responsible for the supervision of a Regional Supervisor.

5.3.1.5 Monitoring and Evaluation Technician

The Monitoring and Evaluation Technician (M&E) will be responsible for the design, implementation and analysis of the social agroforestry baseline and subsequent surveys for the target area. In cooperation with the Training Technician he/she will assure that extension agents receive sufficient training to adequately execute the surveys.

The M&E Technician will monitor species' performance both in the demonstration fields and in the focus areas. He/she will follow closely the development of interventions undertaken by the farmers. The M&E Technician will act in an advisory capacity to the other project technicians offering recommendations based on the information obtained in the field and through surveys. In cooperation with the other technicians, and CADER and project supervisory personnel he/she will monitor extension agents activities and participate in their evaluations.

5.3.1.6 Natural Resources Technician

The Natural Resources (NR) Technician will preferably be a botanist with a background in forest management. He/she will be responsible for training and supervising two assistants in the techniques of collecting and storing plant materials. He/she will create a herbarium as a reference and training tool. The biologist will be responsible for maintaining contacts with institutions and other projects to share botanical information. He/she will work in close collaboration with the ASAP senior technical staff and will have major input into developing a rational management plan for interventions in the forest ecosystem. He/she will act as an advisor to the other project technicians and senior CADER personnel in offering recommendations, based on research and surveys, concerning the use of indigenous species in project interventions.

5.3.2 National Staff

ASAP will retain all national staff positions currently employed by the LSC project. In addition the following new positions will be created. It is assumed that competent and adequately trained personnel will be found locally to fill the technical positions. Further training will be given as needed over the life of the project.

5.3.2.1 Forestry Assistant

The Forestry Assistant will be responsible for assisting in the development of nursery plans and supervising the execution of production programs in all project nurseries. He/she will undertake the task of assuring the procurement and distribution of locally available materials and seed. The Forestry Assistant will supervise the nursery supervisors and be under the direct control of the project Forester.

5.3.2.2 Assistant Agronomist

The Assistant Agronomist is responsible for the development of the demonstration fields. He is directly under the supervision of the Agronomist with whom he will collaborate in the design of appropriate interventions to be employed in the fields. He is responsible for the execution of the work plans in the demonstration fields and for the supervision of the demonstration field supervisors. Note that this position has been created and filled during the LSC Project.

5.3.2.3 Training Assistant

The Training Assistant will be under the direct supervision of the Training Technician. His/Her function will be to assist the Training Technician in the development of training programs, the preparation and procurement of locally available training materials, and in offering advice on training techniques as adapted to local customs. In addition he/she will be responsible for the translation of training materials into the local language so that they will be more accessible to focus area farmers.

5.3.2.4 Monitoring and Evaluation Assistant

The M&E Assistant is under the direct supervision of the M&E Technician. He/she will be responsible for assisting the M&E Technician in the collection and analysis of information and in the development and implementation of surveys. He/she will

monitor the extension agents to assure that the surveys are being accurately carried-out.

5.3.2.5 Assistants to the NR Technician

The NR Technician will be aided by two assistants. They will be responsible for the gathering of specimens of plant species, their conservation and for maintaining a herbarium. They will also be responsible for the gathering of local knowledge and its documentation.

5.3.2.6 Regional Supervisors

A Regional Supervisor will be employed in each CADER to assist the technician responsible for that area to monitor extension agent activities in the focus areas. They will assure that extension agents perform their assigned functions correctly. They will be responsible for the procurement of locally available materials and assist in the logistical coordination of distribution activities.

5.4 Technical Assistance Needs

It is anticipated that over the 5 year duration of this proposal, technical assistance will be required in the following areas:

5.4.1 Training

In year 1 two weeks of technical assistance will be needed to develop a training plan to be used for the training of primary school teachers in subjects pertaining to general environmental awareness. The project Training technician will work closely with the consultant, who may be an RTA, to define, outline and begin development of a curriculum of subjects to increase primary school students' awareness of environmental issues.

During year two a two week consultancy will assist in evaluating the effectiveness of the training of teachers program and offer guidelines as to its further development.

5.4.2 Field Productivity Baseline Survey

Technical assistance will be required for thirty days at the outset of Year 1 (November) to establish guidelines and develop a sound basis for the baseline survey. As the survey is to be implemented primarily by the Agricultural technician, close collaboration in its development will be necessary. In addition, the consultant will work with both the Agricultural and Training Technicians in developing a training plan for the agents who will execute the survey.

In Year 2 technical assistance will be required for twenty days to coordinate survey data and offer recommendations to the project based on its findings. These recommendations will pertain to the value of the data towards the monitoring and evaluation of the soundness or appropriateness of project interventions.

5.4.3 Natural Resources

Technical assistance will be required in evaluating the impact and effectiveness of the input offered to the ASAP by the Natural Resources Technician. Recommendations for possible continuation of this forest management strategy will be made. A 15-day consultancy will take place at the end of Year 2.

In addition, contact will be made with the staff of the Missouri Botanical Garden based in Tananarive, Madagascar, and the possibilities for collaboration explored.

5.4.4 CARE Regional Technical Advisors

CARE RTA services will be requested regularly throughout the life of the project to offer guidelines on technical issues and to participate in evaluations as the need is identified. Their visits for are planned as follows:

Year 1: - RTA Non-Formal Education for 2 weeks in November to review standard and alternative extension structures.
 - RTA SEAD for 2 weeks in June 1990 to review the marketing of agricultural crops.

Year 2: - RTA SEAD for 2 weeks in June 1991 to review the marketing of agricultural crops.
 - RTA ANR for 2 weeks in June 1991 to participate in the mid-term evaluation.

Year 5: - RTA for 2 weeks for participation in the final evaluation

5.4.5 Evaluation

Two evaluations are foreseen for ASAP. A mid-term formative evaluation will take place at the end of Year 2 and be comprised of 14 days RTA and 30 days consultant visits. At EOP the impact evaluation will be performed comprised of the same time allotments as for the formative evaluation.

6. BUDGET

6.1 International Personnel

Budget calculations are based on the recruitment of the following 6 international personnel positions; Project Manager/Forester, Agronomist, M&E Technician and Country Director for five years, Extensionist/Trainer for Years 1-3, and the Natural Resources Technician for Years 1-2. In addition, Consultants' and RTAs' services are based on 3 visits during Year 1, 4 visits in Year 2, and one visit each in Years 3 and 4.

6.2 National Personnel

Except for the Natural Resources Assistants which will only be employed for two years, national staff budget is based on maintaining a full staffing complement over the five year life of the project.

6.3 Project Operations

Budget considerations are based upon past years' experience and consideration given to the increase in project scope and activities. A larger office will be necessary. A vehicle fleet augmented by the arrival of 12 pick-ups and 7 motorcycles will need to be serviced. Travel and Lodging for the expatriate staff's trips to Moroni, the Country Director's visits to Anjouan, and RTA and consultants' visits are considered.

6.4 Materials and Equipment

All materials and equipment necessary for project implementation, whether purchased locally or abroad, are included under this heading.

6.5 Vehicles

Fifteen vehicles will be purchased during the life of the project. In Year 1, 8 vehicles will be added to the existing CARE fleet remaining from the first project. Many of those vehicles will probably be purchased with funds remaining from the previous grant or from revenue from the sale of moveable goods from the garage project. Each of the two CADERs will be assigned one vehicle which will remain under the Director's control and will be operated by a CARE-employed driver. In Year 3, 7 new vehicles will be purchased as replacements to continue operations until EOP. See also Appendix K.

6.6 Evaluation

RTA and consultant costs for a formative and a summative evaluation as described in Section 5.4.5 are budgeted.

6.7 Training

Staff training, either local or third-country, is included. Travel and lodging for an average of one third-country visit per year for each technician and his/her counterpart as described in Section 3.3.3 are considered. Farmer training materials and transport costs to other areas are included.

ATTACHMENT NUMBER TWO: DETAILED BUDGET ESTIMATE

ANJOUAN SUSTAINABLE AGRICULTURE PROJECT

(ASAP, 602-0002)

Table I below summarizes the anticipated annual costs of all activities to be funded under this grant. Table II (attached) provides a more detailed breakdown of those costs.

Table I: Summary Budget Estimate

(U.S. Dollars)

<u>Budget Category</u>	<u>YEAR 1</u>	<u>YEAR 2</u>	<u>YEAR 3</u>	<u>YEAR 4</u>	<u>YEAR 5</u>	<u>TOTALS:</u>
International Personnel:	246,830	236,359	209,475	173,662	172,119	1,308,445
National Personnel:	141,891	156,471	159,551	158,547	151,605	768,055
International Travel:	35,400	36,621	60,921	36,265	43,700	212,907
In-Country Travel:	17,810	10,619	11,410	9,009	7,631	56,479
Vehicle Operations:	34,250	35,278	176,814	38,245	39,393	323,980
Materials and Equipment	37,500	27,920	31,659	20,771	18,744	136,594
Training:	21,500	26,265	18,035	11,335	10,630	87,764
Other Direct Costs:	154,580	116,528	100,330	95,999	112,380	579,817
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Sub-Totals:	689,761	646,061	768,185	543,833	556,201	3,204,041
CARE/NY Indirect Recovery 9.24%:	63,734	59,696	70,980	50,250	51,299	295,959
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GRAND TOTALS:	753,495	705,757	839,165	594,083	607,500	\$3,500,000

Table II:
ANJOUAN SUSTAINABLE AGRICULTURE PROJECT BUDGET 1989-1994

AC		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS	AC TOTALS
4540	INT. STAFF SALARIES							\$543,359
	PROJECT MANAGER/FORESTER	\$19,500	\$20,085	\$20,608	\$21,308	\$21,947	\$103,520	
	AGRONOMIST	\$18,500	\$19,055	\$19,627	\$20,215	\$20,822	\$98,219	
	MONITORING/EVAL. TECH	\$18,500	\$19,055	\$19,627	\$20,215	\$20,822	\$98,219	
	TRAINING COORD.	\$18,500	\$19,055	\$19,627			\$57,102	
	NATURAL RES. TECH.	\$18,500	\$19,055				\$37,555	
	COUNTRY DIRECTOR	\$28,000	\$28,840	\$29,705	\$30,596	\$31,514	\$148,656	
	TOTALS	\$121,500	\$125,145	\$109,273	\$92,335	\$95,105	\$543,359	
4541	NAT. STAFF SALARIES						\$0	\$662,116
	EXTENSION WORKERS	\$43,200	\$53,395	\$61,072	\$58,745	\$50,423	\$267,635	
	REGIONAL SUPERVISORS (2)	\$7,440	\$7,663	\$7,893	\$8,130	\$8,374	\$39,500	
	ASSISTANT AGRONOMIST	\$3,900	\$4,017	\$4,138	\$4,262	\$4,389	\$20,706	
	ASSISTANT FORESTER	\$3,900	\$4,017	\$4,138	\$4,262	\$4,389	\$20,706	
	MONITORING/EVAL ASST	\$3,900	\$4,017	\$4,138	\$4,262	\$4,389	\$20,706	
	NAT. RES. ASSISTANTS (2)	\$7,800	\$8,034		\$0	\$0	\$15,834	
	TRAINING ASSISTANT	\$3,900	\$4,017	\$4,138	\$4,262	\$4,389	\$20,706	
	NURSERY SUPERVISOR	\$3,900	\$4,017	\$4,138	\$4,262	\$4,389	\$20,706	
	DRIVERS (6)	\$9,000	\$9,270	\$9,540	\$9,815	\$10,130	\$47,782	
	MECHANIC	\$2,280	\$2,340	\$2,419	\$2,491	\$2,566	\$12,105	
	ASSISTANT MECHANIC (2)	\$1,440	\$1,483	\$1,528	\$1,574	\$1,621	\$7,645	
	GENERAL HELPER	\$1,200	\$1,236	\$1,273	\$1,311	\$1,351	\$6,371	
	SECRETARY	\$3,300	\$3,399	\$3,501	\$3,606	\$3,714	\$17,520	
	ACCOUNTANT	\$4,800	\$4,944	\$5,092	\$5,245	\$5,402	\$25,484	
	GUARDS (9)	\$4,860	\$5,006	\$5,156	\$5,311	\$5,470	\$25,802	
	MORONI OFFICE STAFF COSTS	\$17,500	\$18,025	\$18,566	\$19,123	\$19,696	\$92,910	
	TOTALS	\$122,320	\$134,889	\$137,535	\$136,678	\$130,694	\$662,116	
4542	INT. STAFF BENEFITS						\$0	\$179,308
	33% OF BASE SALARY	\$40,095	\$41,298	\$36,060	\$30,471	\$31,385	\$179,308	
4543	NAT. STAFF BENEFITS						\$0	\$52,967
	8% OF BASE SALARY	\$9,786	\$10,791	\$11,003	\$10,934	\$10,456	\$52,967	
4544	QUARTERS & REL. ALLOWANCE						\$0	\$53,431
	QUART. ALL. (@ \$8000, 2 PER.)	\$16,000	\$16,400	\$8,487	\$0	\$0	\$40,767	
	RELOC. ALL. (\$1500 / PERSON)	\$6,000	\$1,545	\$1,591	\$1,639	\$1,688	\$12,464	
	TOTALS	\$22,000	\$18,025	\$10,079	\$1,639	\$1,688	\$53,431	
4545	R&R/HOME LEAVE						\$0	\$205,036
	R&R (2 PERS. FAM. @ \$6000)	\$30,000	\$30,900	\$36,071	\$27,865	\$28,700	\$153,536	
	HOME LEAVE		\$5,000	\$24,000	\$7,500	\$15,000	\$51,500	
	TOTALS	\$30,000	\$35,900	\$60,071	\$35,365	\$43,700	\$205,036	
4546	POST ADJUSTMENT	\$35,235	\$40,046	\$34,967	\$29,547	\$30,434	\$170,230	\$170,230
4547	EDUCATION ALLOWANCE						\$0	\$31,855
	@ \$2000 PER PERSON	\$6,000	\$6,180	\$6,365	\$6,556	\$6,753	\$31,855	
4548	ALLOWANCES LOCAL STAFF	\$9,786	\$10,791	\$11,003	\$10,934	\$10,456	\$52,967	\$52,967
4549	MOVING COSTS INT. STAFF						\$0	\$60,262
	@ \$5500 PER PERSON	\$22,000	\$5,665	\$12,731	\$13,113	\$6,753	\$60,262	
4555	OFFICE SUPPLIES	\$14,500	\$14,935	\$15,383	\$15,845	\$16,320	\$76,982	\$76,982
4556	FURNITURE, FIXTURES & EQ.						\$0	\$55,552
	MISCELLANEOUS		\$4,000		\$5,000	\$5,000	\$14,000	
	LAPTOP COMPUT. (3 @ \$2000)	\$6,000					\$6,000	
	PHOTOCOPIER			\$3,000			\$3,000	
	CAMERA	\$1,000					\$1,000	
	PRINTERS (2 @ \$750)	\$1,500					\$1,500	
	STENCIL MACHINE			\$2,000			\$2,000	
	HOUSE FURNITURE (4 @ \$2000)	\$8,000					\$8,000	
	DRYERS (1 @ \$1000)	\$1,000					\$1,000	
	WASHING MACH. (3 @ \$1200)	\$4,800					\$1,800	
	STOVES (2 @ \$1500)	\$3,000					\$3,000	
	REFRIGERATOR (2 @ \$1800)	\$3,600					\$3,600	
	AIR COND. (5 @ \$1000)	\$5,000					\$5,000	
	DEHUMIDIFIER (2 @ \$1250)			\$2,652			\$2,652	
	TOTALS	\$33,900	\$4,000	\$7,652	\$5,000	\$5,000	\$55,552	
4557	COMMUNICATIONS	\$20,000	\$20,600	\$21,218	\$21,855	\$22,510	\$106,183	\$106,183
4558	FACILITIES RENT						\$0	
4559	OFFICE MORONI	\$6,000	\$6,000	\$6,100	\$6,365	\$6,556	\$31,021	\$31,021

ANJOUAN SUSTAINABLE AGRICULTURE PROJECT

AC		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS	AC TOTALS
4559	UTILITIES, MAINT. & REPAIR						\$0	\$00,077
	ELECTRICITY	\$16,800	\$17,304	\$14,258	\$11,015	\$11,345	\$70,722	
	GAS	\$600	\$618	\$509	\$393	\$405	\$2,526	
	VAR. MAINT. & REPAIRS	\$6,000	\$3,090	\$2,546	\$1,967	\$2,026	\$15,629	
	TOTALS	\$23,400	\$21,012	\$17,314	\$13,375	\$13,776	\$88,877	
4560	VEHICLE OPERATIONS						\$0	\$107,460
	13 CARS @ \$2,250	\$29,250	\$30,128	\$35,010	\$32,782	\$33,765	\$160,934	
	10 MOTORCYCLES @ \$500	\$5,000	\$5,150	\$5,305	\$5,464	\$5,620	\$26,546	
	TOTALS	\$34,250	\$35,278	\$40,314	\$38,245	\$39,393	\$187,480	
4565	TRAVEL AND LODGING						\$0	\$61,349
	ANJOUAN-MORONI AIRFARE	\$5,760	\$5,933	\$6,493	\$4,458	\$4,592	\$27,236	
	LODGING IN MORONI	\$1,250	\$1,288	\$1,432	\$983	\$1,013	\$5,966	
	TRIPS TO ANJOUAN AIRFARE	\$1,440	\$1,483	\$1,528	\$1,574	\$1,621	\$7,645	
	LODGING IN ANJOUAN	\$360	\$371	\$382	\$393	\$405	\$1,911	
	RTA LODGING COSTS	\$3,000	\$1,545	\$1,575	\$1,600		\$7,720	
	RTA TRAVEL COSTS	\$1,400	\$721	\$850	\$900		\$3,871	
	CONSULTANT TRAVEL	\$1,000					\$4,000	
	CONS. LODGING COSTS @ \$100	\$6,000					\$6,000	
	TOTALS	\$23,210	\$11,340	\$12,260	\$9,909	\$7,631	\$64,349	\$0
4566	TRAINING COSTS						\$0	\$87,764
	TRAINING TRIPS INTL TRAV.	\$10,000	\$16,480	\$10,609	\$6,556	\$6,753	\$50,398	
	TRAINING TRIPS LODGING	\$5,000	\$7,725	\$5,305	\$3,278	\$3,377	\$24,684	
	REGIONAL TRAINING ACTV	\$3,000					\$3,000	
	TRAINING MATERIALS	\$2,000	\$2,060	\$2,122	\$1,500	\$500	\$8,182	
	VIDEO CAMERA	\$1,500					\$1,500	
	TOTALS	\$21,500	\$26,265	\$18,035	\$11,335	\$10,630	\$87,764	\$0
4570	MATERIALS AND EQUIP. HQ						\$0	\$13,273
	TECHNICAL MATERIALS	\$3,000	\$3,090	\$3,183	\$3,000	\$1,000	\$13,273	
4571	MAT'S AND EQUIP. LOCAL						\$0	\$123,322
	NURSERY BAGS	\$2,000	\$2,060	\$2,122	\$2,185	\$2,251	\$10,618	
	NURSERY EQUIPMENT	\$5,000	\$5,150	\$5,305	\$2,000	\$2,060	\$19,515	
	FRANCING	\$4,000	\$4,120	\$4,244	\$1,000	\$1,030	\$14,394	
	SEEDS	\$3,000	\$3,090	\$3,183	\$2,000	\$2,060	\$13,333	
	DRMO FIELD EQUIPMENT	\$1,000	\$500	\$515	\$530	\$546	\$3,092	
	DRMO FIELD PLANTING MAT'S	\$1,500	\$1,500	\$1,000	\$500	\$515	\$5,015	
	CADION WIRE	\$500	\$515	\$530	\$546	\$563	\$2,655	
	UNIFORMS, KNAPSACKS, ETC.	\$1,500	\$1,545	\$1,591	\$2,000	\$1,500	\$8,136	
	BICYCLES	\$10,000		\$3,183			\$13,183	
	PLANTING MATERIALS	\$2,000	\$2,060	\$2,122	\$2,185	\$2,251	\$10,618	
	NURSERY MIX	\$1,000	\$1,200	\$1,500	\$1,545	\$1,591	\$6,836	
	MISCELLANEOUS	\$3,000	\$3,090	\$3,183	\$3,278	\$3,377	\$15,927	
	TOTALS	\$34,500	\$24,830	\$28,477	\$17,771	\$17,744	\$123,322	\$0
4577	4WD PROJECT PICKUPS						\$0	\$136,500
	@ \$19,500	\$0	\$0	\$136,500	\$0		\$136,500	
4580	CONSULTANTS						\$0	\$18,000
	AGRON BASELINE 30 DAYS	\$9,000					\$9,000	
	SOCIAL CONSULT 30 DAYS	\$9,000					\$9,000	
	TOTALS	\$18,000	\$0	\$0	\$0	\$0	\$18,000	
4581	RTA COSTS						\$0	\$38,182
	RTA SERVICE @ \$500 DAY	\$15,000	\$7,500	\$7,725	\$7,957	\$0	\$38,182	
4587	INSURANCE						\$0	\$35,500
	MISSION INSURANCE	\$4,000	\$4,120	\$4,244	\$4,371	\$4,502	\$21,237	
	VEHICLES @ \$190	\$2,280	\$2,348	\$2,419	\$2,491	\$2,566	\$12,105	
	MOTORCYCLES @ \$50	\$500	\$515	\$530	\$546	\$563	\$2,655	
	TOTALS	\$6,780	\$6,983	\$7,193	\$7,409	\$7,631	\$35,236	

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ANJOUAN SUSTAINABLE AGRICULTURE PROJECT

AC		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS	AC TOTALS
4588	SUNDRY						\$0	
	BICYCLE PARTS	\$500	\$515	\$530	\$546	\$563	\$2,655	\$25,515
	SUBSCRIPTIONS	\$500	\$515	\$530	\$546	\$563	\$2,655	
	MISCELLANEOUS	\$4,000	\$4,120	\$4,244	\$4,371	\$4,502	\$21,237	
	TOTALS	\$5,000	\$5,150	\$5,305	\$5,464	\$5,628	\$26,516	
4589	PROJECT EVALUATION COSTS						\$0	\$39,173
	RTA TRAVEL		\$728			\$950	\$1,678	
	RTA LODGING		\$1,560			\$1,875	\$3,435	
	RTA COSTS \$500/DAY		\$7,500			\$8,250	\$15,750	
	CONSULTANT TRAVEL		\$2,500			\$2,750	\$5,250	
	CONSULTANT LODGING		\$1,560			\$1,755	\$3,315	
	CONSULTANT FEES		\$1,500			\$5,250	\$9,750	
	TOTALS	\$0	\$18,348	\$0	\$0	\$20,830	\$39,173	
	SUB TOTAL	\$689,761	\$646,061	\$768,184	\$543,832	\$555,185	\$3,203,024	\$3,292,024
	NEW YORK OVERHEAD @ 9.24%	\$63,734	\$59,697	\$70,980	\$50,250	\$51,299	\$295,959	\$295,959
	TOTAL	\$753,495	\$705,758	\$839,164	\$594,082	\$606,484	\$3,498,983	\$3,498,983



600 First Avenue • New York, NY 10016 • (212) 686-3110 • Cable: PARCELUS NY

June 16, 1989

Mr. Leon S. Waskin
REDSO/ESA
American Embassy
Nairobi, Kenya

Dear Skip,

Anjouan Sustainable Agricultural Project (ASAP, 602-0002)

We have elected to respond to your guidance cable in the form of a supplement to the revised ASAP proposal. Please find the supplement attached.

We trust you will find the responses contained in the supplement to adequately address all the issues raised in the guidance cable. I wish to add only the following comments to give further support to three of the more important issues:

1. Final Goal: Given the smallness (1/4-1/5 ha) of Comorian farmers' fields, raising the income of 4,275 families working a total of 1080 hectares is unrealistic. This target is based on the assumption that, because the distribution of land is quite wide-spread, and the focus areas of the project are limited to strictly defined areas, most farm families will not have more than one field within the focus areas.
2. Intermediate Goal: Because productivity is more in conformance with the farmers' own perception of intermediate goals, we feel retaining productivity rather than fertility is more appropriate. Also, it better reflects the objective to promote diversity in order to maximize overall production as indicated in the second phrase of the IG statement.
3. We feel it is important to restate our reasons for wanting the Natural Resources Technician position retained. We believe that without having a specialist to address the problems related to the conservation of the natural forest we are addressing only part of the total watershed management problems. In addition, we are convinced that the natural forest contains indigenous species which will be of value to the local farmers. Therefore, without a Natural Forest Technician, a most important element of the watershed management package will be missing.

We are in total agreement with the guidance cable that no pesticides be used in this project. We note that REDSO has modified the text of the IBB accordingly and request that a copy of the revised IBB be shared with CARE-Comoros and with my office.

66

SUPPLEMENT
TO THE
ANJOUAN SUSTAINABLE AGRICULTURE PROJECT

Country :	Comoros
Period:	1989 - 1994
Contact Person:	Director CARE-Comoros
Prepared by:	Remko Vonk
Date:	June, 1989

Introduction:

This supplement is to be used in conjunction with the first revision of the ANJOUAN SUSTAINABLE AGRICULTURE PROJECT, submitted in April, 1989. It reflects changes made in response to the telegram sent by Leon S. Waskin of the Regional Development Support Office in Nairobi, to Rudy Ramp, Regional Manager for the East Africa Region in CARE-USA on 05/23/89.

Where the above referenced telex asked for clarifications that do not require amendment of the proposal, they are responded to in the attached cover letter.

Amendments:

(In response to point 2.A.(1) in the REDSO telex, refer to Page 7, 3.1 - 3.2 of the proposal)

The following sentence has to be added after the Final Goal statement:

Given the small farm size of the average plot (1/4 - 1/5 hectares each; Veerkamp, 1988), a relatively large number of farmers will be directly affected by activities in the focus areas.

(In response to point 2.A.(2) in the REDSO telex, refer to Page 28 of the proposal, end of paragraph 2)

...Agnes Ngugi, due out in 1990. "In addition, the incoming Monitoring and Evaluation Technician will pass several days in Nairobi with the REDSO Agricultural Division in order to get input on appropriate methodologies for evaluation of past and on-going project activities."

(In response to point 2.A.(2) in the REDSO telex, refer to Page 28 of the proposal, last paragraph modification)

In the initial follow-up survey, questions pertaining to land tenure, farmer organization and marketing will be added to the first year's survey. Additional questions pertaining to farmers' participation in, and awareness of, project/CADER activities and environmental concerns will be added to assess the impact of past interventions. Further revisions of the survey format will be undertaken with the assistance of the sociologist consultant in November, 1989.

(In response to point 2.A.(2) in the REDSO telex, refer to Page 29 of the proposal, interjected sentence in paragraph 1)

..during the first year. "Close monitoring of developments in treated fields will provide valuable information in determining the course of application of interventions in new focus areas." As the project identifies.....

(In response to point 2.A.(3) in the REDSO telex, refer to Page 7 of the proposal. 3.2 to be replaced by the following)

The project will address the primary constraint felt by the farmers at the present time, which is the low productivity of the land. Therefore, the intermediate goal of the project is to improve the productivity of 1000 hectares of farmland in the target areas by 1994, and to achieve acceptance and practice of a range of field management options that enable farmers to vary crop mixes and optimize production.

Once the productive capacity of the farmland has been increased through improvement in soil fertility, a satisfactory production of staple crops will be more assured. The farmer will then be more favorably inclined to diversify total production and to try new crops.

The final and intermediate goals are developed further in Appendix B - Project Schematics.

(In response to point 2.A.(3) in the REDSO telex, refer to Appendix B of the proposal. Part 1 to be replaced by the following:)

Appendix B: Project Schematic - Part 1

FINAL AND INTERMEDIATE GOALS

Goals	Indicators	Means of Verification	Assumptions
FINAL GOAL:			
To increase the income of 4275 target area farmers by 30% on a sustainable basis by the year 1997.	This project is not being evaluated at the final goal level		
INTERMEDIATE GOALS:			
1. To improve the productivity of 1000 hectares of farmland of the target area farmers by 1994, and to achieve acceptance and practice of a range of field management options that enable farmers on that land to vary crop mixes and optimize production.	1. The number of farmers that have adopted at least one intervention. 2. The number of farmers maintaining and managing interventions 3. Greater diversity of food and cash crop species present in treated fields than in non-treated fields	1.1 Field plan monitoring 1.2 Follow-up surveys 1.3 Mapping and photographs 2.1 Same as above 3.1 Same as above 3.2 Nursery production 3.3 Monitoring of "no-intervention" control fields	Adoption based on intrinsic value of interventions. not motivated by just WFP rations Positive results from early interventions will induce farmers to maintain interventions Species diversification is result of increased fertility and field capacity to sustain more biomass
	4. Percentage of farmers advancing to successive stages of intervention techniques 5. Percentage of farmers reporting doubling of total production on lands 5 years after initial intervention	4.1 Field plan monitoring 5.1 Final survey	Positive results from early interventions will induce farmers to further improve fields without added food aid

(In response to point 2.A.(3) in the REDSO telex, refer to Appendix B of the proposal. Part 2, points 6, 7 and 8 to be replaced by the following:)

6. Vary crop mixes - Diversify production to assure greater stability of the farming system.

7. Optimize production - Attain the best possible yield given input levels, field conditions and climatic conditions.

(In response to point 2.A.(3) in the REDSO telex, refer to page 37, 4.4.3.2 can be deleted)

(In response to point 2.C.(1) in the REDSO telex, refer to page 8 of the proposal, fourth paragraph to be replaced by the following:)

In addition the project will employ a Natural Forest Management Technician for two years. This person will work with the target area farmers to identify how the existing forest resources can best be utilized, so that they maintain their immeasurable value as the protection of the island's upper watersheds. The farmers are currently opening up the forests; they need the land to cultivate their food crops. In some cases, this is causing a substantial destruction of the forest's protective capacity vis-a-vis the watersheds the project is working in. If the project does not address this issue, it might find itself with well managed lower watersheds that are being threatened by erosion, flash floods and possibly mud slides from the upper watersheds. Already, extensive damage can be observed caused by excessive run-off from unprotected areas. In addition to these problems, removal of forest cover is a well known cause of drying up of water sources.

The project intends to identify those areas where the forest destruction has become a threat to the sustainability of project interventions. The idea is to come up with workable management plans for these areas in consultation with the GOC, other projects, the farmers living in the threatened watersheds and the farmers that encroach on the forest. In these plans, extremely fragile ecosystems will be identified for protection and where possible, exploitable areas will be identified and a management plan for their utilization will be drawn up. The project will work with farmers that cultivate in the forest. By showing them the interventions in the lower watersheds and by offering alternative cultivation methods that are more sustainable, it will try to reduce the destructive impact of the clearing of the forest. Given the land utilization patterns (every farmer cultivates various small pieces of land scattered over a larger area), it is likely that the farmers using the forests will overlap greatly with the farmers using land in the lower watersheds.

Another benefit the project hopes to derive from the exercise is an increased diversification of the indigenous species used on the project. Currently only a very limited number of indigenous species are used. Through discussions with the farmers that are familiar with the forest and by using work done by various botanists that have studied the forest, the project will identify additional useful indigenous species. Botanically, the Comoros islands belong to the same unit as Madagascar and it is thus not inconceivable that species will be identified that are not commonly known to be useful in farming systems.

The information obtained from these activities will also be valuable in guiding the future course of the Agricultural Strategy Studies currently undertaken by the UNDP.

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The natural forest management component can easily evolve into a larger set of objectives and activities. It is therefore included into the ASAP for two years. If the resulting management plans and interventions are viable and can be applied at a larger scale that might affect areas outside the current project area, a separate project paper will be prepared. If the management plans and recommendations do not warrant a separate project, the activities will be carried out through the existing project infrastructure.

(in response to point 2.C.(1) in the REDSO telex, refer to page 47 of the proposal, 5.3.1.6 to be replaced by the following:)

5.3.1.6 Natural Forest Management Technician

The Natural Forest Management Technician will preferably be a forester with a background in natural forest management, botany and or watershed management. He/she will be responsible for the training and supervision of assistants ;in the techniques of identifying useful forest species. The NFM Technician will be responsible for maintaining contacts with institutions and other projects to share botanical information. He/she will work in close collaboration with the ASAP senior technical staff and will have major input into developing a rational management plan for interventions in the forest. He/she will act as an advisor to other project technicians and senior CADER personnel in offering recommendations, based on research and surveys, concerning the use of indigenous species in project interventions.

(In response to point 2.C.(1) in the REDSO telex, refer to Appendix D of the proposal, the Job description of the Natural Resources Technician to be replaced by the following:)

ANJOUAN SUSTAINABLE AGRICULTURE PROJECT

JOB DESCRIPTION

NATURAL FOREST MANAGEMENT TECHNICIAN

BASIC FUNCTION

The Natural Forest Management Technician has the overall responsibility for identifying forest areas that are of importance to the lower watersheds covered by the project, and for management plans for these forest areas. In addition, the Natural Forest Management technician is responsible for the identification of useful forest species that can be used by target area farmers.

MAJOR RESPONSIBILITIES

1. In year 1, reviewing all available literature on the islands flora and fauna as it relates to the natural forest and to study feasibility of species for their use on the project. This work is expected to be done in collaboration with all interested parties.

2. Identify areas in the natural forest that are of importance to the project target areas and to classify these areas for their potential exploitation. This work is expected to be done in collaboration with all interested parties.
3. Develop, in collaboration with the GOC, farmers and the ASAP project team, a feasible plan for the management of exploitable forest areas.
4. Pilot implementation of the initial action plans for focus areas in the forest.
5. Establishing contacts with foreign and national institutions to promote an exchange of relevant botanical and ecological information on the natural forest in Anjouan.
6. Develop information, reference and advisory capabilities to the ASAP, GOC (via CEFADER), and other projects.
7. Hire and train two assistants, responsible for the field implementation activities.
8. Develop ideas of instituting environmental awareness training programs for teachers, students and the general population with the Training Technician.

CRITICAL RELATIONSHIPS

1. Within CARE

Relationships with the other technicians will specifically encompass the following; Relationship with:

- Agronomist: The Natural Forest Management Technician will collaborate closely with the Agronomist to advise on the feasibility of the introduction of new indigenous species first into the demonstration fields and, if successful, ultimately into the package of technical options available for the field.
- Forester: The Natural Forest Management Technician will collaborate closely with the Forester to advise on the feasibility of the introduction of new indigenous tree species first into the nurseries and demonstration fields and, if successful, ultimately into the package of technical options available for the field.
- Monitoring and Evaluation Technician: The Natural Forest Management Technician will collaborate closely with the M&E Technician to monitor the development of new indigenous species introduced into the package of technical options, both under controlled conditions and in the field.

-Training and Extension coordinator: As with the other Technicians, the Natural Forest Management Technician is responsible to assist in the development of the training program. He/she will offer sufficient input into the program's development to assure that training needs pertinent to the Natural Forest Management component are well-defined and adequately addressed. He/she will occasionally be responsible for training others where his/her expertise is required. In such cases he/she will be subject to the guidance of the T&E Coordinator as concerns the methods of organizing the presentations.

National assistants: The Natural Forest Management Technician has direct supervision of two assistants. He/she is responsible for training these assistants.

2. Outside CARE

a. CEFADER and CADER staff: since extension agents may be used in the execution of the research and surveys, the Natural Forest Management Technician will have to maintain close contacts with the CADER-staff, not only in the CADERs where the ASAP is working, but in all the CADERs.

b. Other Projects: Contacts with other projects will be maintained in order to promote the integration of the recommendations into an island-wide strategy.

c. CNDRS: Close collaboration with the National Research Institute will have to be solicited in order to promote the project's propositions at a national level.

d. Ministry of Plan Officials: Since recommendations will be made on protection and exploitation of the indigenous flora and fauna, good relations with the appropriate ministries will have to be maintained.

e. Foreign Institutions: The Natural Forest Management Technician will maintain regular contacts with a variety of Research Institutions. These relations are very important in order to establish an efficient collaboration and exchange of information.

REQUIREMENTS

1. Degree in Biology/Botany with agricultural knowledge or a degree in Tropical Agronomy, Watershed Management or Forestry with some botanical background.

2. At least two years of experience in a developing country, in a farming systems related project.

3. Good capability to speak, read and write in both English and French.
4. Experience with computers (Office Writer, Lotus, DBase) preferred.
5. A proven capability to live and work under difficult, isolated conditions. Good inter personal skills.

(In response to point 2.C.(2) in the REDSO telex, refer to page 27, to following has to be added at the bottom of that page:)

3.7.4 Staffing

In the past, CARE has had substantial problems fielding a complete team of international project staff. This negatively impacted on project implementation. To forego such problems in the proposed ASAP, CARE will step up its efforts to identify suitable project staff. More use will be made of technicians with prior work experience on the Comoros or other isolated locations. In addition, substantial attention has been paid to the job descriptions and to the definition of the inter relationship between the staff positions. The substantial technical assistance team that will be fielded for this project will consist of members with concisely defined tasks and skill areas.

CARE recognizes that assigning a large team of persons to an isolated island can lead to friction and frustrations that can hamper project progress. To alleviate this problem, regular staff meetings will be held with the purpose of giving maximum clarity on the assigned tasks and on how these tasks contribute to the overall goals of the project. Special attention will be paid to the selection of the individuals to be assigned to ASAP. In addition to their technical skills, they will have to have good inter-personal skills.

(In response to point 2.C.(2) in the REDSO telex, refer to the job descriptions in Appendix D. The following will be added:)

For the agronomist: Append to paragraph 1.a.:

"Relationships with the other technicians will specifically encompass the following;

Forester: The Agronomist will collaborate closely with the Forester to optimize compatibility of the species mix while working towards an increase in diversity of planting materials and the maximization of overall field production.

- Monitoring and Evaluation Technician: Agronomist will assist in the development of qualitative and quantitative parameters applied to monitor the performance of different agricultural species. As the Agronomist is responsible for the demonstration fields, he/she will be most directly involved in assuring the success of the monitoring and evaluation scheme in these fields.

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- **Natural Forest Management Technician:** The Agronomist will collaborate closely with the Natural Forest Management Technician to essay the introduction of new indigenous species first into the demonstration fields and, if successful, ultimately into the package of technical options available for the field.

- **Training and Extension coordinator:** As with the other Technicians, the Agronomist is responsible to assist in the development of the training program. He/she will offer sufficient input into the program's development to assure that agricultural training needs are well-defined and adequately addressed. He/she will occasionally be responsible for directly assisting in training sessions when the expertise is required. In such cases he/she will be subject to the guidance of the T&E Coordinator as concerns the methods of organizing the presentations."

For the Forester: Append to paragraph 1.a.

"Relationships with the other technicians will specifically encompass the following;

- **Agronomist:** The Forester will collaborate closely with the Agronomist to optimize compatibility of the species mix while working towards an increase in diversity of planting materials and the maximization of overall field production. The monitoring of tree species development in the demonstration fields will be the Forester's responsibility in cooperation with the Agronomist

- **Monitoring and Evaluation Technician:** Forester will assist in the development of qualitative and quantitative parameters applied to monitor the performance of different tree species, both in the focus areas and in the demonstration fields. As the Forester is responsible for the nurseries, he/she will be most directly involved in assuring the success of the monitoring and evaluation scheme in these areas.

- **Natural Forest Management Technician :** The Forester will collaborate closely with the Natural Forest Management Technician to essay the introduction of new indigenous tree species first into the nurseries and demonstration fields and, if successful, ultimately into the package of technical options available for the field.

- **Training and Extension Coordinator:** As with the other Technicians, the Forester is responsible to assist in the development of the training program. He/she will offer sufficient input into the program's development to assure that training needs pertinent to the forestry component are well-defined and adequately addressed. He/she will occasionally be responsible for directly assisting in training sessions when the expertise is required. In such cases he/she will be subject to the guidance of the T&E Coordinator as concerns the methods of organizing the presentations."

For the Monitoring and Evaluation Technician: Append to paragraph 1.a.

"Relationships with the other technicians will specifically encompass the following;

- Agronomist: The M&E Technician will guide and assist the Agronomist in the monitoring of the development of various crop species both in farmers' and the demonstration fields. Decisions concerning species production and utilization will be made mutually based on the information obtained.
- Forester: The M&E Technician will guide and assist the Forester in the monitoring of the development of various tree species in the nurseries, the focus areas and the demonstration fields. Decisions concerning species production and utilization will be made mutually based on the information obtained.
- Natural Forest Management Technician: The M&E Technician will collaborate closely with the Natural Forest Management Technician to monitor the development of new species introduced into the package of technical options, both under controlled conditions and in the field. He/she will advise the Natural Forest Management Technician on the desired characteristics of species to be sought and introduced.
- Training and Extension Coordinator: As with the other Technicians, the M&E Technician is responsible to assist in the development of the training program. He/she will offer sufficient input into the program's development to assure that training needs pertinent to the M&E component are well-defined and adequately addressed. He/she will occasionally be responsible for directly assisting in raining sessions when the expertise is required. In such cases he/she will be subject to the guidance of the T&E Coordinator as concerns the methods of organizing the presentations. In addition, he/she will assist the T&E Coordinator in developing and implementing a plan for the monitoring and evaluation of extension agents' performances."

For the Training and Extension Coordinator: Append to paragraph 1.a.

"The T&E Coordinator must collaborate with the other technicians to involve them in the various aspects of the training program that directly concern their respective areas of expertise. He/she will also assure their participation in the supervision and implementation of the extension program where appropriate."

(In response to point 2.D.(1).a in the REDSO telex, refer to page 34 in the proposal. The second "benchmark measure" will read as follows:)

- At least 480 hectares treated during years 1 and 2. Continued treatment of at least 200 hectares started under the previous phases of the project.

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Hectares "treated" is defined as areas having received at least one intervention. As the primary intervention is the planting of contour strips, a technique fairly well known and for which food for work is allocated, CARE believes that the set targets are achievable within the proposed time frame.

(In response to point 2.D.(1).b in the REDSO telex, refer to page 34 in the proposal. An additional "benchmark measure" will read as follows:)

- At least 250 farmers apply at least one intervention to their fields that are outside of the focus areas. These can be either farmers who are involved in focus area activities or farmers from neighbouring areas who spontaneously adopt the interventions they have seen demonstrated. This will be difficult to precisely determine as all these fields will not be regularly monitored. The extent of such spontaneous adoption of technical options will be estimated in a small follow-up survey to be done following the second planting season (the follow-up survey proposed for the beginning of year 3). As no food for work is given whatsoever for off-site activities, the attainment of this benchmark will serve as a crucial indicator of progress towards sustainability."

(In response to point 2.D.(2) in the REDSO telex, refer to page 34 in the proposal. An additional comments to be added after the last benchmark measure will read as follows:)

In addition to the above benchmark measures, the mission will prepare separate benchmark measures in preparation for the annual project reviews to be carried out by REDSO. The precise formulation of these measures will largely depend on the timing of the visit of the REDSO team vis-a-vis the planting season and can therefore not be defined in this proposal.

(In response to point 2.E.(2) in the REDSO telex, refer to page 41 in the proposal. An additional comment to be added after the paragraph following the table will read as follows:)

The 200 hectares in the 8 focus areas are the actual achievements of the first phase of the proposal. Two of the ten focus areas for year one have already been selected as part of the Soil and Water Conservation Project and some minor start up activities have already taken place there at the time of writing of this proposal. These sites will be brought under full development during year 1.

(In response to point 2.E.(2) in the REDSO telex, refer to page 39 in the proposal. An additional comment to be added after the first sentence in the second paragraph will read as follows:)

The exact format of this report will be determined jointly by REDSO and CARE.

(In response to point 2.E.(3) in the REDSO telex, refer to the budget in the proposal. Under account code 4571, the money set aside for the freezer for bio diversity (\$2,500) and \$750 for herbarium materials will be allocated to teacher training materials under the same line item for the total amount of \$3,250.)

(In response to point 2.E.(4) in the REDSO telex, refer to page 51 in the proposal. An additional comment to be added after the first sentence under 6.4 will read as follows:)

CARE will prepare a brief commodity procurement plan specifying what proportion of goods slated to be procured locally will have their origin in countries included in A.I.D. geographic code 935 upon approval of the proposal by REDSO and before the start of the procurement of materials and equipment.

(In response to point 2.E.(5) in the REDSO telex, the following has been added as Chapter 3.8 of the proposal)

3.8 Economic Analysis

Formal economic and financial analysis of the ASAP project is difficult, as many of the costs and benefits are not traded or reliably quantifiable. For example, fuelwood itself may change from a "free" public good to a commodity which is priced on par with its energy equivalent kerosene within the 5 years in which the project is productive, especially in a densely populated, rapidly deforested country like the Comoros. The rationale for selecting one technology over the other is driven by the ultimate decisive factor, which is not easily translated in economic terms: success. As this is a second phase of a project which has existed in the context of various other projects, the selection of the techniques is driven by the various trial and error like experiences that characterized the project's first phase and the other projects on the Comoros. It has been the farmer on the Comoros that has decided which approach works best and it has been the strength of the Soil and Water Conservation Project and now of ASAP that has taken into account the feedback of these farmers.

The farmers' decision to go along with the proposed approach for ASAP has certainly been an economic one. It has been a collective approach of whole villages in mini watersheds, rather than individual farmers, which has shown that there is a possibility of collective action. The project has definitely been aided by the collapse of the world market price for cloves, which tumbled from CFA250 to CFA50 at the farm gate in just two years. The cash income of the farmers depended a great deal on their income from this once lucrative cash crop and the elimination of this income source provided a strong motivating force behind farmer participation in the project.

An economic analysis at the farmer level will have to compare the impact the project has on treated areas over a certain period of time with areas not covered by the project that will thus see a dwindling

of yields due to erosion and decline in soil fertility. Typically, more fertile soils have a higher variety of crops on the Comoros, so one can not just compare the output of rice on treated slopes with the yield of rice on un-treated slopes. In addition, one has to add the output of high value crops like pineapple, vanilla, black pepper and sweet potato that can no longer be grown on the un-treated slopes, but are actively promoted for use on the treated slopes. In addition to that, the value of the firewood, building poles, fodder and tree fruits will have to be added.

The community approach that the project has developed over the last two years has two clear economic benefits. First, it increases the efficiency and effectiveness of the extension system in place. One extension worker can cover more farmers when dealing with a group than when dealing with individuals. ASAP proposes a fairly straight forward replication of what to date has proven to be a successful approach to sustainable agriculture on the Comoros. By doing so, it optimizes the use of donor resources. Second, the community approach to watershed management assures total coverage of a watershed, which greatly increases the total impact of the project on soil erosion and thus land productivity.

In straight forward financial terms, the project will assist 4,275 target area farmers, thus supporting a total of approximately 25,000 inhabitants on Anjouan. The cost per beneficiary is thus \$140 and the cost per farmer is \$820. These costs are substantial, but if the project does achieve its set target of doubling productivity on lands 5 years after the initial intervention, the project will provide a real, meaningful improvement of the standard of living of these 4275 farm families. It is especially important to note that the proposed interventions will result in a sustainable improvement in the farm productivity. Even without adoption by farmers not directly targeted by the project, the project will prove to be economically sound.

(In response to point 2.E.(6) in the REDSO telex, refer to page 28 in the proposal. The fourth paragraph is amended to read as follows:)

....year 5 evaluation. "Wherever appropriate, collected data will be desegregated by gender to permit a fuller assessment of the impact of project activities on women."

(In response to point 2.E.(7) in the REDSO telex, refer to the table of contents in the proposal. The amended table of contents will read as follows:)

Handwritten initials or signature in the bottom right corner.

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ACTION MEMORANDUM FOR THE DIRECTOR, REDSO/ESA

From: Leon S. Waskin, REDSO/ESA/PROJ

Date: August 1, 1989

Subject: Waiver of Non-Federal Funding Requirement for Operational Program Grant, Comoros Anjouan Sustainable Agriculture Project (ASAP, 602-0002)

Action: Your approval is needed to waive the requirement that 25% of the cost of subject OPG come from non-Federal sources.

1. Background.

The Anjouan Sustainable Agriculture Project (ASAP, 602-0002) is to be implemented via a \$3.5 million Operational Program Grant (OPG) from the Development Fund for Africa to the Cooperative for American Relief Everywhere (CARE). ASAP represents a continuation and expansion of land and soil conservation efforts that A.I.D. has supported since 1984 through the predecessor CARE OPG I Project (602-0001). Its purpose is to improve the soil fertility of 1,000 hectares of farmland in target areas of the island of Anjouan by 1994, and to achieve acceptance and practice of a range of field management options that enable farmers to vary crop mixes and optimize production. Toward these ends, CARE is to use funds from this OPG to provide an increased level of technical assistance, carry out local training, and purchase commodities in support of its ongoing watershed management and agricultural extension activities in those target areas.

2. Problem.

CARE estimates that the value of the Government of Comoros' (GOC's) in-kind contribution to this activity in the form of housing, office space, and counterpart personnel over the five-year life of project will be equivalent to \$130,000, or 3.58% of total project costs. No other non-Federal sources of funding are expected. However, A.I.D. Handbook 13, Chapter 4, Section B.1.(e) states that "Operational programs for Private and Voluntary Organizationsrequire that 25% of the cost of the program come from non-Federal sources." Thus, if this grant is to be issued, the 25% non-Federal requirement must be waived.

3. Discussion.

The same section of Handbook 13 cited above goes on to say that "The 25% requirement may be waived by the appropriate A.I.D. bureau or mission." The Handbook, however, lists no criteria

on the basis of which a proposal to waive the requirement might be assessed. State 331065 of October 25, 1987 sought to correct this omission. That cable states in part that "Criteria for USAID to consider in determining whether to waive or reduce the 25% contribution include....:

-- The PVO was established under A.I.D. projects as a unique resource to provide long-term capability to support development programs which have no independent source of income..."

This criterion is directly applicable here. While CARE International is an established PVO, CARE/Comoros was created specifically to manage the first A.I.D.-funded OPG, and the land and soil conservation efforts on rural Anjouan remain CARE/Comoros' only activities. No other donor is active in the areas in which CARE is operating, CARE did not operate in those areas prior to the beginning of A.I.D. funding, and CARE could not continue to operate there without continued A.I.D. funding. Thus, CARE/Comoros fits the definition of an organization "established under [an] A.I.D. [project] as a unique resource to provide long-term capability to support development programs which have no independent source of income..." A waiver of the 25% criteria on the basis of this consideration alone would be justified.

Although not directly applicable in this instance, there is an additional argument to be made in favor of such a waiver. The same cable also states that the 25% requirement may be waived when:

"-- The PVO is a new or small non-profit institution without significant independent or external sources of funds."

As noted, CARE/Comoros is a new, small organization that, absent A.I.D. support, would not exist. It is therefore arguable that it also fits this additional criterion for waiver of the 25% requirement.

4. Authority.

As explained in 1987 State 331065, "the required non-A.I.D. contribution [for OPG's] may be waived by the entity authorizing the activity..." In this case, you are the authorizing official. Your authority in this regard stems from three sources:

-- State 185828 of June 13, 1989 (Attachment 6) delegated to you ad hoc authority to approve a PID or PID-like document for this activity;

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-- Section 4.A.(1) of Delegation of Authority No. 551, as revised on March 19, 1989, delegates to you the authority to authorize a project, if that project does not exceed \$20 million over the approved life of project, does not present significant policy issues, does not require issuance of waivers that may only be approved by the Assistant Administrator for Africa or the Administrator, and does not have a life of project in excess of ten years; and

-- A.I.D. Redelegation of Authority No. 149.1.1 of May 15, 1985 (Attachment 7) redelegated to Mission Directors in the field the authority to execute U.S. government grants (other than grants to foreign governments or agencies thereof) in an amount not exceeding \$5 million.

None of the exceptions cited under D.O.A. applies here. You therefore have authority to authorize this activity, and thus authority to waive the 25% requirement.

5. Recommendation.

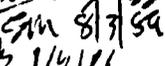
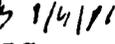
That, by signing below, you approve waiver of the requirement that 25% of the cost of the OPG to be awarded to CARE for implementation of the Anjouan Sustainable Agriculture Project come from non-Federal sources. This waiver is to be issued pursuant to your authority under D.O.A. 551, and is justified on the grounds that CARE/Comoros was established under an A.I.D. project as a unique resource to provide long-term capability to support development programs which have no substantial independent source of income.

Approved:

Satish P. Shah

Disapproved:

Satish P. Shah
Director, REDSO/ESA

Drafted: PROJ:LSWaskin: 
Cleared: PROJ:EMorris: 
LEG:JBorns: 
D/DIR:MKSingh:

MEMO TO: Peter Shirk, REDSO/ESA, Contracting Officer

From: Leon S. Waskin, REDSO/ESA/PROJ

Date: August 1, 1989

Subject: Waiver of Competition for Issuance of Operational Program Grant, Comoros Anjouan Sustainable Agriculture Project (ASAP, 602-0002)

Action: Your approval is needed to waive the requirement for competition in the issuance of subject OPG.

1. Background.

The Anjouan Sustainable Agriculture Project (ASAP, 602-0002) is to be implemented via a \$3.5 million Operational Program Grant (OPG) from the Development Fund for Africa to the Cooperative for American Relief Everywhere (CARE). ASAP represents a continuation and expansion of land and soil conservation efforts that A.I.D. has supported since 1984 through the predecessor CARE OPG I Project (602-0001). Its purpose is to improve the soil fertility of 1,000 hectares of farmland in target areas of the island of Anjouan by 1994, and to achieve acceptance and practice of a range of field management options that enable farmers to vary crop mixes and optimize production. Toward these ends, CARE is to use funds from this OPG to provide an increased level of technical assistance, carry out local training, and purchase commodities in support of its ongoing watershed management and agricultural extension activities in those target areas.

2. Problem.

A.I.D. Handbook 13, Chapter 2, Section B.1. mandates that "Competition is to be used to the maximum practicable extent for the award of grants or cooperative agreements." CARE, however, is the only PVO that has been considered as a potential grant recipient. Thus, if this grant is to go forward, the requirement for competition must be waived.

3. Discussion.

Handbook 13, Chapter 2, Section B.3 states that "Competition is not required for:

b. Assistance awards for which one recipient is considered to have exclusive or predominant capability, based on experience, specialized facilities or technical competence, or based on an existing relationship with the cooperating country or beneficiaries;...

d. Follow on assistance awards intended to continue or further develop an existing assistance relationship."

Both these conditions apply here. In its five years of A.I.D.-funded operations in the Comoros, CARE has developed unique qualifications in terms of the experience of its professional staff and the depth of its existing relationships with the host government that could not be duplicated, or even approached, by any other potential grant recipient. Moreover, the present grant is a "Follow on assistance [award] intended to continue or further develop an existing assistance relationship." Thus, clear justification for waiver of the requirement for competition exists.

4. Authority.

Handbook 13, Chapter 2, Section 4.b specifies that written justification for noncompetitive awards are to be reviewed and approved by "the cognizant grant officer." In this case, you are the cognizant grant officer. Your authority in this regard stems from three sources:

-- State 185828 of June 13, 1989 (Attachment 6) delegated to you ad hoc authority to approve a PID or PID-like document for this activity;

-- Section 4.A.(1) of Delegation of Authority No. 551, as revised on March 19, 1989, delegates to you the authority to authorize a project, if that project does not exceed \$20 million over the approved life of project, does not present significant policy issues, does not require issuance of waivers that may only be approved by the Assistant Administrator for Africa or the Administrator, and does not have a life of project in excess of ten years; and

-- A.I.D. Redlegation of Authority No. 149.1.1 of May 15, 1985 (Attachment 7) redelegated to Mission Directors in the field the authority to execute U.S. government grants (other than grants to foreign governments or agencies thereof) in an amount not exceeding \$5 million.

None of the exceptions cited under D.O.A. applies here. You therefore have authority to approve, authorize, and execute this grant, and thus authority to waive the requirement for competition.

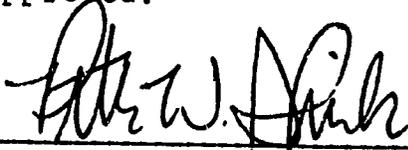
5. Recommendation.

That, by signing below, you waive the requirement for competition in the award of an Operational Program Grant for implementation of the Anjouan Sustainable Agriculture Project. This waiver is justified on the grounds that:

a. CARE has predominant capability to implement this activity based on its experience, technical competence, and its existing relationship with the cooperating country; and

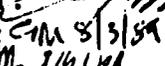
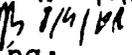
b. This is a follow on assistance award intended to continue and further develop the existing assistance relationships between A.I.D., CARE, and the Government of the Comoros.

Approved:



Disapproved:

Peter Shirk, Regional
Contracting Officer

Drafted: PROJ:LSWaskin: 
Cleared: PROJ:EMorris: 
LEG:JBorns: 
D/DIR:MKSiinding:

5412D

ACTION: AID-3 INFO: ECON POL/RLO

VZCZCNA0816
RR RUEHNR
DE RUEHC #8258 2090755
ZNR UUUUU ZZB
R 270753Z JUL 89
FM SECSTATE WASHDC
TO RUEHNR/AMEMBASSY NAIROBI 8379
INFO RUEHNR/AMEMBASSY MORONI 1913
BT
UNCLAS STATE 238258

27-JUL-89 TOR: 08:35
CN: 46111
CHRG: AID
DIST: AID
ADD:

JUL 28 1989

AIDAC NAIROBI FOR REDSO/ESA

E.O. 12356: N/A

SUBJECT: COMOROS - CONGRESSIONAL NOTIFICATION FOR ANJOUAN SUSTAINABLE AGRICULTURE 602-0002

REF: A. NAIROBI 21839; B. NAIROBI 21918;
C. STATE 183165

CONGRESSIONAL NOTIFICATION FOR SUBJECT ACTIVITY EXPIRED WITHOUT OBJECTION. FUNDS MAY BE OBLIGATED AS SOON AS OTHER PREREQUISITES MENTIONED IN REFTEL B PARA 5 ARE MET. AS STATED IN REFTEL B OBLIGATION IS SCHEDULED FOR MID-AUGUST. PLEASE ADVISE EXACT DATE WHEN KNOWN.

BAKER
BT
#8258

NNNN

UNCLASSIFIED STATE 238258

REDSO: S. / Action Info		
OD		✓
D/DIR		
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ANAL		✓
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PHI		✓
PROJ		✓
LIBRARY		
CHNIC		✓
LXO/PER		
ADM.IN		
CHRON		✓
REPLY CUE		
ACTION TAKEN	Noted	
DATE	7-28-89	
INITIALS	J.P.	

ACTION: AID-3 INFO: ECC POL/RLO

NVZCZCNA0913
OO RUEHNR
DE RUEHC #5828 1632339
ZNR UUUUU ZZH
O 122338Z JUN 89
FM SECSTATE WASHDC
TO RUEHNR/AMEMBASSY NAIROBI IMMEDIATE 6619
INFO RUEHNR/AMEMBASSY MORONI IMMEDIATE 1849
BT
UNCLAS STATE 185828

13-JUN-89 TOR: 05:00
CN: 29290
CHRG: AID
DIST: AID
ADD:

Skiff
7/15

AIDAC NAIROBI FOR REDSO/ESA

JUN 13 1989

E.O. 12356: N/A

SUBJECT: COMOROS ANJOUAN SUSTAINABLE AGRICULTURE PROJECT
(622-2202)

REF: NAIROBI 18828

1. PER REFTEL PARA. 4, THE ACTING ASSISTANT ADMINISTRATOR FOR AFRICA HEREBY DELEGATES AUTHORITY TO APPROVE A PID OR PID-LIKE DOCUMENT FOR THE COMOROS ANJOUAN SUSTAINABLE AGRICULTURE PROJECT (622-2202), NOT TO EXCEED DOLS THREE MILLION FIVE HUNDRED THOUSAND (3,500,000), TO THE DIRECTOR, REDSO/ESA, OR PERSON ACTING IN THAT CAPACITY. SUCH AUTHORITY SHALL BE EXERCISED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF DOA 551.

2. PER REFTEL PARA. 5, THE AFRICA BUREAU ENVIRONMENTAL OFFICER HEREBY DELEGATES AUTHORITY FOR APPROVAL OF THE IPE FOR THE COMOROS ANJOUAN SUSTAINABLE AGRICULTURE PROJECT (622-2202), TO THE DIRECTOR, REDSO/ESA, SUBJECT TO THE CLEARANCE OF THE REDSO/ESA REGIONAL LEGAL ADVISOR (RLA) AND REGIONAL ENVIRONMENTAL OFFICER (REO). PLEASE

FORWARD A COPY OF THE SIGNED DOCUMENT (FOR RECORD PURPOSES) TO THE AFRICA BUREAU ENVIRONMENTAL OFFICER, AFR/TR/AVR, ROOM 310 1515 WILSON BOULEVARD, C/O A.I.D./WAKER

BT
#5828

NNNN

UNCLASSIFIED STATE 185828

REDSO	Action	Info
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D/DIR		
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ANA		
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INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
REDELEGATION OF AUTHORITY REGARDING ASSISTANCE
MISSION DIRECTORS AND PRINCIPAL A.I.D. OFFICERS
Redelegation of Authority No. 149.1.1

Pursuant to the authority delegated to me by the Assistant to the Administrator for Management under Redelegation of Authority No. 149.1, I hereby redelegate to Mission Directors or A.I.D. Principal Officers in the field, the authority to execute the following:

1. Cooperative agreements in an amount not exceeding \$100,000 (or local currency equivalent) in the aggregate.
2. U.S. government grants (other than grants to foreign governments or agencies thereof) in an amount not exceeding \$5 million.

The Mission Director or A.I.D. Principal Officer may approve the making of advance payments to non-profit organizations.

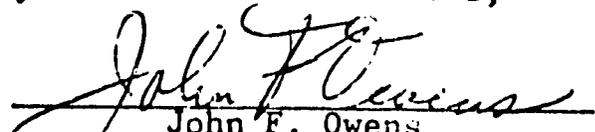
The authority herein delegated shall not be redelegated but may be exercised by authorized persons who are performing the functions of the Mission Director or A.I.D. Principal Officer in an acting capacity.

The authority redelegated herein shall be exercised in accordance with regulations, procedures, and policies established or modified and promulgated within A.I.D. and is not in derogation of the authority of the Director of the Office of Contract Management to exercise the functions herein redelegated.

* This redelegation of authority is effective on June 1, 1985.

MAY 15 1985

DATE


John F. Owens
Associate Assistant To The
Administrator For Management

5C(1) - COUNTRY CHECKLIST

Listed below are statutory criteria applicable to: (A) FAA funds generally; (B)(1) Development Assistance funds only; or (B)(2) the Economic Support Fund only.

A. GENERAL CRITERIA FOR COUNTRY ELIGIBILITY

1. FY 1989 Appropriations Act Sec. 578(b).
Has the President certified to the Congress that the government of the recipient country is failing to take adequate measures to prevent narcotic drugs or other controlled substances which are cultivated, produced or processed illicitly, in whole or in part, in such country or transported through such country, from being sold illegally within the jurisdiction of such country to United States Government personnel or their dependents or from entering the United States unlawfully?
NO

2. FAA Sec. 481(h); FY 1989 Appropriations Act Sec. 578; 1988 Drug Act Secs. 4405-07. (These provisions apply to assistance of any kind provided by grant, sale, loan, lease, credit, guaranty, or insurance, except assistance from the Child Survival Fund or relating to international narcotics control, disaster and refugee relief, narcotics education and awareness, or the provision of food or medicine.) If the recipient is a "major illicit drug producing country" (defined as a country producing during a fiscal year at least five metric tons of opium or 500 metric tons of coca or marijuana) or a "major drug-transit country" (defined as a country that is a significant direct source of illicit drugs significantly affecting the United States, through which such drugs are transported, or through which significant sums of drug-related profits are
N/A

laundered with the knowledge or complicity of the government): (a) Does the country have in place a bilateral narcotics agreement with the United States, or a multilateral narcotics agreement? and (b) Has the President in the March 1 International Narcotics Control Strategy Report (INSCR) determined and certified to the Congress (without Congressional enactment, within 45 days of continuous session, of a resolution disapproving such a certification), or has the President determined and certified to the Congress on any other date (with enactment by Congress of a resolution approving such certification), that (1) during the previous year the country has cooperated fully with the United States or taken adequate steps on its own to satisfy the goals agreed to in a bilateral narcotics agreement with the United States or in a multilateral agreement, to prevent illicit drugs produced or processed in or transported through such country from being transported into the United States, to prevent and punish drug profit laundering in the country, and to prevent and punish bribery and other forms of public corruption which facilitate production or shipment of illicit drugs or discourage prosecution of such acts, or that (2) the vital national interests of the United States require the provision of such assistance?

3. 1986 Drug Act Sec. 2013; 1988 Drug Act Sec. 4404. (This section applies to the same categories of assistance subject to the restrictions in FAA Sec. 481(h), above.) If recipient country is a "major illicit drug producing country" or "major drug-transit country" (as defined for the purpose of FAA Sec 481(h)), has the President submitted a report to Congress listing such country as one (a) which, as a matter of government policy, encourages or facilitates the production or distribution of illicit drugs; (b) in which any senior official of the

N/A

government engages in, encourages, or facilitates the production or distribution of illegal drugs; (c) in which any member of a U.S. Government agency has suffered or been threatened with violence inflicted by or with the complicity of any government officer; or (d) which fails to provide reasonable cooperation to lawful activities of U.S. drug enforcement agents, unless the President has provided the required certification to Congress pertaining to U.S. national interests and the drug control and criminal prosecution efforts of that country?

4. FAA Sec. 620(c). If assistance is to a government, is the government indebted to any U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies, (b) the debt is not denied or contested by such government, or (c) the indebtedness arises under an unconditional guaranty of payment given by such government or controlled entity? N/A

5. FAA Sec. 620(e)(1). If assistance is to a government, has it (including any government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities? N/A

6. FAA Secs. 620(a), 620(f), 620D; FY 1989 Appropriations Act Secs. 512, 550, 592. Is recipient country a Communist country? If so, has the President determined that assistance to the country is vital to the security of the United States, that the recipient country is not controlled by the international Communist conspiracy, and that such assistance will further promote the independence of the recipient country from international communism? Will assistance be provided NO

either directly or indirectly to Angola, Cambodia, Cuba, Iraq, Libya, Vietnam, South Yemen, Iran or Syria? Will assistance be provided to Afghanistan without a certification, or will assistance be provided inside Afghanistan through the Soviet-controlled government of Afghanistan?

7. FAA Sec. 620(j). Has the country permitted, or failed to take adequate measures to prevent, damage or destruction by mob action of U.S. property? NO
8. FAA Sec. 620(l). Has the country failed to enter into an investment guaranty agreement with OPIC? NO
9. FAA Sec. 620(o); Fishermen's Protective Act of 1967 (as amended) Sec. 5. (a) Has the country seized, or imposed any penalty or sanction against, any U.S. fishing vessel because of fishing activities in international waters? NO
(b) If so, has any deduction required by the Fishermen's Protective Act been made?
10. FAA Sec. 620(q); FY 1989 Appropriations Act Sec. 518. (a) Has the government of the recipient country been in default for more than six months on interest or principal of any loan to the country under the FAA? (b) Has the country been in default for more than one year on interest or principal on any U.S. loan under a program for which the FY 1989 Appropriations Act appropriates funds? NO
11. FAA Sec. 620(s). If contemplated assistance is development loan or to come from Economic Support Fund, has the Administrator taken into account the percentage of the country's budget and amount of the country's foreign exchange or other resources spent on military equipment? (Reference may be made to the annual "Taking Into Consideration" memo: "Yes, taken into account by the Administrator at time of approval of N/A

Agency OYB." This approval by the Administrator of the Operational Year Budget can be the basis for an affirmative answer during the fiscal year unless significant changes in circumstances occur.)

12. FAA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have relations been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption? NO
13. FAA Sec. 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the A.I.D. Administrator in determining the current A.I.D. Operational Year Budget? (Reference may be made to the "Taking into Consideration" memo.) While Comoros was in arrears, which was taken into account by the Administrator at the time of approval of Agency OYB, it was not delinquent within the meaning of Article 19 of the UN Charter.
14. FAA Sec. 620A. Has the President determined that the recipient country grants sanctuary from prosecution to any individual or group which has committed an act of international terrorism or otherwise supports international terrorism? NO
15. FY 1989 Appropriations Act Sec. 568. Has the country been placed on the list provided for in Section 6(j) of the Export Administration Act of 1979 (currently Libya, Iran, South Yemen, Syria, Cuba, or North Korea)? NO
16. ISDCA of 1985 Sec. 552(b). Has the Secretary of State determined that the country is a high terrorist threat country after the Secretary of Transportation has determined, pursuant to section 1115(e)(2) of the Federal Aviation Act of 1958, that an airport in the country does not maintain and administer effective security measures? NO

17. FAA Sec. 666(b). Does the country object, on the basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. who is present in such country to carry out economic development programs under the FAA? NO
18. FAA Secs. 669, 670. Has the country, after August 3, 1977, delivered to any other country or received nuclear enrichment or reprocessing equipment, materials, or technology, without specified arrangements or safeguards, and without special certification by the President? Has it transferred a nuclear explosive device to a non-nuclear weapon state, or if such a state, either received or detonated a nuclear explosive device? (FAA Sec. 620E permits a special waiver of Sec. 669 for Pakistan.) NO
19. FAA Sec. 670. If the country is a non-nuclear weapon state, has it, on or after August 8, 1985, exported (or attempted to export) illegally from the United States any material, equipment, or technology which would contribute significantly to the ability of a country to manufacture a nuclear explosive device? NO
20. ISDCA of 1981 Sec. 720. Was the country represented at the Meeting of Ministers of Foreign Affairs and Heads of Delegations of the Non-Aligned Countries to the 36th General Assembly of the U.N. on Sept. 25 and 28, 1981, and did it fail to disassociate itself from the communique issued? If so, has the President taken it into account? (Reference may be made to the "Taking into Consideration" memo.) Comoros failed to disassociate itself, which was taken into account by the Administrator at the time of approval of Agency OYB.
21. FY 1989 Appropriations Act Sec. 527. Has the recipient country been determined by the President to have engaged in a consistent pattern of opposition to the foreign policy of the United States? NO

22. FY 1989 Appropriations Act Sec. 513. Has the duly elected Head of Government of the country been deposed by military coup or decree? If assistance has been terminated, has the President notified Congress that a democratically elected government has taken office prior to the resumption of assistance? N/A
23. FY 1989 Appropriations Act Sec. 540. Does the recipient country fully cooperate with the international refugee assistance organizations, the United States, and other governments in facilitating lasting solutions to refugee situations, including resettlement without respect to race, sex, religion, or national origin? Yes

B. FUNDING SOURCE CRITERIA FOR COUNTRY ELIGIBILITY

1. Development Assistance Country Criteria

FAA Sec. 116. Has the Department of State determined that this government has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, can it be demonstrated that contemplated assistance will directly benefit the needy?

NO

FY 1989 Appropriations Act Sec. 536. Has the President certified that use of DA funds by this country would violate any of the prohibitions against use of funds to pay for the performance of abortions as a method of family planning, to motivate or coerce any person to practice abortions, to pay for the performance of involuntary sterilization as a method of family planning, to coerce or provide any financial incentive to any person to undergo sterilizations, to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning?

NO

2. Economic Support Fund Country Criteria

FAA Sec. 502B. Has it been determined that the country has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, has the President found that the country made such significant improvement in its human rights record that furnishing such assistance is in the U.S. national interest?

N/A

FY 1989 Appropriations Act Sec. 578(d). Has this country met its drug eradication targets or otherwise taken significant steps to halt illicit drug production or trafficking?

N/A

5C(2) - PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A includes criteria applicable to all projects. Part B applies to projects funded from specific sources only: B(1) applies to all projects funded with Development Assistance; B(2) applies to projects funded with Development Assistance loans; and B(3) applies to projects funded from ESF.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

A. GENERAL CRITERIA FOR PROJECT

1. FY 1989 Appropriations Act Sec. 523; FAA Sec. 634A. If money is sought to obligated for an activity not previously justified to Congress, or for an amount in excess of amount previously justified to Congress, has Congress been properly notified?
2. FAA Sec. 611(a)(1). Prior to an obligation in excess of \$500,000, will there be (a) engineering, financial or other plans necessary to carry out the assistance, and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?
3. FAA Sec. 611(a)(2). If legislative action is required within recipient country, what is the basis for a reasonable expectation that such action will be completed in time to permit orderly accomplishment of the purpose of the assistance?

Notification was sent to the Congress on June 6, 1989, and expired without objection on June 21.

Yes

N/A

4. FAA Sec. 611(b); FY 1989 Appropriations Act Sec. 501. If project is for water or water-related land resource construction, have benefits and costs been computed to the extent practicable in accordance with the principles, standards, and procedures established pursuant to the Water Resources Planning Act (42 U.S.C. 1962, et seq.)? (See A.I.D. Handbook 3 for guidelines.) N/A

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and total U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability to maintain and utilize the project effectively? N/A

6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. NO

7. FAA Sec. 601(a). Information and conclusions on whether projects will encourage efforts of the country to:
(a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions. The project is to disseminate technologies for improved efficiency in international trade.

8. FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise). CARE, a U.S. PVO, is to implement the project.

9. FAA Secs. 612(b), 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars. The GOC will provide local salaries, housing, and office space.
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release? NO
11. FY 1989 Appropriations Act Sec. 521. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity? N/A
12. FY 1989 Appropriations Act Sec. 549. Will the assistance (except for programs in Caribbean Basin Initiative countries under U.S. Tariff Schedule "Section 807," which allows reduced tariffs on articles assembled abroad from U.S.-made components) be used directly to procure feasibility studies, prefeasibility studies, or project profiles of potential investment in, or to assist the establishment of facilities specifically designed for, the manufacture for export to the United States or to third country markets in direct competition with U.S. exports, of textiles, apparel, footwear, handbags, flat goods (such as wallets or coin purses worn on the person), work gloves or leather wearing apparel? NO
13. FAA Sec. 119(q)(4)-(6) & (10). Will the assistance (a) support training and education efforts which improve the capacity of recipient countries to prevent loss of biological diversity; (b) be provided under a long-term agreement in which the recipient country agrees to protect ecosystems or other (a) Yes
(b) No
(c) Yes
(d) No

- wildlife habitats; (c) support efforts to identify and survey ecosystems in recipient countries worthy of protection; or (d) by any direct or indirect means significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas?
14. FAA Sec. 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (either dollars or local currency generated therefrom)? N/A
15. FY 1989 Appropriations Act. If assistance is to be made to a United States PVO (other than a cooperative development organization), does it obtain at least 20 percent of its total annual funding for international activities from sources other than the United States Government? Yes
16. FY 1989 Appropriations Act Sec. 538. If assistance is being made available to a PVO, has that organization provided upon timely request any document, file, or record necessary to the auditing requirements of A.I.D., and is the PVO registered with A.I.D.? Yes
17. FY 1989 Appropriations Act Sec. 514. If funds are being obligated under an appropriation account to which they were not appropriated, has prior approval of the Appropriations Committees of Congress been obtained? N/A
18. State Authorization Sec. 139 (as interpreted by conference report). Has confirmation of the date of signing of the project agreement, including the amount involved, been cabled to State L/T and A.I.D. LEG within 60 days of the agreement's entry into force with respect to the United States, and has the full text of the agreement been pouched to those same offices? (See Handbook 3, Appendix 6G for agreements covered by this provision). N/A

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

- a. FY 1989 Appropriations Act Sec. 548
(as interpreted by conference report for original enactment). If assistance is for agricultural development activities (specifically, any testing or breeding feasibility study, variety improvement or introduction, consultancy, publication, conference, or training), are such activities (a) specifically and principally designed to increase agricultural exports by the host country to a country other than the United States, where the export would lead to direct competition in that third country with exports of a similar commodity grown or produced in the United States, and can the activities reasonably be expected to cause substantial injury to U.S. exporters of a similar agricultural commodity; or (b) in support of research that is intended primarily to benefit U.S. producers?
- (a) No
(b) No
- b. FAA Secs. 102(b), 111, 113, 281(a). Describe extent to which activity will (a) effectively involve the poor in development by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, dispersing investment from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward a better life, and otherwise encourage democratic private and local governmental
- (a) The project is aimed at poor rural farmers, and will promote labor-intensive production using appropriate, locally available technology;
- (b) and (c) the project will help organize farmer groups to carry out self-help efforts;
- (d) the project has several female extension agents, is actively seeking more, and is targetted to assist women farmers.

institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries.

(e) implementation of this project on a regional basis is not possible.

- c. FAA Secs. 103, 103A, 104, 105, 106, 120-21; FY 1989 Appropriations Act (Development Fund for Africa). Does the project fit the criteria for the source of funds (functional account) being used?
- d. FAA Sec. 107. Is emphasis placed on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)?
- e. FAA Secs. 110, 124(d). Will the recipient country provide at least 25 percent of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)?
- f. FAA Sec. 128(b). If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority?

Yes

Yes

N/A

Yes

g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government.

While this project will impart training and skills, these are for development activities only, and only tangential to participation in processes essential to self-government.

h. FY 1989 Appropriations Act Sec. 536. Are any of the funds to be used for the performance of abortions as a method of family planning or to motivate or coerce any person to practice abortions?

NO

Are any of the funds to be used to pay for the performance of involuntary sterilization as a method of family planning or to coerce or provide any financial incentive to any person to undergo sterilizations?

NO

Are any of the funds to be used to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning?

NO

i. FY 1989 Appropriations Act. Is the assistance being made available to any organization or program which has been determined to support or participate in the management of a program of coercive abortion or involuntary sterilization?

NO

If assistance is from the population functional account, are any of the funds to be made available to voluntary family planning projects which do not offer, either directly or through referral to or information about access to, a broad range of family planning methods and services?

N/A

- j. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise? Yes
- k. FY 1989 Appropriations Act. What portion of the funds will be available only for activities of economically and socially disadvantaged enterprises, historically black colleges and universities, colleges and universities having a student body in which more than 40 percent of the students are Hispanic Americans, and private and voluntary organizations which are controlled by individuals who are black Americans, Hispanic Americans, or Native Americans, or who are economically or socially disadvantaged (including women)? None. All project funds will be granted to the U.S. PVO CARE.
- l. FAA Sec. 118(c). Does the assistance comply with the environmental procedures set forth in A.I.D. Regulation 16? Does the assistance place a high priority on conservation and sustainable management of tropical forests? Specifically, does the assistance, to the fullest extent feasible: (a) stress the importance of conserving and sustainably managing forest resources; (b) support activities which offer employment and income alternatives to those who otherwise would cause destruction and loss of forests, and help countries identify and implement alternatives to colonizing forested areas; (c) support training programs, educational efforts, and the establishment or strengthening of institutions to improve forest management; (d) help end destructive slash-and-burn agriculture by supporting stable and productive farming practices; (e) help conserve forests which have not yet been degraded by helping to increase (a) - (h) Yes.
(1) The project is specifically targetted to conserve biological diversity in forest areas and to identify forest ecosystems and species in need of protection, but does not contemplate establishment of protected areas.
(j) Yes
(k) Yes

production on lands already cleared or degraded; (f) conserve forested watersheds and rehabilitate those which have been deforested; (g) support training, research, and other actions which lead to sustainable and more environmentally sound practices for timber harvesting, removal, and processing; (h) support research to expand knowledge of tropical forests and identify alternatives which will prevent forest destruction, loss, or degradation; (i) conserve biological diversity in forest areas by supporting efforts to identify, establish, and maintain a representative network of protected tropical forest ecosystems on a worldwide basis, by making the establishment of protected areas a condition of support for activities involving forest clearance or degradation, and by helping to identify tropical forest ecosystems and species in need of protection and establish and maintain appropriate protected areas; (j) seek to increase the awareness of U.S. government agencies and other donors of the immediate and long-term value of tropical forests; and (k) utilize the resources and abilities of all relevant U.S. government agencies?

- m. FAA Sec. 118(c)(13). If the assistance will support a program or project significantly affecting tropical forests (including projects involving the planting of exotic plant species), will the program or project (a) be based upon careful analysis of the alternatives available to achieve the best sustainable use of the land, and (b) take full account of the environmental impacts of the proposed activities on biological diversity?

Yes

- n. FAA Sec. 118(c)(14). Will assistance be used for (a) the procurement or use of logging equipment, unless an environmental assessment indicates that all timber harvesting operations involved will be conducted in an environmentally sound manner and that the proposed activity will produce positive economic benefits and sustainable forest management systems; or (b) actions which will significantly degrade national parks or similar protected areas which contain tropical forests, or introduce exotic plants or animals into such areas? NO
- o. FAA Sec. 118(c)(15). Will assistance be used for (a) activities which would result in the conversion of forest lands to the rearing of livestock; (b) the construction, upgrading, or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undegraded forest lands; (c) the colonization of forest lands; or (d) the construction of dams or other water control structures which flood relatively undegraded forest lands, unless with respect to each such activity an environmental assessment indicates that the activity will contribute significantly and directly to improving the livelihood of the rural poor and will be conducted in an environmentally sound manner which supports sustainable development? NO
- p. FY 1989 Appropriations Act. If assistance will come from the Sub-Saharan Africa DA account, is it (a) to be used to help the poor majority in Sub-Saharan Africa through a process of long-term development and economic growth that is equitable, participatory, environmentally sustainable, and self-reliant; (b) being provided in accordance with the policies contained in section 102 of the FAA; N/A

(c) being provided, when consistent with the objectives of such assistance, through African, United States and other PVOs that have demonstrated effectiveness in the promotion of local grassroots activities on behalf of long-term development in Sub-Saharan Africa;

(d) being used to help overcome shorter-term constraints to long-term development, to promote reform of sectoral economic policies, to support the critical sector priorities of agricultural production and natural resources, health, voluntary family planning services, education, and income generating opportunities, to bring about appropriate sectoral restructuring of the Sub-Saharan African economies, to support reform in public administration and finances and to establish a favorable environment for individual enterprise and self-sustaining development, and to take into account, in assisted policy reforms, the need to protect vulnerable groups;

(e) being used to increase agricultural production in ways that protect and restore the natural resource base, especially food production, to maintain and improve basic transportation and communication networks, to maintain and restore the renewable natural resource base in ways that increase agricultural production, to improve health conditions with special emphasis on meeting the health needs of mothers and children, including the establishment of self-sustaining primary health care systems that give priority to preventive care, to provide increased access to voluntary family planning services, to improve basic literacy and mathematics especially to those outside the formal educational system and to improve primary education, and to develop income-generating opportunities for the unemployed and underemployed in urban and rural areas?

- q. FY 1989 Appropriations Act Sec. 515.
If deob/reob authority is sought to be exercised in the provision of DA assistance, are the funds being obligated for the same general purpose, and for countries within the same general region as originally obligated, and have the Appropriations Committees of both Houses of Congress been properly notified?

N/A

2. Development Assistance Project Criteria
(Loans Only)

- a. FAA Sec. 122(b). Information and conclusion on capacity of the country to repay the loan at a reasonable rate of interest.

N/A

- b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20 percent of the enterprise's annual production during the life of the loan, or has the requirement to enter into such an agreement been waived by the President because of a national security interest?

N/A

- c. FAA Sec. 122(b). Does the activity give reasonable promise of assisting long-range plans and programs designed to develop economic resources and increase productive capacities?

N/A

3. Economic Support Fund Project Criteria

- a. FAA Sec. 531(a). Will this assistance promote economic and political stability? To the maximum extent feasible, is this assistance consistent with the policy directions, purposes, and programs of Part I of the FAA? N/A

- b. FAA Sec. 531(e). Will this assistance be used for military or paramilitary purposes? N/A

- c. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made? N/A

-5-
INITIAL ENVIRONMENTAL EXAMINATION
OR
CATEGORICAL EXCLUSION

Project Country: Comoros

Project Title: Anjouan Sustainable Agricultural Project, Phase II
(602 - 0002)

Funding: FY(s) 89 - 94 \$3,500,000

IEE Prepared by: Dr. Edward McGowan, REO

Environmental Action Recommended:

Positive Determination _____

Negative Determination X _____

Categorical Exclusion:

Several activities are undertaken in this Project. Categorical Exclusions are accorded to each or components thereof as detailed below.

Activity 1, Community Education and Staff Training, qualifies for a Categorical Exclusion in accordance with Reg. 16, Section 216.2(c)(2)(i) [Education and Training].

Activity 2: Agroforestry/Soil Conservation. Certain components of this activity qualify in a Categorical Exclusion in accordance with Reg. 16 Sections 216.2(c)(2)(i) [Training and TA]; 216.2(c)(2)(ii) [Research]; and 216.2(c)(2)(xv) [Application of approved design criteria]. The components related to nurseries and establishing demonstration centers, are accorded Negative Threshold Determinations.

Activity 3, Natural Resources Survey and Forestry Management. Components of this activity qualify for a Categorical Exclusion in accordance with Reg. 16, Sections 216.2 (c)(2)(i) [Education, Training and TA]; 216.2(c)(ii) [Research]; and 216.2 (c)(2)(xiv) [Planning capability Development].

Activity 4, Monitoring Components of this activity qualify for a Categorical Exclusion in accordance with Reg. 16, Section 216.2(c)(2)(i) [TA and Training], 216.2(c)(2)(iii) [Analysis], and 216.2(c)(2)(xiv) [planning].

Approved X Etish P. Sha

Disapproved _____ DATE 8/3/89

Concurrence:

Bureau Environmental Officer: Bessie L. Boyd, AFR/TR/ANR

Clearance:

J. L. M.
REDSO/RLA

DATE 8-4-89

A. Project Description

The project focuses upon several integrated activities which affect the complicated hydrology on Anjouan Island of the Comoros. Principal issues relate to extensive soil erosion, decreasing land productivity as well as reduced available land for subsistence farming. The project proposes to arrest erosion and reverse productivity loss through a combination of training, environmental education, forestry/agroforestry, soil conservation, and monitoring.

B. Focus of Environmental Considerations

The major integrated activities discussed above were analyzed for potential adverse impact. The discussion below indicates in brief form the project's environmental determinations. As indicated, there are no compelling issues of adversity, thus strengthening the recommended Environmental Determinations that are either Categorical Exclusions or Negative Threshold Decisions. The alternative of "No Project" is without merit as it would merely see the system continue to degrade.

The sub-activities related to research, training, education, and institutional support are accorded Categorical Exclusions. The sub-activities related to development of Forests Plans, Agroforestry/Soil Conservation, Nurseries, and Demonstration Centers are accorded Negative Threshold Determinations.

C. Community Organization, Extension, Environmental Education, and Staff Training

Although accorded a CE under various subsections of 216.2(2), the project needs to be aware of some potential constraints. These however are not primary issues and relate to sustainability, based on the capacity of the GOC to fully contribute to and participate in the project. Although the government may not be able to contribute monetarily, the proponents of the project should assure themselves that a suitable policy environment exists and is reasonably solid for the long term. An example from another island community is worth review. The government, in restructuring its tax system, so affected coffee farmers, that they pulled all the trees and replanted to annual crops. The erosion resulting from the tax driven change was devastating. More is said of this later under Agroforestry.

D. Agroforestry and Soil Conservation Activity (ASC)

As with the Natural Forest Management Activity discussed below, this activity plays a principal role in the drainage and hydrology of the Island. As indicated in the PP, agriculture has been virtually extended to its limit up the steep terrain. Although much of the focus under this activity relates to reversing existing natural resource degradation, some aspects may require further analysis during implementation. The latter aspects will be discussed momentarily. First however it seems prudent to briefly note those areas warranting either a CE or a Negative Threshold Determination (NTD). These include: (1) Research in and the development

of extendible technical packages for soil/water conservation and agroforestry which are accorded a CE under 216.2(c)(2)(ii); (2) TA [216.2(c)(2)(i)]; (3) Training [216.2(c)(c)(2)] and; (4) Replication of the CARE-LSCP Program [216.2(c)(2)(xv)].

In addition to the above, the ASC Activity proposes to (1) establish nurseries; (2) and establish demonstration centers,

With respect to nurseries, principal areas of inquiry would include impacts from: (1) introduction of phyto pathogenic problems; (2) species that would foster pest development; and (3) species that would adversely affect income margins of adoptees causing later abandonment. Abandonment thereby affecting soil erosion. The project design should address these issues during implementation, and therefore a NTD is warranted. At the time of mid term evaluation, these issues should be reviewed. A monitoring provision currently exists with in the design but should be restructured to formally include these concerns.

With respect to establishment from an major demonstration centers, although it is acknowledged that they are overall standpoint beneficial, care must be accorded to their siting and any accompanying construction. More specifics need to be known about potential sites. At the time of site selection the issue should be reviewed by REDSO engineers and environmental officer.

With respect to soil conservation and watershed development through agroforestry, the following precautionary notes are warranted. Development should occur on a sub drainage basin level. Adoption by farmers must be coordinated. Adoption in a sporadic manner may actually exacerbate erosion. Adoptees at the bottom of a drainage may be impacted by finding themselves washed out by those above who have failed to adopt. Conversely, lower units may receive excessive run off which is collected and shunted by partially completed upper works.

The PP does not discuss the cost-benefit side of adopting agroforestry. This analysis would be useful in determining sustainability. Economics has a crucial role to play in decision-making exercises such as profit maximisation, risk aversion, household economics, opportunity costs for labor, etc. Although the project seeks to mitigate the effects of soil loss, the introduction of techniques or packages must have solid base in experience and benefit. The response to incentives for greater production is usually to extend cultivation, not intensify such on existing land. An analysis of opportunity costs of household labor to that of land value may show a tendency to extensify even though land is critical. Such an analysis is not noted as part of the current project.

E. Natural Resource Survey and Forest Management

The majority of effort within this activity relates to research, management training, conservation education, and TA. These activities warrant a CE based upon Section 216.2(c)(2)(i) [Education, training, and TA];(ii)[Research]; (xiv) [Planning capability development].

The Natural Forest component centers its effort in the remaining principal forests areas: These forest areas in addition to their value in the area of biodiversity are also principal watersheds. Research efforts should also include analyses of the multi use potential in biodiversity and hydrology*. Research will also consider socio-cultural influences of the surrounding areas for their impact on a sustained economy as well as affects on the forest**. The combined information will aid in the development of appropriate management plans.

F. Monitoring: This activity supplies the feedback to allow periodic mid course corrections. As per the face sheet the Activity components are accorded Categorical Exclusions. Nonetheless, the project is encouraged to establish monitoring plots which can be used to ascertain validity of interventions. Although similar encouragement was accorded the previous phase, such plots did not receive the necessary attention. The result was less than useful data.

* The research in biodiversity should also review impacts to the aquatic flora, fauna and habitat of these watersheds.

** As an aside, the impact of microbial loss or population change can also be profound. The cutting of tropical forests with ensuing soil infertility can be linked to the ability of rhizosphere microbial populations to provide nutrient compounds not stockpiled in tropical soils. In some places, reestablishment of vegetation not having the associated microbes has depleted soil fertility and ultimately resulted in serious damage to the ecosystem. If the knowledge of rhizosphere associations had been used in the decision making process, these activities might have been adjusted to minimize the effect of forestry operations on soil fertility.