

REPORT ON THE FINAL EVALUATION FOR ADRA'S

***PROJET D'AUGMENTATION DES RESSOURCE ALIMENTAIRES
DE SIGUIRI (PADRAS)***

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SO2: Increased effectiveness of FFP's PVO and Mission partners in carrying out Title II development activities with measurable results related to food security, with a primary focus on household nutrition and agricultural productivity.

Foreword

The purpose of the final evaluation is to assess ADRA's achievements toward the goal of improving food security in the Siguiiri prefecture of northeastern Guinea. ADRA has approached food security with a two-pronged strategy of increasing food availability through a set of agricultural technologies appropriate to the region and of increasing food access through increased incomes of participants in project activities. It also incorporated concerns which it shares with the funding agency, USAID, for improved and sustainable natural resource management. It should be noted that the use of agro-chemicals was not part of PADRAS' strategy because of USAID/Guinea policy until early 2004. The conclusions and findings of the final evaluation report focus mainly on the projects impacts as input delivery and process concerns were well addressed in the mid-term evaluation. The Evaluation Team hopes that the conclusions and recommendations of this report will be useful to ADRA in the final months of the PADRAS project and in any future ADRA project in Guinea and indeed elsewhere in the region.

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List of Acronyms

ACA	Agence de Commercialization Agricole (Agricultural Marketing Agency)
ADRA.....	Adventist Development and Relief Agency
AFD.....	Agence Française de Développement
APRA-F.....	<i>Association Pisciculture et Développement Rural en Afrique tropicale humide—France (aquaculture)</i>
BCRG	Banque Centrale République de Guinée (Central Bank of the Republic of Guinea)
BHR	Bureau for Humanitarian Response
CA.....	Conseil d’Administration (Board of Directors)
CCS	<i>Centre de Conditionnement des Semences</i> (Seed Conditioning Center)
CLUSA.....	Cooperative League of the USA (now NCBA)
CRG.....	Crédit Rural de Guinée
CS.....	Cooperating Sponsor
CRAB.....	<i>Centre de Recherche Agronomique de Bordo</i>
DAP	Development Activity Proposal
DYNAFIV	Projet de Dynamisation des Filières Vivrières
ET	Evaluation Team
EW	Enterprise Works Inc
EUPD.....	<i>Entraide Universitaire Pour le Developpement</i>
FAO	Food and Agriculture Organization
FFP	Office of Food for Peace
FFW	food for work
FY	fiscal year
GDA.....	Global Development Alliance
GOG	Government of Guinea
HG	Upper Guinea (<i>Haute Guinée</i>)
HQ	Headquarters
ICRISAT.....	International Crops Research Institute for the Semi-Arid Tropics
IPTT	Indicator Performance Tracking Table
IRAG.....	<i>Institut de Recherche Agronomique de Guinee</i>
IRAM	Institut de Recherche et d’Application des Méthodes de Développement
LOA.....	Life of activity
M&E.....	Monitoring and Evaluation
ME	Microenterprise
MFI.....	Microfinance Institution
MT.....	Metric Ton (1000 kgs = 2,200 pounds)
MTE	Mid-Term Evaluation
NARS.....	National Agricultural Research Systems
NCBA.....	National Cooperative Business Association (ex-CLUSA)
NGO.....	Non-Governmental Organization

NRM.....	natural resource management
OICI	Opportunities Industrialization Centers International Inc.
PADRAS	<i>Projet d'Augmentation Des Ressources Alimentaires de Siguiri</i>
PASAL	<i>Programme d'Appui a la Securite Alimentaire</i>
PEGRN	Projet Elargi de Gestion des Ressources Naturelles
PCK	<i>Projet Coton Kankan</i>
RGTA.....	Réseau Guinéen pour la Traction Animal et le Développement Intégré
RRG.....	Rurale Radio de Guinea
REDSO	Regional Economic Development Service Office
SAG	Société Ashanti Goldfields (gold-mining company)
SIDI	Société d'Investissement et Développement International
SNPRV	<i>Service National de la Promotion Rurale et de la Vulgarisation</i>
SNPV	Service National de Protection Végétale
SOW	Scope of Work
SPCIA	Société de Production et de Commercialisation d'Intrants Agricoles
TSP	triple super phosphate (chemical fertilizer high in phosphate)
USAID.....	United States Agency for International Development
WFP	World Food Program

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Executive Summary

Background of Program: The goal of the Projet d'Augmentation des Ressources Alimentaires de Siguiiri (PADRAS) is to improve the level of food availability and access in the targeted communities in Upper Guinea's Siguiiri prefecture. Siguiiri is located 750 kms from Conakry, the national capital, and shares border with Mali. The project covers all 12 sub-prefectures of Siguiiri. Project activities are financed by a Development Activity Proposal (DAP) under which ADRA receives its funding from the monetization of edible vegetable oil (with Africare as the lead agency for a consortium of NGOs) as well as section 202e grant. The project proposes to increase food availability and access to food through the introduction of improved agricultural techniques that improve productivity and enhances income-generating opportunities through the sales of high value vegetables and the expansion of microenterprises. Credit plays a major role for clients engaged in food crop production, vegetable gardening and petty trading, making it possible to increase production and earn higher incomes from their enterprises. This Final Evaluation report complements the report of the mid-term evaluation and assesses the extent to which PADRAS is meeting the basic food security needs of the recipient communities as stated in the goals and objectives of the project.

Evaluation Methodology: Documents generated by the project including the original DAP document and mid-term evaluation and annual reports were reviewed. Project staff and all stake holders (partner institutions and USAID personnel knowledgeable about project activities) were interviewed. The Evaluation Team arrived at a consensus decision with ADRA to put most effort into a survey of a large (8%) sample of the total of 298 groups assisted by the project, but was expanded during the course of interviewing to include all groups found in the sampled communities, effectively doubling the size of the sample. The two External Consultants used a common checklist to obtain comparable information from interviews with group representatives on main issues addressed in this report and produced sets of field notes. Wherever possible, fields, gardens and granaries were visited to allow direct observation of technologies introduced by PADRAS. The information provided during intensive fieldwork and meetings and interviews with the stakeholders and potential partners in Kankan and Conakry forms the basis for conclusions on project impacts and recommendations for innovations for future activities, including a possible follow-on project in the Siguiiri area.

Accomplishments and Program Impacts: The set of activities being promoted to increase productivity of food crops have led to a substantial impact on yield and increases in food available for family consumption and of farm income through sales of part of the increase in production. Oxen-drawn technologies have significantly reduced labor input, especially for weeding operations performed mostly by women. Dry season vegetable gardens using new technologies and better access to well-water for irrigation have given women the

opportunity to improve family nutrition directly through consumption of a diversity of types of vegetables and more importantly given them an income from vegetable sales with which to contribute to the costs of educating their children and providing for medical needs for their families and achieving modest levels of savings. The growth of micro enterprises has been stimulated by the micro-credit component of the PADRAS program, which has provided the growing amounts of working capital needed by expanding businesses. It has also provided credit to farmers allowing them to adopt the new technologies for food crop production, vegetable gardening and the acquisition of animals and implements all of which represent significant indications of the achievement of project goals. Improved storage technologies have reduced losses from rodents and mildew. However, because of USAID/Guinea restrictions, PADRAS was unable to make use of small amounts of chemical fertilizer to enhance soil fertility and increase productivity as had been proposed in the original DAP document. In early 2004 USAID did approve limited use of fertilizer in specific cases, but PADRAS has so far not promoted its use. Losses due to insects are also significant in crop storage and vegetables and can only be addressed by low-level application of selected insecticides.

Conclusions and Recommendations:

The PADRAS project has been instrumental in raising food availability and in replacing some of the lost income when cotton ceased to be commercially viable, leaving farmers stranded without an alternative source of cash income. PADRAS' technologies have worked to raise both productivity and production. In the view of the Evaluation Team, ADRA has made significant progress on most of its tasks set out in the main components of the project document.. The results of an independent quantitative survey confirm the main conclusions of this evaluation. The ET recommends that ADRA should put priority in developing an Exit Strategy before the end of the project. We propose two main options: (i) establishing an independent successor microfinance unit to replace the credit component of the current program; or (ii) negotiating with Crédit Rural de Guinée (CRG) which is expected to expand its operations into Siguiri prefecture and the merger of its activities with those of CRG. The ET favors the second option. In view of the approval for small amounts fertilizer, ADRA should support training in appropriate use of chemical fertilizer for crops (during the last year of the project) as was proposed initially in the original project document.

In the future, PADRAS should improve its marketing and group governance strategies. Tree crops need to be integrated with food crop production and crops in storage protected from insect losses. In view of the dramatic decline of the Guinea Franc (FG) and consequent loan recovery problems, PADRAS should raise its interest rates to a level comparable to those of Crédit Rural de Guinée. Better marketing of edible vegetable oil needs to be assured before starting a new program financed through monetization of oil in an oligopsonistic market.

General Observations, Conclusions and Recommendations

General Observations

The Evaluation Team (ET) applauds the impressive accomplishments of ADRA during the review period and the demonstrated impact ADRA has had in the rural community and livelihoods of the targeted community in the Siguiro Prefecture of Guinea. The Team considers PADRAS greatest success is reaching the poorest of the poor (who are otherwise unassisted) and sharing with them technologies that have helped bridge the hunger period from 6 months to 2 months.

Evidence from the field interviews shows that the new technologies and the micro-credit are now benefiting farmers in the target areas. Accomplishment can also be cited from PADRAS work on training (literacy and technology) and provision of oxen traction that has helped reduce labor and increased the number of children going to school. The Team was also pleased to note that during the 4 years of PADRAS intervention, yields of rice, sorghum, and maize have increased tremendously.

Labor will be a key issue in the face of the HIV/AIDS epidemic and the trend towards urbanization of the rural people so the Evaluation Team was highly impressed with the adoption of the labor-saving technologies introduced by PADRAS that have helped increase school attendance and relieved the burden on women to weed.

Host country/prefectural linkages always warrant special considerations. The ET commends PADRAS for the vigor with which it has crafted successful partnership with the NARS and other stakeholders for greater effectiveness and efficiency.

During the interview with the beneficiaries, it came to light that an important impact of PADRAS's intervention is the team spirit and the ability to work together. "ADRA will leave with their money but the new technologies and the team spirit we have will remain," one old farmer noted. Farmers now have a strong sense of ownership of the technologies that creates accountability and competitiveness.

In the view of the Evaluation Team, ADRA has met most of its task sets in the main proposed components of the project— community mobilization, technical, and financial support. A 4-year period is too short a timeframe to expect too many tangible results/impacts, but nevertheless, considerable success on a number of fronts has been achieved.

Despite these achievements, it is also clear to the Evaluation Team that some changes/modifications and bold decisions are required to ensure the successful completion of the project, and to help improve activities to be undertaken in the proposed new DAP. The conclusions and observations are listed below.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

(For details see Chapter 4 on Findings and Recommendations)

I. *Improving Soil fertility*

Conclusions

- Improved seed alone will not achieve its full potential unless soil fertility problems are adequately addressed.
- The quality and quantity of manure and compost is insufficient to cover the area under crops (no urine, poor animal nutrition, insufficient quantity, high production and transportation costs for compost).
- The recommendation of the mid-term evaluation (MTE) to use green manure/cover crops is good as far as it goes; these recommendations are being implemented. But this approach increases availability of nitrogen through biological nitrogen fixation but it does nothing to increase the availability of phosphorous, which is the major limiting factor and is not being supplied by current strategies.
- The diffusion of new planting technologies (row planting, appropriate spacing, higher plant density) from farmer-to-farmer has been significant. This demonstration effect has led to high adoption of the technologies by farmers not directly assisted by ADRA.

Recommendations

- 1 The integration of chemical fertilizer is essential to complement the application of manure and compost for increased crop yields and for the long-term sustainability of the cropping system. Nearly virtually all the farmers are already trained during their years of producing cotton in the proper use and considerable benefits derived from the use of chemical fertilizer.
- 2 USAID/Guinea has recently approved in principle the limited use of chemical fertilizer, has provided guidelines, and is awaiting a specific request from ADRA detailing types of fertilizers, levels of application, types of crops to be used on, etc.
- 3 Farmers should be linked to suppliers selling fertilizer in Siguiri and nearby areas.
- 4 In view of the approval for small amounts fertilizer, ADRA field agents need to modify the messages related to the use and value of chemical fertilizer in an integrated program of soil fertility management.
- 5 ADRA should support training in appropriate use of chemical fertilizer for crops, as proposed in the original project proposal document.

II. *Seeds*

Conclusions

- The quality of the seeds and varieties being promoted by ADRA are superior to those found in shops in Siguiri and Kankan; seeds provided by ADRA are generally cheaper than those found in the market.
- The consultants observed that a high proportion of farmers not directly assisted by the project have adopted the varieties being promoted by PADRAS.

Recommendations

- 1 The prices of seeds provided by ADRA should be similar to the price of similar seeds by the local dealers.
- 2 The seeds from ADRA should be made available to other farmers beyond those being assisted directly by the Project through its distribution by local dealers. This would be a first step in encouraging the development of a sustainable seed supply system.

III. *Animal Traction*

Conclusions

- Farmers are convinced of the benefits of work animals (ability to increase crop area, substantial reduction in the use of labor, easier transport of seeds, compost, manure, chemical fertilizer and harvest to/from fields and homestead and to the market, provision of services to other farmers as a source of income, increased crop production, and higher sales revenues).
- Ox-drawn technologies for harrowing, ridging and weeding have been successfully proven and adopted by farmers in Siguiri, whereas such technologies have failed in other countries.
- The gender impact of these technologies has been highly positive. For example, weeding with yoke oxen reduces labor (most of which is provided by women when weeding is done manually) from 10-15 workdays per hectare to a single day. Transport to/from the fields and to market is mostly done by women and children carrying loads of up to 30 kgs on their heads, but is now being replaced by donkey carts.
- The reduced workload has increased school attendance of children to some degree.
- The number of animals for traction (both oxen and donkeys) is insufficient to meet farmer needs.

Recommendations

- 1 Increase the number of work animals by encouraging farmers to purchase additional animals and by increasing the availability of credit for animal purchases.

IV. *Blacksmiths*

Conclusions

- The mid-term evaluation (MTE) recommended training blacksmiths; although not part of the original project activities, this has been done and 10 blacksmiths have been trained.
- The number of blacksmiths trained to build and repair hand-tools and farm equipment used for animal traction is insufficient.
- Those trained have acquired necessary skills but do not have necessary tools and access to needed inputs to make and maintain high-quality farm implements.

Recommendations

- 1 More blacksmiths have to be trained, so that every major village should have a blacksmith trained in these skills.
- 2 Blacksmiths need to be equipped and assisted in obtaining access to needed iron-working tools and better quality steel for fabricating and repair implements.

V. *Marketing*

Conclusions

- The poor state of roads affects the ability of farmers to get their products to market and at same time discourages traders from coming to and competing in the buying of farmers' products in their own communities and at periodic markets.
- In the case of the excess supply of onions and other vegetables promoted by PADRAS, ADRA contacted ACA to carry out a study and provide recommendations on future programming vegetable production more in tune with market demand. ADRA has implemented major recommendations of the ACA study.
- There has been a substantial increase in production of the main food crops with which the PADRAS project has been working. Further increases in farmer income from these crops will require improvements in the way farmers market these products.
- The challenge is therefore to foster a harmonized cross-cutting approach that fosters sustainable exploitation of natural capital for production and

marketing of high value and value-added products to provide high returns to land and labor for smallholder farmers enabling them to break away from poverty.

Recommendations

- 1 Through food-for work programs, ADRA should help communities to repair and maintain the roads which allow access to markets for their farm production.
- 2 ADRA should meet with CLUSA to learn techniques it has been teaching farmers to improve marketing and to increase their income from their farming businesses, some of which ADRA might want to include in a second phase of the PADRAS.
- 3 An increase in animal traction, bicycles and other means of transportation will facilitate farmers' ability to transport and successfully market their products. ADRA should do whatever it can to assist farmers in making these changes.
- 4 With the improvement in the road from Siguiri to Bamako, ADRA and USAID should encourage farmers to market a higher percentage of their production of mangoes and other products to Mali and through Mali to neighboring countries, to take advantage of better prices available in regional and international markets.
- 5 ADRA should investigate closer ties between vegetable producers and SAG for bulk marketing and contract farming.

VI. Storage

Conclusions

- Farmers have adopted the improved granary storage technology by ADRA, although the technology is yet to reach some of the communities
- Improved granaries may prevent damage from rodents and humidity, but not from insects. Pre-harvest infestations of insects before storing in granaries could lead to severe food loss during damage by weevils.
- Notwithstanding USAID policy on the use of commercial pesticides for food crops, crop protection chemicals like *Phostoxin* have minimal effect on the environment or on consumer health, require only minimal training and surveillance, and are widely used worldwide to protect stored products in warehouses and during shipping. Products needing such protection include maize, groundnuts, rice and sorghum.

Recommendations

- 1 Farmers should be encouraged to use and trained in the use of crop protection chemicals (phostoxin) for stored products.
- 2 Improved granaries should be built by PADRAS in all villages, preferably in a location by the road so that they are visible to non-participating farmers and other travelers.

VII. Vegetable Production

Conclusions

- Early damage of leaf-eating insects contribute to severe yield loss can even result in the loss the entire crop, leading to severe economic losses.
- Problems with insect damage are serious in the nursery stage of vegetable production and could reach a threshold level (making the use of low-doses of insecticides imperative to prevent loss of the entire crop).
- There is an opportunity, which is already being exploited on a small scale by women engaged in market gardening to integrate production of seedlings of mangos and cashew nuts.
- The vegetable farmers are pleased with the results obtained from improved wells funded by the Canadian High Commission in Guinea and ADRA International, but are unaware of the cost of building them.

Recommendations

- 1 ADRA should link up with the Agricultural Research Institute and the Plant Protection Service of the Ministry of Agriculture to recommend effective and appropriate insecticides to control pre-nursery insect infestations on leafy crops when a threshold level is reached.
- 2 Vegetable gardeners need to be trained in the application and storage of the low doses of pesticides required to control insect damage in the nurseries for their gardens.
- 3 Improved wells should be built in all market gardens where they are required and are appropriate.
- 4 Farmers should be made aware of the cost of such wells so that they can look for alternative financing to build additional wells as needed.
- 5 Vegetable gardeners need to be encouraged to apply the skills learned in making nurseries for their gardens to the production of seedlings for mangoes and cashews, both of which are in high demand.
- 6 They can be encouraged to produce off-season groundnuts seeds and for the haulms which can be used most effectively in fattening sheep for major festivals.

VIII. Petty Commerce

Conclusions

- Members of the groups have benefited substantially from their loans, but in almost all cases there has been no increase in the size of the groups.
- Most groups have established social funds to meet emergency needs of their members, but some groups have also established group loans funds of their own (in addition to the ADRA lending program) and are using these funds to make loans to their members, at higher rates of interest.
- Crédit Rural de Guinée (CRG) will soon be opening *caisses* (rural credit cooperatives) in the Siguiiri region.

Recommendations

- 1 ADRA should **encourage the groups to admit additional members** until reaching a group size beyond which the group would become unmanageable; additional groups should be formed where group size becomes unmanageable.
- 2 The groups should be encouraged to **change their social funds to loan funds and to expand existing group loan funds** at the fastest rate prudently possible **to provide additional loans** to their members from resources generated by the group itself. This mechanism will strengthen the groups and could form the basis for continued operation of the credit program after the end of ADRA's involvement.
- 3 ADRA should **explore** the possibility of **merging** its program with **CRG's** expansion into the Siguiiri prefecture.

IX. Inflation and the Credit Component

Conclusions

- **Inflation** has **significantly increased** in recent months.

Recommendations

- 1 The loan amounts for all kinds of loans needs to be adjusted upwards.
- 2 Interest rates need to rise and to be realigned in tune with those of CRG.

X. Literacy

Conclusions

- The level of literacy remains unsatisfactory despite efforts of PADRAS with its program.

Recommendations

- 1 The initial courses should be followed by refresher courses. Written materials in the local language should be supplied. (It should be noted that micro-credit manuals have been translated into local language and are scheduled to be used in training group leaders in the near future. PRIDE has been involved in providing some training in microfinance.)

XI. Governance

Conclusions

- None of the groups has reported any change whatsoever in its leadership despite the fact that some groups have been in operation for as much as 4 years.

Recommendations

- 1 The *Conseil d'Administration (CA)* should be elected and ADRA should institute a culture of frequent elections (every 2 years) with a possibility of re-election for a second term only.
- 2 ADRA could benefit from discussions with CLUSA on governance issues based on its experience with producer groups.

XII. Partnerships

Conclusions

- ADRA has developed good partnerships with other institutions which have enhanced the overall success of the program.

Recommendations

- 1 ADRA should continue with existing partnerships (such as (SNPRV on the part of the government) and should openly seek new partners, including agro-input suppliers (seed, fertilizer and pesticide dealers) as well as Government departments such as the plant protection service (SPV = Service de Protection Végétale), etc.), NGOs and other development institutions.

XIII. Monetization

Conclusions

Monetization of Title II vegetable oil has provided the resources for program operation. However, in 2004 the deteriorating political situation and the depreciation in the value of the Guinea franc (FG) and its dramatically increased overvaluation against the US dollar at the official rate affects the maintenance of the purchasing power of local currency generation.

Recommendations

- 1 ADRA should propose changes in procedures to generate maximum local currency from sales of Title II oil such as requesting bids for oil auctions in local currency rather than dollars, charging interest in local currency at 3% per month, reviewing and making appropriate changes to bidding procedures referring to maximum and minimum acceptable bids, keeping close track on the wholesale market for imported vegetable oils and edible oils in general.
- 2 ADRA should start this process of change with the assistance of a short-term international oil marketing consultant paired with a national or regional consultant to investigate the market for oils of the type generating its local currency resources and for near substitutes for such oils. (The USAID Mission is completing a Bellmon study; the terms of reference need to be broad enough to include coverage the elements of the previous recommendation and are not limited to simply assessing effects of oil placement in the national market, as has been the case with previous Bellmon analyses).

XIV. Monitoring and Evaluation

In an innovation systems approach, it is essential to have a means of quickly determining and explaining what works, and what does not, not only within the Team, but also between the teams so that they can avoid pitfalls and benefit from the success of others.

ADRA set up **the monitoring and evaluation (M & E) system** to monitor the performance of the program activities through process measurement and achievement of results. The Evaluation Team agrees with the mid-term evaluation observation that the M & E Department set up a very **clearly defined indicators that were relevant and fairly simple** to monitor. In the view of the Evaluation Team, the Department made a lot of progress towards achieving its targets. The Evaluation Team was also

satisfied with the action taken by PADRAS on the recommendations of the mid-term evaluation to arrange additional training for the staff working in Monitoring and Evaluation Department.

XV. Exit Strategy

Conclusions

- One of the most important recommendations of the MTE was the need for ADRA to consider an exit strategy and prepare the clients accordingly. This is extremely important in order not to leave the clients in a lurch when PADRAS is terminated.
- With only one year to the end of the Project, not much progress has been achieved toward preparing the exit strategy.

Recommendations

The Evaluation Team recommends that with the arrival of the new Country Director, ADRA should consider the Exit Strategy as a priority before the end of the project. If a new DAP is contemplated, the Exit Strategy should be part of that strategy. If it is determined that no new DAP will be forthcoming, the urgency of completing the strategy will be increased. We propose two possible options:

- First, establishing an independent successor microfinance unit as a successor organization to the current credit component; or
- Second, exploring the possibility of merging ADRA's program with Crédit Rural de Guinée which is expected to expand its operations into Siguiri prefecture.

The Future of PADRAS

I. Geographical Expansion of the Program

Conclusions

- There is a tendency for development institutions to propose geographical expansion or redirection of efforts before projects impacts are fully incorporated by initially targeted communities.
- Despite the remarkable advances made, food security and malnutrition still remain the most critical challenges facing the semi-arid regions of Siguiri.

Recommendations

- 1 The team believes that the geographical focus should be maintained on Siguiri Prefecture.
- 2 It also believes that there should be a scaling-up and –out of technologies and the inclusion of additional groups within originally targeted communities and the incorporation of new communities.
- 3 The team believes that the results achieved to date indicated that future focus should be directed toward income-generating activities having a positive impact on food availability and general family welfare. The future focus of production of food crops should be both for on-farm consumption and for marketing and sales of these same crops in order to raise family income and access to food through purchases of needed foodstuffs (particularly fish and leguminous crops).

II. *Tree Crops*

Conclusions

- The Siguiri prefecture has a **very high potential** for the production of **mangoes, cashews and date palms**.

Recommendations

- 1 The project should encourage the establishment of new orchards and during the establishment phase, between the young trees farmers should **intercrop with food/commercial crops** such as maize, peanuts, sorghum and cowpea. This intercropping will assure rapid and cost-effective development of the trees crops as well as the long-term sustainability of soil fertility.
- 2 During the early establishment and late vegetative stage of tree crop development, **small amounts of chemical fertilizers** will facilitate development and **speed the entry of the trees into production**.

III. *Small Livestock Enterprises: the Integration of Small Ruminants, Poultry, and Bee-Hives into Farm Production*

Conclusions

- Potential exists for farmers to invest in small ruminants, particularly for their sale at the time of major feasts (*Tabasqui*, etc.).
- Expansion possibilities also exist for poultry, particularly guinea fowl, ducks and others not susceptible to Newcastle disease.

- Joint production of rice production and fish (tilapia) is already being practiced successfully elsewhere in Guinea.
- Honey-harvesting and production is already an important activity in remote communities served by the PADRAS project and is being successfully promoted in the PEGRN area.

Recommendations

- 1 ADRA should **promote** the integration of **small ruminants** into the farming system **and** should encourage the **fattening** of sheep **for major feasts** like Tabasqui. Integration of livestock component: farmer investment in small ruminants (sheep and goats) should be supported. Fattening rams with groundnut (not cowpea because of insect problems) haulms for Tabasqui could be a viable income-generating venture. Off season dual-purpose groundnut production should be encouraged in the vegetable gardens. ADRA should promote the production of poultry varieties not affected by Newcastle's (guinea fowl and ducks) in the project region.
- 2 Joint **production of tilapia and rice should be tried** on a pilot basis in the basis in Siguiri prefecture.

IV. Labor-Saving Community Infrastructure: (Grinding mills, huskers and boreholes)

Conclusions

- **Women** and children **lose** an enormous amount of **time, husking grain**, shelling groundnuts, pounding grain, **and carrying water** for their families.

Recommendations

- 1 ADRA should look for partners such as SAG and major development investors/partners to **make boreholes** in targeted communities.
- 2 ADRA should consider financing pilot interventions in conjunction with its **credit** program **for** the acquisition and operation of **grinding mills and de-husking machines** in order to free up labor of women for more productive tasks and to facilitate school attendance by children. (The Consultants understand that ADRA has received some funding from ADRA International and the UNDP for a pilot intervention for grinding mills, but given the importance of this intervention additional such mills should be funded where the community has the ability to make their operation sustainable.)

Chapter 1. Introduction and Background

1.1 Introduction and justification for awarding grant

The PADRAS (*Projet d'Augmentation Des Ressources Alimentaires de Siguiri*). ADRA/Guinea's Title II Food Program with a 5-year life was proposed in December 1999, but was initiated in October 2000. The Program was designed with the overall goal of improving the level of food security within the Prefecture of Siguiri in Upper Guinea. Siguiri is comprised of 12 sub-Prefectures, including the town of Siguiri, with a total estimated population of 311,000 people according to Ministry of Health estimates for the year 2000. The inhabitants in this prefecture usually experience a 6-month shortfall of food during the year, severe child malnutrition and extreme poverty.

1.2. Goals and expected outputs

It is for this reason that the PADRAS project was initiated in the Siguiri prefecture with its goal to improve the level of food security and income in the target communities within the prefecture. The program proposes to reduce starvation and malnutrition by addressing the immediate food needs while developing their capacity (avoiding a dependency syndrome) to feed themselves, and to work on long-term solutions that will forestall future food shortages and enhance income-generating opportunities of the smallholder farmers.

1.3 Implementation methods

During the 5-year initiative, ADRA proposed to enhance community mobilization and team spirit, introduce new and innovative agricultural technology and the technical know-how and organize the provision of a financial support in the form of micro-credit to the clients. The Clients are to *imbibe the knowledge*, create a strong *sense of ownership* of the technologies, and *develop their capacities to sustain* themselves.

ADRA proposed to monetize vegetable oil to generate the local currency to support most of the activities of PADRAS.

A mid-term evaluation (MTE) of PADRAS looked at the extent to which project activities met the basic food security needs of the target communities as proposed in the goals and specific objectives; the MTE was carried out and a report was submitted in September 2003. The MTE applauded PADRAS for their interventions to raise the yields of the Prefecture's most important basic staples 60 to 90% over traditional levels, reduced the hunger season for most

participating families from an average of about 4.5 months to about 2 months. The Evaluation team was also impressed with the increase vegetable production in the market during the dry season and the effort being made to reduce post-harvest losses.

The MTE Team did, however, observe that the agricultural goal of maintaining or improving soil fertility and of developing an exit strategy plan was far from being accomplished. A number of recommendations to help accomplish the objectives were made in the report.

1.4 Purpose of Evaluation

The purpose of this Final Evaluation (FE) is to address three crucial issues of effectiveness, sustainability, and lessons learned. In the area of effectiveness, the FE is to look at the extent to which the Title II activities met the basic Food Security needs of the recipient communities as stated in the goals and objectives. Likewise the FE is to assess the target population's competence and prospects in terms of continuing sustainable and effective Food Security activities on its own for the foreseeable future. Additionally, the FE will seek to show what lessons, if any, positive and/or negative, intended and/or unintended, are learned. It is expected that such lessons will benefit ADRA's own current and future Title II projects around the world.

The goals and objectives of the program were analyzed using the following basic seven principle: (i) monetization and support of PL 480 (ii) the timely implementation of activity schedules (iii) integration of intra and inter program activities (iv) a program monitoring and evaluation mechanism that is effective and efficient in collecting and analyzing data for an ongoing intelligent decision making (v) incremental development impacts that correspond to the vitality of the program. (vi) sustainability of the current/ongoing beneficial activities after the expiration of the program and (vii) the overall program management.

Chapter 2. Evaluation Methodology

2.1 Site selection for the evaluation

2.1.1 Statistical sampling procedures

After the Evaluation Team's discussions with the Director of Evaluation at ADRA's Washington, DC headquarters, Programs Manager for Guinea and PADRAS' project management, a consensus decision was arrived at to provide a maximum coverage of program impacts through interviewing a large sample of groups participating in PADRAS activities and to dedicate most of the consultants' time to establishing program impacts. Given the time available and a conservative estimate of two groups in different communities per consultant per day, the largest sample that could be covered was 8%. Groups were listed in alphabetical order by year of formation (year 1-4), by sub-prefecture, by district, and by group name. After a random start (the Team Leader dropped a pen on page one of the 10 page list of 298 groups), every twelfth group was picked (giving an 8% sample). In all, 24 groups covering all the 10 sub-prefectures (including urban Siguiri) were selected as the sample.

PADRAS management pointed out logistic difficulties in reaching some of the groups which turned up in the sample. These difficulties included bad roads and long travel-time (over 4 hours) to reach some groups served by the project, the need to take pirogues (dug-out canoes) and then walk several kilometers to reach some other villages, etc. However, in the end, the consultants together with ADRA decided not to replace any of the groups and the groups selected by the random sampling were in fact visited and their members interviewed. Therefore, no bias was introduced by failure to reach groups whose access is difficult for evaluation consultants (as it is for project staff serving them on a regular basis), as often occurs in evaluations. The types of groups (food crop production, gardening, petty commerce) selected in the sample was compared with the proportion of such groups in the population of all groups and not found to be significantly different from the proportion of such groups in the general population of groups served.

2.1.2 Validity of representation including gender

To ensure that the Evaluation Team's assessments are adequately grounded in the reality of PADRAS circumstances and report provided reflecting its efforts and accomplishment, the two independent consultants undertook field visits selected from a random sample of groups and villages served by the program. The field work covered all sub-prefectures and types of activities to provide a realistic assessment of PADRAS' operations. Senior staff of PADRAS accompanied the Evaluation Team but did not intervene in substantive discussion with the farmers. The Consultants also visited Kankan and Conakry for discussions with the major partners and stakeholders of ADRA's program.

The arrival of the Evaluation Team was treated as a major event by PADRAS' project participants in selected communities. In a number of communities the entourage was greeted by music, dancing and local poets (*grillots*) singing the praises of the work PADRAS had done in the community. Meetings often concluded with a prayer by the local imam for the success of the consultants in their work. In accordance with the generous spirit of receiving visitors, which is part of local culture, food was usually prepared and served to the consultants and visitors from ADRA. Consultants were also honored with small presents (usually the 10 kola nuts given in the region as a token of welcome to honored visitors). Thus, the interviews constituted a major happening for the entire community. The Evaluation Team also paid courtesy call to the office of all the Sub-Prefects prior to visiting the communities.

Often a high percentage of the entire adult population of the communities was present. Normally the entire membership of the group selected was present; at least the leaders of the other groups (and usually most of the membership) of other groups were also in attendance. Consultants in consultation with ADRA management decided that it would be easier to interview all groups in each village selected rather than only the group selected in the random sample; it would have been difficult to explain sampling theory to the population and the reason why one group was interviewed and its concerns listened to while other groups were left out and their concerns ignored. Thus the numbers of groups interviewed in each meeting rose from the one group selected to multiple groups (usually at least two, sometimes three or more). These groups could be considered clusters rather than individual sample points. The percentage of groups interviewed was in excess of 15% of all groups, and therefore should represent the population accurately. Groups in which women predominate (gardening and petty commerce) were represented in the initial sample; additional such groups were also interviewed when encountered in communities where the food crop production groups (dominated by men) were selected in the original sample to be interviewed.

The Evaluation Team consultants were accompanied by ADRA and PADRAS managers, but, except for asking a few questions, they did not participate actively in discussions with farmers. For the most part, field staff introduced the consultants, explained the purpose of their visit, and acted as interpreters. The Evaluation Team does not believe that the presence of PADRAS' staff in any way intimidated or biased responses given by participants. (For example, participants provided clear and accurate responses on their experience growing cotton and past use of chemical fertilizer and pesticides, despite the contradiction between their use and messages being provided by the PADRAS project.) In most meetings, participants went out of their way to express their thanks to PADRAS for its support and in a few meeting specifically thanked the field agents for the high-quality and diligence of service which they provided.

2.2 Description of data collection

The in-country portion of the final evaluation was carried out between November 26 and December 17, 2004. A detail of the itinerary for the final evaluation is attached in the Appendix 2.

PADRAS prepared very comprehensive background documentation for the Final Evaluation Team upon its arrival. The Scope of Work (SOW) provided the overall guidelines and was used to develop a framework for the final evaluation for analyzing the program delivery and its impacts on the population served by the PADRAS project. Dr Solomon Wako, Director of Evaluation at ADRA's Washington, DC headquarters, provided additional instructions and clarifications for the Evaluation. The Team was also supported by ADRA's Program Manager Mr. Stephen Amoako based in Conakry who participated actively with the evaluation throughout the course of fieldwork and in interviews with partners and potential partners in Conakry. The fieldwork of the final evaluation coincided with work of the design team for a proposed new DAP; some discussions were undertaken with this team and its preliminary results were provided to the Team.

2.2.1 Review of Documents

A large number of documents were provided in hardcopy to the Evaluation Team and were reviewed during evening hours and rest days in Siguiiri. These documents were prepared prior to the arrival of the final Evaluation Team and included annual and quarterly reports, the mid-term evaluation report, and the PADRAS Development Activity Proposal). On arrival, the Team also had access to additional documents related to ADRA's Title II programs. The Project Director of PADRAS made a summary presentation of the main project activities, achievements, impacts and lessons learnt. The Consultants initially devoted a day for the review of the documents, and subsequently devoted the evenings (after the field visits) for the review of documents. The Consultants requested other documents and information that could help in the assessment of the program and its impacts. Relevant websites have also been consulted.

2.2.2 Interviews with groups of farmers and other beneficiaries

Interviews were conducted in large public meetings. Community leaders (the village head man or his spokesman, the president of the district, etc.) usually provided general information on the composition of the community and its population. Then in villages where multiple groups were present (the majority of the cases) whichever group had appeared in the sample was normally interviewed first. Then other groups assisted by PADRAS in the same community were interviewed. In most cases all groups in the community were interviewed and their responses; their responses are part of the field notes of the two team members prepared.

Respondents from groups were normally officers from the groups in question; frequently other members of the group beyond the main respondents would intervene and provide information on subjects in which they had special expertise or interest.

In some interviews conducted by the Team Leader with groups having a predominantly female membership, a male officer of the group (often the secretary) responded to most questions. In such cases, the Team Leader made an attempt to solicit information from female members of the group as well. One petty commerce group was all female, having expelled all male (and some female members) for late payment of their loans. However, the Team Agronomist in his interviews did not encounter male members dominating discussions in any of his interviews. Nevertheless, the fact that male members acted as respondents in some of the interviews may point up governance issues which may need to be resolved in future projects where a few males are included in groups otherwise composed solely of women.

Both consultants were guided by checklists (an example is included in the Appendices); these were prepared prior to the start of field interviews to make sure that all main topics of interest were covered by the consultants in the course of each interview.

2.2.3 Field and site visits

Where time allowed, direct observation of farmer's fields and gardens was carried out. Although most fields in which food crops were grown had already been harvested by the time fieldwork began, evidence of crop practices remained to confirm that the techniques discussed during the course of group interviews had in fact been adopted. In the case of gardening groups, the Evaluation Team observed plants both at the nursery and at the transplanting stages. Most beds had been prepared as described in the interviews; improved and traditional wells were seen and the change-over from calabashes to watering cans was visually confirmed. Observations at the nurseries also made it clear that insect attacks were serious in some cases and the organic gardening techniques being promoted by PADRAS could not effectively control these leaf-eating insects. Cover crops were also observed in demonstration plots. Improved storage was also seen in a number of locations, including copycat building of improved storage facilities in addition to the model built with help from PADRAS. Had more time been available, more visits of these types would have been done; however, the Evaluation Team did enough visual observations to confirm that most of the statements made in interviews were reliable and permit the Team to come to a realistic assessment of PADRAS' operations.

2.3 Host Government/partnership

The PADRAS Program has developed a number of relationships with other NGO's and Government Departments that is as strong as those we have seen in any other Program of its size. In most cases, these relationships consist primarily of PADRAS' subcontracting services provided by the partner organizations. A detail briefing of the activities by the organizations and the services they provide is attached as Appendix 3.

The Evaluation Team received briefings, engaged in discussions, and actually observed the work of most of each of these organizations which include, CRAB, SNPRV, IRAG, Rural Radio de Guinee, Ecole Nationale de l'Agriculture et de l'Elevage, USAID/Guinea, RGTA, EUPD and CCS. Other potential partners in the next DAP may include APDRA-F (Association Pisciculture et Developpment Rural en Afrique tropical humide-France), SPCIA, CLUSA, Credit Rurale de Guinee. EUPD, RGTA, and IRAG have worked closely with PADRAS and have had the widest impact on PADRAS' capacity-building work. These institutions are doing very good quality work, with the latest and most effective technical knowledge and training processes. On the other hand, SNPRV handles some very interesting information, but its extension methodology is still that of the traditional transfer of technology of the 1970's and is far different in quality compared to the extension done by ADRA.

The impact of most of these groups has been that of providing a level of quality in their respective services that would be difficult for ADRA to supply on its own, because these are agencies that have each specialized in their particular line of work, know it well and has the expertise to best provide services required in its chosen field of endeavor.

2.4 Review of Mid-Term Evaluation Report

The Evaluation Team reviewed the mid-term evaluation and the recommendations. In our view, ADRA has made considerable progress to address most of the recommendations. We, however, request ADRA to speed up in preparing an exit strategy. The Evaluation Team's observations to ADRA's implementation of the recommendations are attached as Appendix 7.

2.5 Final Survey Results of the Title II

This final survey was conducted in November and December 2004 (the first quarter of the fifth year of the project) to assess the performance of the project. The sample size was 600 household selected randomly from 10% of the districts where ADRA implements the project. The districts or villages (13) were selected using the proportional to population size (PPS) approach.

In the view of the Evaluation Team, the final survey results confirm our observations that ADRA has made significant advances towards the goal of the project. Estimate values obtained for all the impact indicators suggest that ADRA has achieved the targets set at the beginning of the project. A summary of the findings of that survey are listed below

- The percent of households reporting seasonal food shortage has decreased from 56% to 46%. The target was 49.1%.
- The average number of months of food shortage has also decreased from 5.5 to 2.2 in the past four years far below the target of 3.5 months.
- The illiteracy rate has dropped from 92% to 62% well below the target of 87%.
- Indicators on improved storage units that ADRA introduced have improved greatly from the beginning of the project.
- In addition, the micro credit component has penetrated over 30% of the population and 99% of beneficiaries of the scheme have indicated that they are willing to continue using the loan facility provided it is available in the community.
- Over 70% of households visited reported that they have small businesses and 70% of those with businesses claim to make profits. Majority of businesses are agriculture oriented, and the ADRA micro-credit scheme is funding about 30% of those with the businesses. Respondents indicated that profits are used to buy food and solve other family problems. Others said they use profits to enlarge their business and to save.

2.6 Composition of the Final Evaluation Team

The Evaluation Team was composed of two independent consultants: Dr Jeff Dorsey and Dr Joseph J Adu-Gyamfi, one representative of ADRA's Conakry office (Stephen Amoako), three representatives of the PADRAS Program (Mr Barry Ahmadou, Juvenal Mukezangango and Saliou Toure). The Program also invited the USAID to be present; Steven A Gilbert from the FFP Washington, DC bureau and Dramane Mariko from the FFP Regional Office in Dakar came to Siguiiri to discuss the project with the team and participated in group interviews during one afternoon of their visit. USAID's project manager Ibrahima Camara could not attend due to scheduling conflicts but had discussed major issues concerning the project with Dr Dorsey in the past. Dr Dorsey served as the Team Leader and Dr Adu-Gyamfi as Team Agronomist.

Chapter 3. Sustainability Issues: (Effectiveness, Sustainability and Lessons Learned)

3.1 Monetization

Monetization of Title II food commodities (vegetable cooking oil) is the source of funds for the PADRAS project. USAID defines monetization as “the selling of agricultural commodities to obtain foreign currency for use in U.S. assistance programs.”¹ (USAID sources also provide direct dollar funding through Section 202e grants as well as funds provided through the monetization of food commodities.) Sales are carried out by an NGO cooperating sponsor (CS). Proceeds of sales are used to support food security and development programs.

The objectives of monetization are to:

- Combat hunger, malnutrition and their causes;
- Promote equitable development based on agricultural sustainable production;
- Expand international trade;
- Develop and expand export markets for USA food commodities; and
- Stimulate private enterprise and trade and development of democracy.

In order to promote open and competitive sales rather than non-competitive sales, Africare has raised public awareness concerning the program through advertisements in the press, on radio spots, the production and distribution of pamphlets. The consortium of NGOs benefiting from the sales has also set a number of conditions for participation by traders who must possess:

- A fixed operating site;
- A certificate attesting to the legal and tax registration of their business;
- Proof of at least three years experience in commerce in food products;
- A professional license to engage in trade;
- A physical plant (warehouse and facilities) suitable for storing the quantity of oil bid upon;
- Sufficient financial resources to meet payment obligation as outlined for the sales;
- No outstanding debts (with Africare or other NGOs, with USAID or other donors, or with the Government); and
- FG 1.5 million (\$588 at the official exchange rate, \$455 at the parallel market rate) and provide a certified check in that amount made out to Africare to guarantee their participation in the auction.

¹ http://www.usaid.gov/our_work/humanitarian_assistance/ffp/monetiz.htm

Bids are required to be made in US dollars; but payment is made in local currency (Guinean francs) equivalent to the dollar bids at the rate established by the Central Bank of the Republic of Guinea (BCRG). Two payment methods are acceptable:

- 1 Payment before delivery (minimum lot 100 metric tons)
- 2 Three payments with bank guarantee provided at the time of contract:
 - First payment of 45% at the time of contract signature;
 - Second payment of 30% thirty days after delivery;
 - Third payment of 25% 60 days after delivery.

Payments are in Guinea francs at the official exchange rate prevailing on the day of the sale. Two banks approved for provision of the guarantee are: BICIGUI and ECOBANK.

3.1.1 Sales Process and Cost Recovery

In pursuance with the goal of encouraging competition, sales are well advertised and up to 20 traders have participated. The actual number of participants in the various sales was not available to the Team, and therefore, the possibility of oligopsony and collusion to depress the sales price cannot be assessed. The degree of participation by smaller traders also cannot be assessed. To date, no traders based in other parts of the country outside of the capital (Conakry) have participated in auctions.

A consultative committee comprising the Government of Guinea, the NGOs members of the consortium and USAID has been formed. The committee is involved in the monetization process; however, the exact role of the consultative committee in setting maximum and minimum prices is not clear based on the information made available to the Consultants. Bids are opened in the presence of the consultative committee and buyers who put in bids.

The goal is to recover as high a percentage of the cost of the commodity. The “C&F and Free-Alongside-Ship (FAS) values of the commodity to be monetized, have been used for determining sales prices” in many instances. However, these target prices are often not achieved; sales are normally made at “reasonable market price” determined by local market conditions. Africare carries out periodic market surveys of oil sales at the retail level; Africare incorporates analysis of survey results in setting maximum and minimum acceptable prices for bids. (However, the results of these surveys, actual sales prices, and the procedures for setting maximum or minimum prices were not available for review by the Evaluation Team for incorporation in this report.) Africare reports that in dollar terms, on average between 80-85% of C&F or 100 % FAS prices are achieved. USAID sets the cost recovery benchmark at 80 percent of the C&F value, using the FAS quotation provided by FFP at the time of the call forward, the foreign flag rate, plus port clearing and handling costs and duties, estimated transport costs to move the commodity to the point of sale, and

expenses associated with marketing the commodity, or 100 percent of FAS, whichever is greater.”² Therefore, assuming that Africare was referring to the C&F value, it would be meeting this benchmark. (No documents or statistics were made available to consultants to verify this statement.) Oil is sold in 20 liter containers.

3.1.2 Sales Price and Currency of Denomination

The most recent sale was at \$910 per metric ton. (No time-series of prices nor of exchange rates are available at this time to the Evaluation Team.) Traders pay for the oil as described earlier in this section in local currency at the official exchange rate established by the Central Bank; the official rate differs from the parallel market rate which more closely reflects the value that traders have to pay for their imports of commodities, including edible oil; the parallel market rate which is probably closer than the official rate to a shadow exchange rate reflecting the scarcity value of the dollar, is normally higher by some amount. In December 2003, the official rate paid at the bank at USAID was FG2000 per dollar; the parallel rate at that time was approximately FG2350, 17% higher than the official rate. In December 2004, the official rate was FG2,550 per dollar, while the parallel market rate was FG3,300, 29% higher than the official rate. To the extent that traders are able to pay for monetized oil at a 29% discount over the rate that, for the most part, they would have to pay for the same type of oil that they already import commercially, windfall profits are generated for those traders able to participate successfully in the auctions.

ADRA reported additional problems resulting in losses of \$100,000 when comparing amounts budgeted by ADRA with those actually achieved by Africare in its sales to traders. Additional losses were incurred due to other problems derived from oil sales to traders.³

Since the main objective of monetization of edible vegetable oil is to generate local currency, revenues might be higher if tenders and bids were denominated in local currency. Denominating sales prices in local currency would eliminate or reduce windfall profits for traders and provide a more level playing field between purchases through the monetization mechanism and normal commercial imports. USAID notes that “sales below local market prices result in a windfall gain for a particular trader at the expense of programming funds for activities targeted to the food insecure.”⁴ It is unlikely that the FFP office would object to such a change.

² http://www.usaid.gov/our_work/humanitarian_assistance/ffp/monetiz.htm

³ ADRA, Fiscal Year 2005 Resource Request, Resubmission, Conakry, Guinea, March 22, 2004, pp.10-12.

⁴ http://www.usaid.gov/our_work/humanitarian_assistance/ffp/monetiz.htm

3.1.3 Edible Vegetable Oil Imports and Bellmon Analysis

Figures obtained from the Autonomous Port of Conakry indicate that imports listed as “soybean oil” ranged from 15,000 to 19,000 MT, rising to almost 25,000 MT in 2002.⁵ For 2004 4,015 MT were proposed for monetization and 1,338 MT for distribution (in FFW and other programs). These amounts are scheduled to rise respectively to 4,779 MT and 1,593 MT by 2009. Assuming that 25,000 MT were imported in 2005, the amount monetized would account for less than a fifth of total soybean oil imports. The most recent Bellmon analysis indicates that oil requirements in the Guinean diet are provided by groundnut oil (including peanut butter) supplies 165 calories, palm oil 141, and soybean oil 23;⁶ thus soybean oil accounts for only 7.0% of calories coming from oil, and of this total, only one fifth is accounted for by monetized imports (1.4%). This relatively small amount is unlikely to have a major impact on price, nor is it likely to have a negative impact on incentives for increased production of palm oil and groundnuts for use as peanut butter.

3.1.4 Market analysis capability

“[I]t is the CS's responsibility to conduct a Bellmon analysis, [but] the CS should not carry the burden of expanded market analysis alone ... USAID strongly encourages the CS executing a monetization to continue its efforts in developing marketing expertise. Potential collaboration with national and international institutions with the technical expertise to conduct market analyses should also be considered.”⁷

In addition to the Bellmon analysis, given the potential problems of oligopsony in Guinea and of the overvalued exchange rate, additional analysis is needed in order to maximize revenues from monetization.

ACA, which has already assisted ADRA in addressing earlier marketing problems could provide expertise on this issue. DNYNAFIV has also studied the oil market and palm oil production and would be well placed to assist in an in-depth study of the market focusing on maximizing revenue from monetization of vegetable oil.

3.2 Activity Schedule and Implementation compliance

This portion, in the view of the Consultants, was well covered during the mid-term evaluation. The MTE reported that the staff of the Program has the requisite qualifications and experience for their various positions. All of the staff are

⁵ Autonomous Port of Conakry Export-Import Statistics provided in November 2003.

⁶ Ousmane Diop, Guinea Bellmon Determination Food Needs Assessment, Market Analysis, Draft Report prepared for USAID/Guinea, n.d. (2004?).

⁷ http://www.usaid.gov/our_work/humanitarian_assistance/ffp/monetiz.htm

employed on a full-time basis, and are paid; the Program has no voluntary staff. (However, it should be noted that a US Peace Corp volunteer works part-time for the project).

All the activities listed on the detailed implementation schedule have been or are being carried out as planned, and in a manner that has avoided overlaps and gaps. Thus, the delivery of services has been quite efficient. The methods used also seemed to be as cost-effective as possible. Other observations related to the implementation compliance are listed in the section on Recommendations.

3.3 Integration of Activities

In general, the integration of the various program activities are excellent. The literacy program supports the work in credit and agriculture. Likewise, community organizations and in particular the groups associated with PADRAS activities are supporting all the other program efforts. The integration with other stakeholders (please refer to the section on partnerships/host Government linkages help the program to exploit its comparative advantages of ADRA and its national partners. Inclusion of a nutrition component to make better use of the food and vegetable crops promoted by the project would be a welcome addition to project activities.

3.4 Monitoring and Evaluation

From the beginning of the project ADRA assigned a high priority to monitoring and evaluation. Very early on, ADRA carried out a comprehensive baseline survey; this essential first step was taken at the very beginning of the project in November 2000 and January 2001. The survey had the full support of staff from ADRA headquarters and was carried out with the help of a local consulting firm STAT VIEW. A week-long monitoring and evaluation workshop was then held at ADRA headquarters in Washington, DC. Project staff participated in this workshop, which was held in late March and early April 2001. Based on the results of the baseline survey, ADRA concluded that the Indicator Performance Tracking Table (IPTT) needed to be modified. New indicators were incorporated and those associated with USAID's strategic objective for better natural resource management (NRM) were also incorporated. All these changes were made during FY2001.

An early achievement of the monitoring and evaluation system was the recognition macroeconomic conditions in the country would negatively affect project activities as initially planned, allowing appropriate adjustments to be made. For example, the number of vegetable gardening groups was reduced in response to market disruptions caused by the rebel assault on Geckédou, the main market in the southern part of the country and for transshipment to neighboring countries.

Once ADRA had clarified the logic of the program as a result of the survey, it identified information needs and developed a conceptual framework for monitoring project inputs, processes, outputs, outcomes, effects and impacts. A detailed monitoring and evaluation plan was developed listing intermediate results, strategic objectives, indicators and their definitions, sources of data, methods of data collection and frequency and the persons responsible for the data collection. The monitoring and evaluation plan also contemplated two evaluations during the course of the project: a mid-term evaluation and a final evaluation toward the end of the project. Special surveys were also to be conducted during the course of the project implementation.

Data collection instruments were designed and schedules and responsibilities assigned for their use in generating necessary data. Random verification and audits of data quality are also contemplated in the system. Special studies were to be carried out to track specific indicators. Appropriate computer systems were acquired and staff was trained in their use. An initial staffing problem was identified early on and corrected in August 2001 when the national staff assigned to the monitoring and evaluation position was replaced by an expatriate. The system operates on seven tracks: process, indicators, forms, computerization, analysis, utilization, and adjustments. The monitoring and evaluation system focuses on inputs, process, outputs, effect and outcomes, and impacts. As constituted and operated, the system provides adequate monitoring to assure that the process is followed and then to establish that the effects and impacts of project activities are those which were planned, which are its primary focus.

The system was designed as a tool to assist management in identifying problems and in deciding on appropriate solutions and remedial actions. It also provides the information necessary to meet reporting requirements for ADRA headquarters and USAID. The system has also provided information on new activities not contemplated in the original project document, such as digging improved wells and training blacksmiths.

3.4.1 Assessment of Accuracy, Efficiency and Usefulness of the Monitoring and Evaluation System

The final evaluation included a large sample of the population involved in ADRA's project activities. Enough of the same information gathered by the system was obtained by the Team in open meetings with representatives of the population served to confirm the results obtained by the system and to attest to their general validity. The Team encountered no case where information obtained in the final evaluation contradicted results obtained by the monitoring and evaluation system and then presented in ADRA's reports. However, the Team does have some observations and conclusions on gaps in the system and recommendations on how these might be filled in future projects.

The team was able to confirm the following results also obtained by the system:

- Positive impact of literacy training (though rates were lower than those reported by EUPD);
- Increased yield as a result of new cropping techniques;
- Increased production as a result of increased crop area and labor-saving as a result of increased animal traction and associated training and technologies;
- Lower storage losses in improved storage units due to humidity and rodent attacks (though not from insect attacks);
- Reduction in the famine period;
- Increased incomes from food crop sales
- Increased incomes from vegetable gardening;
- Increased income from petty commerce;
- Positive impact of the microfinance component on farmers' and gardeners' ability to adopt new technologies, leading to higher incomes;
- High rates of loan repayment;
- Positive impact of the project as a whole and of individual components in contributing to improved family nutrition; and
- Positive impact on general family welfare and positive impact on school attendance.

The results were obtained independently and in separate interviews by the two external consultants on the Evaluation Team. The Team could confirm in all cases that the direction of change was that provided by the monitoring and evaluation system, although at this point it cannot come up with quantitative estimates of change. The Team can, however, in good faith validate the major results provided by the monitoring and evaluation system.

However, the Team also came up with results which showed that the organic farming paradigm under which the PADRAS project was constrained to operate during most of its operating life reduced economic benefits from the Project from those which it would have obtained had it not been operating under this constraint.

Interviewing independently, the two Team members established that:

- Cotton had been grown by farmers in most of the villages in the project intervention area;
- Nearly all farmers were familiar with the increased yields obtained in cotton with the use of chemical fertilizer and many had also obtained increased yields in food crops with the use of chemical fertilizer;
- Nearly all farmers had used pesticides in cotton, and some reported having used herbicides in food crops;

- Messages provided by PADRAS field agents were that fertilizer is bad for soil fertility and that these messages continued even after MTE recommendations for limited use of chemical fertilizer and after ADRA successfully petitioned USAID to permit fertilizer use under specific conditions and for specific crops.
- Farmers reported significant storage losses in maize and peanuts to insect infestations of the crops, and that natural insect repellents used in the construction of improved storage facilities helped reduce losses due to rodents and high humidity but did not control losses due to pre-harvest insect infestations;
- Interest rates from alternative sources of credit were 10% per month in the case of some loans from money-lenders and significantly higher than the highest rate charged by the PADRAS microfinance program, indicating an ability to pay higher rates;
- Bicycles play perhaps as large a role as animal traction in transportation of farm products to the homestead and to market given the limited numbers of animals available;
- Virtually none of the groups reported any change whatsoever in leadership despite the fact that some groups had been in existence for as long as 4 years.

While the monitoring and evaluation system successfully followed up on progress in meeting goals and pre-selected levels of established indicators, the system apparently failed to ask and then answer questions which would have assisted project management in its decision-making. Issues include chemical fertilizer and pesticides, group governance and literacy, and failure of groups to grow to optimal size.

For example, the Evaluation Team found that knowledge about and past use of fertilizer on cotton and also on food crops was significant; this fact was not included in any of the reports consultants reviewed. Furthermore, field agents were off-message in terms of their condemnation of fertilizer and pesticides; the transmission of this message continued even after USAID approved in principle the use of fertilizer for specific crops (early in 2004). This divergence from ADRA policy does not appear to have been communicated to management.

Reduction in losses from rodents and humidity were well documented by the system and reported in various reports to ADRA and USAID. However, the fact that insect infestation continued to cause significant losses. This problem was identified as serious and was brought to the attention of USAID in a number of fora. ADRA, Africare and OICI sent requests to USAID concerning the need for fertilizer to be used and for the limited authorization for the use of pesticides. These representations appear to have led to the change of USAID/Guinea policy on the use of chemical fertilizers (but, until now, not on the policy regarding the limited use of pesticides).

The Consultants observed that the literacy program was well received by participants, increased the numbers able to sign their name and has some positive impact on the numbers effectively able to read and write, but it failed to have a significant impact on group governance. Most groups maintained the same leadership throughout their life associated with the project, reducing their usefulness in providing continued and effective service to the community especially after ADRA's support ceases.

The consultants also observed that some of the groups were at less than optimal size and that no attempt was made to replace members who left the group or to incorporate the growing list of people wanting to be included once the benefits attainable from project activities became obvious to community members other than those who initially adhering to the group.

3.4.2 Staff Training/Technical Support

The Evaluation Team applauds PADRAS for having taken action on the mid-term evaluation recommendation for further training of the monitoring and evaluation staff on data collection systems. The Leader has received training in Maryland, USA and in Dakar, Senegal on monitoring and evaluation concepts, plans and systems. Additional training has also been provided on the use of software like SPSS and MAPINFO for analysis. Further training in Visual Basics and Oracle has been requested.

3.5 Development Impact and Capacity Building

During our interviews with the project participants, the Evaluation Team observed that PADRAS had made concrete and timely progress toward the achievement of project goals and objectives. The Project has made a difference in the livelihoods of the beneficiaries. These observations of the Team are confirmed by the ADRA/Guinea Assessment Performance Survey which has concluded that ADRA has achieved the main targets established at the beginning of the project.

Results and Impact of ADRA's Interventions in Siguiri prefecture

In terms of sustainability, the Evaluation Team looked at the 5 main pillars namely:

- Productivity Enhanced productivity and increased food access
- Security Access to food through the year
- Protection Protect the potential of NR base
- Viability Be economically viable
- Acceptability Technologies be socially acceptable

It became evident during our visits that the interventions by ADRA have significantly increased food crop yields and reduced post-harvest losses

significantly from rodents and humidity in those villages where new types of storage have been adopted in a major way. The impact on food availability has been impressive in villages targeted for PADRAS activities.

Besides improved food security, ADRA's intervention has also helped improved the social life of people. During the interviews the Evaluation Team listed the following benefits mentioned by the farmers as the impact on their social lives

- Income from donkey traction has helped to purchase roofing sheets and Women are now contributing to household expenses (feeding and income for other house hold activities) eg school fees for children
- Most households are able to meet the health care expenses, buy clothing for children
- Women are now helping their husbands to acquire sheep for major festivals like Tabasqui.
- Most men can now afford to marry from the incomes from their business.

Another important achievement worth mentioning is feminization—improving economic status of women. The project has helped women make investments in small ruminants, petty trading. Women are now contributing to household expenses and assisting families and relatives. We also observed the active participation of women in discussions during meetings

Gold digging and agriculture

Most of the farmers said they prefer agriculture to gold digging. “Whereas agriculture has not failed completely, gold digging is just like gambling” said one of the farmers. “One out of 10 can succeed to get the gold”. In addition, the farmers enumerated some of the hazards in gold digging as

- Environmental hazards and sickness
- Occasional deaths when the soil fell on them
- Old mining dug holes became death traps for human and animals
- Breakdown of family relations
- Lack of family care was poor
- More physical and energy requirements than farming

In spite of its hazards, some of the farmers and women involved in trading said they found gold digging a lucrative job during the off-season.

It is the view of the Evaluation Team that gold digging cannot be completely replaced by agriculture because it is an important source of income to the people. Rather, the system could be improved by organizing the group and providing them with small-scale equipment that could enhance their effectiveness

and efficiency. It should also encourage those farmers who are successful in gold-mining to invest part of their windfall in improved technologies being introduced by the PADRAS project.

3.6 Project Management

Planning. The Evaluation Team agrees with the observations made by the mid-term evaluation that all the individuals involved in the implementation of that effort undertake the planning of any activity. For instance, the entire staff of any given unit develops as a group the plans for that unit. In this process, the M&E data are used to determine the indicator targets for the work plan. The resulting work plans have regularly been submitted on schedule to the PADRAS Coordinator.

The PADRAS staff, as well as the key leaders of the partner organizations and the communities, is well-informed about the objectives and strategies of the Program.

Staff Supervision and Support. PADRAS has a supervisory system whereby a superior staff officer supervises each staff member. These officers also undertake regular field visits to check on the completion of the activities listed in the work plan.

Human Resources.

The program personnel seem to have a healthy degree of camaraderie. We sensed no tension between colleagues at all. Their sense of responsibility and duty toward fulfilling Program objectives is very evident in the way they go about their work.

The Program's exit plan for its staff we understand is in progress.

External Audit

Regular External audit of the micro-credit section to improve its services to clients will be required in the next proposal.

Support from ADRA/Conakry. The support of the PADRAS Program from Conakry has been more than adequate. It has included more than 7 field visits/year. Activities have included everything from general supervision to staff training, evaluation and monitoring to the installation of computer hardware and the conducting or provision of workshops in and outside the country to many different kinds of follow-up.

Financial Management. The budgeting process starts at the unit level. Each unit established a budget, and then the Management Committee reviews the unit budgets to prepare a consolidated budget. This budget also includes the costs of those activities to be undertaken by the partner organizations. The consolidated budget is then used by the Financial Director to revise, if necessary, the original financial plan drawn up in 2000. After formal approval by ADRA International and USAID in the annual Resource Request, ADRA Guinea then controls and monitors the cash flows.

The Finance Director periodically summarizes the budget performance and reports to the Board of ADRA/Guinea and then to ADRA International.

3.7 Results of Main Project Activities

- Creation of nearly 300 groups organized around:
 - Food crop production
 - Off-season vegetable gardening
 - Petty Trading and other Micro-enterprise finance
- Introduction of changes in agricultural practices
 - Introduction of new varieties (short-cycle and drought-tolerant varieties)
- Seed production
 - Provision of foundation seed from CCS (Bordo station in Kankan)
 - Training of farmers as seed producers
 - Multiplication by farmers trained as out-grower seed-producers
 - Distribution to other community and area farmers
- Introduction changes in vegetable gardening
 - Introduction of new crops (imported eggplant and white onion, lettuce)
 - New varieties of pre-existing crops
 - Improved pre-nursery and nursery techniques
 - Row planting and spacing (leading to high plant density)
 - Technology of making compost
 - Innovations in irrigation (use of watering cans instead of gourds, frequency of irrigation, improved wells)
- Storage
 - New types of granaries (reducing losses from rodent attack and humidity)

- Animal Traction
 - Yokes of oxen (plowing, harrowing, ridging, weeding)
 - Donkey and donkey cart (transport to and from the field, house and market)

- Credit Program
 - Seasonal loans for crop production (Seed, plowing, hiring labor, tools, fencing, well-digging)
 - Seasonal loans for peanut production
 - Loans for Animal Traction
 - Working capital for petty trading and micro-enterprises

- Training
 - Literacy and numeracy (signing, reading and writing, simple book-keeping)
 - Use and management of loans (Pre-credit training)
 - Crop practices
 - Animal traction (especially use of oxen for non-traditional tasks like harrowing, ridging and weeding)
 - Storage
 - Vegetable gardening
 - Blacksmiths in the manufacture and repair of simple agricultural implements (plows, harrows, hoes, etc)
 - Seed production

Chapter 4. FINDINGS AND RECOMMENDATIONS

4.1 Crop Production

4.1.1 Soil fertility improvement and increasing agricultural productivity

The major determinants to enhancing agricultural productivity in the dry Sudan Savanna region where PADRAS activity is currently concentrated are:

- Soil fertility improvement
- Use of improved seeds
- Technological training
- Water availability

Soil fertility improvement is a critical constraint that it frequently outweighs the impact of water and seed availability. It is a prerequisite to reaping the benefits of high yielding potential of improved seeds. In spite of the availability of improved high yielding and drought-tolerant varieties and other technologies (planting in row, appropriate spacing) to farmers, reported yields of maize, rice, groundnut and sorghum are still low. This indicates that the supply of improved seeds alone will not help to achieve the program's ultimate objective of reducing the number of household reporting food shortage, unless the critical constraint of soil fertility is adequately addressed.

To maintain or improve the soil, most of the farmers interviewed indicated that they prefer manure to chemical fertilizers because of its slow release (applied once every 3 years), timely availability and, no direct cost to them. However, during the interview it became clear that the quantity of manure produced is not enough and the Evaluation Team predicts that the quality of the manure could as be low because of the quality of feed to the animals. In addition, the Evaluation Team agrees with the MTE report that the cost of transporting the manure from the homestead to the fields and spreading the manure could be prohibitive (200 person-days/ha/year for fields located more than 6 km away)

The Evaluation Team commends PADRAS for implementing the mid-term evaluation (MTE) recommendation to explore the use of green manure/cover crops to restore soil fertility. This recommendation, in the view of the Final Evaluation, is a partial solution because this approach increases availability of nitrogen through biological nitrogen fixation but does nothing to increase the availability of phosphorous which, is the major limiting factor and is not being supplied by current strategies.

An immediate solution to increasing yield and realizing the full potential of the improved seeds is to encourage the use of chemical fertilizers (as a booster)

along with manure (farmyard and green) and train farmers on the benefits and the judicious use of chemical fertilizers.

The Evaluation Team was informed that during the first quarter of 2004, USAID approved in principle the limited use of chemical fertilizer. By mid-December, however, USAID so far not received a specific request from ADRA detailing types of fertilizers, levels of application, types of crops and so on. The Team also observed that the messages to farmers that chemical fertilizer either did not contribute to or was deleterious to soil fertility, remained unchanged.

A quick survey at the market in Siguiri and Kanakan showed that phosphorus-rich fertilizers such as diammonium phosphate (DAP) and triple superphosphate were not available in the market, we however found compound fertilizers NPK (17-17-17, and 15-15-15) in the market.

A combination of moderate applications of farmyard manure, green manure/compost and one bag (50 kg/ha) of superphosphate at planting (equivalent to 8 kg P/ha), followed by one bag of urea (23 kg N/ha) 25-40 days after planting is ideal for maize, rice and sorghum. For groundnuts, one bag of superphosphate at planting and a one bag of gypsum before pegging, is ideal. In the absence of superphosphate, and a combination of manure at planting and a bag of NPK (17-17-17) 25-40 days after planting is recommended. A 50 kg bag of compound fertilizer in Siguiri costs FG 50,000. Micro-dosing of 5 kg/ha of P (hill placement) has resulted in 150-300% increase in millet yields in the semi-arid regions of Mali and Burkina Faso

The Evaluation Team recommends that the integration of micro-doses of chemical fertilizer is essential to complement the application of manure and compost for increased crop yields and the long-term sustainability of the cropping system.

Most of the farmers in the Siguiri Prefecture used chemical fertilizers to enhance the yields of cotton and are aware of the benefits of chemical fertilizers. It is also evident that some of the farmers diverted part of the fertilizer meant for cotton to their food crops on the understanding that they improved yields in these crops as well.⁸

A small proportion of the farmers indicated that some of the field agents have told them that fertilizers are bad for the soil and for their harvested products. These agents were apparently trying to instill in the people the environmental

⁸ The initial PADRAS project document contemplated support to farmers who had access to chemical fertilizer, stating: "ADRA will support training in appropriate use for subsistence crops. ADRA will also provide training to ensure that farmers are aware of and properly utilize residual fertility remaining after cultivation of cash crops (particularly cotton)." DAP - Final Project Document, April 11, 1999, Executive Summary page v.

consequences of applying high doses of chemical fertilizer or were trying to honor the USAID rule prohibiting the use of chemical fertilizers.

The Evaluation Team recommends that in view of the approval for small amounts fertilizer, ADRA field agents need to modify the messages related to its use and value in an integrated program of soil fertility management.

The Team further recommends that ADRA help link farmers to fertilizer importing/supplying companies in Siguiri and nearby areas (as is already being done in the case of seed).

4.1.2 Seed supply

Sustainable seed supply continues to be relevant and a high priority for ADRA to ensuring food security. The high yield increase realized in the major food crops in the farmers field compared to those of the control plots could be attributed to the supply of improved drought-tolerant, but high yielding varieties. The Evaluation Team commends ADRA for successfully developing appropriate partnership with private seed (CRAB) suppliers to supply improve seeds to farmers. The quality of the seeds and varieties being promoted by ADRA are superior to those found in shops in Siguiri and Kankan and are generally cheaper than those found in the market. PADRAS has trained farmers as seed growers who supply certified seed to farmers.

The Team recommends that prices of seeds provided by ADRA should be similar to the price of similar seeds by the local dealers. The seeds from ADRA should be made available to other farmers beyond those being assisted directly by the Project through their distribution by local dealers. This would be a first step in encouraging the development of a sustainable seed supply system and the out-/up-scaling of the technologies

We observed a tremendous increase in farmer to farmer seed diffusion and a high adoption of improved seeds by farmers not directly assisted by the project

The Team commends PADRAS for this initiative but this farmer-to-farmer diffusion needs to be documented so as to know the overall impact of their interventions.

4.1.3 Animal Traction

Labor will be a key issue in the face of the HIV/AIDS epidemic and the trend towards urbanization of the rural people so the Evaluation Team was highly impressed with the adoption of the labor-saving technologies introduced by PADRAS. Farmers are convinced of the benefits of work animals (ability to increase crop area, substantial reduction in the use of labor, easier transport of seeds, compost, manure, fertilizer and harvest to/from fields and homestead and

to the market, provision of services to other farmers as a source of income, higher revenues).

Ox-drawn technologies introduced by PADRAS for harrowing, ridging and weeding have been successfully proven and adopted by farmers in Siguiri, whereas such technologies have failed in other countries . The technology also helped improved the water holding capacity of the soil and other physical properties of the soil.

The gender impact of these technologies has been highly successful. For example, weeding with a yoke oxen reduces labor (most of which is provided by women when weeding is done manually) from 10-15 work-days per hectare to a single day. Transport to/from the fields and to market is mostly done by women and children carrying loads of up to 30 kgs on their heads, but is now being replaced by donkey carts.

The Team was informed that this reduced workload has increased school attendance of children to some degree.

However, there were complaints from the farmers that the number of animals for traction (both oxen and donkeys) is insufficient to meet their needs.

The Evaluation Team recommends that PADRAS increase the number of animals by encouraging farmers to purchase additional animals and by increasing the availability of credit for animal purchases.

4.1.4 Blacksmiths

The long-term sustainability of the animal traction technology is a concern to the Evaluation Team. We applaud the mid-term evaluation (MTE) recommendation for the training of blacksmiths (although not part of the original project activities). This was immediately implemented by arranging with RGTA, an NGO based in Kindia who successfully trained 10 blacksmiths.

The number of blacksmiths trained to build and repair hand-tools and farm equipment used for animal traction is insufficient; therefore their impact is only felt by farmers in the small number of communities in which they reside. If funds are available, more blacksmiths need to be trained and equipped. It also became evident that those trained have acquired necessary skills to enhance their effectiveness and efficiency, but lack the necessary tools and access to needed inputs to make and maintain high-quality farm implements.

The Team recommends that more blacksmiths be trained, such that every major village has a blacksmith trained in these skills. The Blacksmiths need to be equipped and assisted in obtaining access to needed iron-working tools and better quality steel for fabricating and repairing implements. We further

recommend that PADRAS should look into the possibility of financing equipment used for animal traction.

4.1.5 Marketing

Among the principal causes of persistent poverty in agricultural sector is the lack of good market opportunities. There is an urgent need to improve the accessibility to and efficiency of markets for the smallholder and pastoral products.

The poor state of roads affects the ability of farmers to get their products to market and at same time discourages traders from coming to and competing in the buying of farmers' products in their own communities and at periodic markets. In the case of the excess supply of onions and other vegetables promoted by PADRAS, ADRA contacted ACA to carry out a study and provide recommendations on future programming vegetable production more in tune with market demand. ADRA has implemented major recommendations of the ACA study.

There has been a substantial increase in production of the main food crops with which the PADRAS project has been working. Further increases in farmer income from these crops will require improvements in the way farmers market these products.

The challenge is therefore to foster a harmonized cross border approach that fosters sustainable exploitation of natural capital for production and marketing of high value and value-added products to provide high returns to land and labor for smallholder farmers enabling them to break away from poverty.

In the view of the Evaluation Team, ADRA should help communities to repair and maintain the roads which allow access to markets for their farm production through food-for work (FFW) programs.

The Evaluation Team recommends that

- (i) ADRA should meet with CLUSA to learn techniques it has been teaching farmers to improve marketing and to increase their income from their farming businesses. ADRA might want to include some of these approaches in a second phase of the PADRAS.
- (ii) An increase in animal traction, bicycles and other means of transportation will facilitate farmers' ability to transport and successfully market their products. ADRA should do whatever it can to assist farmers in making these changes, including direct provision of loans and linkage of farmers to other sources of credit.
- (iii) With the improvement in the road from Siguiri to Bamako, ADRA and USAID should encourage farmers to market a higher percentage of

their production of mangoes and other products to Mali and through Mali to neighboring countries, to take advantage of better prices available in regional and international markets.

- (iv) ADRA should enter into conventions with Enterprise Works (EW) to help cashew producers to sell their cashews directly to consumers.
- (v) ADRA should investigate closer ties between vegetable producers and SAG for bulk marketing and contract farming.

4.1.6 Storage

Farmers have adopted the improved granary storage technology by ADRA although the technology is yet to reach some of the communities. An experienced farmer from an old man who tried to understand the system and to verify the technology by ADRA, did a comparison. Ten bags each of rice (800 kg in each case) were kept in the traditional and improved system for 4 months. While there was no loss in the improved granary, 25 kg (3%) was lost in the traditional crib. This trial confirms the new storage technology introduced by ADRA reduces storage losses to rodents and humidity.

The Evaluation Team recommends that at least one improved granary should be built by PADRAS in all villages, preferably in a location by the road so that it is visible and accessible to non-participating farmers and other travelers. The person on whose property the granary is built should also be provided with a pamphlet in the local language for distribution to those interested in building an improved granary of their own.

The improved granaries substantially reduce damage from rodents and humidity; however, despite the inclusion of organic insect repellents in their construction, these granaries are not effective in preventing damage from insects. Pre-harvest infestations of insects before storing in granaries often lead to severe losses of stored products to weevils if more effective preventive measures are not taken.

Notwithstanding USAID policy on the use of commercial pesticides for food crops, crop protection chemicals like *Phostoxin* have minimal effect on the environment or on consumer health, require only minimal training and surveillance, and are widely used worldwide to protect store products in warehouses and during shipping. Products needing such protection include maize, groundnuts, rice and sorghum.

The Evaluation Team recommends that farmers should be trained in and encouraged to use crop protection chemicals (phostoxins) for stored products to help improve the shelf life and quality of these products.

4.2 Vegetable Production

Although some of the groups existed before PADRAS, the interventions by PADRAS to provide credit for improved seeds, fencing, hiring labor and digging wells; training in new technologies and provision of credit has allowed the community to increase vegetable yields and production dramatically. Most of this production takes place in areas with access to water during the dry-season, the time of the year when farm production and hence farm income was lacking in the past. However, the Team was informed that PADRAS' intervention has resulted in the production of vegetables all year-round in and around Siguiri town for the local market. Expanding year-round production would provide a dependable supply of vegetables needed by the commercial mining company SAG and small artisanal miners who now supply their needs from the market in Mamou.

PADRAS' intervention in promotion of dry-season vegetable production has helped minimize disruptions to family life by offering a profitable alternative to gold digging to women who in the past have had no alternative except to spend months at a time away from their families to earn some income during that season of scarcity. Low-lying land used for dry-season vegetable-gardening is generally used for rice during the main season. The main determinants of yield are soil fertility and soil structure, availability of water and good quality seeds. It is clear to the Team that if chemical fertilizers were available to the household, some of the manure and compost now being used on food crops in exterior fields, could be redirected to improve the fertility of the soils used for the production of high-value vegetables.

The Team agrees with the MTE recommendation on the need for reliable supply of quality seeds and improved marketing for the bulk of the vegetable crop, which is produced for the market rather than for home-consumption.

The Team observed that early damage of leaf-eating insects contribute to severe yield loss; in some cases losses are so severe that it can result in the loss the entire crop, leading to severe economic losses. The problems with insect damage are especially serious in the nursery stage of vegetable production and could reach a threshold level where all profits from the crop are removed before the crop can even be planted. This situation makes the use of low-doses of insecticides imperative.

The Evaluation Team recommends that ADRA should link up with the Agricultural Research Institute and the Plant Protection Service of the Ministry of Agriculture to recommend effective and appropriate insecticides to control pre-nursery insect infestations on leafy crops when a threshold level is reached. Furthermore, vegetable gardeners need to be trained in the application and storage of the low doses of pesticides required to control insect damage in the nurseries for their gardens.

The Team further recommends the training of vegetable gardeners in the application and storage of the low doses of pesticides required to control insect damage in the nurseries that are the basis for most production from their gardens.

The gardening groups are pleased with the results obtained from improved wells funded by the Canadian High Commission in Guinea and ADRA International, but are unaware of the cost of building them.

We recommend that improved wells should be built in all market gardens where they are required and are appropriate, and farmers should be made aware of the cost of such wells so that they can look for alternative financing to build additional wells as needed.

There is an opportunity being exploited on a small scale by women engaged in market gardening to integrate production of seedlings of mangos and cashew nuts. (It should be noted that production of these types of seedlings is already planned for 2005 as part of the strategy to produce community forests seedlings.)

To further improve a sustainable income generation, the Evaluation Team recommends that some vegetable gardeners be encouraged to apply the skills learned in making nurseries for their vegetable gardens to the production of seedlings for mangoes and cashews. Both of these products are high in value and are in high demand.

Gardeners should also to be encouraged to produce off-season groundnuts seed and for their haulms which can be used most effectively in fattening sheep for major festivals. Animal fattening (embouche) will help generate income for additional purchases of food and for other purchases improving family welfare. (It should be noted that some funding has been obtained from UNDP for groundnut production.)

The Team recommends a new dual-purpose groundnut (**UGA 2**) and rosette-resistant variety jointly developed by ICRISAT and the University of Georgia.

4.3 Petty Commerce

The Team applauds PADRAS for the successful implementation of the micro-credit scheme and the high recovery rate of the loans. The Micro-credit Coordinator and the loan monitoring team have done an excellent job.

Members of the groups have benefited substantially from their loans, but in almost all cases there has been no increase in the size of the groups. In addition, most groups have established social funds to meet emergency needs of their members, but some groups have also established group loans funds of

their own (in addition to the ADRA lending program) and are using these funds to make loans to their members, at higher rates of interest. Crédit Rural de Guinée (CRG) will soon be opening *caisses* (rural credit cooperatives) in the Siguiiri region.

To the extent that resources allow, ADRA should encourage the groups to admit additional members until reaching a group size beyond which the group would become unmanageable. Additional groups should be formed where group size becomes unmanageable, as is already being done in some places.

The groups should be encouraged to change their social funds to loan funds and to expand existing group loan funds at the fastest rate prudently possible to provide additional loans to their members from resources generated by the group itself. This mechanism will strengthen the groups and could form the basis for continued operation of the credit program after the end of ADRA's involvement.

ADRA should explore the possibility of merging its program with CRGs expansion into the Siguiiri prefecture.

4.4 Inflation and the Credit Component

The Evaluation agrees with the clients that inflation has significantly increased in recent months. Some prices have doubled in the past year, but the most credible estimates are in the 30+ percent range, close to 3% per month. Inflation at this rate, particularly when it is a new phenomenon, puts severe strains on all actors in the economy. ADRA has had to increase loan sizes for the purchase of draught animals but has not done so for the bulk of loans financing food crop production.

We recommend that for the remainder of the program ADRA increase the loan amounts for all types of loans so that purchasing power of these loans for acquiring goods and services is reestablished in real terms at levels initially selected when the credit program began.

We further recommend that in the interest of facilitating the possibility of merger or some other form of future collaboration with Crédit Rural de Guinée (CRG), ADRA should raise interest rates with immediate effect to charge the same rates as CRG for the same types of loans.

Subsequently, in a program associated with a new DAP, purchasing power of loans should be maintained in real terms by periodic readjustment taking into account changes in cost of the principal items being financed and ADRA should follow changes in rates when these are made by CRG.

4.5 Literacy education

Fieldwork confirmed great interest among participants in literacy training. Many participants had learned to read and write as a result of this training, although some had forgotten due to ADRA's inability to provide follow-up training and access to reading materials in the local language. Many participants expressed satisfaction from simply learning to sign their own name; their ability to sign their name has contributed greatly to their self-esteem and obviated the often-public humiliation of having to "sign" with a thumbprint. Participants are satisfied with what they have learned but would like further training.

However, the Evaluation Team observed that the level of literacy remains unsatisfactory despite the best efforts of PADRAS' literacy program.

High priority should be given to members of the leadership of organizations and integrated with training designed to improve organizational governance.

The Team recommends that the initial courses should be attempted to teach all participants how to sign their names which increases the dignity of the person even if full literacy is not attained.

Initial literacy courses should be followed up with refresher courses.

Additional access to written materials in the local language should be encouraged, including materials from sources other than PADRAS (such as the reproduction of pamphlets prepared by SNPRV and other projects having similar approaches to that of the PADRAS project).

4.6 Governance

The Evaluation Team observed that none of the groups surveyed indicated any change whatsoever in its leadership despite the fact that some groups have been in operation in collaboration with ADRA for as long as 4 years. It also observed that very few groups had incorporated new members, even in the case of groups whose size was relatively small, and that in many cases there were others interested in joining, without any action reported on their inclusion. (However, the existence of multiple groups engaged in the same activity is the result of splitting groups which had become too large. There has also been changes in the leadership of some groups where leaders have been caught embezzling. There has also been some attrition in groups where repayment problems have emerged.)

The Evaluation Team therefore recommends that the Conseil d'Administration (CA) should be elected every two years (with a possibility of re-election to the

same position for a second term only). ADRA should institute a culture of elections.

Rotation of leaders to new positions and the incorporation of new members to the CA should be encouraged.

Groups should be encouraged to take in new members to replace those who leave and to grow to a size which balances effective group management with the desire of non-participants to take part in the efforts and benefits accruing to group membership.

ADRA could benefit from discussions with CLUSA on governance issues based on its experience with producer groups.

4.7 Partnerships, Client Relations and Host Country Linkages

We commend ADRA for the vigor and effectiveness with which it has pursued the development of appropriate partnership with their major stakeholders. These partnerships have made effective use of existing local capacity to address those areas complementing the core components of the project managed directly by PADRAS.

PADRAS' partnerships with other institutions have enhanced the overall success of the program. Sub-contracting other local NGOs that have comparative advantage over PADRAS to train farmer groups makes effective use of resources and is an approach worth pursuing in future work. PADRAS' partnerships include good relationships with the Government of Guinea and its regional, prefectural and sub-prefectural levels.

The link with the rural radio station is helping to educate other non-ADRA farmers. Radio is an efficient method of technology dissemination and diffusion. Partnership with CRAB, IRAG and CCS has helped PADRAS to secure improved seeds, trained farmers as seed producers, and the extension of technologies to the participating farmers. The partnership with RGTA has been effective in teaching a limited number of farmers, labor-saving plowing techniques and the application of ox-traction to new types of farm operations resulting in considerable reduction in labor input, allowing farmers to increase food availability and farm income by planting a larger area to food and other cash crops and raising yield as a result of better done and more timely crop operations.

The Evaluation Team recommends that ADRA should continue with existing partnerships and should openly seek new partners, including those in the private sector, particularly, agro-input suppliers (seed, fertilizer and pesticide dealers) as

well as Government departments (SNPV, etc, in addition the current partnership with SNPRV), NGOs and other development institutions.

4.8 Monetization of commodity imports

ADRA entered into a collaborative agreement with Africare and OICI for the monetization of Title II commodities in Guinea. Africare is the lead monetization agent and fills the role of sale agent on behalf of all three Title II cooperating sponsors. This activity has helped address an increasing demand for vegetable oil in Guinea, increase availability of vegetable oil in and around Conakry, as well as generating the local currency necessary for the implementation of PADRAS.

In collaboration with Africare and OICI, ADRA should immediately commission a study of the oil market focusing on the wholesale and import markets to have a better understanding of how the market works, assessing the degree of oligopsony in the market, and the degree to which monetization sales contribute to the promotion of a level playing field, and how to maximize revenues from oil sales.

ADRA should request support from USAID to finance the oil market study. It should request additional support to develop internal expertise in monetization and oil marketing in lines with FFP guidelines on the need for in-house marketing expertise within CS' organizations.

The consortium should consider the impact of the deteriorating political situation, the increasing seriousness of inflation and the overvaluation of the Guinean franc at the official rate. It should change procedures for monetization to maximize revenues: elimination of maximum bids, tendering in local currency and charging 3% per month interest in local currency on deferred sales.

The consortium should consider dropping maximum bids while retaining minimum bids sufficient to cover commodity costs in line with FFP guidelines.

4.9 Monitoring and Evaluation

In an innovation systems approach, it is essential to have a means of quickly determining and explaining what works, and what does not, not only within the Team, but also between the teams so that they can avoid pitfalls and benefit from the success of others.

ADRA set up a monitoring and evaluation system to monitor the performance of the program activities through process measurement and achievement of results. The Evaluation Team agrees with the mid-term evaluation observation that the Monitoring and Evaluation Department set up a very clearly defined indicators

that were relevant and fairly simple to monitor. In the view of the Evaluation Team, the Department made a lot of progress towards achieving its targets.

The Evaluation Team was also satisfied with the action taken by PADRAS on the recommendations of the mid-term evaluation to arrange additional training for the staff working in Monitoring and Evaluation Department

4.10 Exit Strategy

One of the most important recommendations of the MTE was the need for ADRA to consider an exit strategy and prepare the clients accordingly. This is extremely important in order not to leave the clients in a lurch when PADRAS is terminated.

With only one year to the end of the Project, not much progress has been achieved toward preparing the exit strategy. The Terms of Reference (ToR) for the Consultant was written but the actual hiring of the consultant was delayed because of the arrival of a new Country Director, who is participating actively in the design of the Exit Strategy.

The Evaluation Team recommends that with the arrival of the new Country Director, ADRA should consider the Exit Strategy as a priority before the end of the project. If a new DAP is contemplated, the Exit Strategy should be part of that strategy. If it is determined that no new DAP will be forthcoming, the urgency of completing the strategy will be increased.

4.10.1 Alternatives for Consolidating Agricultural Technologies:

Options to be considered for food production and vegetable gardening groups include:

1. Leaving independent groups each being left to manage its own affairs;
2. Networking groups so that groups are able to provide some mutual support perhaps with the assistance of small central advisory office or resource center.

The consultants recommend the second alternative if funding can be found for building the network and then supporting it. This approach will be easier if a new DAP is funded and several years are available to develop the strength and viability of the groups and networks of groups. A greater focus on group marketing is also needed to provide a *raison d'être* for group cohesion and networking among groups. Under either alternative, governance issues discussed elsewhere in this report need to be addressed.

The messages on technologies need to be changed, in the last months. The value of small amounts of chemical fertilizer in certain crops in conjunction with

the techniques already promoted by the project needs to be recognized and information on its use in food crops needs to be diffused. If approval can be obtained from USAID, the value of crop protection chemicals like Phostoxin and of other pesticides in controlling insect attacks needs to be recognized by PADRAS and messages gotten out on their contribution to protecting gains obtained from other parts of the technological packages on crop production, crops storage and vegetable production already being promoted by PADRAS.

Any exit strategy needs to understand that no one can take away what farmers and vegetable gardeners have learned. Thus, regardless of what strategy is adopted, PADRAS and its staff and USAID can reflect on the positive and permanent contribution of the project to farmer knowledge of new technologies which improve their availability to food and access to its purchase and the purchase of the other items important to family welfare. These acquisitions will remain regardless of which strategy is adopted.

4.10.2 Alternatives for Consolidating the Microfinance Program:

Unlike other aspects of the project, PADRAS' credit component cannot survive without a viable exit strategy. (It should be noted that this challenge is not unique to PADRAS but is also faced by the credit component of Winrock's PEGRN project at its close.

Two main options are:

1. Establishing an independent successor microfinance unit as a successor organization to the credit component of the current program; or
2. Developing some sort of partnership with Crédit Rural de Guinée, which is expected to expand its operations into Siguiri prefecture soon.

If the first option is to be pursued, Final Evaluation Team proposes that:

- Interest rates should be raised with immediate effect to a level thought to be sufficient to allow operational self-sufficiency and to support continued activities by PADRAS microfinance staff in a new independent institution;
- USAID should leave loan funds currently being managed by PADRAS transfer them for use as loan funds for the proposed institution;
- An ownership model such as that adopted by CRG in its transformation from a project to a private financial company could be considered;
- Groups should also be encouraged to change their social funds to loan funds and to expand existing group loan funds at the fastest rate prudently possible to provide additional loans to their members from resources generated by the group itself. This mechanism will strengthen the groups and could form the basis for continued operation of the credit program after the end of ADRA's involvement.

However the Evaluation Team favors the second option and recommends that:

- ADRA explore the possibility of merging its program with CRG's expansion into the Siguiri prefecture;
- To this end, interest rates and operational procedures should be made compatible with those employed by CRG, starting with immediate raises in interest rates to those charged by CRG for similar types of loans.

The Team concurs with USAID/Guinea's assessment that advocates for a more uniform sustainable, long term and cooperative-based microfinance system, and finds the second of the two alternatives to be more closely in line with goals being pursued by USAID in its support to microfinance programs.

4.11 Future Directions for ADRA's Program

A. *Geographical Expansion of the Program*

There is a tendency for development institutions to propose geographical expansion or redirection of efforts before projects impacts are fully incorporated by initially targeted communities. Despite the remarkable advances made, food security and malnutrition still remain the most critical challenges facing the semi-arid regions of Siguiri.

The Evaluation Team believes and strongly recommends that the geographical focus should be maintained on Siguiri Prefecture.

The Team also sees the need for scaling-up and scaling-out of technologies and the inclusion of additional groups within the originally targeted communities and for the incorporation of new communities in the same geographical area.

The Team believes that the results achieved to date indicate that future focus should be directed toward income-generating activities which have a positive impact on food availability and general family welfare. The future focus of production of food crops should be both 1) for the on-farm consumption directly as food and 2) for the marketing and sales of these same crops. This approach will increase food availability but, more importantly, will raise family income and access to food through purchases of need foodstuffs (particularly fish and leguminous crops) out of family cash reserves.

B. Tree Crops

The Siguiri prefecture has a very high potential for the production of mangoes, cashews and date palms. All evidence available to the Team have shown that tree crops such as cashews, dates and mangoes have a high potential as income-earning crops, trees producing them thrive in the region, and face strong demand in domestic, regional and overseas markets accessible to farmers in the region.

The Evaluation Team recommends that PADRAS immediately start encouraging the establishment of new orchards and, during the establishment phase, should encourage farmers to intercrop with food/commercial crops such as maize, peanuts, sorghum and cowpeas between the young trees. This intercropping will assure rapid and cost-effective development of the trees crops as well as the long-term sustainability of soil fertility.

During the early establishment and late vegetative stage of tree crop development, small amounts of chemical fertilizers will favor the development of the young trees and speed their entry into fruit production.

ADRA should enter into conventions with Enterprise Works (EW) to help cashew producers to sell their cashews directly to consumers.

C. Integration of Small Ruminants, Poultry, and Bee-Hives

Potential exists for farmers to invest in small ruminants, particularly for their sale at the time of major feasts (*Tabasqui*, etc.). Expansion possibilities also exist for poultry, particularly guinea fowl, ducks and others not susceptible to New castles. A joint production of rice production and fish (tilapia) is already being practiced successfully elsewhere in Guinea and is worth experimenting it. In addition, honey-harvesting and production is already an important activity in remote communities served by the PADRAS project and is being successfully promoted in the PEGRN area.

ADRA should promote the integration of small ruminants into the farming system and should encourage the fattening of sheep for major feasts like *Tabasqui*. ADRA should promote the production of poultry varieties not affected by Newcastle's disease (guinea fowl and ducks) in the project region.

Joint production of tilapia and rice should be tried on a pilot basis in the basis in Siguiri prefecture with the support of the PPGF aquaculture project.

Conclusion

In conclusion, the Evaluation strongly believes that the best way to break the poverty cycle in the region is the cultivation of high-valued tree crops intercropped with food/leguminous crop during the establishment phase. This is to ensure long term sustainability of the soil and the agro-ecology resilience and help the people grow their way out of poverty

The integration of livestock, "the walking wealth" of the dry regions into the system will help increase income, provide a source of protein source, and bring new hope to the people.

D. Labor-Saving Community Infrastructure: (Grinding mills, huskers and boreholes)

Women and children lose an enormous amount of time in husking grain, shelling groundnuts, pounding grain, and carrying water for their families. Interviews with community leaders and women involved in these tasks reveal that the community is prepared to pay for the cost of grinding mills and dehusking machines if PADRAS is able to finance their initial purchase directly or to arrange finance with an external financial institution.

The Team recommends that ADRA should look for partners such as SAG and major development investors/partners to make boreholes in targeted communities.

ADRA should also consider financing additional pilot interventions in conjunction with its credit program for the acquisition and operation of grinding mills and dehusking machines in order to free up labor of women for more productive tasks and to facilitate school attendance by children. One pilot will start this fiscal year with funding from ADRA International and UNDP; additional funding should be sought and other approaches tried for filling this felt need of the community. ADRA should also consider linking community groups or entrepreneurs to financial institutions like Crédit Rural de Guinée (CRG) to finance such equipment.

Chapter 5. HIGHLIGHTS OF HUMAN INTEREST STORIES

“Thanks to God, thanks to ADRA, now our women can stay with us”—Mr Bala Traouré of Namoudouko village of Banko Sub-prefecture

—Broken marriages restored because of ADRA’s Interventions

The Siguiiri Prefecture, where PADRAS activities are concentrated, is an important gold mining area in Guinea. The Société Ashanti Goldfields (SAG) is engaged in the mining of gold in the prefecture. Besides the deep-shaft mining, the local people engage in artisanal mining of the gold (gold digging) with simple implements, despite Government prohibitions to this kind of small-scale mining.

The digging of gold was the main source of cash income during the dry season to most of the families before ADRA’s intervention. Most of the people interviewed admitted that gold digging is a risky business. The rough estimate is that one out of 10 succeeds in finding enough gold to make this “dirty and dangerous” work worthwhile. (Two young women reported that the working capital for their petty trade business was derived money saved during a few months work in the mines.) Environmental hazards and illness are associated with the gold-digging business, which involves digging deep shafts without proper reinforcement of walls and roof or working waist-deep panning for gold in filthy water. Some miners die when the roof or shafts cave in. Meter-wide open shafts of abandoned mines become death traps for people and animals. The Consultants stumbled on such shafts within half a kilometer of the hotel in which they stayed in Siguiiri; they also saw shafts on the outskirts of one of the villages (within a few meters of the last house), endangering the lives of toddlers, other children and even adults. Living conditions in the mining camps (sleeping places, water and food) are miserable. High population density and the close proximity inhabitants are thrown in to encourage diseases of all kinds, including waterborne diseases, tuberculosis and HIV/AIDS.

The most serious consequence of this gold-digging activity is its impact on the family. The extended emigration of young women who often work in the mines for months at a time, leads to the broken of marriages and deficient care of children. Many men reported losing their wives to other miners. Not staying at home to take care of their older children, women often take their small babies with them to the mines, and many of them lose their babies as a result of exposure to the harsh conditions prevailing in the mines.

Gold-mining also requires more physical energy than women are called upon to expend in their work on the farm. Women work waist-deep in muddy water washing gold-bearing sands to separate mud and sand from minute amounts of gold dust, left in the bottoms of the calabashes used for gold-panning. Women return to their families bringing back with them all sorts of illnesses, including HIV/AIDS.

With the help of ADRA's interventions, women now have alternatives available to them to earn money during the dry season. With the training they receive from ADRA and with the finance obtained from its microfinance component, women are able to earn a decent living in vegetable production and or in petty trading. While many of the younger men and unmarried women still go off to the mines to make their fortune if they can, married women with children now are able to earn enough money from vegetable production and petty trading so that they can afford to stay home to take care of their family, especially the children. These activities provide women with sustainable livelihoods, increase the stability of families, and lead to improved nutrition and greater welfare of participating families.

Women assisted by PADRAS activities support their husbands by cooking for them and their children and contribute financially from what they earn to meeting other family expenses. As a result of project interventions, family intimacy and the relationship among its members has improved. Both men and women report being happier. Women are happy because they now have money of their own and are now able to help their husbands with the cost of maintaining the family and to contribute to school and other expenses for their children. They are also able to save some money and to make investments in small ruminants. They contribute to improving the family's diet both directly through the use of some of the vegetables they produce and indirectly through the purchase of dried fish, cooking oil and other food items to increase the availability of protein and fats so lacking in the rural diet in the region.

The men have also secured loans and training from ADRA that have led to enhance their crop productivity and higher income from product sales. Most of the men interviewed have increased their crop yields, remaining with a surplus to sell for cash, even after retaining increased amounts for family consumption. More food is available directly through farmers' ability to put more land in production as a result of animal traction and training in its application to weeding and other operations traditionally done by hand, mostly by women. Techniques learned from ADRA contribute to higher yields and also increase production of food crops. Male farmers assisted by the project showed the Evaluation Team new buildings built with the proceeds from the sale of some other additional crop production. The distinction between food crops and cash crops has become blurred as surplus production increases food directly available for family consumption and indirectly contributing as product sales to improve family welfare by meeting non-food needs for goods and services and the cost of protein-rich foods like dried fish, which have to be bought.

A typical example of the impact of the PADRAS activities is of a Blacksmith, Mahamadhi Coulibaly, who, through the training in repairing and making agricultural farm implements by ADRA, has doubled his yearly income from FG 350,000 to FG 750 000. Mr Coulibaly stated that the community has benefited

from his skills and that his prices are lower than those for similar implements bought from other areas. He currently owns a bicycle and plans to buy an oxcart which will provide him with additional income through the provision of transport services to other members of the community. Mr Coulibaly and his family have lost interest in gold-digging because his income from his trade is sufficient to maintain the family at a good standard of living without risking his health and safety in mining gold.

Another participant in the PADRAS project, Mr Bala Traouré remarked, “Thanks to God, thanks to ADRA, now our women can stay with us”.

Appendices

Appendix 1

FINAL EVALUATION - SCOPE OF WORK FOR ADRA/GUINEA'S TITLE II FOOD PROGRAM

November, 2004

I BACKGROUND

A Introduction

It is a public policy that the United States Agency for International Development (USAID) annually reports to Congress on the impact of Title II food aid by assessing progress toward food security in each country receiving United States Government assistance (section 407(h) of P.L. 480).

The Adventist Development and Relief Agency (ADRA) is a cooperating sponsor (CS) for many Title II Food Security Program recipient countries around the world. One of the recipient countries with a program that has reached its end of project life is Guinea. This means, according to the original agreement, it is time to conduct a final evaluation. Therefore, the Evaluation Director at ADRA Headquarters (ADRA/HQ), following the guidelines given by USAID's BHR/FFP and with the understanding of USAID Guinea Mission, prepared a comprehensive final evaluation (FE) scope of work (SOW) for ADRA/Guinea.

Hence, ADRA/HQ in cooperation with BHR/FFP, ADRA/Guinea and USAID Mission, developed this FE SOW for ADRA/Guinea. ADRA believes that this SOW is comprehensive and covers all the major areas that ADRA's Title II Food Security Program activities for FY 2000 - 2005 were and are addressing in Guinea.

ADRA has sent you this SOW ahead of time so that BHR/FFP and the USAID Guinea Mission staff study the manuscript, and if need be, make the necessary revision before the FE starts. In addition, ADRA/HQ expects that ADRA/Guinea field staff will put together the necessary data to respond to all the items listed in this document at the time of the FE. Such preparedness, it is hoped, will significantly reduce the time and cost of the FE.

B ADRA's Final Evaluation Approach

ADRA's final evaluation will be a joint activity with its local partners, and other stakeholders. ADRA's participatory approach to its final evaluation is expected to encourage problem analysis and development of solutions by its program staff and partners.

The program design has already established clearly stated objectives, valid indicators and realistic methods for measuring change over the life of the program. The program has been using baseline and monitoring and evaluation data in tracking incremental change in its target population. All these will serve as the foundation for documenting ADRA's program achievements.

In addition, ADRA's final evaluation recognizes the achievements of the Title II program for the target population. Furthermore, it will take notice of its individual Title II program innovative activities and promising practices will be shared across ADRA's global programs.

II PURPOSE OF THE EVALUATION

Title II programs focus on two themes. The first is alleviating the causes of hunger, particularly by increasing agricultural productivity, and the second is improving the natural resources management.

The prime purpose of the final evaluation is to address three crucial issues. These are: effectiveness, sustainability, and lessons learned.

In the area of effectiveness the FE will look at the extent to which the Title II activities met the basic Food Security needs of the recipient communities as stated in the goals and objectives of the Title II project.

Likewise, the FE will assess the target population's competence and prospects in terms of continuing sustainable and effective Food Security activities on its own for the foreseeable future.

Additionally, the Final Evaluation will seek to show what lessons, if any, positive and/or negative, intended and/or unintended, are learned. It is expected that such lessons will benefit ADRA's own current and future Title II projects around the world. Furthermore, if and when applicable, the gained knowledge will be disseminated to all other organizations who deal with Title II Projects.

III METHODOLOGY

The methodology shall include the following:

Develop a Framework of Analysis - the evaluation team, taking into consideration this SOW, should develop a framework for analyzing program delivery based on the information collected during the literature, desk, and field reviews.

Review Literature - First the evaluation team should conduct a literature review of selected documents to identify Title II Food program key issues. The evaluation

team should review the information available at ADRA/HQ and FFP. In addition, the team should obtain essential data regarding ADRA's own Title II programs by reviewing the annual reporting documentation and the survey results that ADRA/Guinea office had carried out as a follow-up to the original baseline survey.

Review Midterm Evaluation Report - The evaluation team should review the Mid-term Evaluation (MTE) report and find out to what extent are the mid-term findings and recommendations were adhered to since the post MTE period of the life of the project.

Interview Officials - Interview officials involved with Title II at USAID/Washington/Regional Office in Dakar, Senegal, ADRA/HQ, USAID Mission, ADRA field offices, other donor organizations, and host country public and private agencies.

Final survey - The evaluation team should use the Title II final survey results.

Collect Rapid Data - Third, the evaluation team should use some rapid data collection technique of its own. This could be accomplished through focus group discussions and key informant interviews with customer beneficiaries and local implementing staff.

In the field review, the team should examine the specific goals, objectives and activities of each component of the program as stated in the official document and formulate key questions for each component as it proceeds in the evaluation. The questions will guide the team to place each component in the wider perspective of the Title II program's major goal of improving household food security among the target population.

IV CURRENT ADRA GUINEA TITLE II PROGRAM GOALS

Goals

Projet d'Augmentation Des Ressources Alimentaires de Siguiiri (PADRAS) is designed with the overall goal of improving the level of food security within the Prefecture of Siguiiri in Upper Guinea. PADRAS addresses two areas: availability and access. The greater programmatic focus is on enhancing food availability in all sub-prefectures in Siguiiri.

Objectives

In doing so PADRAS will promote the following activity components:

- 1) Community Mobilization - A vital component of both impact and sustainability of PADRAS will be the development of local capacity to identify and prioritize food security needs and feasible strategies to

address them. Over the 5-year Life of activity (LOA), approximately 280 groups will be formed (120 Farmer's Groups; 160 Women's Groups). Each group will be comprised of between 20 and 30 members. Total program coverage will be approximately 7,200 households.

- 2) Agricultural Technical Assistance & Training - Agricultural technical assistance and training will be provided to farmers. The program will provide assistance in the following areas of intervention
 - a) Production of legume forage crops;
 - b) Natural Resource Management – Best Management Practices;
 - c) Practices for enhanced fertility renewal in cropping systems;
 - d) Promotion of Animal Traction (including training for oxen and operators);
 - e) Production and multiplication of improved seeds;
 - f) Storage Loss Reduction
- 3) Micro-Enterprise Activities - Increased access to credit to program clients will be used to address both access and availability components of food security. Three types of financial services will be made available to PADRAS clients: Loans in cash, loans specifically for the purchase of oxen and plows, and group savings. ADRA proposes to disburse a total of 30,187 loans over the 5-year LOA. Lending methodology will be group lending.
- 4) Monetization of Commodity Imports - This activity will address an increasing demand for vegetable oil in Guinea, increase availability of vegetable oil in and around Conakry, as well as generate the local currency necessary for the implementation of PADRAS.

V DETAILED EVALUATION GUIDELINE FOR GUINEA TITLE II PROGRAM OBJECTIVES AND GOALS

All the above goals and objectives must be analyzed on the basis of the following seven principles. The first is starting up the program which includes: monetization and support of PL 480. Second, the timely implementation of activity schedules. Third, integration of intra and inter program activities. Fourth, a program monitoring and evaluation mechanism that is effective and efficient in collecting and analyzing data for an ongoing intelligent decision making. Fifth, incremental development impacts that correspond to the vitality of the program. Sixth, sustainability of the current/ongoing beneficial activities after the expiration of the program. Seventh, the overall program management.

A. Starting up the Program

1. Monetization - The process of monetization must be seen in the context of the amount of funds generated, end-use of the funds, the supply of food or sale itself, and its ability to develop local markets.

A. Cost - Benefit

- Taking into consideration the amount of funding available for programming as compared to the costs incurred in carrying out the monetization, is monetization still justified?

B. Target Community Use

- What are the specific uses of the foreign currency resources for Title II intervention?

C. Market Demand

- Given that monetization is justified, are there supply effects from monetization - e.g., the impact of the additional supply of food in the market, the effects from the sales process?
- What are other features of monetization that have value in the cost recovery operation?

D. Inclusiveness of the Market

- How did monetization contribute to the development of local markets?
- Did it broaden the market to include small-to medium-sized traders and/or those traders who traditionally may not have had access to commercial opportunities?
- What specific strategies were introduced by the program to strengthen local market capacity - e.g. reducing barriers to entry for smaller traders, developing appropriate payment plans, facilitating the movement of commodities into rural areas, etc.?

2. Support of PL 480 – section 202 (e) funding is an integral part of a Title II Food Program. Section 202 (e) is requested to complement and strengthen the program interventions and activities funded through Title II.

B. Activity Schedule

1. Scheduled activities - Activity schedule should begin with the program staff which is the integral part of Food Security program. A given delivery service is as good as its staff.

- What are the characteristics of program staff?
- What percent of the staff is paid and what percent are volunteer workers?
- What is the background of their organizational affiliation if any?
- What are their levels of effort -, e.g., hours per week - their agricultural activities or environmental duties, and their training regarding each intervention by topic and hours?
- Is the number of staff adequate for delivering the promised service?

2. Detailed implementation compliance - Food Security programs have detailed implementation plans or charts identifying key activities planned, their timing, person(s) responsible and the relationship between the planned activities and the objectives, performance indicators, and/or benchmarks established for the activity.

- Is every activity stated in the detailed implementation plan being carried out as planned in a timely manner?
- Do these activities take into consideration their cost-effectiveness?
- Are these activities the most efficient ways of delivering the service?
- To date, what is the likelihood that this program has attained or will attain its ultimate goals and specific objectives?

C. Integration of Activities

By nature, Food Security programs comprise many activities and components.

- 1) To what degree do all food security-related activities integrated with each other to work towards the same objectives and goals?
- 2) Are all components of the program set in such a way that they all complement each other to achieve the program's objectives and goals?
- 3) How is the program integrating its service or/and collaborating its service with that of other PVOs, donors, host government, with food security objectives of the mission, with non-food resources where applicable and ADRA's?
- 4) Is the current logistics plan producing the intended result?

D. Monitoring and Evaluation System

The Food Security program should have a clear monitoring and evaluation system that clearly and adequately gauges the performance of each indicator. In other words, the monitoring and evaluation should report on the program's level of success with verifiable records. In short, the monitoring and evaluation system should include specific measurement units, deal with people level effects and impacts and manifest clear links among program activities. The evaluation team must specifically address the following key questions on the program's monitoring and evaluation system.

1. Data Collection -

- Does the program, for every indicator, in all its activities, clearly identify - the type of data collected, the frequency of data collection, the methodology used, the population covered, key assumptions anticipated in the interpretation of data, and the personnel who collected, recorded and analyzed the data?

2. Data Utilization -

- To what extent were the monitoring and evaluation system results employed for adjusting the activity implementations of the program?

- Furthermore, how were the monitoring and evaluation data results drawn upon to track progresses related to annual monitoring and impact indicators?
- State the extent to which the program is using and supporting other existing data collection systems (i.e. government).
- Is data used to inform and help management decision-making?

E. Development Impact and Capacity Building

1. Development Impact - The core of this evaluation is to gauge the progress of this Title II program to its continuous and timely progress toward making a difference in the lives of the beneficiaries, especially through enhancing food availability and access.

- Are both goals of Food Security program, enhancing food availability and access equally working together in a complementing manner?
- Taking into consideration the first half of the program's life, is the program making impact on the food security of the participants?

2. Capacity Building - Explain the progress made in implementing the capacity strengthening and how this progress affects the program's sustainability plan as described in the DAP.

3. ADRA Organization

- What are the progresses made so far towards achieving the capacity building objectives, indicators and targets?
- What are the approaches and tools used to assess capacity? Discuss the appropriateness of the tools to measure change in capacity over the life of the program.
- Describe activities related to organizational capacity building within ADRA at HQ and in the field.
- State the evidences which indicate that the program has increased organizational capacity?

4. Local Partner Organizations

- State the program's effort in forming partnership with the local partners, and pinpoint which partners are the main participants in capacity building activities.
- Summarize the effect of this partnership on the overall capacity building both for ADRA and the local partner.
- Are there challenges which this program has faced in further advancing the capacities of its partners?

5. Agricultural Facilities

- What are the activities that are aimed at strengthening agricultural facility? Are these activities of the program appropriate and effective?

- How does the program assess the existing Agricultural facility? Are these reliable and dependable ways of assessing these facilities?
- To what extent are these facilities detrimental for improved agricultural productivity?

6. Training

- What are the training strategies, and their effectiveness? Are progresses being made towards meeting the objectives?
- How does the program substantiate that the training implemented has resulted in new ways of doing things, or increased knowledge and skills of the participants?

7. Farmer's Performance

- How did the program assess farmers' performance? Are they appropriate and effective for measuring change in the program time frame?
- Have the assessment results been used to improve the quality of services?
- What is the program doing to address the gaps between performance standards and actual performance?

F Sustainability

1. Sustainability refers to the capacity of the target population; local/national government or their agencies to sustain the achievements of the program covered under activity schedule above.

- What is the plausibility that the intended benefits of the activities and their impacts are sustainable as articulated in the DAP?
- What are the measures in progress to eventually secure cost recovery, financial commitment of partners, and capacity of government or NGO partners for continued activity management?
- To what extent is the local/national government a partner to this program?
- Do the local community and or the local/national government have a long range sustainability plan for this program? Discuss in detail your findings?
- What are the potentials for continued high yields and continued improved food availability and access?
- Are the groundwork for the exit strategy been laid with program staff and local partners in the program?
- What are the views of the target community about sustaining program services through alternative funding sources at the close of the program?

2. Unintended Outcome - Beyond this, the team should discuss any program activities that have positively or negatively affected the expected outcome so far.

G Title II Program Management

The evaluation team needs to assess the strengths and weaknesses of the management support systems which include: planning, financial management, information management, personnel management, supervision, training, logistics, etc. The aim is to identify specific ways in which the management support systems function well.

1. Planning

- Are there specific groups who are involved in program planning?
- Are the work plans submitted in the DAP on schedule?
- Does everybody involved in the program understand the program objectives including field staff and headquarters staff, local level partners, the community etc?
- Has a copy of the program's objectives and the monitoring and evaluation plan been distributed to all parties concerned?
- How much of the program monitoring data is used for planning and/or revising program implementation?

2. Staff Training

- Is there an adequate training program for the program staff? If so how effective is the process for the project staff in terms of continual improvement in the knowledge, skills and competencies including needs assessment, training methods, content of training and follow-up assessment?
- What are the mechanisms used to assess and monitor the trainee performances in new skill areas?

3. Supervision of Program Staff

- What are the processes utilized for the process of directing and supporting staff for effective performance of their duties? Make an assessment of supervisory leadership, methods, style, training, work planning and problem solving?
- Do the resources available in terms of the numbers, roles, and workload of personnel and frequency of supervisory visits appropriate for meeting the technical and managerial needs of the program?

4. Human Resources and Staff Management

- The team should analyze the program's personnel management system. In this analysis the team should include key personnel policies and procedures, job descriptions for all positions in ADRA headquarters, field program and with partners collaborating on the program.
- Depict the morale, cohesion and working relationships of program personnel, and how this impacts program implementation.

- What is the level of staff turnover in the program? How did this impact on program implementation. If there is evidence that this is a problem what are the current strategies for staff retention?
- Does the program have a plan for facilitating its staff's transition to other paying jobs when the program ends?

5. Financial Management

- Provide a brief analysis of the program's management and accountability of its finances, budgeting and financial planning for sustainability for both the program and local partners.

6. Technical and Administrative Support

- Explain the types and sources of external technical assistance the program has received to date, and how timely and beneficial this assistance has been.
- State the anticipated technical assistance needs of the program in the remaining life of the program.
- To what extent was the field program-support by ADRA's headquarters appropriate? Approximately how much time has been devoted to supporting this program?

VI. COMPOSITION OF THE EVALUATION TEAM

The evaluation team will consist of Dr Joseph F. Dorsey, JR an independent consultant and team leader; Dr. Joseph Jackson Adu-Gyamfi, an independent Consultant; Dr. Solomon Wako, Director of Evaluation ADRA/Headquarters; Stephen Amoako, Programs Director ADRA/Guinea; Ahmadou Barry ADRA/Guinea Title II Project Director; Representatives of BHR/FFP Regional Office in Dakar, Senegal and USAID Guinea Mission; one individual from Central/Local Government Office and one Community Leader.

VII. CALENDAR OF EVALUATION ACTIVITIES

Arrive in Guinea	Nov. 26, 2004
Design of evaluation by Team Leader	Nov.29, 2004
Review of Documents	Nov.30-Dec1, 2004
ADRA/Guinea Evaluation Field Visit	Dec.2-10, 2004
Writing of the draft Final Evaluation Report	Dec13-15, 2004
Review of the draft document with ADRA/Guinea.....	Dec.16, 2004
Travel to USA (ADRA/HQ Team).....	Dec.17, 2004
Review of the draft document by ADRA/Headquarters	Dec.20-31 , 2004
Revisions of Final Evaluation Report	Jan 3 - 10, 2005
Final Evaluation Report due at ADRA Central Office	Jan.12, 2005
Report sent to USAID Washington.....	Jan14, 2005

VIII. REPORT FORMAT

The FE evaluation document will be written using the following outline:

Title Page.

The title page will state the name and program number, names and titles of consultants, and date and name of the document.

List of Acronyms.

Unusual or obscure acronyms should be identified at the beginning of the report.

Executive Summary.

The executive summary synthesis should be no more than two pages in length and will include: background of program, evaluation methodology, accomplishments and impact of the program, concerns and recommendations:

Table of Contents.

The table of contents should outline each major topic section, appendices, figures, maps, tables, etc.

Body of the evaluation.

The body of the evaluation report will include the following in sequential order:

The introduction and background: will include at a minimum: justification for awarding grant, goals and objectives of the grant, implementation methods, and the purpose of the evaluation.

Evaluation Methodology: The evaluation methodology will include at a minimum: description of data collection and evaluation sites selection processes.

Sustainability Issues: The section on sustainability issues will include sequential responses to the sustainability questions and issues outlined in this Scope of Work.

Findings and recommendations: The team should clearly spell out its findings both positive and negative (if any), and provide concrete recommendations to the program staff as to how to proceed in the final part of the program's life.

Results Highlight - Human interest stories related to some aspect of the program, supply a two page (maximum) narrative with supporting data, that may be used as a communication piece for ADRA or USAID to distribute or to post on the Office Webpage.

Appendices.

The appendices to be included will be at the discretion of the evaluation team. However, the appendices must include the scope of work, itinerary for the evaluation visit, list of individuals interviewed/surveyed during the evaluation, surveys and interviewer questionnaires, references cited, and maps. Additional appendices such as case studies, etc. may be included as determined appropriate by the evaluation team.

IX. BUDGET FOR EVALUATION

The budget for the FE of ADRA/Guinea's Title II program will be worked out.

X CITIZENS PRIVACY

A General Use of Data

ADRA/HQ considers it unethical for any member of the evaluation team to use information gathered from unsuspecting citizens during the evaluation assignment for anything other than the evaluation under study. Should viable reason present itself for using the information obtained for other purposes, then, ADRA/HQ must be consulted and prior permission secured. This must be adhered to, especially when the material is of a controversial nature and exclusively involves the private lives of the target population.

B Distribution of the Evaluation Document

The ultimate responsibility for gathering and disseminating information from all of its regional offices around the world lies within ADRA/HQ. Therefore, ADRA/HQ expects the evaluation team particularly the hired consultants, to turn to ADRA/HQ all the data and other information which were used as the basis of the team's final inferences.

It is ADRA's position that no evaluation is final until it is presented to ADRA/HQ, discussed with the consultants in an open manner, engaged parties have a clear understandings of all conclusions and any differing views are reached between the consultant and ADRA/HQ as reflected in the final document.

ADRA/HQ does not edit or change in any form or fashion the final report of the evaluation team without the Team's consent. In the event the evaluation team and ADRA remain to have a difference of opinion regarding the final report of the evaluation, ADRA distributes the document intact but will attach a letter to the report stating its own position.

Appendix 2

Itinerary for the Final Evaluation

Thursday 2030	November 25, 2004	Jeff leaves for airport in Miami
Friday 0700 1430 2050	November 26, 2004	Joseph leaves Accra Joseph arrives in Conakry Jeff arrives in Bamako
Sunday 0730 1330 1930	November 28, 2004	Joseph travels from Conakry to Siguiiri Jeff gets visa in Bamako Joseph arrives in Siguiiri
Monday 0735 1110 1415	November 29, 2004 198	Jeff leaves Bamako BKO; Residence Kome FCFA 140,000 w/ discount Jeff arrives in Siguiiri Design scheduling of mission and framework for analysis
Tuesday	November 30, 2004	Presentation of PADRAS (Achievements and impact). Selection of groups for interviews Meeting with Stephen, and Solomon to discuss logistics and finalize selection
Wednesday	December 1, 2004	Courtesy call to Governor of prefecture Start field work (Review documents in the evenings)
Thursday	December 2, 2004	Field work
Friday	December 3, 2004	Field work
Sunday	December 5, 2004	Field work
Monday	December 6, 2004	Meeting with USAID Ibrahim Camara/Steve Gilbert/Mariko Dramané
Tuesday	December 7, 2004	Meeting with USAID
Wednesday	December 8, 2004	Travel to Kankan
Thursday	December 9, 2004	Field work
Friday	December 10, 2004	End field work (12.00 noon) Review documents and interview project staff & other donors/NGOs); discussion of major findings with ADRA
Sunday	December 12, 2004	Travel to Conakry
Monday	December 13, 2004	Prepare findings, conclusions and recommendations
Tuesday	December 14, 2004	Discussions with ADRA/other donors in Conakry: WFP, ACA, SPCIA, CLUSA, Canadians
Wednesday	December 15, 2004	Debriefing USAID/ADRA Guinea
Thursday	December 16, 2004	Discussions with ADRA Stakeholders in Conakry (CRG, Africare,)
Friday	December 17, 2004	International travel for Consultants and ADRA/HQ team
Sunday	December 19, 2004	Consultants work on draft report:
Monday	December 20, 2004	Jeff has some computer &

Tuesday		December 21, 2004	health problems
	Wednesday	December 22, 2004	Consultants work on report
	Monday	January 10, 2005	Draft Report sent
	Thursday	February 3, 2004	Comments received from ADRA; revisions by consultants
	Monday	March 14, 2005	Final Report Sent
	Tuesday	March 15, 2005	Additional comments and corrections received
	Wednesday	March 16, 2005	Comment reviewed, Corrections made and Final Report Sent

Appendix 3 List and Assessment of Partners Contacted

List of partners contacted

1. The Bordo Research Station. Provides both research and farmer training in groundnut, rice, sorghum, maize and gm/cc production.
2. RGTA. Provides training and services related to animal traction.
3. EUPD. Has provided the literacy training to some 251 PADRAS groups, with a total of some 6,744 participants. Is also working on the elaboration of documents to help the participants retain their literacy skills.
4. The Seed Multiplication Center. Collects, cleans, purifies and disseminates good quality seed for the ADRA Program.
5. SPRA. Works with cattle, mostly in the branding and monitoring of animals. Wants to diversify into donkeys because there are more animals available, and they are less subject to theft.
6. The National School of Agriculture and Livestock-Raising. Provides agricultural training. Most ADRA employees working in agriculture graduated from this school.
7. The Rural Radio School. Programs messages supporting ADRA's work on a local radio station.
8. SNPRV. Part of the government extension services, SNPRV is negotiating to provide ADRA with extension services.
9. PRIDE GUINEA has been offering micro-credit training for the Program's staff.
10. ACA provides assistance on marketing issues, including problems in vegetable marketing encountered early in the PADRAS project.

List of potential partners contacted

1. Crédit Rural de Guinée (CRG) provides microfinance services in rural areas of Guinea and is expand into Siguiri during 2005.
2. SPCIA provides services related to cashew production and marketing.
3. CLUSA has provided assistance in governance and marketing to rural people in various parts of Guinea, including Siguiri including training in literacy skills focusing on the leadership of organizations.
4. Projet Piscicole de Guinée Forestère (PPGF) provides assistance for development of tilapia aquaculture with joint rice production in lowlands.

Assessment of Current and potential Partners

Input suppliers

Centre de Conditionnement des Semences (CCS)
Seed Conditioning Center

The Centre de Conditionnement des Semences (CCS) is a seed multiplication center. It collects, cleans, purifies and disseminates good quality and improved seeds for PADRAS. CCS has a laboratory for testing the viability of seeds (germination percentage) and for ensuring that the seeds meet the phytosanitary requirements (ie do not harbor any diseases or insects). CCS has an excellent set up for sorting out good quality seeds and a scale for weighing in-coming and out-going seed. PADRAS partnership with CCS has helped to increase yields of the basic food crops thereby enhancing Food Security. CCS is located within the perimeter of the Bordo research center but is a separate commercial entity. The team was not aware of contacts CCS may have with respect to distribution and sale of seed through input supply dealers.

Input Supply Dealers

Despite limitations on the time it had for observations in Siguiri town itself, the Team did attempt to assess the input supply situation in Siguiri to confirm information provided by respondents in the many groups interviewed. The Team Agronomist visited one shop in Siguiri and recorded the price of compound NPK fertilizer at FG 50,000 per 50 kg bag. There was no fertilizer in stock, which is not surprising since fertilizer distribution is not well organized in Guinea and when supplies do come in, dealers sell out in short order (based on discussions held by the Team Leader with major fertilizer dealers in Labé and N'zerekore in late 2003). In the past, fertilizer for food crops was obtained as an adjunct by farmers growing cotton who received small supplies in addition to the fertilizer for the cotton crop or who diverted part of the fertilizer for cotton to their food crops. Groups reported that seeds, particularly vegetables are usually but not always available and their quality is not guaranteed; some vegetable growers reported going as far as Bamako, Mali to purchase vegetable seeds before the advent of the PADRAS project.

USAID, NGOs and other partners, and Government extension staff and researchers

USAID

USAID: Because of other commitments, Ibrahima Camara, the project manager for USAID was not present during fieldwork. However, the Team Leader had interacted extensively with Mr Camara on a previous assignment which had included a visit to the PADRAS project and had discussed many of the issues

being covered in the current evaluation. Steve Gilbert from the FFP Washington bureau and Dramane Mariko from the Regional Office in Dakar participated in fieldwork and met the Team Leader for additional discussions in the evening and provided information by email relating to USAID monetization policies. The Evaluation Team met with John Mullenax, Agricultural Officer USAID/Guinea to discuss recent approval by USAID for the use of fertilizer in selected cases (although no specific requests have yet been made by ADRA) and need for low of levels insecticides to protect stored grain and to combat insect attacks in nurseries. The Team also made a presentation to Stephen R Morin, Team Leader for Natural Resources Management and the Leader of the Evaluation Team subsequently met briefly with Tom Crubaugh, Supervisory Program Officer.

NGOs and other partners

Radio Rural

Radio Rural is a Government-controlled radio network of 4 stations with AM and FM transmitters with coverage of nearly the entire country. The station is located in Kankan and also covers Mandiana and Siguiri prefectures. It has a 25-30 kilowatt medium-wave (in the 530-1600 megahertz band) transmitter which covers all corners of the region; it also operates a 3 kilowatt FM (87-108 megahertz band, line-of-sight transmission) in Kankan and a 600 watt repeater transmitter in Siguiri which covers most of the Siguiri region. (Community radios stations are springing up throughout the country with low-powered transmitters designed to cover local markets and tailor programming to the needs of the local community; a community radio station will soon be operating in Siguiri, probably with a 300 watt transmitter capable of covering Siguiri town and a radius of 30 kilometers from its transmitter site.)

Radio Rural's impact on the types of activities PADRAS has supported, started even before the project began. A number of the groups interviewed by the Evaluation Team reported their having formed in response to a nationwide campaign by Radio Rural encouraging the rural population to band together and form groups shortly before the initiation of the PADRAS project. Government authorities at the prefectural and sub-prefectural levels were also getting out the same message and continue to support the organization of rural people in their efforts to promote rural development.

As soon as the agreement between PADRAS and Radio Rural was signed, radio messages were prepared and transmitted which announced the project start-up and sensitized rural people to the existence of the project. The MTE noted the importance of Radio Rural in supporting group formation and in getting out other messages of interest to the project and to the rural people it supports. Radio Rural does its own internal surveys. Based on survey results and discussions with PADRAS, problems encountered initially were addressed and resolved.

Radio Rural prepares radio magazines, spots, traditional songs and other types of programming to get out messages agreed upon with PADRAS. For example, recent programming concentrated on the safe use of controlled burning to clear fields for planting (*feux précoce*) instead of late burning in the dry season which often leads to uncontrolled wildfires destroying biomass on huge tracts of bush not needed for farming. PADRAS' messages are transmitted during prime-time at 0800 and 1910 and 2200 just before or after death announcements and the news, which everyone listens to. Radio Rural transmits these PADRAS' messages many times a day, in some cases up to 10 times a day, many more than the three times a day called for (and paid for) in its agreement with PADRAS. (Based on a separate agreement ADRA's health project, Radio Rural transmits another set of messages related to health.)

Radio is an effective tool to get out the rural development messages. Radio Rural does its own listener surveys to determine the impact of its messages, making adjustments in its presentation where necessary. No survey on radio ownership has been done (though it would be worth doing). However, the Evaluation Team was told that radios are one of the first consumer items families identified as buying with increased earnings as a result of PADRAS' interventions. A rough estimate is that a little more than half the families have radios; better off families may have more than one radio in the household. The percentage of people owning radios is only going to increase in the future. Radio is an effective tool in getting out PADRAS' messages (even to rural areas not covered by direct interaction with staff). Radio Rural has proven to be an effective means of getting out messages of the type PADRAS has been getting out and new messages which it needs to get across in the future; small community radios also have a role to play in reaching ADRA's target population.

Reseau Guinéen pour la Traction Animal et le Développement Intégré (RGTA)

ADRA has partnered with the Reseau Guinéen pour la Traction Animal et le Développement Intégré (RGTA) to teach farmers in the region improved use of animal traction. Three contracts have been signed between ADRA and RGTA, providing for limited amounts of time (2 months for initial training and 3 months for follow up). Despite the limited time allocated for training, ox-drivers have learned to work a pair of oxen by themselves alone instead of needing three other helpers to guide the oxen, as was the case before the training. Land preparation for one hectare can now be accomplished with one man and one yoke of oxen in ten hours instead of requiring 4 people. Furthermore, with proper row-spacing promoted by PADRAS and new implements designed for use with this technology, farmers are able to harrow, ridge and weed between rows achieving tremendous savings in labor, most of which was provided by women in the past. Weeding rather than land preparation is often the limiting operation in determining the area which farmers can manage.

RGTA has been operating for the past 15 years with principal support from the Belgian Survival Fund and additional support by various project sources, including GTZ (Basse Guinée), the EU and others. Where RGTA has been working for a number of years and has trained a critical mass of ox-drivers, experienced drivers can train other farmers in these skills. In new areas like Siguiri, RGTA believes that it has to intervene itself to train new drivers. RGTA was instrumental in convincing PADRAS of the need to train local blacksmiths to build and maintain the new equipment designed for the work it was teaching ox-drivers to do and in providing them with credit to acquire the tools they needed to apply newly learned skills.

Field interviews confirmed farmer satisfaction with the training and new skills they had acquired as a result of the PADRAS' intervention in animal traction. Women also expressed their thanks for being relieved of some of the weeding that they had been called upon to perform in the past. The Team Leader was impressed with the successful application of animal traction to operations other than land preparation because he has seen attempts in these areas fail in other countries.

Government Extension Workers and Researchers

Extension Services

Service National de la Promotion Rurale et de la Vulgarisation (SNPRV) and other Regional Government Agricultural

PADRAS negotiated with Service National de la Promotion Rurale et de la Vulgarisation (SNPRV), the government extension service, to provide its services to its participating farmers. SNPRV assists in the production and marketing of cotton, cashews and peanuts.

Government agricultural sector authorities expressed concern over the demise of cotton production, blaming it on the low international price of cotton. Cotton used to be the cash crop and source of income for the farmers in Siguiri, Mandiana and Kankan. Cotton production started in 1985 and production had grown to 35,000 MT. With support from the French, the company holding the monopoly on cotton ginning and marketing provided farmers with a good technological package, on-farm training, the inputs needed to put it into place including chemical fertilizer and pesticides for both cotton and food crops, and credit to finance its production which was recovered from the harvest. It also built and maintained roads and bridges into the remotest areas and was instrumental in development of cotton producing areas in the north including Siguiri prefecture. Record production of 37,500 MT was achieved in 1998/99. As the result of a failed privatization in the year 2000 which left farmers unpaid and their cotton crop uncollected for months at a time, the area planted fell from around 20,000 hectares to a little over 1,000 hectares by 2004. Production fell to virtually

nothing, company staff abandoned their jobs due to non-payment of salaries, and only a skeleton crew remained. The demise of cotton as the sole cash crop of the region occurred just as PADRAS was starting; as farmers abandoned cotton production, they sought to replace some of the lost income through increased production of food crops, and with the help of new technologies introduced by PADRAS were able to generate surpluses for sale to cover schooling costs and other non-food family expenses. A Malian-owned company called Eglon has stepped in to attempt the revival of the industry, and has begun releasing money for the purchase of cotton and is starting to supply some farmers with cotton seed, fertilizer and pesticides for the next planting season. The Siguiiri region possesses good agronomic conditions for cotton production and farmers understand the production technology for the crop; as part of a new strategy including fertilizer as part of its soil fertility enhancement, ADRA may want to contact Eglon and discuss coordination of activities with this company, which could perhaps bring in fertilizer for food crops in addition to cotton, as was done in the past in both Guinea and Mali.

Due to the loss of cotton as a source of cash income, many farmers are turning to cashew production. Government agricultural sector authorities are interested in promoting the expansion of this crop. The initial impetus for production and supply of planting material came from a processing plant in neighboring Côte d'Ivoire. Only two companies Jawa Guinea (Indians) and SPCIA have been authorized by Government to operate in cashew marketing, although buyers for other firms are buying despite their lack of authorization. SPCIA has secured improved seeds from Brazil and Great Britain. Transplanting is preferred to direct seeding because transplanting ensures a high survival rate, a healthier plant stand and faster returns. About 100 plants (10 meter by 10 meter spacing) is required to cover an area of 1 hectare. Mandiana prefecture has the largest group of cashew producers but interest is strong in Siguiiri where there is already a tradition of using cashews as live fencing. In all, groups associated with PADRAS have already planted 15 hectares of cashews.

Agricultural sector authorities reported that cross-border trade with Cote d'Ivoire and Guinea Bissau is common, but Government over the past two years has put in place a strategy for consolidating and funneling agricultural exports through Conakry and through companies like SOGEPAM and others linked to Government authorities. Given the distance to Conakry, more attractive prices being paid by buyers from other firms and from neighboring countries in the region, and the effect of oligopsony on the reducing farm gate prices of products like cashews, it is questionable if this strategy is in the best interests of producers and businesses in interior regions like Siguiiri. The Team was also informed that Enterprise Works (EW) is working on the production of manual cashew-cutting machines for the small-scale processing of cashews for the local market; currently the supply of roasted cashews produced by artisanal means is exhausted within a few months after the harvest. Authorities reported the selling price of local varieties of raw cashew nuts to be FG 500-800 per kg; however,

some farmers reported sales to the Team Leader at prices as low as FG 400 per kg; and one village (Togui Oule across the river from Siguiri) reported sales of raw cashews to SPCIA at the low price of FG150-200 per kg.

Research

Institut de Recherche Agronomique de Guinee (IRAG)
Centre de Recherche Agronomique de Bordo (CRAB)

The Institut de Recherche Agronomique de Guinee (IRAG) is responsible for agricultural research in Guinea. Its Centre de Recherche Agronomique de Bordo (CRAB) located just outside of Kankan is responsible for research into crops grown in the northeastern region of the country including Siguiri prefecture. The CRAB provides both research and farmer training in groundnuts, rice, sorghum, maize and green manure/cover crops. In 2001 PADRAS entered into a partnership agreement with the Bordo center, which provides technical support and training. CRAB has assisted groups in Siguiri to set up demonstration plots and to learn about the seed multiplication. PADRAS has also asked CRAB for help from its researchers to train its field agents. From 2001 until the present, three researchers specialized in maize, peanuts and rice are linked directly with the PADRAS project. Both parties have been satisfied with this arrangement, and the agreement is renewed every year.

CRAB has provided technical support and training in 5 main areas: seed multiplication, design of protocols for demonstration, packaging of seeds, providing improved seeds, nurseries for cashews, and cover crops. On 30 and 31 August, 2001, 15 agents were trained in seed packaging techniques in Siguiri. Similar training was conducted for 10 agents between 27 and 31 May 2002 and again between 6 and 10 May 2003, 13 agents received training in the use of hand spraying equipment for pesticides Nerica rice and between 29 June and 1 July 2004, training was carried out in the production of cover-crops for enhanced soil fertility and weed control and its impact on maize production was conducted for the PADRAS agents.

The Researchers also carry out field visits to evaluate the performance of crops and to plan for the next season. Certified seeds supplied for the demonstration plots and for contract seed out-growers included 2,700 kg of maize (using the varieties Perta, K 9101, Obatanpa and quality protein maize called QPM), 900 kg of peanuts (MDR-8/15), 60 kg of sorghum (Nagua white variety), 1,200 kg of rice (using the varieties Nankin, Kaolaka, CK 73 and the New Rice for Africa known by its acronym NERICA). Data collected showed 27-75% yield increase compared to the controls. Average of 3-year yields (MT/ha) recorded and the percentage over control is presented in the Table below

Crop	Improved Variety	Local Variety	Yield over
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			control
Maize	2.48	1.74	73.8%
Groundnut	1.49	0.97	51.8%
Sorghum	1.71	1.44	27.4%
Rice	1.86	1.12	74.7%

The results show a major improvement in yields due to improved seeds and improved crop practices. Since Cassava is a major crop in the Siguiiri area, the researchers asked PADRAS to consider a future training in cassava production techniques considering the importance of cassava in the local diet. CRAB asked PADRAS to expand its support to cover the whole of Upper Guinea (HG), which have similar problems.

CRAB has done numerous fertilizer trials with the compound (NPK) fertilizers available in the local market (15-5-15 or 17-17-17 or 14-22-6-1 = NPK + sulfur). New, affordable and practical fertilizer recommendations for rice and maize have been developed by Sasakawa Global 2000 (SG2000). Some farmers use herbicides to cut down the labor cost in weeding after since they spend most of their time in the mines after getting the crop into the ground. CRAB has shown that natural insecticides from organic products such as *Neem*, *Eucalyptus*, and *Samakada*, are only effective in very small plots but not feasible or effective on large fields. (These are the only insecticides currently authorized and being promoted by PADRAS.)

CRAB has already started to do extensive research on cashew production. Its result show that using direct seeding, plants take 4 years to mature whereas transplanted seedlings takes only 3 years to mature and enter into production. Application of 500 g/plant of triple super phosphate (TSP) can accelerate the growth of the crop and increase production in initial years.

Ecole Nationale de l’Agriculture et de l’Elevage
National School of Agriculture and Animal Husbandry

The National School of Agriculture and Animal Husbandry provides agricultural training and has collaborated with PADRAS for 4 years. The Team was informed that 5 of ADRA’s current employees were trained in this school. Out of the 45 students that graduated last year, five eventually found employment in the PADRAS project and many more did their field practice (stage) with PADRAS. The school also takes into account the needs of ADRA in the training of its students.

The School also provides PADRAS and CCS with seeds for the multiplication of soybean, mucuna and other crops.

Potential Partners

APDRA-F (Association Pisciculture et Développement Rural en Afrique tropical humide - France)

The Association Pisciculture et Développement Rural en Afrique tropical humide - France (APDRA-F), is a French-based NGO operating in the humid forest of Guinea that has successfully integrated fish farming into cropping systems. Based in Nzèrèkorè, the Projet Piscicole de Guinée Forestière (PPGF) has exploited the integration of rice production and extensive *tilapia* harvesting under natural conditions. This technology that takes advantage of large ponds in low-lying areas, saves labor, and doubles profit because of joint rice-fish production on the same area.

A dike is constructed for the main pond and a small service pond is established to multiply the fish breeding stock. The fish species is mainly *tilapia* is harvested after 6 months. The pond is drained to harvest the fish, and after the harvest of the fish, rice is directly transplanted into the mud of the pond, eliminating labor for land preparation. The rice crop takes advantage of the nutrients left over after feeding the fish. This system has the advantages of saving all the labor normally required for land preparation and all the labor which normally goes into weed control since effective water management prevents weeds from growing in the first place.

According to the Project Manager Mr Marc Oswald, fish yields ranges from 1 MT per hectare (without feeding) and 7 MT per hectare (with feeding and other inputs and improved practice). Rice yield now averages 2.7 MT per hectare but could be increased in the future as farmers gain experience.

Each fish farmer has his own ponds but they are organized in groups to allow farmers to support each other and to facilitate the flow of knowledge among original participants and to new farmers. The system allows farmers to manage the flow of water, especially critical during the rainy season. So far, there have been no reports of any disease, and the nature of the system whereby farmers produce their own fingerlings reduces the likelihood of disease in the future.

In the Sigüiri where PADRAS operates, there is a possibility to exploit this technology in low land areas. A feasibility study is required to ensure the proper design of the ponds, which is very crucial for the survival of the fish and the profitability of the production system and the ability to expand ponds in the future based on a development plan established before the first pond is built. A study tour by ADRA managers and later by interested farmers to Nzèrèkorè to see this technology is advocated.

PPGF was initiated in 1999 but its effective start-up date was set back to 2000 due to rebel incursions in Geckédou which had been the original area targeted for the PPGF project. ADRA-F has operated a project in similar environments in Côte d'Ivoire and elsewhere in West Africa for the past 15 years.

Cooperative League of the USA (CLUSA)

CLUSA is the acronym for the Cooperative League of the USA. The League changed its name to the National Cooperative Business Association a number of years ago to better reflect its business-orientation; it is the business arm of the US cooperative movement. In its work in Africa, CLUSA focuses on helping farmers organize democratic cooperatives for the purpose of improving their farm businesses. A key element in the success of any cooperative is good governance, and the CLUSA project in Guinea, which includes some groups in Siguiri, operates under the Governance Strategic Objective of USAID.

CLUSA works with governance and economic development through decentralized organizations: rural associative enterprise and cooperatives, including the establishment of second level organizations (such as federations) where primary organizations see the need for their establishment. CLUSA focuses on strengthening the management and organizational capacity of the groups they work with; in so doing CLUSA concentrates its literacy and training efforts on the leadership (*conseil d'administration*). While the membership is in attendance at all times and discussions are open so that all members are exposed to the message being transmitted, resources such as literacy training are concentrated on the leadership of the organization. Institution-building is a slow process and training takes at least two years. CLUSA's agents are on-site in a village and each one handle 20 groups in a radius of 10-20 kilometers. Agents have varying degrees of interaction with groups depending on the capacity of each group to absorb the message and to achieve institutional growth on its own.

CLUSA helps groups with economic analysis of their activities and connects groups with SNPRV for crop-production issues. CLUSA does not provide credit itself, but provides its services in credit intermediation – linking its groups with microfinance institutions and banks which do provide credit. In Siguiri prefecture, contact was made with PADRAS' microfinance component but there were no unobligated resources available within the component to fund the new groups.

CLUSA also has a marketing support unit which helps groups it supports to understand the market for their products and to establish long-term relationships with buyers based on trust and respect for product quality considerations. It collaborates with ACA on marketing and market information. CLUSA supports diversification of production rather than concentration on a specific product (the *filière* approach, favored by the Ministry of Agriculture and the French agency AFD). CLUSA has a new project director with long experience in West Africa and is open to collaboration with other projects.

Société de Production et de Commercialisation d’Intrants Agricoles (SPCIA)

The Société de Production et de Commercialisation d’Intrants Agricoles (Society for the Production and Marketing of Agricultural Inputs) has been in operation since 1994 having been formed by former staff members of the Ministry of Agriculture. It has been promoting agricultural inputs and planting material. It has worked with improved seed and fertilizers in the past. The name SPCIA is associated with the promotion of cashews, which have been grown commercially on a large- scale in neighboring Guinea-Bissau (whose production is 90,000 MT per year) for many years. Cashews were introduced into Guinea during colonial times strictly for reforesting barren land. SPCIA has been instrumental in the promotion of cashews as a commercial crop in Basse Guinée in the area around Boké not far from the Guinea-Bissau border and only a few hours drive north of Conakry; however, the region most suitable for production is Upper Guinea (HG) in particular the area between Kankan, Mandiana and Siguiri. Production in Guinea is currently estimated to be on the order of 7,000MT, and is expected to rise soon to 10,000MT within a year or so.

SPCIA is convinced that cashew orchards with the wide spacing (10m by 10m) , can be establish without any credit other than that needed to finance the production of the annual crops grown between the rows. The only real cost are the plants themselves and the chemical fertilizer or manure applied to speed their development and early production stages. All other operations are taken care of with the annual crops grown between the rows until the trees begin to produce. Both the crops and the young trees need to be protected from bush fires; animals do not eat young cashew trees as they do with mangoes but can break the young trees when scratching themselves; therefore fencing is important.

SPCIA’s expertise has been increased over the years by visits to Brazil. SPCIA has support from the Global Development Alliance (GDA) of USAID which promotes public-private sector partnerships. After a high-level mission from USAID/Guinea brought a favorable report in early 2004 on the potential of cashews to its attention by Kraft Foods (which owns Planters Nuts) has shown an interest in Guinea’s production of cashews and has sent its director for nut supply for an inspection tour of Guinea. USAID now supports cashew production with a GDA grant of \$1 million, with SPCIA providing the technical support and active in purchases of raw cashews. Enterprise Works is providing technical support in processing technologies to two small cashew processing businesses in Boké in Basse Guinée. No enterprises are active in processing cashews in HG, and producers in one village were fascinated in listening to the Team Leader describe a simple small-scale processing system that they set up on their own to get started and produce small batches of roasted nuts for sale in the local market. Technical support from Enterprise Works could be useful in regions where small volumes of cashews are beginning to be produced, since there is a

small market in Bamako for roasted cashews and unsatisfied demand in urban markets in Guinea as well.

SPCIA estimates that there are 2 million hectares of land suitable for cashew production, most of it in Upper Guinea. At present only 27,000 hectares have been planted in cashews and most of these plantations are not yet in production. Where orchards are in full production, yields are relatively low, around 200 kgs per hectare (roughly 2 kgs per year per tree). By way of comparison, some producers in Brazil can attain 800 kgs per hectare. In addition to the two firms authorized by Government to buy cashews and export them through official channels via the port of Conakry (one of them SPCIA itself and the other a politically well-connected Indian trading company), many other firms are buying raw cashews for export to countries like India and Vietnam for processing.

Credit Institutions:

Crédit Rural de Guinée

Crédit Rural de Guinée (CRG) was set up in 1989 as a project and in November 2001 became a private company owned by three classes of stock holders. Ownership is vested in the local caisses (40% collectively), staff (35%), and external partners; external partners (25%: Government 15%, the French NGO Société d'Investissement et Développement International (SIDI with 8%) and the Institut de Recherche et d'Application des Méthodes de Développement (IRAM, which has been the technical assistance provider since 1988, with 2%).

The Team Leader renewed contact with CRG with whom he had met on a previous assignment in December 2003. At that time, CRG noted that it was already covering most of the country and was planning to operations into Siguiri prefecture early in 2004. However, this expansion did not take place in 2004; due to the deteriorating economic and fiscal situation of the country, Government was in arrears with a number of international financial institutions including the African Development Bank (AfDB). AfDB is the backer of CRG's proposed expansion into Siguiri and of its plans to achieve national coverage. Government has recently paid its arrears with AfDB and expects to set up a regional delegation during the course of 2005. It plans to set up 4 caisses (credit unions) in the prefecture of Siguiri: centers of the area now covered by the PADRAS' microfinance component.

- Nourassouba Centre, serving Nourassouba, Noukounkan
- Siguiri Centre, serving Siguiri, Kinebacoura, Banko, Kintinian
- Doko Centre, serving Doko, Niagasola and Franwalia
- Maleah Centre, serving Maleah, Nabu, Siguirini

If these caisses are in fact established, CRG would have a presence in major population areas of villages and with selected groups. ADRA and PADRAS staff has already had some initial contacts with CRG.

In mid-October 2004, CRG responded to the dramatic increase in the rate of inflation in the past year which now may be in excess of 30 percent annually (nearly 3% per month), has been forced to increase its interest rates to 3.5% per month on short-term loans and 3.0% for medium-term lending from the 2.0% it had been charging before. (By way of comparison, interest rates charged by PADRAS have remained unchanged since the program started despite recent increases in inflation and loan losses: 1.5% for animal traction loans, 2.0% for agricultural loans and 2.5% for petty trading loans.)

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Sinell Traore (Agent Micro-Credit)

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GROUPS INTERVIEWED

Groupement C (Nounkunkan)

President: Komdaghe Magassouba
Vice President: Naguduma Magassouba
Secretary: Mamadou Magassouba
Controller: Fatoumata Camara
Treasurer: Minata Doumbouya

Deimenyoko Group (Vegetable Gardening Group)

President: Aissatou Benike
Vice President: Fatoumata Beneke
Secrétaire: Moussa Magassouba
Contrôleur: Fafode Camara
Trésorier: Fanta Conde

Sodia (Farada) (Food crop group)

President: Kondecine Conde
Vice President: Adama Sekou Beneke
Secrétaire: Saimata Lancei Conde
Contrôleur: Nautauon Billy Conde
Trésorier: Naguonma Damani Conde

Ka Sodiah Group (Banko)

Sous-Prefect: M. Toumani Camara
President: Nyamba Konate

Gerema Kono (Vegetable Gardening Group)

President : Sonoba Traore
Secretary: (Yowung Man)

Benkadi (Boukaria)

Mamadou Camara, Chef du Distrit de Boukaria
ADRA Staff in attendance:
Issa Keita
Isamaela Kondé

President: Aminata Boué
Vice President: Diesu Diawara
Treasurer: Sona Camara
Secretary: Fodé Dumbuya
Controller: Fanta Perité

Cumyanjambougou Village
Sub-prefecture Banko
Namduko Group
President : Maraba Traore
Vice President: Mamaram Traore
Secretary: Fanta Coulibably, Dousou Koita

Sodiah Group
President: Lancine Kondé
Vice President: Sekou Breite
Treasurer: Damanine Kondé
Secretary: Lancey Kondé
Controller: Mantombili Kondé

BENKADI (Food crop group)
President: Minata Camara
Vice President: Sogona Camara
Treasurer: Tumafa Sangaré
Secretary: Madi Bakary Camara
Controller: Siradi Kondé

LANAYA
District President: Kumu Magabsouba
President: Fanta Magasouba
Secretary: Morisanda Kante

MAGASOUBA KANI BOUKARÉ (Food crop group)
President: Amadou Kain Magasouba

KOTO TAMA (Food crop group)
President: Mamoudou Camara
Vice President: Makan Kondé
Treasurer: Faremoussa Camara
Secretary: Faré Sako
Controller: Kani Kanté

FOULATA Sodiah (Petty Commerce)

President: Madouba Camara
Vice President: Madouba Keita

Treasurer: Sonkari Camara
Secretary: Bamba Camara
Controller: Moussa Sako

FOULATA Benkadi (Vegetable Gardening Group)
President: Tinoko Sako PresWoman
Vice President: Sounoukou Keita
Treasurer: Teneka Missoko
Secretary: Duba Camara
Controller: Mamadi Sako

FOULATA Landaya “La confiance” (Food crop group)
President: Fode Camara

Demenyoko “L’entrée” (Vegetable Gardening Group)
President: Asetuo Briete
Vice President: Fatoumata Briete
Secretary: Moussa Magasouba
Controller: Safere Camara
Treasurer: Fanto Condé

President of District: Dansokon Magan

HERAMAKONO, (Petty Commerce Group)
President: Ilamissolo Diane
Vice President: Faroui Kamosos
Treasurer: Kanimba Kanisoko
Secretary: Amara Kamarisoko
Controller: Dioubaté Bougoudi

SODIAH (Vegetable Gardening Group)
President: Demba Koita
Vice president: Kamissoko Kankou
Secretary: Dansoko Nuyme

SABOUGNOUMA (Vegetable Gardening Group)
President: Tenemba Camara

BALANDOUGOU

Benkadi (Food crop group)
President: Camara Kandia Balla
Vice President: Diakite Magan
Treasurer: Camara Foceny
Secretary: Camara Fayala III
Controller: Camara Sogona Mamoudou

5 Groupement Baraka

President: Magassouba Fanta
Vice President: Camara Diaka

Treasurer: Keita M'Bamissa
Secretary: Keita Balakissa
Controller: Condet Doumbouya

6 Konkomagni (Food crop group)

President: Camara Sogona Balla
Vice President: Camara Daouda
Treasurer: Camara Bounama II
Secretary: Camara Boukary
Controller: Camara Fadjimba

TOGUI-OULON

Konkomba-Sayon (Food crop group)
President: Mamadi Toure
Vice President: Kedjan Sylla
Treasurer: Niakodomadi Sylla
Secretary: Fodé Kaba Toure
Controller: Conseny Sylla

TOGUI-OULON

Heremakono (Vegetable Gardening Group)
President: Filani Keita
Vice President: Minata Sylla
Treasurer: Nakani Diaby
Secretary: Maimouna Diane
Controller: Mamadi Sylla

TOGUI-FINY

Benkadi (Food crop group)
President: Karim Sylla
Vice President: Mamadi Sylla
Treasurer: Bakary Sylla
Secretary: Amadou Sylla
Controller: Almamy Sylla

TOGUI-FINY

Sodia (Food crop group)
President: Sadou Mamadi Sylla
Vice President: Ansoumane Sylla
Treasurer: Fode Kaba Sylla jr
Secretary: N'Faly Sylla

Lanaya (Petty Commerce)

President: Hadja Fanta Cissé
Vice President: Noumouni Sylla
Treasurer: Noumouso Traore
Secretary: Fodé Kaba Sylla sr.
Controller: Déyé Sylla

Sous Prefectorales Officers: Siguirini

Sous prefet: Moussa Sacko

President CRD: Tounko Camara
President CDC: Daouda Keita
Communication: Ibrahima Kalil Diallo
President District: Fatouma Mady Keita

7 Kairaba Group

President: Camara Kandia
Vice President: Damba M'bamagan
Treasurer: Camara Doubatenén
Secretary: Camara Karim
Controller: Minata Tmiam

8 Fasso Djigui Group

President: Sayon Soumaila Camara
Vice President: Sagnoume Keita
Treasurer: Oumar Koula Diallo
Secretary: Mamady Sacko
Controller: Oury Bah

9 Gararitie Group

President: Bobo Sacko
Vice President: Minata Camara
Treasurer: N'bamissa Camara
Secretary: Djamady Fofana
Controller: Mariam Magassouba

10 Benkady Group

President: Fanta Cissé
Treasurer: Fanta Camara
Secretary: Bakary Camara
Controller: Bah Camara
Controller: Sadan Camara

Sodia Group

President: Kaba Kiabou
Vice President: Siga Bréma Camara
Treasurer: Daouda Camara
Secretary: Kaba Camara
Controller: Bréma Diakite

11 Kankelen, Sokoro Group

President: Karim Sangare
Vice President: Bakary Condé
Treasurer: Alpha Fouta Diallo
Secretary: Alpha Salou Talla
Controller: Mamadou Condé

12 Garantie Sokoro Group

President: djanka Savane
Vice President: Bahoumou Sanoh
Treasurer: Bomba Sangure

Secretary: Sidy Sanguare
Controller: Haye Diawara

Fasso Demen Sokoro

President: Mariama Sangaré
Vice President: Ousmane Sangaré
Treasurer: Fatoumata Camara
Secretary: Salemany Fafana
Controller: Djamy Sangaré

BENKADY (“L’UNION EST BONNE”) (Food crop group)

President: Alamamoudou Camara
Treasurer: Sekou Magasouba
Secretary: Moussa Camara
Controller: Sona Nouhamra

Thursday 2 December [Banko]

Sub-prefecture	Banko
Village Name	Namoudouko
Activity	Crop Production
Total No of people	27
Group Composition	Male (27), Female (0)
Starting date	22 January 2001

Sub-prefecture	Banko
Village Name	Wassafodeko
Activity	vegetable
Total No of people	27
Group Composition	Male (1), Female (1)
President/controller	Madam Bintu Camara
Treasurer	Mamadhi Sylla
Starting date	22 January 2001

Friday 3 December (Doko)

Courtesy call on the Sous Prefet (Aliou Guiché) and Dy (Sekou Bakary Camara)

Sub-prefecture	Doko
Village Name	Fonafanako
Activity	Crop Production (farmer0
Total No of people	38
Group Composition	Male (38), Female (0)
Starting date	2002
President	Kabiné Simagan
Assistant	Djigui Simagan
Treasurer	Sacko Simagan

Vegetable group (Gardening)

Name Benkadi
President Mariame Simagan
Starting date 2002

Visit to a Vegetable garden

Name of village Namankoubara
Area (size) 1 ha
Name of farmer Madam Rokia Sano

Sub-prefecture Doko
Village Name Soumbarakoba
Activity Crop Production (farmer0
Total No of people 19
Group name Benkadi 2
Group Composition Male (19), Female (0)
Starting date Sept 2001
President Sayon Doumbouya
Secretary Karifa Keita
Treasurer Yousouf Traoré

Sub-prefecture Doko
Village Name Soumbarakoba
Activity Commerce (petty trading)
Total No of people 21
Group name Benkadi 1
Group Composition Male (4), Female (17)
Starting date Sept 2001
President Djinebou Diallo
Secretary Karifa Keita
Treasurer N'gama Balamou

Sunday 5 Dec 2004 (Franwalia)

Sub-prefecture Franwalia
Sous prefet Adama Douno
Sous Prefet Adj Marcel Malaya Sossouadouno
Village Name Sambaya
Activity Commerce (petty trading)
Total No of people 28
Group name Nafaya
Group Composition Male (14), Female (14)
Starting date 2000
President Souadou Condé
Vice President Mande Condé
Secretary Karifa Keita
Treasurer Mariame Traorè

Sub-prefecture Franwalia
 Sous prefet Adama Douno
 Sous Prefet Adj Marcel Malaya Sossouadouno
 Village Name Sambaya
 Activity Farming group
 Total No of people 41
 Group name Konkomagni
 Group Composition Male (41), Female (0)
 Starting date 2000
 President Frankaye Camara
 Vice President Mousa Camara
 Secretary
 Treasurer Baffing Traorè

Kintinian

Sub-prefecture Kintinian
 Sous prefet Mamady Grow Keita
 Sous Prefet Adj
 Village Name Setiguiya
 Activity Commerce groups
 Total No of people 35 (31)
 Group name Sodia (Benkadi)
 Group Composition Male (3), Female (32) [female 31; male 0]
 Starting date 2002
 President Fanta Condè (Minata Diabatè)
 Vice President Kouda Keita(
 Secretary
 Treasurer Sidiki Camara (Nana Beretè)

Sub-prefecture Kintinian
 Sous prefet Mamady Grow Keita
 Sous Prefet Adj
 Village Name Setiguiya
 Activity farming group
 Total No of people 29
 Group name Sabounouma
 Group Composition Male (29), Female (0)
 Starting date 2000
 President Sidiki Camara
 Vice President Trekaye Camara
 Secretary
 Treasurer Fatamadi Camara

Monday 6 Dec 2004 (Naboum)

4 groups with 108 people
 Pop of Boukaria 1700

Group/	Farming			Commerce
	SODIA	KAIRIBA	BOLOBA	NAFAYA

Sub-prefecture	Naboun	Naboun	Naboun	Naboun
Sous Prefèt	Pé Gamy			
Sous Prefèt Adj	N'bemba Duba Camara			
Village name	Boukaria	Boukaria	Boukaria	Boukaria
No of People	25 7F, 18M	26 1F 25M	26 7F 19M	31 28F 3M
President	Bandiougou Dansoka	Mamadjan Keita	Sokono Tanin Madi Dansoka	
Treasurer	Camara Boli	Mamadou Diakite	Elhadj N'faly Dansoka	Nassou Dansoka
Secretary	Sacko Mouni Madi	Fayala Touré	Camara Fremba	Sumano Dansoka
Date of commencement	Sept 2002	Sept 2003	Sept 2003	Sept 2002

Maleah

Sub-prefecture Maleah
 Sous prefet
 Sous Prefet Adj
 Village Name Hafia
 Activity Gardening
 Total No of people 27
 Group name Sodja
 Group Composition 26M 1F
 Starting date 2000
 President Bintou demba Dialy
 Vice President Sekou Dialy
 Secretary Sekou Bukari Dialy
 Treasurer Ndi Dialy
 Controller Ali Keita

Farming group

Sub-prefecture Maleah
 Sous prefet
 Sous Prefet Adj
 Village Name Hafia
 Activity Gardening
 Total No of people 23
 Group name Kouroum heronakoro
 Group Composition 5M 18F
 Starting date 2000
 President Komkon Dialy
 Vice President Assi Dialy
 Secretary Adama Dialy
 Treasurer Djedi Dialy
 Controller Aminata Diallo

Farming group

Sub-prefecture	Maleah
Sous prefet	
Sous Prefet Adj	
Village Name	Hafia
Activity	Gardening
Total No of people	23
Group name	Kouroum heronakoro
Group Composition	5M 18F
Starting date	2000
President	Komkon Dialy
Vice President	Assi Dialy
Secretary	Adama Dialy
Treasurer	Djedi Dialy
Controller	Aminata Diallo

Tuesday 7 December (Niagassola)

[This village is surrounded by mountains, and poverty is high. Serious malnutrition of children and old men]

There were 2 farming groups who were interviewed together.

Sub-prefecture	Niagassola
Sous prefet	Boh Alassane Sano
Sous Prefet Adj	Mafignan Sumaoro
Communication	Mamady Fayou Condé
Village Name	Banani-koro
Activity	Farming
Total No of people	30 [31]
Group name	Sodia [Fasso kanou]
Group Composition	6 M, 24 F [24F 7M]
Starting date	2002 [2002]
President	N'bamagan Keita[Dousson Keita]
Vice President	[mama Keita]
Secretary	Fode Keita[Tayirou Keita]
Treasurer	Namagan Keita [Sackoba Traoré]
Controller	Yacouba Kamissoko[Nagnalen Keita]

Sub-prefecture	Niagassola
Sous prefet	Boh Alassane Sano
Sous Prefet Adj	Mafignan Sumaoro
Communication	Mamady Fayou Condé
Village Name	Djigui semb-kouroubala
Activity	Commerce
Total No of people	33 25F 8M
Group name	Djigui semba
Group Composition	25 F, 8M
Starting date	2001

President	Mamou coulibaly
Vice President	Mariama Keita
Secretary	Djigi Keita
Treasurer	Fata Mojara Keita

Sub-prefecture	Niagassola
Sous prefet	Boh Alassane Sano
Sous Prefet Adj	Mafignan Sumaoro
Communication	Mamady Fayou Condé
Village Name	Djigui semb-kouroubala
Activity	Gardening
Total No of people	30 25F 5M
Group name	Sodia
Group Composition	25 F, 8M
Starting date	2001
President	Nayima Souba
Vice President	Nasoura Koita
Secretary	Janaba Condé
Treasurer	Sekou Keita

Friday 10 December (Urban Siguiri)

Sub-prefecture	Commune Urbaine
Name	Siguiri
Activity	Commerce (petty trading)
Total No of people	40
Group name	Nana Karifa berete
Group Composition	Male (0), Female (40)
Starting date	Sept 2001
President	Mama Doumbonya
Secretary	Fanta Cissé
Treasurer	Mama Diawara

Sub-prefecture	Commune Urbaine
Name	Siguiri
Activity	Gardenning
Total No of people	37
Group name	Barawili
Group Composition	Male (8), Female (29)
Starting date	2002
President	Fanta Camara
Vice president	Manka Keita
Secretary	Kemba magasuba
Treasurer	Niada Coulibaly

PARTNERS and Potential Partners

Radio Rural

El Haj Alpha Fodé Dembélé (Station Manager)
Sarleyemane Condé (Program Director)
Moustapha Fofana (Director of Technical Section)

Ministry of Agriculture

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Appendix 4 Issues Covered and Checklist

ISSUES TO BE COVERED IN FIELD VISITS

When did it start?

Type of groups/composition in terms of male and female

ADRA Interventions

- Credit
- Storage
- Seeds Acquisition (problems and alternative sources besides ADRA)
Commercial seed production/Contract seed growers
- Fertilization (manure, gm/cc chemical fertilizers)
Mode of acquisition
Price
Whether people have ever grown cotton (implications on fertilizer use)
- Pesticides (usage—on other crops)
- Land Preparation (manual, animal traction)
- Labor (family, hired or both)
- Farming (Orpaillage, digging for gold)

Crop Operations

- Land preparation (if animal traction, then acquisition/finance/credit/training)
- Weeding
- Irrigation
- Bird scaring
- Harvest (Labor/finance)
- Post Harvest (labor for harvest + finance)
Transport to house
Transport to market
Drying and cleaning—labor
STORAGE-storage technologies, the source of information

Marketing + Crop use

Distribution of crop (family consumption & sales); length of the periode
de soudure”

How marketing is done and problems

Standardization, drying, quality

ADRA responses

Soil fertility

Knowledge about cover crops/adaptation of technology

Impacts

How improved technology from ADRA helped to reduce storage loss

What can you show as a proof that your life has improved after
participating in ADRA's program?

Changes in income/assess/animals/bicycles/children's education

Sustainability

- **Governance**

To what extent has the literacy /education programs contributed to participation of people in household decision making
Turnover in organization-changes in leadership

- **Technologies**
Capacity of farmer to adapt to changes in new technology
Ability of farmers knowing that alternative exists and modify technology depending on situation
- **Seed and seed issues**
Training of seed growers---Partners in Kankan
Access to seeds from Non-ADRA sources
- **Irrigation**
Well digging, maintenance, duration of water
Bas-fonds
- **Credit**
Who gets what? (type, male or female)
How much?
What for?
Timeliness and duration
Conditions of credit: duration, repayment modes, interest rate
Do they know the interest rates?
Repayment problems?
If program did not exist, what will they do
What did they do before the program to get credit

Non-Agricultural business (Petty Commerce)

No of groups at the beginning
No of groups now, and why the reduction
Distribution among men and women
How much money is available
How much is the working capital
Sources of micro-finance from ADRA
Source of micro-finance from other source
Size of business
New business and expansion of existing business

- **Blacksmiths**
Tools and plows and how beneficial the training from ADRA has enhanced their work

Uses of Additional Income

What do they do with the additional income (education, nutrition[protein + fish +calories) asset accumulation, clothing,health care improvement, construction (houses, store houses etc)

- **Knowledge**
Adoption of new technologies boding well for adopting new technologies in the future or adapting to new situations.

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Appendix 6 Map (not available)

Appendix 7 Response to Mid-term Evaluation Recommendations

Recommendations/ Suggestions	Implementation by ADRA	ET's Observations
Intensify the promotion of Soil Fertility improvement technologies eg. animal and green manure utilization	<ul style="list-style-type: none"> • Clients sensitized on use of animal manure • 57 demonstration plots focusing on use of green manure established. Types of green manure planted include dolicos lablab, jackbean and mucuna 	<p><i>Agrees that good progress has been made. Future efforts should concentrate on the integration of micro-doses of chemical fertilizer to complement the application of manure (farmyard and green) and compost for increased crop yields and the long-term sustainability of the cropping system.</i></p>
Take steps to ensure that repair and replacement of animal traction equipment in the project area.	10 blacksmiths from 10 prefectures were selected and trained. Training was provided by RGTA	<p><i>Progress has been impressive but more blacksmiths have to be trained, so that every major village should have a blacksmith trained in these skills.</i></p>
Promote farmer experimentation in the program area	290 trained farmer leaders have been sported to establish 156 demonstration plots	<p><i>Progress has been very impressive</i></p>
Project to assist clients with more wells for gardening	14 wells financed by Canada-Embassy and 23 funded by ADRA International under construction	<ul style="list-style-type: none"> • <i>Project is commended on the efforts to solicit funds to finance more wells.</i> • <i>Farmers should be made aware of the cost of such wells so that they can look for alternative financing to build additional wells as needed.</i>
Sale of vegetable seeds through commercial enterprises within the prefecture	2 commercial enterprises identified in Siguiiri. Steps being taken towards formal collaboration	<ul style="list-style-type: none"> • <i>Partially addressed.</i> • <i>Efforts should be made to speed up the process.</i>
Improve marketing of vegetables produced by ADRA supported farmers	<ul style="list-style-type: none"> • Clients and agents trained in crop production • Local onion variety (that preserves better than imported varieties) being promoted 	<p><i>ADRA should investigate closer ties between vegetable producers and SAG for bulk marketing and contract farming</i></p>

	<ul style="list-style-type: none"> Participation in an agriculture show in Kankan 	<i>PADRAS should initial cash prizes for best farmers during the year</i>
Need for training of clients in micro-credit activities	1460 clients trained during 235 training sessions.	<i>Progress has been impressive</i>
Project to encourage farmers who have resources to pay their own oxen for training	Clients being sensitised at group meetings	<i>Project should assist farmers identify oxen.</i>
Project to provide information on the operational expenses of the micro-credit activities in Siguiri	Studies in progress	<i>The delay is regrettable. The outcome of studies needed to determine the feasibility of the micro-credit activities</i>
Provide individual clients with passbook indicating loan amounts received and instalments paid together with the interest paid.	Training being provided before passbooks are supplied	<i>Well addressed</i>
Each group to keep his own ledger books to record loan principal received, disbursements to clients, repayment from clients and bulk payment to ADRA, with interest	Steps being taken to provide clients with the ledgers	<i>Steps need to be elucidated</i>
Project advised not to over-stretch itself by increasing the number of loan clients	Steps are being taken to enhance the efficiency of agents and supervisors through training to enhance their efficiency to handle the numbers.	<i>The Evaluation Team is satisfied with the progress made so far</i>
Exit strategy and prepare a plan accordingly	In progress	<i>We understand the delay was due to the arrival of the new Country Director. ADRA should consider this as a priority before the end of the project</i>
Provide additional training for the M&E staff	M&E specialist participated in an ADRA Professional Leadership training session on M&E that took place in US in April 2004.	<i>Addressed</i>
Promote more coordination between	M&E staff did exchange experiences on reporting and	<i>The Progress made recently is commendable</i>

the M&E staff of PADRAS and ADRA health project (SMIS)	data collection tools and analysis using SPSS	
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