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EVALUATION OF THE
PVO/DEVELOPMENT INITIATIVES PROJECT
(PROJECT NO. 677-0060)

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The Evaluation Team
Washington, DC

LIST OF ACRONYMS AND ABBREVIATIONS

ACDI	Agriculture Cooperatives Development International
ACDR	Association de Cooperative Rural de l'Afrique
AAFGRO	Agency for Facilitating Growth of Rural Organizations
AGDERUMKA	A federation of <u>groupements</u> in the Karal area
ARPES	Association rurale pour l'auto-promotion economique et sociale
DT	delegates technique
EIRENE	a Swiss PVO working in Kim
FAC	Fonds d'Aide et Cooperation
CICP	Consortium for International Crop Protection
CFA	Caisse financieres africaines
FEWSP	Famine Early Warning System Project
MCT	Manufacture de Cigarettes du Tchad
NKE	Neem Kernal Extract
NGO	Non-government organization
OESI	Ouaddai Economic Strengthening Initiative
ONADH	Office Nationale de Developpement de l'Horticulture
ONDR	Office Nationale de Developpement Rurale
ONG	Organisation non-gouvernemental
ORDP	Ouaddi Rural Development Project
ORT	Organization for Rehabilitation Through Training
PIR	Project Implementation Report
PSC	Personal Services Contractor
PVO	Private voluntary organization
SECADEV	Secours Catholique de Development
SODELAC	Societe du Developpement du Lac
UNDP	United Nations Development Program
VITA	Volunteers for International Technical Assistance

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EXECUTIVE SUMMARY

A. Project Background

USAID/Chad's PVO Development Initiatives project was authorized in June 7, 1985 as a four year US\$12,725,000 activity with a PACD of September 30, 1989. The project's purpose was to:

Assist small-farmer food production and supportive private sector activities having demonstration and institutional development effects.

The project, and subject of the present evaluation, with additional obligations amounting to US\$13,475,000, was amended and extended to May 31, 1995. The purpose of the amended DIP is to:

improve agricultural marketing, increase small-farmer productivity, improve job skills through training, and develop private business having demonstration and institutional development effects.

The focus of follow-on projects was consequently shifted from an emphasis on production to marketing - including improvement in quality, post-harvest processing and storage, and market efficiency. These concerns are reflected in the six projects implemented under the umbrella PVO Development Initiatives Project. The geographic embrace of the project was widened from the Sahel to include the Sudanian zone, essentially the lower half of Chad, and DIP sub-projects are scattered throughout both zones.

B. Purpose of the Evaluation

The Scope of Work underlying the evaluation of the PVO Development Initiatives Project [DIP] calls upon the evaluators to: [1] measure the progress to date in achieving the projects and sub-projects outputs and purposes, [2] the appropriateness and effectiveness of the interventions undertaken by the PVOs, [3] the validity of the underlying assumptions, [4] the provision and quality of inputs supplied by the PVOs, [5] the role of the GOC, [6] the management and role of the USAID, [7] recommendations if necessary of the structure of the project[s] as outlined in the logical framework, and [8] the linkage of the DIP with the newly launched AMTT and shortly to be launched ATPRP [including non-project activities].

C. Findings

The project has:

- o Contributed to food security.
- o Provided labor-saving technology which has benefitted men and women.
- o Contributed to: [1] income generation through marketing technology and [2] establishment of group-managed group funds for mutual advancement.
- o Contributed to institutional sustainability in at least three ways: [1] supported long-term presence of US PVOs which offer a viable alternative to GOC-sponsored development in a period of uncertainty; [2] supported groupements; and [3] promoted technology some of which appears sustainable.
- o Made credit available to the smallest scale entrepreneurs.
- o Provided a decentralized mode of implementation capable of adapting to the different environments in which project activities were undertaken.
- o Has benefitted women mainly through labor-saving food security, income generation and credit, while addressed mostly to men.

but that:

- o The underlying assumption that markets operate inefficiently is incorrect. Farmers and commercants are aware of and respond to price signals;
- o While the farmers' primary objective is food security the project assumes it is the earning of extra cash income. Farmers' are more likely to maintain activities which are consistent with their own priorities. and
- o Consumers are quality conscious.
- o Groupements formed in response to development projects are not necessarily stable or viable over the long term.

With respect to Mission project management:

- o The umbrella has been found to be an efficient mode of implementation of a project which includes a number of dissimilar agents.
- o The success of the umbrella mode depends in unusually large measure upon the project manager.
- o A carefully and thoughtfully prepared contract is of at least equal importance to the institutional location of the project management.
- o The umbrella may be marginally more effectively managed from without the USAID, but the quality of the project manager is more important than the management mode.
- o While the umbrella has been utilized in the project primarily for its bureaucratic dimensions its potential as a development tool remains underutilized.
- o PVOs have found it easier to shift from relief and concern with food security to production as the primary project purpose than from production to an exclusive focus on marketing.
- o Project progress measures utilized by the separate projects have not on the whole been very useful because they stress means rather than results.
- o The GOC, given its limitations, has been supportive.
- o The primary input supplied by the PVOs has been technical staff. PVOs experienced some difficulty in the timely recruitment of suitable expatriate staff. In particular instances a full turnover in expatriate staff has occurred.
- o The quality of the Chadian field staffs is on the whole sufficiently high that they could be counted on to implement the current projects with minimum expatriate direction.

D. Recommendations

- o If the marketing focus remains a mission priority, adopt a broader definition of marketing to include production for the market.
- o Do not neglect food security as a priority just because the rains have been good in recent years. It remains a priority with Chadian farmers.
- o Continue to use PVOs as agents for implementing rural and farmer-oriented USAID development activities in Chad.
- o Make the maximum use possible of trained Chadians in project design and implementation.
- o In designing the next project, work collaboratively with the PVOs to maximize their particular skills and local knowledge.
- o Encourage American PVOs to enter into partnership with Chadian NGOs.
- o Use a non-PVO as the primary management vehicle. The PVO's should remain subcontractees.
- o Build in more active information sharing between PVOs through exchange of research reports and visits or consulting between staff members and beneficiaries.
- o Re-examine assumptions that land is readily available everywhere and open to all comers. Be sure to consider pastoral rights as well as agricultural access.

MAP 1

Team Itinerary



I. INTRODUCTION AND BACKGROUND

The evaluation of the PVO Development Initiatives Project [DIP] looks at four issues. First, the overall performance of the sub-projects. Will the DIP accomplish its long-term objectives? Secondly, what elements among the various sub-projects can be sustained and what additional support will be needed to secure these accomplishments? Thirdly, an attempt will be made to account for particular instances where achievement has been less than targeted. Finally, it will look into the effectiveness of the umbrella mechanism, under which the cluster of PVO implemented sub-projects have been launched, with a view to coordinate implementation and accomplish the programs objectives. The evaluation is introduced in two parts. The overall findings are summarized in the present section. The findings with respect to each sub-project is spelt out in the particular annexes. A separate annex is also introduced to cover the umbrella mechanism.

A final concern addressed in the present evaluation is the sort of linkages which may be usefully included with regard to the AMTT and ATPRP project and program.

Evaluation of project management inescapably calls for judgements to be made. These will be attempted through the use of clearly defined criteria.

A. Background

A mid-term evaluation of the umbrella project and its six sub-projects was called for in the implementation plan. For a number of reasons, however, what was to have been a mid-term evaluation has become in practice a final evaluation and for other projects a mid-term evaluation. It was assumed that the six components would begin at roughly the same time, 1990, such that by mid-1992, the expected date of the evaluation, the six would be in a comparable state of development - at mid point or a bit after. As such the evaluation findings would be of use to project management in making particular determinations regarding the desirability for project completion as planned, a redesign, a funded or non-funded extension, a termination etc. Project planners made the simplifying assumption that internal security within Chad would remain sufficiently stable that project implementation would not be delayed or otherwise affected. This expectation has not in fact been realized. Chad's internal affairs have been and remain in a state of uncertainty with persisting and adverse implications for the six DIP sub-projects.

Implementation of DIP ^{sub-projects} have been affected in all but two cases - the VITA credit project located in N'Djamena and the CARE/Kim project. Other projects are behind schedule by as much as a year - ACDI is one example, Africare is another. In these instances project plans were closely linked to the cropping cycle so that implementation has strayed from play by up to a full year. The projects in located north of Lake Chad are being terminated early due to the inability of government to ensure that project property, in particular but not only vehicles, is safe. Local unrest in these areas have first caused suspension of activities [1990-91] and, later, led to evacuations of teams [1992],

then abandonment of project sites [ORT and CARE] at the end of 1992. In certain instances, but for differing reasons, project extensions have been called for.

Sub-project histories vary and these impact upon implementation. In certain cases sub-projects succeed earlier phases - in others they are wholly new initiatives. The VITA credit project, for example, is the third in a series dating back to 1984, and its current success is built on a firm foundation of practical experience. The Africare project is in its second phase. Others, such as the ACDI project south of Lake Chad is by definition experimental and pilot in nature and is located in an entirely new project area.

Project time tables count on full staffs being in place by a certain time. In practice it has been found difficult to find suitable candidates for positions often located in difficult physical and geographic circumstances.

B. Purpose of the Evaluation

The Scope of Work underlying the evaluation of the PVO Development Initiatives Project is necessarily a complicated one and calls upon the evaluators to: [1] measure the progress to date in achieving the projects and sub-projects outputs and purposes, [2] the appropriateness and effectiveness of the interventions undertaken by the PVO's, [3] the validity of the underlying assumptions, [4] the provision and quality of inputs supplied by the PVO's, [5] the role of the GOC, [6] the management and role of the USAID, [7] recommendations if necessary of the structure of the project[s] as outlined in the logical framework, and [8] the linkage of the DIP with the newly launched AMTT and shortly to be launched ATPRP [including non-project activities]. Gender concerns are addressed as well. These objectives are ones conventionally reviewed in the course of an evaluation but are essentially backward looking - asking where we are today and why?

The above analyses having been done, the evaluation then will look beyond the EOPS to the sub-project's long-term goal and ask the question: can the objective be reached from that prevailing at EOPS and, where the response is yes, how? First, an appraisal of the umbrella mode of project management and its relevance and effectiveness in the present project. A determination will be made as to the utility of the approach. Second, each of six sub-projects will be examined with the long view in mind: can the project strategy succeed in accomplishing the project's purpose and goal or, failing this, can it or can it not be done using some alternative strategy? In each particular instance the project will be examined in terms of its present status with respect to its end-of-project purpose and its strategy, state of progress with respect to remaining time, levels and composition of inputs, expected outputs etc. Very important the assumptions underlying each sub-project's will be examined for their continued relevance, or realism in the context with the conditions prevailing in the country.

Particular recommendations will be made with respect to each sub-project in the context of issues identified in the course of the evaluation.

C. Methodology and Approach

The evaluation makes use of a mix of sources. Interviews will be held with chiefs of party and technical persons and Chadian counterparts and staff assigned to the projects. The respective quarterly report series were read in addition to the original and amended project papers, any earlier evaluations, technical studies produced by the particular projects etc. Relevant Mission staff have been interviewed. Finally, the evaluation team will make site visits to each project, talk with the persons - Chadian and expatriate - actually engaged in the implementation, beneficiaries, groupements, cooperatives, women's groups etc.

Several of the sub-projects have been evaluated in-depth prior to the present evaluation and these have been made use of. No attempt is made to repeat this work. All of the projects have produced a sustained stream of project implementation reports. Use has been made of all of the above in the present evaluation.

Particular attention will be paid to the technical approaches being attempted under the projects and especially those utilized by the 'pilot' projects.

D. Project Background

USAID/Chad's PVO Development Initiatives project was authorized in June 7, 1985 as a four year US\$12,725,000 activity with a PACD of September 30, 1989. The project's purpose was to:

Assist small-farmer food production and supportive private sector activities having demonstration and institutional development effects.

Initially four projects were implemented:

<u>PVO</u>	<u>Sub-Project Title</u>	<u>US\$ Total Funding*</u>	<u>PACD</u>
Africare	Ouaddai Rural Development	2,967,700	9/30/90
CARE	Irrigated Agriculture Development	4,042,600	4/30/90
ORT	Lake Chad Agricultural Development and Farmer Training	2,592,800	7/31/91
VITA	Private Enterprise Promotion	1,287,100	6/30/90
----- Total Fundings		10,891,000	

* all figures rounded off to the nearest thousand

Final evaluations of these sub-projects indicated they had substantially improved the food security of the target areas with the introduction of various production-enhancing technologies. The Mission and the Africa Bureau were of the opinion that, having raised production levels, marketing of produce constituted the most important constraint facing farmers and that marketing constraints found in towns and cities in the country should be addressed in the next phase.

The focus of follow-on projects was consequently shifted from an emphasis on production to marketing - including improvement in quality, post-harvest processing and storage, and market efficiency. These concerns are reflected in the six projects implemented under the umbrella PVO Development Initiatives Project as well as the multi-year Agricultural Marketing and Technology Transfer Project [AMTT] and non-project assistance supported Agriculture Trade Policy Reform Program [ATPRP]. This last program will address policies and regulations constraining agricultural market efficiency including import and export taxes and fees which raise Chadian costs of production in the UDEAC customs area harming Chad's comparative advantages in particular crops.

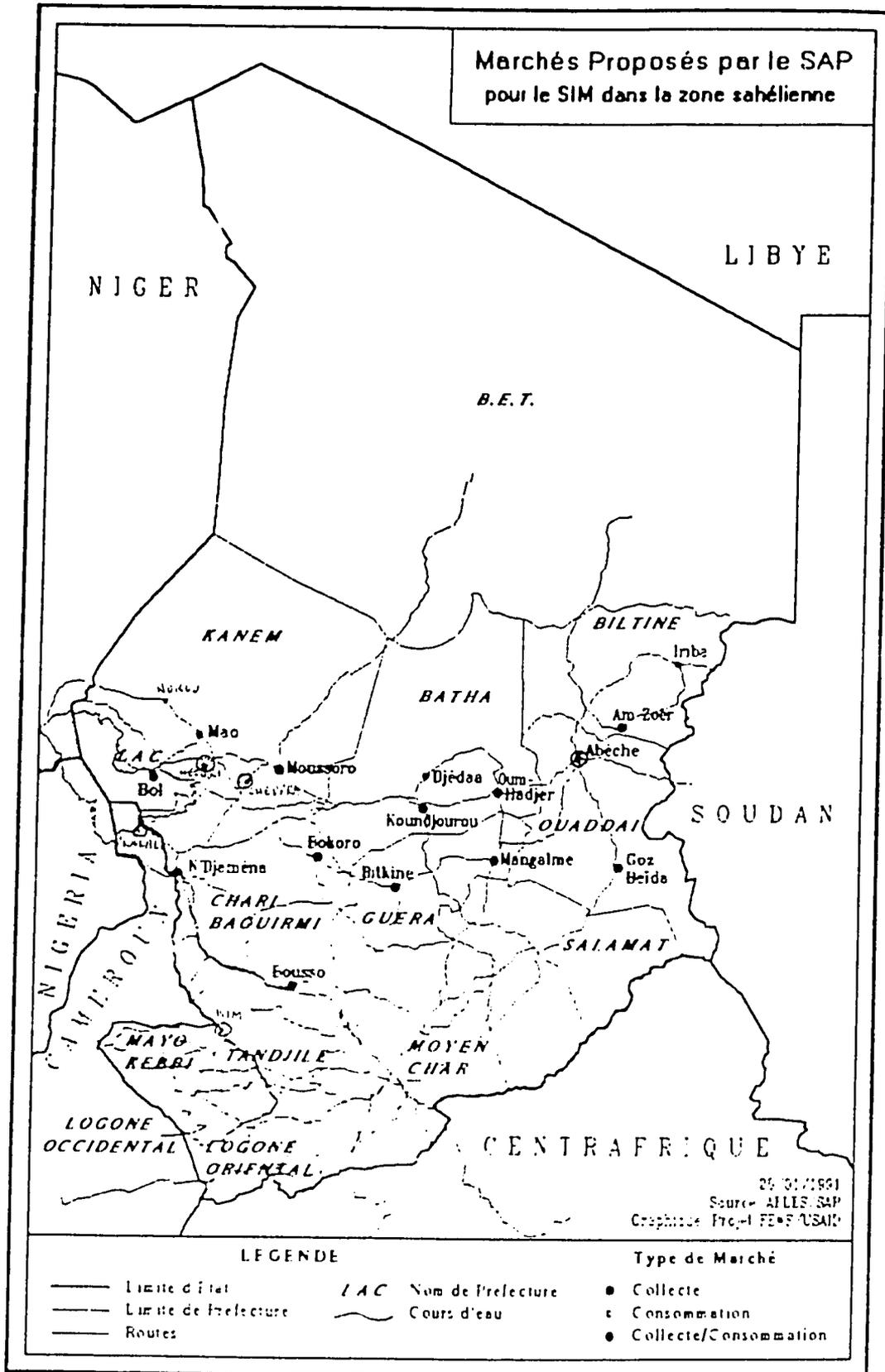
The geographic embrace of the project was widened from the Sahel to include the Sudanian zone, essentially the lower half of Chad, and DIP sub-projects are scattered throughout both zones [map 2].

The project, and subject of the present evaluation, was amended and extended to May 31, 1995. The purpose of the amended DIP is to:

improve agricultural marketing, increase small-farmer productivity, improve job skills through training, and develop private business having demonstration and institutional development effects.

MAP 2

Location of Project Sites



NOTE: VITA is located in N'Djemena

The PVO implemented projects under the umbrella, in order of authorization, include:

<u>PVO</u>	<u>Sub-Project Title</u>	<u>Total Funding US\$*</u>	<u>PACD</u>
ACDI	Pilot Fruit & Vegetable Marketing	2,429,000	12/31/92
Africare	Ouaddai Economic Strengthening Initiative	1,801,000	6/17/94
CARE	Kanem Pumps & Agricultural Marketing	1,150,000	4/30/93
CARE	Kim Area Agricultural Marketing	0,811,000	4/30/93
ORT	Lake Chad Agricultural Development and Farmer Training--Phase II		
	Marketing & Technology Dissemination	2,571,000	7/31/94
VITA	Private Enterprise Promotion III	6,702,000	6/30/94

Total Obligations - LOP		15,824,000	

* all numbers rounded-off to nearest thousand.

The PACD's of the following projects have since been adjusted:

CARE/Kanem	December 1993	Terminated for security. <i>NO</i>
ORT/N'Gouri	December 1992	The final year and a half will be implemented in a yet-to-be determined area.
ACDI/Karal	March 1993	Terminated
VITA/PEP	June 1994	Extended by one year with additional funding [included above].

The three phases have cost US\$26,715,000 in grant funds since 1985.

II. STATUS OF THE PROJECT

A. Summary of Findings

1. Findings regarding the project as a whole

The project has:

- o Contributed to food security.
- o Provided labor saving technology which has benefitted men and women.
- o Contributed material well-being through: [1] income generation through marketing technology or [2] Establishment of group managed group funds for mutual advancement.
- o Contributed to institutional sustainability in at least three ways: [1] supported long term presence of US PVOs which offer a viable alternative to GOC-sponsored development in a period of uncertainty; [2] supported groupements which are mainly but not entirely temporary community responses to what members see as targets of opportunity; [3] promoted technology which has proved a mixed bag although some appear sustainable, for example, hand pumps, well drilling, onion storage and tomato drying.
- o Made credit available to the smallest scale entrepreneurs who would not have been able to find institutional credit.
- o Provided a decentralized mode of input delivery capable of adapting to the different contexts in which project activities were undertaken.
- o Has benefitted women mainly through labor-saving food security, income generation and credit, while addressed mostly to men.
- o PVOs have found it easier to shift from relief and concern with food security to production as the primary project purpose than from production to an

exclusive focus on marketing. This may reflect their fundamental orientation towards humanitarian goals - such as the direct provision of food and food security.

2. Findings regarding the umbrella project

- o The umbrella has been found to be an efficient mode of implementation of a project which includes a number of dissimilar agents.
- o The success of the umbrella mode depends in unusually large measure upon the project manager - his ability to cause the partners to pull together as a team, his sensitivity to the needs of the particular partners, his ability to coordinate using a variety of methods while not appearing to dominate.
- o The umbrella may be marginally more effectively managed from without the USAID ceteris paribus.
- o While the umbrella has been utilized in the project primarily for its bureaucratic dimensions, as a funding vehicle, its potential as a development tool taking full advantage of the flexibility provided by the PVOs, remains underutilized.

3. Design findings

- o Project progress measures utilized by the separate projects may not be particularly useful. The problem centers on the effort to use quantitative measures for accomplishments needing a qualitative measure. Measures often stress means rather than results. For example, a target might be the completion of a building and this taken to imply the accomplishment of its purpose which is to promote a marketing strategy. Similarly, stress upon numbers of activities mask their intended purpose. For example, counting demonstration plots as a progress measure misses the objective which is adoption by farmers. Designers are prone to this because numbers of adopters may only occur beyond the life of the

project while progress measures are called for within the LOP.

- o Numerical targets included in project designs should be much more carefully selected. For example, ten percent increases in farmer's income may be advanced. Little or no justification is provided in project narratives for the number selected or the conditions which must prevail for it to happen. In fact very small numbers of farmers may achieve much increase before LOP. Adoption rates of even very promising technologies typically follow an 'S' curve, wherein very small number adopt and perfect a skill within a certain amount of time. Then, the leaders having demonstrated success, and risks being thereby reduced, larger numbers adopt a process which continues until other constraints come into play and rates begin to decline.
- o It is not always clear that project designers distinguish between farmers' objectives and project objectives. While the farmers' primary objective is food security the project assumes it is the earning of extra cash income. The evaluation's finding is that cash earnings are seen by as one of several survival strategies which are used simulataneously.
- o Project design made assumptions concerning the binding constraints on marketing which are probably overdrawn. Markets appear, based on admittedly anecdotal evidence, to be price efficient and not segmented to a degree that they are inoperative.
- o Assumptions represent necessary but not sufficient criteria for project success. The longer the list of assumptions the less likely the project will succeed. The designers did not understand this and assumptions abound in each project paper. For example, national growth is not in fact necessary for realization of many objectives, yet impressive and unlikely figures are advanced throughout the papers. In many particular instances public stability may not be terribly important at the farmers level. Assumptions should not be thrown about casually -

the rule should be - the failure of an assumption to materialize means project failure is more likely. Is this true in each particular case.

4. Overall recommendations

- o Until a stable, responsible government is operating normally in Chad, continue to use PVOs as agents for implementing USAID development activities.
- o In designing the next project, work collaboratively with the PVOs to determine the local needs in different areas in which they work and the degree of latitude and flexibility to build into project guidelines for proposals.
- o If the marketing focus remains a mission priority, adopt a broad definition of marketing, such that consumer determined varieties and crops are reflected back to producers and producers provided the means to respond. It is recommended that in addition to a wider range of tomato varieties other vegetables including zucchini squash, melons, bell peppers, carrots, and pulses can be made available to farmers.
- o Continue to promote food security as a priority. Although the rains have been good in recent years food security remains a priority with Chadian farmers.
- o Encourage American PVOs to enter into partnership with Chadian NGOs to provide technical assistance to each other. Chadian PVOs have local knowledge and experience in some types of development interventions that could benefit their American partners, as well as being able to benefit from American technical and managerial expertise. Do not expect Chadian NGOs to drop their modes of service delivery to work for American PVOs.
- o Consider contracting the management of future PVO umbrella projects to an organization that is not in competition with PVOs for funding and activities.

Build in more active information sharing between PVOs through exchange of research reports and visits or consulting between staff members and beneficiaries.

- o Do not assume that groupements formed in response to development projects are stable or viable over the long term. Instead of creating new groupements that are too big or not culturally well-supported, use in-depth interviewing techniques to identify traditional social groupings appropriate for development tasks. Try to reformulate existing unwieldy groupements to have a more solid cultural and institutional base.
- o Re-examine assumptions that land is readily available everywhere and open to all comers. Be sure to consider pastoral rights as well as agricultural access.

Who's the best?

B. The Six Sub-Projects - Findings and Conclusions

The separate evaluations underlying this section are to be found in Annexes A through F. This section summarizes the findings and conclusions and turns to the longer term issue of sustainability using as its point of departure each project's current situation with respect to its planned position at the end-of-project together with the relevant assumptions needed to assure long-term sustainability.

The six projects vary somewhat among themselves. It is clear, for example, that promotion of production has not been entirely dropped in the present marketing-oriented phase. Indeed in the case of the ORT project in N'Gouri marketing has been added to a continuing concern to raise productivity and protect production through an extension of irrigation. An similarly in the case of the CARE project in Kanem. Marketing is the paramount and almost exclusive concern in Karal [ACDI], Kim [CARE] and Abeche [Africare]. Support has continued in both Kim and Abeche for pre-cooperatives responsible for the operation of water management systems installed in the previous phase. In this connection three sorts of pumps - hand, motor and animal powered - have been studied and introduced. All six promote small scale private enterprise but from differing angles: well drilling and pumps - Kanem and N'Gouri; marketing - all projects; short term credit to farmers - Abeche; marketing through groupements - Kim, Abeche, Karal; and micro and small enterprises - VITA. Most of the sub-projects have a processing component [tomato powder, peanut oil] - Abeche, Kim are the most advanced, and these may be owned by womens groupements.

n

Most of the projects have undertaken tests into various appropriate forms of post-harvest technologies including storage, drying and packaging of produce - of which the Karal project perhaps has been the most ambitious. The projects generally have at least considered earning value added from some form of grading and/or trade on the established reputation of their produce to earn extra income.

1. The Kanem Pumps and Agricultural Marketing Sub-Project - CARE

Not true / The project [but not all CARE activity] is being prematurely terminated because of continuing insecurity in the region. The project has focused upon [1] introduction of hand pumps and well drilling technology and [2] sensitizing farmers to marketing strategies for tomatoes and onions including price awareness.

The project has fallen short of its objectives regarding number of hand pumps installed, in large measure because the original objectives were unrealistic [500 by EOP]. Although farmers showed little interest in the new drying technologies it is believed that the concept of storing for later sale has caught on.

It was found that price and marketing information was available although usually several days old. The women's groupements showed themselves quite able to trade and take advantage of market opportunities in the trading of produce. Only limited use appeared to be made of posted prices.

The project's principal accomplishment will be to leave a core of trained artisans capable of making, repairing and maintaining hand pumps. About 50 of these have been installed. The artisans are undercapitalized and lack sufficient transport. They are able to only handle pump and well drilling within a small radius of the project towns.

2. The Kim Area Marketing Sub-Project - CARE

The project will end by April 1993.

The project focuses almost entirely on marketing - womens groupements of taro and produce grown on irrigated perimeters, mainly rice. Women's groupements have been growing mixed vegetable crops for market on fields irrigated by hand. The rice production groupements are felt to be too large for effective self-management. The women's groupements have turned out to be mainly interested in production for home consumption and in selling as individuals.

Prices have been collected in five local markets and some major national markets which are distributed monthly. Price information, however, is already widely known as both men and women travel among local and national markets.

The evaluation is of the opinion that not much can be accomplished using the present set of objectives. That is not to say the area should be dropped. The team agronomist is of the opinion that the production base for the rice is in decline for a number of reasons although current yields are in line with those common in west Africa.

3. The Lake Chad Agricultural Development and Farmer Training II Sub-Project - ORT

This project builds upon a successful set of production related interventions initiated in an earlier phase. These appear to have been adopted by farmers and are spreading autonomously. ORT has built on its long suit as an agency which is training.

The present phase focuses upon post-harvest storage, packaging, marketing strategies and the extension of water supply technologies. Prices are collected from N'Djamena, sent by ORT radio to N'Gouri, and disseminated locally. Price information does not appear however to have been a local constraint.

The project area has been particularly hard hit by domestic insecurity such that the Mission has decided to terminate what is a successful project. ORT has submitted a phase-out plan which focuses on the training. The project will end its work in the N'Gouri area in December 1992 and will relocate in some yet-to-be determined site, probably in southern Chad.

4. The Ouaddai Economic Strengthening Initiative Sub-Project - AFRICARE

The project's present phase only got underway in early 1992 but will last until June 1994, which is sufficient time for it to realize its objectives.

The project has built upon substantial accomplishments sustained in an earlier phase when several dikes were constructed to assist in food security. Although the area is economically and physically remote from Chad's principal markets it produces superior onions and dried tomatoes for them. The tomatoes are produced behind the dikes using recessional agriculture.

The project has introduced several cost-effective drying and storage methods each aimed at different needs. These include upgraded and improved on-farm units, large group and village units of two sizes.

It assists in the training of farmers organizations in dike management and maintenance.

An important strategy being initiated is the processing of peanuts for oil and tomatoes for dried powder. The project hopes to upgrade the latter's quality and sell it

as a retail good under its own label. In the process it is hoped to be able to cut transportation costs by negotiating bulk shipments.

It is not clear that farmers have great need for the price information collected under the project. Local commercants make good use of phone connections with N'Djamena whose prices are closely tracked by the interested parties.

Long term survivability depends upon the maintenance of the dikes. An engineering study earlier in 1992 noted the propensity for the floods to create gullys around the dike berms which, if left unattended, will contribute to the erosion of both dike and land under recessional culture. The project has trained farmers in maintenance and they seem to be aware of what is needed. Arrangements will have to be made to involve the local genie rural in maintenance and provision of transportation of anti-erosion materials as needed.

5. The Pilot Fruit and Vegetable Marketing Sub-Project, Kara--ACDI

This project has had an unfortunate history - difficult and late staffing and later a full turnover in staff. This is also an instance where AID's stress upon marketing effectively masked the underlying production problem. What is needed are appropriate varieties of tomato to market which would have required an important agronomic input. Although an agronomist was in fact supplied his scope of work stressed post-harvest technology rather than production.

The project has only accomplished preliminary training of farmers in post harvest technologies and little conclusive progress has been sustained. It is not clear that farmers were as unaware of final market prices and market strategies as the project assumed.

The project assisted in the construction of various physical assets - hangars in both Karal and N'Djamena. There is concern that the N'Djamena hangar will not able to provide cooling for tomatoes, which is needed, because of the high cost of installation and monthly cost of electricity. The most important accomplishment has been the gathering, analysis and distribution of price and market information which will be of use to AMTT.

After the project came into existence a local farmers federation came into being to which the project has given important support.

The area has real economic potential lying close to Chad's largest market, good roads and having the capability to produce up to three crops annually. The recommendation is advanced that the area and its federation continue to get donor attention and support.

The Karal project will come to an end by early 1993.

6. The Private Enterprise Promotion III Sub-Project - VITA

The VITA/PEP addresses previously unmet credit needs for small scale entrepreneurs. The project has demonstrated that this class of borrowers do not need subsidized credit, are credit worthy, and capable of using credit effectively to buy inventory, machines etc.¹ The borrowers have on the whole a good repayment record especially in the context of general business insecurity.

The project's training component is one of these costs and is an important contribution to general development through promotion of small scale enterprise. The project would pay for training costs and supervision of micro loans by charging the SME borrowers these higher interest rates. The project expects to be able to cover its operating costs from loan generated incomes by 1996 if interest rates are allowed to rise first to 18 and then 24 percent.

Even using real interest rates questions exist regarding the institution's sustainability after EOP. The recommendation is made that the credit facility be sheltered under a donor umbrella for a considerable period. The Chadian director should be kept on as an employee of VITA and close scrutiny given to its loan practices. In the long run some kind of cooperative credit institution may be brought into being.

VITA/PEP has been extended with additional funding until mid-1994. In addition to USAID money the project has received support from both UNDP and the World Bank.

¹. It is true that interest rates currently charged borrowers are lower than the real scarcity value of capital. On the other hand budgets prepared in the course of evaluating loans shows that borrowers are able to realize substantial rates of return such that they could afford much higher interest rates and still turn a profit.

III. PROJECT EVALUATION

A. Evaluation of the Overall Project

1. Consistency of the project with USAID, AID and GOC goals

The Africa Bureau's Strategic Framework for Promoting Agricultural marketing and business development in sub-Saharan Africa includes the capability of market participants to engage in marketing activities. USAID/Chad has initiated DIP, AMTT and ATPRP to address various constraints to Chadian farmers and commercants to become more effective participants in marketing.

The GOC has not engaged in policies antithical to private enterprise. For whatever reason the country has been free of most of the policies adopted by others in Africa aimed at controlling prices, marketing, private investment etc. It is probable these pro-business policies will continue. These policies will become even more favorable to the extent ATPRP succeeds in its objectives.

2. Validity of the project's assumptions

The DIP builds upon three assumptions - one technical and two behavioral. First, that the existing marketing system does not adequately convey information to the farmer. But if it did then, second, farmers would actively seek out the highest possible price, and, three, they would employ various strategies to so position themselves that they could maximize income. Restated, it is assumed that farmers presently sell at time of low prices because they are unable due to various technical and economic constraints including the need to pay debts due at harvest time and the inability to store produce for later sale. The further assumption is made that cash income is of primary importance to the farmer.

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Not a
review

The project strategy has been to help the farmer to raise incomes through the provision of storage technology and the means to transform produce to gain a higher value added and by the provision of market information to enable the farmer to plot an appropriate market strategy which would allow him to sell when and where prices are optimum. The project recognizes the importance of high transportation costs and addresses this through the production of a higher value lower volume product - for example, the conversion of a fresh tomatoes into dry powder.

Finally it is assumed that these interventions meet a real need, which they must if they are to be self-sustaining beyond the end of the life of the project.

The Mission has undertaken an unusually large number of marketing studies and these will continue under AMTT. In the course of the evaluation farmers, farmer-cum-commercants and commercants were asked about market operations. The following

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preliminary insights were developed which tally with the larger studies. Where telephone service exists, and in the present context this only exists between Abeche and N'Djamena, commercants [we were told by both farmers and commercants] were in constant touch between assembly and final markets. Prices were essentially communicated daily. Where telephone service does not exist, which is the case in N'Gouri, Kiri, Cheddra, and Karal, a continuous coming and going of traders, transporters, farmers themselves, relatives etc, ensures that reasonably current price information is communicated. In Cheddra, for example, two day old price information was generally available.

The farmers spoken with were found to be quite aware of general annual swings in prices and the reasons for this. What is less clear is their subsequent actions in certain cases, for example market opportunities which they clearly perceived were not taken advantage of. Study will be needed to get a fuller appreciation of farmers evaluation of risks, opportunity costs and overall strategies for these to be understood.

Competition exists as well. Farmers in Abeche reported that they had three choices when selling their produce. Dealers came to their gates when supply was short and tried to buy directly. Farmers could take their produce to market and sell it there directly. Or they had the choice of selling at the edge of the city where commercants or their agents usually posted themselves. It seems to be fairly easy to become a trader, apprentices need only some capital which can be borrowed from family or friends - so that a large number are on the scene.

We asked about the movement of capital between Abeche and N'Djamena. Our respondent replied that actual money is not transferred. Rather dealers settle accounts, directly or indirectly, at either end -and this often within a network of relatives, friends, village brothers etc. For example, instead of a sending a cash payment back to Abeche an N'Djamena buyer might pay off a debt owed by the Abeche seller to an N'Djamena creditor. Accounts are cleared through the movement of goods not cash.

Are farmers compelled to sell at harvest? Our sources indicate that short term debt often exists as farmers have borrowed food [mainly cereals] after their stocks were exhausted. They repay in kind - a bag for a bag - at harvest. Although farmers are perfectly aware of the money value of a bag at different times, the claims of social reciprocity are of equal if not greater importance at the village level. Farmers market choices are limited, once social claims and subsistence needs met, in that they lack the ability to store efficiently and here the provision of credit to tide them over until market prices rise is of importance, and in this particular the projects which have provided short term loans have introduced a useful service.

*market debt
farmers
refer*

B. USAID/Chad's Management Role

An evaluation of the effectiveness of the umbrella approach is developed more fully in Annex G. The USAID's management role has been defined and delimited through the use of an 'umbrella'. The underlying documentation states that this project differs from conventional PVO 'umbrella' projects in that: [1] it is limited to six sub-projects; which are [2] of comparatively large magnitude - having a mode a bit over US\$2,000,000 and an average of US\$3,250,000. Also [3] the efforts they represent are central to AID's program rationale and [4] are expected largely to be conceived and implemented by PVO's already financed by AID in Chad and undertaking activities that are the precursors to those anticipated under the new project.

C. Role of the Government of Chad

Some PVO's depend upon GOC organizations to implement their projects - others have virtually no such links at all. The PVO's and their GOC counterpart agencies are spelt out below.

ORT has worked closely and with good results with SODELAC, a GOC parastatal. ORT has established good working relations with civilian local government, although contacts with the military have been less rewarding. CARE/Kanem developed useful links with their local forestry and genie rural. Less fortunate has been ACDI which received only three of seven promised staff slated to work with them in the collection of statistical data. The project has been able to establish a working relationship with local extension representative. GOC units in the Abeche area have worked well with the Africare project. Taken as a whole, however, GOC support has been weak, but this should not have been a surprise given the country's recent history.

PVO's and their links to
GOC organizations

PVO	Supporting GOC
ACDI	3 staff from MOA/DSA 2 staff from ONAD links with ONDR
Africare	forestry and genie rurale, ONDR
CARE	forestry and genie rural [Kanem]
ORT	SODELAC
VITA	GOC represented on advisory committee

Source: PVOs

D. Linkage of the PVO Sub-Projects with the AMTT and NPA

1. AMTT

The Agriculture Marketing Technology Transfer [AMTT] began in 1992. It seeks to address three critical market constraints which include:[1] lack of market information; [2] inability to identify and finance viable investment projects in agribusiness and [3] lack of data and analysis needed for agriculture price policy formulation. Elements of DIP [AMTT, KIM, Kanem] are seen by the Mission as a 'bridge' whereby price information is collected in markets important to a particular sub-project and distributed to interested parties through bulletin boards located at various markets. Producers and commercants in the Abeche, Kanem and N'Gouri area are supplied with reasonably current information on selected product prices in the N'Djamena markets. The Kim project collects and distributes only information gathered in neighboring markets. The ACIDI project has collected, analyzed and produced a comprehensive review of vegetable prices for products coming from the Karal area and sold in the various N'Djamena markets. The DIP works on the assumption that farmers and commercants will use locally posted price information as an addition, and perhaps cross check, to information available from other sources and use these in the preparation of their particular marketing strategies.

Unfortunately the most ambitious price collection and dissemination scheme, that operated by the ACIDI Karal fruit and vegetable sub-project, ends a full year before the AMTT project will be able to assume at least some portion of the work. And similarly in the case of the two CARE and ORT implemented projects.

Even so the sub-projects have gathered sufficient information about markets to support the belief that an investment in market information pays off. The work has demonstrated that: [1] competitive markets now function at least in the sub-project areas and between these areas and the principal urban markets; [2] farmers and local commercants are sensitive to and make use of price information from both local and the N'Djamena markets; [3] the final markets are to some extent quality conscious [within limits permitted by very low average incomes] and that buyers seek produce from particular sources known to have certain characteristics; and [4] the cost composition of market margins are better understood. Tomato producers in Karal, for example, appear to earn from 35 to 40 percent of the wholesale and retail prices paid in N'Djamena. Transportation may be as high as 70 percent of the market margin between producers and final consumers. The project has, once again, demonstrated the high losses sustained by farmers using traditional storage methods and thus the importance of better methods in connection with marketing strategy.

The DIP has shown as well that commercants make extensive use of the telephone system where this exists [Abeche in the present case]. Unfortunately telephone links only exist among N'Djamena, Abeche, Largeau, Mongou and Sarh.

2. ATPRP/non-project assistance.

The project purpose is to increase the efficiency of the agricultural marketing system for non-industrial [read cotton] crops. The strategy for accomplishing this is to: [1] reduce the import duty on trucks and spare parts; [2] reduce the import duty on agricultural inputs; [3] removing all export duties on agricultural products; and [4] increasing the capacity of the private sector. A successful ATPRP would help DIP sub-projects in every one of these instances.

It is argued in the ATPRP project paper that from 10 to 20 percent of the cost of transport reflects high import tariffs on trucks and spare parts. The evaluation endorses once again the fact that transportation represents the largest single component of the margin between farm and final consumer [adding up to 70 percent to the farm gate price for produce sold near Abeche when transported to the capital]. It also conditions the sort of market an particular area can exploit. Fresh produce cannot be shipped without an important loss. Abeche, for example, can only export dried produce to N'Djamena and the south east of the country is effectively excluded from central markets.

Nigeria provides spare parts for pumps, some fertilizer and agro-chemicals. Reductions in import duties would benefit farmers. Of interest too would be the practical effect of duty free manufactured inputs now produced under monopoly conditions by SIMAT. It has been argued that an important contributing factor to the high levels of failure to repay debts to the VITA project by farmer borrowers in the Bongor area was the use of this money to buy SIMAT products which broke down.

Any reduction in export tariffs would work to promote sales of tomato powder, dried vegetable produce and cow peas [were Chad to end the periodic export ban]. Cow peas have considerable potential in the Karal area.

Finally, it is likely, even probable, that SME's loans could be used by private firms to finance exports to UDEAC countries were markets in those countries to open up.

E. Activities of Other Non-Governmental Organizations and PVO and their Relations to the PVO Project and Sub-Projects

How closely have the PVO's worked with Chadian NGO's? On the whole not much with one notable exception, ACDI and SECADEV.

PVO	NGO's	Quality of links
ACDI	SECADEV	good
Africare	none	n/a
CARE	none	n/a
ORT	none	n/a
VITA	none	n/a

Source: PVO's

These links are spelt out in the relevant annex. In Abeche Africare staff have worked closely with a Parent Teachers Association in the area, DARNA, and have transferred various management practices to strengthen the organization.

F. Suitability of Progress Measures²

Several of the sub-projects have prepared through baseline [Africare, ORT and ACDI] with respect to which progress can be measured, of which Africare's is notably well done. The VITA project has attempted a practical approach using measures based on a balance sheet prepared at the time of a loan application.

In the case of the DIP the entire benefit is contingent upon the project's ability to increase incomes from a given level of production as the result of certain changes [recall in this connection that the project does not seek to increase production, that was accomplished in an earlier phase - in this phase production is protected]. Increased incomes are expected to result from changes in farm technologies, most notably having to do with storage, and behavior related to marketing and the search for extra cash income. The effect of technical changes can be observed and their effects measured directly. More difficult is behavior.

The Ouaddai [Africare] base line study is of particular importance because it underscores the need to carefully prepare a base line so as to be able to measure expected

². Much of this section directly benefits from the Base Line Study prepared for the Ouaddai Economic Strengthening Initiative by Walter West and submitted in March 1992. This is an excellent appraisal of the logic underlying the selection of progress measures and deserves to be applied to the project as a whole.

and probable events while not confusing assumptions and hypothesis with a clear cause and effect. The measures used in Ouaddai can be monitored - losses in storage, percentage of produce marketed, prices received.

How can we be sure a change is due to an improved delivery of price information or extra marketing due to a shift in risk perceptions? The analyst must be wary of imputing linkage between interventions.

Organizational changes are expected as well - most notably organization of farmers into pre-cooperatives and various forms of production related groupements. These last can be measured by direct observation.

The base line prepared in Ouaddai faces up to the problems encountered in such an attempt and underscores the difficulty and cost of measuring impact such that believable results are obtained. For one thing, a control group is needed, which must be observed with the same diligence as is expended upon the project change group. A second factor, and one routinely overlooked in AID project planning, is the length of time needed to have an impact. In most cases three years, the typical LOP of DIP sub-projects, is simply not enough time to register progress when a change in behavior is expected of a broad class of people.

In a three year period little more than practical demonstrations can be attempted in situations where a substantial change in behavior is needed. Storage is an example. The smallest family level unit may cost CFA 40,000. By year three in a project how many farmers can reasonably be expected to swallow the risk, find the capital and engage in a wholly new approach to farm management?

It is likely that a number of years will pass before even an important number of farmers in a village will be adopters. A series of post project soundings will be required to measure impact and spread - number of market strategies utilized, and their impact upon quality of life, income etc.

IV. APPROPRIATENESS AND REPLICABILITY OF THE UMBRELLA MECHANISM FOR PVO SUPPORT

The analysis of the DIP umbrella project management focuses upon: [1] the effectiveness of the current DIP umbrella; [2] the most effective institutional location of the umbrella's management; and [3] the AID-PVO relationship under the umbrella.

The DIP umbrella is characterized by being totally managed from within the USAID. The DIP is unusual among umbrella projects in only addressing the contracting and management of six subprojects implemented through contracts with ACDI, Africare, CARE, ORT and VITA. Umbrella's elsewhere in Africa include training, extension, technical assistance in addition to the management of subprojects. Within the USAID the project is located under the section which deals with agriculture and rural development and gets day to day direction through a PSC hired for the purpose. The small size of mission precludes the need for a dedicated steering committee to provide overall direction. In common with many umbrella projects the DIP is not area-specific.

The analysis of the umbrella project indicates that a clear case cannot be made that location of the project management within the mission is superior or inferior to management from the outside under contract. Both are superior to management as separate projects by mission project officers supervising this among other responsibilities - given the present and likely continuing ratio of direct-hire staff to work load within the USAID. A good case can be made that the overall capacity of the person managing the project is all important and can even offset poor design.

The AID-PVO relationship under DIP is described as similar to the partnership between horse and rider, with AID, paying the bills, in the latter role while describing it as 'collaborative'. The present relationship is rooted in the manner by which DIP came into being. More important is how an umbrella might be worked out in the future. PVOs can have important resources to bring to both design and implementation. PVOs often have special concerns and skills to implement them. They probably have long-standing experience in [this case] Chad. The evaluation recommends that the USAID makes use of this experience in the planning of any future umbrella project.

ANNEX A

Kanem Pumps and Agricultural
Marketing Project, CARE

**PVO Development Initiatives:
Kanem Pumps and Agricultural Marketing
677-0051.H**

**Date of Authorization: May 1, 1990
PACD, revised, April 30, 1993
Date of Last Evaluation: February 1992
LOP Obligation: US\$1,149.7
Project Implemented by CARE**

I. INTRODUCTION AND BACKGROUND

A. Introduction

The project was originally scheduled to finish in April 1993, but as it was feared the local security situation had the potential to change suddenly a determination was made to advance this date to December 30, 1992 [although CARE will continue a non AID-funded project in the area]. This evaluation is in consequence an end-of-project appraisal of progress made and lessons learnt. The project is the second in the area implemented by CARE. The first phase, 1986-90, tested the hand-operated pumps and determined them practical and technically and economically interesting to local agriculture. Since its launching in May 1990 the project has made considerable progress inspite of periodic punctuation by local disturbances which caused the project to be shut down at critical junctures during each growing season.

B. Project Background

1. Project area

The project area comprises a series of oasis towns from the north east of Lake Chad [Cheddra - about 70 kilometers, 40 miles, from the lake] to Mao over 150 kilometers to the northwest and nearly 100 kilometers from the lake. At one point, security permitting, even more remote Noukou, 100 kilometers north of Mao was included. Marketing projects were included as well in Moussoro and Birchamchi near Cheddra. The area's vegetation is transitional from Sahelian to near desert.

2. Commercial agriculture in area

Farmers can grow two crops annually - millet during the rainy season and selected vegetables in the oasis. Here pump irrigation is practiced with traditional water lifting equipment, shadouf, raising water up to seven meters from the water table. The shadouf can irrigate 7 ares [15 percent of an acre] but requires two adults or one adult and youth to operate it for an entire work day.

II. PROJECT STATUS

A. The Kanem Pumps and Agricultural Marketing Project

1. Project purpose

The purpose of the Kanem Pumps and Agricultural Marketing Project is:

- o To provide 1,800 Kanem farmers sustainable access to improved water-lifting technology [located in wadi's], supported by local private sector artisans.
- o To improve incomes of 1,000 Cheddra area farmers from sale of wadi produce to local and national markets.

2. The technical and economic problems addressed by the project and strategy adopted

The principal agricultural product produced in the area and in demand in large final markets, of which N'Djamena is the most important, are onions. The crop is seasonal in Chad and markets are swamped at harvest time. The project has done some work to perfect onion drying and storage so that produce can be available later in the season when prices are higher. This is an additional potential source of income to groupements. The technical judgement made by the evaluation is that very little progress has been made towards perfection of this technique and the judgement is made by the project that farmers do not see the need for the extra effort required to try using the new technique[s]. Farmers do a poor job in culling onions during the drying and storage process - many poor specimens were found. In a related area, packaging of tomatoes for transport, some tests have been made, but nothing has been found that is cost effective with respect to traditional loose packing.

To support marketing the project has introduced the farmers to the need to maintain funds sufficient to allow them to hold stocks of produce in storage until prices rise - three or four later. As a demonstration the project provided seed capital amounting to 60 percent of the value of an onion crop destined for sale to be repaid at final sale [with interest]. Thirty loans have been made and all repaid. The project, however, does not attempt to establish a revolving fund.

Farmers face a labor constraint inhibiting their ability to expand agriculture and from adopting any technology which places additional labor demands upon them. The Kanem Pump and Agricultural Marketing Project introduces the hand pump, a relatively low cost water lifting device which can be made from and repaired using local materials and to replace the labor demanding shadouf. The pump raises the area under irrigation command only marginally, by one or two ares, but does it much more quickly using only one person for up to three hours. This effectively frees an adult for alternative work who would have otherwise had to man the pump for an entire working day.

The hand pump is moderately expensive by local standards [CFA32,000 - and may rise to CFA50,000 when buyers have to pay for all costs including transport to the area]. The project has sought to ensure that an indigenous capacity to drill shallow tube wells and mount hand [or even motor driven] pumps is locally available. A number [23] of 'artisans' have been trained in both of these skills. The project has made available to them a kit containing all of the basic tools needed to do the work in addition to training. Should an apprentice decide to enter the business on his own, an initial outlay of around US\$500 would be required to buy the basic tools and equipment.

Although the Kanem area is linked with the N'Djamena produce markets through the commercants, farmers, it is believed, have been insufficiently informed as to final prices in that market. The project assumed that if farmers were fully aware of current final prices for their produce they could obtain a better farm gate price. Farmers face a competitive market and can bargain. The project established a system based on price gathering in the final market and using the CARE radio link to send current prices to the project area where they were posted in the Cheddra market.

B. Progress of the Progress to Date of Evaluation

1. Impact on beneficiaries

The project is approaching the end of its three year life. The project installed some 50 pumps. Training has been given to 23 artisans to enable them to build, repair, maintain pumps and support farmers in their use. In addition 700 farmers have been shown the utility of these pumps. The initial goal of 500 pumps has proven to be impractical, because of the work stoppage due to insecurity. Also the final demand for pumps costing CFA 32,000, was found inadequate at current costs and prices for inputs and outputs. Twenty six onion producer groupements including 326 members have been organized.

Two women's groupements have formed and have obtained a hand pump to water group plots. Members pay a fee to the groupement to pay for inputs and prepare the overall perimeter together. However, members cultivate their individual plots within the perimeter.

2. Effectiveness of interventions towards purpose

The evaluation found that much more progress has been made, comparatively speaking, in the promotion of hand pumps and their support, than with the introduction of various drying techniques.

Although the pumps have been demonstrated to be valuable and within the technical capacity of local artisans to support, their actual out-of-pocket cost, expected to be around CFA 50,000, will put a limit on their demand. On the other hand, where a farmer or farmers can put together this amount, the pump will pay for itself in an single season. Alternative pumping

technologies have not explored. The evaluation is of the opinion that the bidon verseur, currently being introduced under the DIP in the N'Gouri area, could be a viable alternative.

The evaluation agronomist found the post-harvest tests/demonstrations to be inconclusive and not particularly well-planned. The quality of dried product was unsuitable to market need. Smut was found on stored onions which were not being culled. Still a few marketing runs were made using onions stored eight weeks, and these got better prices. The attempt was viewed as a demonstration only. Packaging tests were made as well using tea chests. Experiments were run putting aeration holes into the tea chests but the twenty percent shrinkage expected [during transport from Kanem to N'Djamena] in the original project design and attributed to inadequate packaging was found to be excessive.

It is very unclear whether farmers make much use of the price information collected by project staff and is presented in both French and Arabic on boards in the central market. It is evident that discussions with farmers and farmers-cum-commerçants suggest that farmers are generally informed about final prices but that the information is usually several days out of date. There is a continuous coming and going by relatives, neighbors, traders etc who bring with them market information. It is possible, although this could not be ascertained, that the project-supplied price information, is used as an additional source, although it is no more up to date than alternative sources.

3. How has the private sector been affected

It would be premature, and probably overly sanguine, to claim that a new private sector industry has been created. The facts seem to be as follows. Five artisan teams have been trained, one in each of the five project centers. The private sector at present can supply hand pumps, maintain them and drill wells. The demand, however, is limited when artisans must charge the full cost of materials - CFA 50,000, nearly CFA 20,000 more than the project charged [transport of materials from N'Djamena to the site was paid for by the project]. The artisans complain that their effective working radius is limited by lack of transport. The group in Mao make use of three camels to haul drilling equipment - and the cost effective radius is limited to the distance they can walk in one day around Mao. A vehicle could be hired but the extra cost, when passed on to the farmer, would be beyond typical means to pay.

4. Social impact of CARE interventions

Both the introduction of hand pumps and the activities of groupements stimulated by the availability of credit from CARE fit into the spectrum of people's normal activities without creating conflicting demands. Both offer labor-saving devices, directly or indirectly, that people appreciate.

The handpumps are a direct and obvious way of getting the job of irrigation done in less time and less effort. In addition, at least one women's groupement with which we met also has organized specifically to put together a fund to purchase and set up a grain mill similar to that

in N'Gouri, at the moment there is none. They see this mill as the solution to the onerous task of pounding grain by hand every day. They are not, however, informed at present about the costs of mills, the choice of types available, or the way to go about getting one.

Groupements had organized in response to the opportunity to apply for credit from CARE but seemed quite capable of sustaining their activities as long as they saw some payoff from them, whether CARE continues to offer credit or not.

Though, for the moment, there are no evident conflicts over who has the right to use the wadi's in which CARE is promoting handpumps, the CARE program assistant notes that in the past there have been confrontations. The system of rights over land, both wadi and dune, is complicated; land rights have multiple dimensions, depending on:

- o The type of land in question. Certain marshy wadi's are traditionally the dry-season pasturage and watering points of transhumant pastoralists, for example. Formerly settled farmers did not seek to till these wadis, but improved techniques of marshland cultivation have created the possibility of agriculture--and conflict--in these wadis;
- o Who has usage rights? These are reserved for certain ethnic groups in certain areas. Similarly, transhumant pastoralists hold traditional rights to certain dune grasslands that they use during their seasonal migrations; and
- o Who has traditional administrative rights? In Mao, the Sultanate has the right to assign parcels and to collect fees, but in Cheddra it is the chef de canton, with the chefs de village and chefs de terres below him who holds similar rights over field assignment but is only entitled to oversee collection of official taxes.

The consequences are that, as long as CARE projects respect the traditional rules of field assignment they are able to operate relatively smoothly. But, by the same token, they cannot hope to provide land to the traditionally landless, who may benefit only indirectly from employment generation that general rise in prosperity brings to the region.

C. Suitability of Progress Measures

Whereas the measures selected, numbers of pumps, adapters etc, were correct, the actual numbers chosen [500 users by EOPS] proved to be much beyond the effective level of demand for pumps by farmers. The trend towards exaggerated demand was reflected as well in the estimated numbers of wells drilled by private artisans - 50 demanded, drilled and paid for instead

32

of 500 planned. The formation of farmers groupements came close to the numbers originally planned.

Similarly, expected levels of marketings, reduction in losses due to storage, adoption of packaging technologies has proven overly sanguine. In the case of storage the team found the produce had been poorly selected, not properly watched over by farmers, up to 30 percent had been contaminated with smut and not culled. Several packaging techniques had been tested [see below] and none adopted. The tea box had been modified with extra holes but this test proved inconclusive in that a number of boxes vanished in the N'Djamena market.

Training, on the other hand, has come much closer to expectation. Seven hundred farmers have been exposed even in the context of disruption and a shortening of the project.

D. End of Project Status

The project will be closed out in December 1992 when the expatriate technical person will be withdrawn. By that time it is expected that enough artisans will have been trained to be able to meet the demand for hand-pumps. It is further expected that final demand for onions will be sufficient to attract farmers, as individuals or in groupements, to pay CFA 32,000 for a pump. But, if as expected, the price raised to CFA 50,000, effective demand will be much less.

It is further expected that farmers will be more sensitized to market opportunities in N'Djamena, the principal market in western Chad near to the project area, to grow more onions [and, possibly, tomatoes and hot peppers] for the market and to hold some quantity in storage in the hopes of higher prices in the post-harvest season.

By the end of the project, and at time of writing, in addition to the groupement members, a further 150 may see the price announcements placed in central markets in the project area every week. This information may be used as an additional source of prices by local commercants and farmers.

III. PROJECT SUPPORT AND LINKAGES

A. AID support for the field project

The underlying project design was well conceived although the particular output targets were found to be for the most part unrealistic.

The present project officer has been very supportive. The former ADO, it was felt, ADO over directed, was very unrealistic with respect to what could be done while managing from afar at AID. The current management is very supportive. Very important, he has been realistic as to what is and is not practicable and gives useful technical leeway to field staff.

B. Linkages with Other PVOs

Two project-wide PVO meetings have been held, in 1990 and 1992 [the 1991 affair was cancelled due to political problems at the time]. With particular regard to the CARE project, the implementation team feels it has had a good working relationship with the CARE office in the capital. The project has found it necessary for field staff to come to N'Djamena from time to time to push clearances and generally follow-up requests.

With respect to the other PVOs generally good relationships have been the case and all have been responsive to particular requests. ACIDI, for example, has been very helpful viz containers and market information. Africare aided in tomato, transformation, shipping and handling. The project would have liked VITA to include artisans as SME loan candidates. The project would like to explore the possibility of collaborative assistance in the training of illiterates in simple book-keeping.

C. Links with NGO's

Very tenuous links exist with SECADEV which is consulted on various rural development issues. BIEP [Bureau Interministerial des Etudes et de Programation], a quasi official research institution comprised of civil servants who sell part of their time as consultants, did a packaging study for tomato and melon.

D. Role of the Government of Chad

GOC has been cooperative but lacks means. Unofficially, ONDR support the setting up of and doing price collection at the local markets. ONDR provides help also from the genie rurale. DEFPA [Direction des Etudes et Formation Professionel Agricole] sent a very useful trainer- sets up training, Genie rurale, one person. ONHPV [Office Nationale de l'Hydrolique Pastoral et Villageoise] has provided water table maps.

IV. ISSUES AND RECOMMENDATIONS

Two sorts of recommendations are advanced. The first group summarizes those actions which should be taken before EOP in April 1993 which, if taken, will go some way to raise the likelihood that some elements of the project sustain themselves. The second group include actions which may be undertaken in the future.

A. Before EOP

Issue: Introduction/Trial of Bidon Verseur

The Kanem pumps and agriculture marketing project has been involved in the establishment of hand pumps in the project area. The initial pumps were partially subsidized to stimulate farmer interest. It would appear that the pricing of these pumps will tend to increase which will limit the number of farmers able to buy them [individually if not so much as members of a group].

Since the bidon verseur technology will be less expensive for those farmers who may not be able to afford a hand pump, the comparison of the bidon verseur in the Kanem area should be made known to them.

Recommendation

It is recommended that at least one bidon verseur demonstration be undertaken in the Kanem area.

B. After EOP

1. Issue: Support of women's groupements

Women's groupements we were able to interview in Cheddra and Birdelep were active and entrepreneurial. The women's group¹ at Birdelep had been able to pay a dividend of 2500 FCFA to its members the first year, a sum sufficient to convince the members and their husbands that it was worth continuing their purchasing and stocking of onions, millet, and dates as a group. It is the Birdelep women who are interested in investing in a mill but do not know either how to buy or how to manage one.

Women also appreciated the labor savings from hand pumps, since they work with their husbands in the fields. The grain mill issue just discussed is, of course, of particular concern to women.

¹Technically a mixed groupement, because the women had recruited a token man to act as foreman in building their warehouse and representing them to the authorities.

Recommendation: CARE should bring representatives of the women's groupement at Birdelep to talk with the women's groupement at Ngouri that runs a mill, so that they can learn first-hand what is involved in purchasing and running a mill.

2. Issue: Support of artisans

The artisans CARE has trained to install and maintain wells are technically able to carry out operations without continued supervision but have been able to rely up to now on CARE's informal contributions to materials transport, particularly to sites in more distant wadis, which have kept the installation costs down considerably. It is difficult to say, at this point, whether, in CARE's absence, they will be able to offer well installation at a price people will be able to pay. In any case, without CARE's help the range within which they will be able to install wells will be restricted, but there is still demand close enough to be feasible if the price is not prohibitive.

Recommendations:

- o Investigate sources of transport other than CARE vehicles for materials to more distant wadis and their costs, to see whether there are any affordable sources available;
- o Consider options for creating a revolving fund for equipment maintenance; and
- o Encourage artisans to undertake training of people from areas outside the one in which they operate.

3. Issue: Onion storage

Due to the seasonality of onion production in the Kanem area only one storage trial of onions was examined. The four methods being tested include: storage on woven mats placed on a storage rack; onions placed on sand; onions placed on mosquito netting and onions woven into the Bulgarian knots.

The onion stored on the woven mats and on sand exhibited an estimated loss of 30-50 percent due to smut and rot. Although losses in storage can be expected to high depending on the length of storage and the techniques being tested, the culling of undesirable onions weren't being closely monitored.

Although we were told stored onions were being culled every 10 days, closer attention should be taken to remove deteriorating onions before others are infested.

Recommendation: There will be insufficient time to do more trials. Lessons can be applied to other areas. Storage must be monitored.

ANNEX B

Kim Area Agricultural
Marketing Project. CARE

Kim Area Agricultural Marketing
Sub-Project
677-0051.I

Date of Authorization: May 1, 1990
PACD April 30, 1993
Date of Last Evaluation: June 1992
LOP Obligation: US\$811.4
Project Implemented by CARE

I. INTRODUCTION AND BACKGROUND

A. Introduction

The Kim Area Marketing Project represents in bold the assumption that marketing constraints have a grave effect upon agriculture's ability to realize its full potential once levels of production of staples are raised and maintained. The project centered much of its attention to the collection and dissemination of local prices for a large number of locally traded goods on a monthly basis. But attention has also been given to training of groupements and marketing strategies. Earlier evaluations had found that the project has indeed installed a mechanism to meet this need. The present evaluation attempted to gain insight into one issue - is the sort of information gathered made use of by local farmers and commercants, and is it an important addition to their existing knowledge of current prices.

B. Project Background

1. Project area

The project area comprises a swath of land along the Logone river 35 miles upstream from Bongor centered around the town of Kim.

2. Commercial agriculture in the area

An important cereal produced in the area is paddy rice most of which is consumed in the area together with rainfed rice, maize, millet, sorghum, taro. Commercants move some paddy and taro to N'Djamena market.

II. PROJECT STATUS

A. Kim Area Agricultural Marketing Sub-Project

1. Project purpose

The purpose of the Kim Area Agricultural Marketing Sub-Project is:

- o To enable 600 farmers exploiting irrigated paddy in five villages of the Kim area to regularly implement improved strategies for marketing the produce of group-managed irrigated agricultural operations.
- o To enable 300 women, organized in groups throughout five project villages, to regularly implement more effective strategies for the marketing of agricultural produce by 1993.

2. Technical and economic problems addressed--strategy

The CARE project, building upon the increased total output sustained in the earlier production-centered project, focused upon increasing farmers cash incomes resulting from improved marketing. It was assumed that local markets worked poorly and that farmers did not, or could, not make effective use of them to sell surpluses.¹ It was observed as well that women grew taro [cocoyam] on rainfed land but that they did not appear to be able to take full advantage of the active local market for the crop because they traveled to and sold in markets as individuals. Finally, no local capacity existed to efficiently hull rice which greatly limited the marketability of the paddy.

The CARE project addressed these marketing issues. Because it was assumed that current market prices for cereals and vegetables were not easily available to producers a component was introduced which collected and disseminated a wide range of retail prices in six local markets bi-monthly. Training was provided farmers through their perimeter management institutions regarding the desirability to store paddy at harvest for subsequent sale when prices had risen, sensitivity to price and the desirability of transporting and selling paddy in bulk. A rice hulling facility was imported into the Kim area for sale, it was hoped, to the five perimeters units as a group.

Women's groupements were established to sell cocoyams. In fact they showed little interest in groups trading in cocoyam sales which proved to be a well organized efficient market but did show interest in growing a wide range of vegetables grown with the use of a hand pump.

¹. It should be noted that [1] farmers had little prior experience with rice marketing, since most was kept for home consumption and [2] the OMVSD, which provided a certain if less profitable outlet for rice, went out of business.

Although the land, a 1/10 of a hectare, was collectively owned and fenced, it was individually cultivated.

B. Progress to Date of Evaluation

1. Impact on beneficiaries

Although 600 farmers were targeted it is believed that 550 have in fact been sensitized to marketing opportunities. As planned 30 farmers were given specialized training. The 550 farmers, and rice groupement members, include about five percent of the local population of nearly 12,000. But, and assuming a family counts seven persons, nearly 30 percent of the local population are directly benefited by the project.

Upwards of 500 farmers had obtained one or more small parcels of land within five irrigated perimeters during the phase beginning in 1985. Farmers have plots of 1/4 ha each within the irrigation perimeter [although less than 20 percent of the farm families have such plots]. Farmers pay for the cost of irrigation water in either cash or kind at harvest - currently 4.5 sacks of 80 kg [out of a total average production of 15-20 sacks per parcel [15 sacks being a rate of 25 sacks or 2 metric tons per acre, this being above the 1.2 MT usual in the Sahel]. Groupements use a rather complicated but basically logical method to calculate the value of a sack of paddy - and includes an estimate of the likely amount of paddy produced, last years price, the price needed to cover pumping costs and an effort not to under price which would require that members be asked to make an extra contribution to meet costs. These variables are taken into account an a collective judgement arrived at. The price this year was CFA4500, roughly the price in the local market.

Because rice is the basic staple villagers wish to keep an adequate supply on hand, with some buffer, such that saleable surpluses are not annually available. As a result groupements do not as a matter of policy sell paddy on their own account in the N'Djamena market even when paddy would fetch a higher price.

The perimeter management units were intended to use the funds gained at harvest to finance a sinking fund to replace their pump. In practice, however, a number of claims are made on the funds - to pay for extension of the perimeter to included families not presently having a plot, to pay to dike along the river as a protection against flood, for a second pump, or [as one group expressed] for distribution among members to pay for current consumption needs.

A recent survey found that little difference existed between the net incomes [value of paddy sold and home consumed less cost of production in both kind and cash] of participating and non-participating farmers. But an important benefit received by irrigation farmers is possession of extra food security. Both sorts of farmers operate three or four parcels [2.55 ha by participants and 2.75 ha for non-participants] of rainfed land on which they grow millet, cocoyam and upland rice. A groupement farmer typically operates 2.8 ha of land in toto. Farmers in one groupement, where detailed observations were made, were found to earn 10 sacks of paddy from

their perimeter for autoconsumption--this amounting to the return to family labor used on the parcel.² With respect to expenditures the groupement family, while having about 13 percent more disposable cash income used this money to consume marginally more food [three percent] but having to use only half as much to repay debt [from four to two percent]. It should be stressed that these findings reflect a single year only and are likely to vary considerably between good and poor years.

It was discovered as well that local markets work efficiently given the poor transportation and limited local purchasing power. It is believed that local commercants obtain and make use of reasonably current information regarding prices in both local and more distant markets. Competition exists among commercants to buy from farmers.

The original project targeted 300 women as participating in the sale of cocoyam [taro]; in fact almost none have while over 125 have organized into still weak groupements to operate their vegetable growing perimeters. When counting beneficiaries it is unclear how many of these are members of families which have a parcel of irrigated land and are thus members of rice groupements. A small number are members both sorts of groupements.

CARE has found it difficult to sell the rice huller to the five irrigation groups. Two have expressed interest [and payments are reported to have been made]. Unless these can find the money to buy the unit CARE will remove it at EOPS.

2. Effectiveness of interventions towards purpose

A review of the data together with findings made during meetings with farmers and traders suggests that the project design underestimated the efficiency with which local markets operate. Local commercants and the irrigation groupements have reasonably current price information regarding both local and N'Djamena markets. Meetings with the executive committees of several groupements made it clear that producers are more sensitized to income making opportunities from marketing than before. But it seems clear as well that the project design overestimated the interest in group selling on the part of women.

The net effect of both phases of the project has been to raise local production closer to self-sufficient in paddy and this, in the eyes of beneficiaries at least, is probably the most important benefit. As was pointed out in the mid-term evaluation 'the design of the project has been affected by the belief that food security and income generation are mutually exclusive'. In fact farmers look at rice production under irrigation as only part of a total strategy to survive in any likely level of drought or rain. Farmers do not want to depend upon a market for their survival; rather their overall strategy balances probable production from irrigated and rain fed

². The interested reader is directed to read the following for full details; Etude sur la situation economique des exploitants dans les perimetres irrigues, Haroun Sow, CARE-Tchad, December 1991.

crops on their own land! Depending upon their evaluation different annual strategies may be adopted. Labor, a farmers most limited input, is allocated accordingly. Cash is needed only for certain inputs used on irrigated land; their cash needs for consumption are limited. Cash income needs are likely to be more limited than AID's project planners assumed and is not their primary objective when making their farm plans. Farmers do not want to become dependent upon irrigation perimeters production on which are not fully under their control.

3. Has the private sector been affected?

The project did not establish a base line with regard to local commercants and transporters so the project's effect on them is not well understood. Commercants do provide fuel and oil and spare parts for the pumps. A wide market spread seems to exist seasonally for paddy.

4. Particular constraints

The principal constraint to more vigorous marketing of produce by farmers appears to be access to cheap surface transportation. Areas as remote as Kim from large final markets in both Chad and neighboring Cameroun find it difficult to compete with better located producing areas. This equation could change if transport rates declined and yields were to increase more than proportionately to increases in cost.

C. End of Project Situation and Sustainability

The market price collection system is unlikely to survive. It is funded entirely by the project. It is the belief of the evaluation team that both farmers and commercants get more timely information more cheaply than they would if in some manner they were to pay for the project system.

The rice groupements can survive if their leadership is able to manage money in such a way that pumps can be replaced while gradually expanding irrigated area enough to defuse the pressure by non-holders to add land at rate beyond the groups financial ability to manage. Both the mid-term evaluation and the present evaluation found ground for concern that groupements may find social pressures to expend funds rapidly too much to cope.

Of more basic concern is whether the advances in rice production can be maintained [see attachment 1 below].

III. PROJECT SUPPORT AND LINKAGES

A. AID Support of Project

The project is fully implemented through the PVO. The PVO arranges for all procurement, TA etc used in the program.

B. Linkages with Other PVO's

It is clear that the AID project manager works to keep channels open between the various sub-projects. This certainly acts to facilitate inter PVO communication. What is not clear, especially from the point of view of CARE's field staff is how much different with would be to establish useful links among PVO's in the absence of the AID umbrella project.

C. Linkages with NGO's

One Chadian NGO, ARPES, is active in the same area in which CARE/Chad is working. Though the team was not able to interview the ARPES staff, since they were in N'Djaména at the time of the visit, it is clear that ARPES is engaged in activities supporting rice perimeters and women's vegetable production groups which are very similar to those undertaken by CARE's USAID-funded project, especially in the village of Eré. Since both organizations are working on the same type of project, project staff meet regularly to discuss work together.

D. Role of GOC

Very little apart from some collaboration with ONDR agents.

IV. ISSUES AND RECOMMENDATIONS

A. Issue: Should the Market Information Collection System be Maintained?

The evidence indicates that market information collected and 'published' once monthly plays practically no useful role in farmers' marketing decisions. Farmers have several independent sources of information. The project-supplied information is unlikely to add enough in relation to its cost to justify the activity.

Recommendation: That the effort be discontinued. It is recommended, however, that the AMTT project focuses on the problem of national dissemination of price information using radio.

B. Issue: Ethnic Diversity, Political Rivalry, and their Implications for Development

The Kim region is ethnically and institutionally complex. Village politics are far from simple, many donors are active in the area, and groupements vary in size from a dozen or so to the rice perimeter groups of well over a hundred. One reflection of all this is the amount of variation in the degree of sophistication one encounters in the five or six villages all situated (except for Eré) within a mere ___ km. stretch along the road from Bongor to Lai. These complexities have ramifications for project management and sustainability in the area, some of which CARE's USAID-funded projects have already encountered.

Six or more ethnic groups speaking allied languages, not all of which are mutually intelligible have evidently inhabited the region since well before the drought period. A 1987 socioeconomic study lists the ethnic groups inhabiting each town in the project area; though some towns are coterminous with a single ethnicity, some are mixed, including, notably, Kim. The same study also sketches the political organization of the villages, which are generally divided into quartiers, each with its chef de quartier, and a village chief administering the village as a whole, under the chef de canton. Though, as the report states, these various positions are ostensibly hereditary, between the ideal and the actual there is considerable scope for politicking and factionalism, an aspect passed over in the report. In fact, though the evaluation team's brief field visit could not begin to examine the dimensions of local politics in Kim village (which has been a source of problems for the project) or the region generally, from an anthropological perspective, both the ethnic complexity and the segmentary nature of local office indicate possible lines of political fission that could show up in other villages as well and suggest that a project leader needs to be politically sensitive and astute in dealing with them. As CARE's experience in the village of Kim shows, village politics easily infect the relatively large groupements required to manage the irrigated rice perimeters on which its last two projects have relied.

In addition to being an area of multiple ethnic groups, this is an area of multiple donors whose spheres of activity more or less overlap that of CARE/Chad. "More or less" are the key words here--the variability in the overlap shows. Groupements engaged in raising vegetables in Djouman, for example, had no difficulty in giving a fluent recitation of their goals: achieving a healthy and varied diet, to begin with; and then generating supplementary income by marketing

the surplus. But in Eré, a village somewhat removed from the rest since it is off the road on the opposite bank of the Logone river, groupements engaged in the same activity showed little comprehension of the question and gave only vague answers.

Different donors also have different styles of intervention; though CARE/Chad tries hard to encourage people to organize to help themselves and prefers to give loans, not "gifts," other PVOs in the area are far more willing to supply grants of money or equipment to start the activities they support. Some of these evidently favor petitioners who know exactly what they want and how they will use it. It is not surprising, then, that local organizations and their representatives may open a conversation by telling a someone they identify as a potential donor exactly that.

It is evident that different villages have had differing amounts of experience with PVOs and bilateral donors. Some are rather naively opportunistic. At the other extreme, the village of Kolobo, which has had an active village association for at least nine years, has, according to its rice groupement's secretary-general, what amounts to a comprehensive village development plan of its own with donor agencies in the area slotted in where they are most appropriate. Activities include: a school, now up and running; tree planting and live hedges; a village pharmacy, with support from EIRENE; a major move from its riverside site to a location along the road, aided by Cooperation Française; and the rice perimeter, for which the rice groupement envisages CARE as a possible source for a needed dike, since it has its own growing bank account earmarked for expansion of the perimeter. Kolobo's rice perimeter groupement is merely a recent remolding of part of the village association. It is worth noting that Kolobo's rice warehouse project, another of its community initiatives, encountered more than a year's delay because of political factions squabbling over its location, a difficulty that, according to the secretary-general, has now been resolved. Though this particular problem did not affect CARE's work with the village, it indicates that such internecine disputes are not limited to the village of Kim.

In sum, in a region as diverse as the Kim area, a development agency cannot count on coming in with a one-size-fits-all project. Even though the area is not large, it is important to be sensitive to local differences in capacity to manage proposed activities and to tailor them accordingly.

Recommendation: Be aware that projects must be responsive to the differences between villages. Make a point of staying attuned to what is going on in each and be willing to modify activities accordingly.

C. Issue: Managing large groupements for complex activities

The groupements with which CARE works in the Kim area range in size and complexity from the twenty to thirty women who agree to prepare a catchment basin together in order to raise vegetables, each on her own plot, to the irrigated rice perimeter groupements numbering well over a hundred, who must organize to maintain the irrigation canals and pumps and who

therefore accumulate a considerable bank account and rice stocks from membership fees. Such matters as how often it is possible to call together a meeting of the entire membership and how much management must be left in the hands of an executive committee depend on the size of the group involved. Prudence dictates caution in judging that the larger groupements, with relatively small committees handling sizeable resources, be considered launched and set to operate without some continuing external oversight.

Some large-scale associations, such as the village association for development of Kolobo do exist in the area [although some observers believe this to be a mixed blessing given the considerable range noted in their skills]. These presumably are able to bring social sanctions to bear on the probity of their members and leaders, but it is by no means clear that these social controls have been transferred to the operation of the donor-stimulated groupements. The matter merits further study. Africare's experience in basing its development groups on traditional social institutions might be instructive.

Recommendations:

- o Do not be too quick to assume that these groups can operate without some external support [by some disinterested body], if only to keep the executive committee honest. Over the long term a CARE-like institution should aim to provide management guidance that enhances transparency in the groups' operations.
- o Investigate the types and functions of local organizations that already exist to organize work and coordinate activities within local villages. Consider whether some of these might be adapted to management functions of project-related activities, and at what level.
- o Consider drawing on the assistant administrator of Africare in Abéché as a consultant in techniques of community organization and group formation.

D. Issue: Relations with Chadian NGOs

A successful collaboration would benefit both ARPES, giving it access to guidance in staff development, management, and funding, and CARE, giving it solidly based local perception of development issues. Such a collaboration will be successful only if the two organizations are in agreement on a common approach to development activities and reach a clear understanding concerning the basis for cooperation.

Recommendation: Hold exploratory meetings with CARE/Chad staff to explore the bases for cooperation and collaboration.

E. Issue: Addressing Women's Needs

While women have benefitted in several ways from CARE/Chad's activities, it is true that their voice in decision-making in the male-dominated rice groups ~~is~~ tends to be muted.

Some women who are widows do hold a parcel of the irrigated rice perimeter in their own right. In Djouman they numbered twelve among the 102(?) members of the rice group, a small, unassertive minority. Married women, though not members of the groupement in their own name, help their husbands with work on their parcels in the perimeters. Asked whether cultivation of these irrigated fields in addition to their usual ones increased their work load, one answered that, on the contrary, it decreased it: "Before, we would work the rainfed fields never knowing whether, in the end, we would get a crop out of them or not. If the crop failed, all our work would go to waste. Now, when we work in the irrigated fields, at least we know that our work will produce a harvest worth having, and we will have food for the family."

In addition to the rice perimeter groupements, CARE/Chad has also helped women (and some men, as well) to form and operate vegetable-growing groupements that have obtained the use of fields in catchment basins near the river that can be watered either by hand or by the use of hand or motor pumps--the women generally preferring to petition donors for the latter without much sense of the kinds of inputs and maintenance involved, for which their group would have to be responsible.

Like the irrigated rice fields harvest, women value vegetable production, first and foremost, for its contribution to their family diet. They are also pleased to supplement their incomes from sales of the surplus, for which there is enough local demand to absorb everything without resorting to shipping or transformation of the fresh produce.

Within their own groupements, women manage their activities without male help, but in the men's groupements they have more trouble making their voices heard. The women's groupement of Djouman faced this problem when they decided they wanted the rice group to heed their request for a dehulling machine. They decided not to work through their members who were also members of the rice group but to put their request together as emanating from the women's group as a whole. And they backed it up in a way the men could not ignore: "We told them that, after a day in the fields, it was too much work to come home and pound the rice for dinner, too. We told them we needed the hulling machine, and if we didn't get it--no more boule!" They got their machine.

From the perspective of outside donors it would, of course, be desirable to help women to stand up for their rights openly. But this has to be a long-range rather than an immediate goal if it is to be achieved solidly and permanently. In the short time an evaluation allows it was not possible to identify the means of going about doing this. Clearly, though, it is the women themselves who are the best advisors on how to proceed to make their needs known and to get satisfactory responses.

Recommendations:

- o Women place very high value on food security and on labor-saving. These should be recognized as project goals that are at least as valid as income generation.
- o Enlisting the advice and assistance of local women with leadership abilities and providing them with back-up support, through project staff and groupement backing, will facilitate their chances of making their needs known and their voice heard. Desirable as the goal may be, this is no place for the bull-in-the-china-shop approach.
- o Farmers or commercants marketing decisions. The evidence further indicates that existing marketing information systems, based primarily of word of mouth among traders and farmers moving from one local market to another constitutes sufficient information for marketing decisions to be made.

F. Issue: How to Dry Rice Under Local Conditions

Kim farmers have difficulties drying and subsequently storing their rice harvested during and immediately after the rainy season. Rice which has been stored in one of the groupement storage warehouses was examined and found to have some rice mold. This is due to the rice being stored before it could be dried to a point of 12-13 percent moisture.

There are several grain dryer models which have been tested and could be introduced on a trial basis. One is a solar dryer. It uses no fuel, can be made from local materials [wood, clay bricks] and will last for years. These can reduce rice from 25 percent moisture to 12 percent in a day or less. Small dryers usually hold eight to 11 kg for each square meter of drying surface. Plastic sheets are needed to cover the unit to protect it from rain.

Recommendation: A trial be undertaken to test simple dryers on rice. The VITA publication Manual Series No 35E, Preparing Grain for Storage, Lindblad and Bruben, is available to guide the effort.

G. Issue: How to Increase Rice Productivity

Rice grown in the Kim area is primarily IR46, a hybrid, whose potential declines over time if farmers use the seed repeatedly. In this case the original genetic characteristics have not survived. It was observed that the crop does not tiller well, has many sterile heads with associated lower yields. The yields now grown, 4 mt/ha are low by world standards. Fertilizers are not much used due to high cost and unavailability at critical times.

Recommendation: New, better rice varieties must be attempted and provision made to provide fresh seeds annually. Legumes may be introduced to provide nitrogen and in part replacing nitrogenous fertilizers.

The concept of rotations should be introduced as well - to replace the present practice of planting rice on rice. There are several which could be attempted in rice perimeters using cowpea [a small niebe variety developed at Gassi would do]. One rotation could be rice-cowpea-rice. A second could be cowpea-cowpea-rice.

The test should be supervised by an experience agronomist. Over a period of 3-5 years yields of rice might increase by as much as 25-50 percent with out the use of fertilizers.

ANNEX C

Lake Chad Agricultural Development
and Training Project, ORT

**PVO Development Initiatives:
Lake Chad Agricultural Development and Farmer Training
Phase I
677-0051FH**

**Date of Authorization: July 31, 1991
PACD, revised, July 31, 1994
Date of Last Evaluation: None
LOB: Obligation: US\$2,570.8
Implementing Agency: ORT**

I. INTRODUCTION AND BACKGROUND

A. Introduction

This project, the second of two implemented by ORT in the area, has several firm accomplishments to its credit. This evaluation looks at the accomplishments in place at the end of project activities in N’Gouri and ponders their post-project sustainability. It is fair to say, however, that an important part of this success derives from solid accomplishments sustained in phase one - phase two has benefitted from the momentum achieved at that time. It is likely as well that important elements will survive the official end of the project although spread beyond the project area is improbable. The unexpected termination has been the result of seemingly endless local unrest causing project staff to be evacuated, project work suspended and project equipment confiscated. Although progress has been made there is legitimate concern for the safety of project staff, and project activities in N’Gouri will end on the last day of December 1992. ORT hopes that a new site can be found where lessons learnt in the N’Gouri project area can be applied during the remaining 18 months of its contract.

B. Project Background

1. Project area

The project is located in the N’Gouri sub-prefecture which lies to the east and north of Lake Chad. The project sites are situated along a 40km stretch of the road between N’Gouri town [the sub-prefecture capital] and Bol. The activities focus on oasis-like dried up water courses called ‘wadis’. These are depressions among surrounding dunes where groundwater lies near the surface. Farmers find it easy to raise water from the water table about two meters using the traditional shadouf. In other areas the water table is five meters deep, which requires more complex methods to use.

2. Commercial agriculture in area

A sedentary agriculture based upon a mix of rain-fed cereal culture and cultivation of high value crops under irrigation in the wadis is widely practiced in the zone. Irrigation water has traditionally been supplied through the use of the shadouf, a human-powered low-lift low-yield device which can command about 15 percent of an acre. So much human energy is taken up in operation of this unit [two adults or one adult and a child], that little or none is left over, given all of the other demands, for weeding. In addition to cassava, onion, tomato, okra, hot pepper, egg plant - are grown for sale in local market towns and represent an important part of family income. Some of the tomato cropped is dried for sale in more distant markets, off season, such as N’Djamena. Except for some seed varieties, no modern inputs are used.

II. PROJECT STATUS

A. Lake Chad Agriculture Development Project

1. Project purpose

The purpose of the Lake Chad Agriculture Development Project is:

- o To increase the amount of wadi produce that farmers supply to the market; and
- o To increase the profits that they earn from selling that produce.

2. Technical and economic problems addressed by the project and strategy adopted by the project

In 1986 a project design team identified the most important constraints to increased production in the wadis as [1] water availability, [2] water-lifting, [3] fencing and [4] maintaining soil fertility. This project was implemented by ORT and evaluated in 1990. It concluded that good progress had been made in addressing these technical constraints, a start had been made in introducing these innovations to farmers but that more time would be needed. Further, the experience underscored the importance of marketing as part of a total intervention to link extra income possible from sales to the acceptance of costly new technology, in particular motor and animal-powered water-lifting devices known as bidons verseurs. A second phase was determined necessary to secure the achievements made and widen these to a larger number of farmers while promoting commercialization of high value crops.

The second, present, phase of the project included four activities: [1] development of a commercial input supply system based on local commerçants to serve wadi farmers; [2] develop profitable marketing techniques and strategies for wadi farmers for their high value produce; [3] dissemination of improved water-lifting and irrigation methods developed in phase 1, and [4] the dissemination of new technologies to complement earlier and ongoing production and marketing activities. The project directly targeted 650 households in 47 wadis over a three-year period.

B. Project Progress to Date of Evaluation

The project has been halted after only 18 months, due to continuing insecurity in the area. The expatriate team was completed in November 1991. Unrest in the area, however, has prevented them from establishing a permanent presence. As a result, they were not on site during both growing seasons. The local staff, however, has carried out the planned activities with punctual supervision of the technical assistance team.

1. Impact on beneficiaries

Two comments must be made in connection with the impact on beneficiaries. First, it has become clear that agronomic practices introduced in an earlier phase - manuring, use of live fencing, etc. - are spreading autonomously in the project area and even beyond. Second, insufficient time has passed to register any impact upon numbers of farmers. Perhaps 300 or more farmers are believed to be using at least one new technique introduced under both phases. Extension has put in place different water-lifting technologies - donkey powered, motor powered, deeper lift tubewells.

The project has introduced storage techniques to help farmers to save harvested produce for later sale. The technology seems to be accepted and likely to spread. It has been found that both new varieties, and planting times and harvesting methods are as important if not more important than processing practices.

In addition, at least preliminary tests have been undertaken to improve packaging, selling off season, and selling new crops under the project's direction. Final market prices have been provided on a regular if infrequent basis.

2. ORT's institutional impact in N'Gouri

In addition to the new agricultural practices ORT has introduced, it is also leaving its mark on the institutional development of a region receptive to new ideas. This impact has been brought about through judicious guidance and management training of active groupements, through giving local "master farmers" technical training in skills ranging from techniques of raising seedlings and planting live windbreaks to using sludging methods to drill wells or repairing Honda motorpumps for the wells, and finally through wise choice and development of local project staff. All this constitutes forms of human capital it leaves in its wake.

The evaluation team was able to visit several groupements that had received ORT assistance. The first was a women's groupement, arising from a pre-project tontine, that had received the first grain mill in the area along with training in bookkeeping (another instance of comptabilité par symboles for unlettered women) and help in reorganizing to manage the mill efficiently. The second, a men's motorpump purchasing groupement, was also self-sustaining, with a stock of several pumps and 200,000 FCFA of spare parts so that it could respond promptly to requests for purchase or maintenance and could replenish their stock as needed. They had procedures for drawing up contracts and repayment schedules countersigned by the chef de canton that allowed them to conduct their affairs in a clear, business-like manner. The other women visited whom ORT had trained, a mother, daughter, and cousin fitfully engaged making tomato concentrate from over-ripe tomatoes in season were finding they had a product with only a week's shelf-life for which demand was as yet embryonic. At best, they were ahead of their time; realistically, if a project is to explore a range of possibilities, not every experiment can be expected to succeed.

A master farmer we interviewed was both a trained well-driller and a trained pump repairman. He had repaired two pumps the previous week--one which merely needed cleaning and one which required a part. His charges to his clients were reasonable (1000 FCFA and 2000 FCFA respectively), perhaps too reasonable, since they just barely covered his costs, which include hiring a farm laborer to replace him in his own field, leaving him a mere 500 FCFA profit. As a well-driller, though, he had sustained the loss of tools mentioned and had been forced to leave off drilling for the past year until ORT replaced the tools last month. He now had a backlog of six requests to be filled as soon as possible. He was insistent on the need for a rolling fund to protect his group from another such catastrophe. If he can manage to keep equipped, he and his fellow trained workers constitute an enduring form of human capital, since, as he points out, he is a local farmer with his fields right there. He is not going anywhere else.

Farmers trained to give agricultural advice are less constrained by the need for capital equipment, but without links to sources of advice to keep their expertise up-to-date they will not be able to keep their edge. In the current situation those links are fragile, depending as they do mainly on SODELAC's continuing support.

Finally, the Chadian ORT staff members included several from the local area, the engineering expert among them, who are likely to continue to contribute directly or indirectly to the development of the region because of what they have learned during the life of the project. Some intend to seek employment elsewhere but at least one will continue to support his family through remittances. The engineer is exercising his considerable inventiveness and skill to come up with ways of reproducing at least some of the project's inputs with local material; he hopes to go into business with the well-drillers selling hand-pump wells, or possibly bidon verseurs, to farmers in the wadis.

3. Impact on women--and men

For women of N'Gouri, as for men, the ORT project has given their groupements guidance in engaging in profit-making activities and has introduced appropriate local technologies that make their work easier, as well as the management techniques just described which will make mill operation sustainable. The women's milling group not only created a 'community chest,' it also meant that the task of transforming a koro of millet into dehusked and ground grain, which used to take half an hour of hard work with mortar and pestle now takes three minutes, and 25 FCFA, at the mill. As one man pointed out, "It's better for us, too. Now our wives have more time to help us in the fields or to turn a profit transforming onions or tomatoes that cannot be stored into dried products that they can sell." The improved pumps have had an analogous impact on men's labor in their wadi gardens; men can use time they would formerly have spent swinging the heavy shadouf to increase their field size, weed, plant windbreaks, improve irrigation canals, and gain greater crop yields.

4. Cooperation with GOC agency

SODELAC, a parastatal regional authority, has provided extension agents. The project has trained these agents and volunteer farmers [called délégués techniques] in various activities - agro-forestry, nursery management, land preparation, pest control, use of windbreaks, etc.

5. Effectiveness of interventions towards purpose

Although it is too early to point to solid accomplishments a good argument can be made that the project would have reached its primary targets.

6. How has the private sector been affected?

It also appears that private entrepreneurs have begun to supply vegetable seeds, nursery pots, spare parts for pumps and pumps themselves. Local suppliers are able to meet the local demand for low lift pumps. Training has been given to entrepreneurs to make the donkey-powered bidons verseurs. A team is trained to drill wells and has the necessary equipment to do it. As a consequence of these it is reasonable to expect a growing number of farmers to be able to buy and maintain pumps. A motor pump credit group exists which is able to aid a number of farmers to buy them.

The well team has had the capacity to drill for over a year. They were unfortunate enough to have had their drilling equipment stolen a year ago and they have just received a new kit. They should be able to drill indefinitely or until some new misfortune occurs.

7. Particular constraints

The most basic is security. The technically and socially promising area has been left only with reluctance. The second, and perhaps equal, constraint is the lack of decent roads. A road exists which is so deteriorated as to be worse than no road, though it was built only several years ago. As has been noted elsewhere price information, two or more days old, is available. Transporters, commerçants, relatives, travelers, etc. are a routine if not always timely or reliable source.

D. End of Project Status and Sustainability

Senior local officials, the SODELAC and ORT personnel, indicated that they were confident that much of the technical interventions achieved will be continued. They attribute this to the clear suitability of the new technologies to their needs - they pay for themselves and earn extra income. Those technologies which are essentially one of technique - use of live fencing, use of organic manure, use of improved seeds, use of drying methods to hold onions for sale later in the season to earn higher returns - will be kept. It is argued that these practices may spread autonomously beyond the project area. The délégués techniques [a kind of master farmer

who trains and demonstrates new technology to other farmers] will remain in place. It is conceivable they may assist in the spread of technology.

The project has trained a team of well-drillers and provided them with a basic work kit including galvanized pipe. They can drill as many as 100 wells with this basic endowment. But if the team loses its second tool kit drilling will stop again, unless the team has functioned long enough to have earned enough to replace the equipment.

The donkey-powered irrigation water delivery system may survive if ways can be found to repair the metal frame which holds the pulleys. At present the system is welded and no local welding capacity exists. Frames could be transported elsewhere for repair but this adds to the general problem of support. Project staff had helped to construct one system with a frame made partly of wood and bolted together. The system requires at most a young child to manage the donkey, freeing one adult for other work. Often, trained donkeys can operate the lift by themselves.

The motor pump is likely to survive because parts are available both in shops and with the farmers' groupement [who keep an inventory worth an estimated CFA 200,000]. Although no repair shop has been created in the area, six repairmen were trained by the project and, at this writing, provide repair services. Some pumps have been in service for several years and have been repaired at various times by them. It is possible that these persons will be able not only to maintain and repair pumps but to fabricate other devices. A case in point is the engine powered maize mill capable of milling 2.5 kilos per minute. The builder, a project employee, saw a prototype while in Niamey for training. He reproduced the machine entirely from materials found locally. The motor pump requires almost no attention while in operation; farmers said they used the extra time available for weeding.

The motor pump technology is unlikely to spread because of its initial cost. Local farmers within the project area and members of groupements have access to credit from a revolving fund established by the project. This fund is sustainable if it continues to operate on a sound basis. It is unlikely, however, that a second fund could be established using only local financial resources.

A women's groupement trained by ORT is managing two mills provided under phase I. These mills save women at least 30 minutes daily from having to hand pound cereal. This technology more than pays for itself and can be sustained from local resources post-project. The women's groupement has used the profits from mill operation for other activities, such as creating a cereal bank.

A practical and cost effective system of onion storage has been introduced and is being copied by at least some farmers. There is no element in the system dependent upon external inputs of any kind. Farmers are sensitive to market opportunities at least in their market area [a radius of up to 100 km around N'Gouri] and they have contact with commerçants who come from even farther away. With the end of the project the prompt feedback in price information

from N'Djamena will come to an end [being dependent upon the ORT office radio], though in due course the AMTT project is expected to provide prices by local radio. This will work to reduce the scope for marketing but, so long as roads remain usable, will not fully cut the area off from wider markets.

III. PROJECT SUPPORT AND LINKAGES

A. AID Support for the Project

The project has not requested any special support from the USAID with respect to actual implementation of the project.

B. Linkages with other PVOs

There are no other PVOs which work in the immediate project area. ORT has collaborated with the 'Projet-Etude' Action in Doum-Doum--which is financed by the Swiss and had activities similar to ORT's (training, farmer-to-farmer visits).

C. Linkages with NGOs

There are no other NGOs active in the area.

D. Role of the Government of Chad

A Chadian parastatal, Société de Développement du Lac [SODELAC] is the implementing agency. SODELAC has provided extension personnel to assist in the training of the farmers.

E. Realism of Project Measures

The project design called for the introduction of 400 farmers to water lifting technology. The project now feels this was too ambitious, especially since the project continued to work in the same wadis as in phase I. Other examples include the bidon verseur: target 50, reality, 12; motor pump: target 90, reality 50. Some 300 watertaps were planned - only 21 achieved.

IV. ISSUES AND RECOMMENDATIONS

A. Issue: Sustaining Institutions that Received Project Support

Up to now, ORT has made grants of some capital equipment--tools or, in one case, a grain mill--to get groups started, and it initially provided transportation for activities like well-drilling that would be otherwise unprofitable beyond a couple of hours' walking distance. ORT has also been the emergency cushion that allowed its trained well-drillers eventually to acquire a new set of tools after fleeing a rebel attack, abandoning their first set in the process.

What is still missing to assure the sustainability of certain project-initiated activities is:

- o A cushion of other assets that would allow some of these entrepreneurial groups to recover from unanticipated shocks or losses;
- o The links a master farmer needs to stay up-to-date in his area of training; and
- o Possibly for some individuals, the managerial skills a single, small-scale entrepreneur needs to assess risks and engage in medium and long term planning.

Recommendations:

- o USAID and ORT should weigh carefully the advantages and disadvantages of leaving certain types of small equipment behind in the hands of prospective entrepreneurs. It should assist them in fixing prices that enable them to begin to build up a revolving fund.
- o Since ORT will remain in Chad for another year and a half, periodic visits to N'Gouri to monitor what the population is actually able to carry forward on its own would be highly desirable.
- o Advice or a brief training session on considerations in small business planning might be helpful for participants, staff and farmers alike, who hope to privatise activities supported by the project up to now.
- o Examining the Ngouri site should be included in the scope of work of the final project evaluation, if security conditions permit.

B. Issue: Development Links Between PVO Projects

The women's mill groupement in N'Gouri has learned management skills for running a mill that would be useful to the women's groupement in Birdelep. Moreover, although that particular group did not purchase its mill, other groups in the vicinity, observing its success, have.

Recommendation: The usefulness of a visit by representatives of the CARE/Kanem women's groupement to N'Gouri is recommended in view of the situation seen from N'Gouri as well as from Kanem.

C. Issue: Extension of Drying Technology - Onions

Based on the time limitations that ORT has been able to undertake its defined goal of increasing the income of wadi farmers in the Lake Chad region, physical evidence was exhibited in the storage and marketing of onions to take advantage of higher prices by testing and promoting off-season movement into the market.

The four techniques used in the trial storage of onions have been closely documented and culling of those onions with onion smut or rot were removed on a weekly basis.

One aerated storage thatched hut where one farmer had stored his onions in the ORT project in his own storage unit recently sold his onions prior to the consultants visit. The ORT project farmer had stored his onions for a period of four months and had sold them at a price of CFA13,000 per sack. This price differs from the price of CFA3,500 the farmer would have obtained if he had sold them four months earlier immediately after harvest.

Recommendation: With the time remaining for the ORT project to remain in the Lake Chad area, it is recommended that members of the other PVO sub-projects make an effort to observe the well-documented and controlled trials for onion storage. Such trials have not been observed in all the sub-project areas. The trial where the stored onions were placed on a straw mat on aerated tiers inside the storage huts, were giving satisfactory results. All materials used in the units were readily available to the small farmer in his home environment.

C. Issue: Deepen Support for Bidon Verseur

Due to the limitations the higher priced motor pumps will have on saturating the requirements of those small farmers who will not be able to afford this advance in technology, the use, demonstration and training of artisans to promote the less expensive and highly efficient bidon verseur should be promoted in the other PVO projects where suitable. There are many of the wadi farmers who will be unable to afford either the motor pump or bidon verseur to increase productivity.

Recommendations

- o The bidon verseur, being less expensive and with a distinct advantage over the shallow water delivery system of the shadouf, should be given much more emphasis.
- o (Although) an artisan group has been thoroughly trained by the ORT project, there does exist an artisan in N'Gouri who is capable of extending, promoting and selling the bidon verseur technology. Assistance should be extended to the Chadian ORT technician to extend this technology in many means possible.

D. Issue: Need for Follow-on Impact Assessment

It has been observed above that farmers have been autonomously adopting certain farm practices and the well-pump technology. Because these practices and technology can be made use of entirely independent donor support, and because they appear to pay, there is every reason to be optimistic that this spread will continue, including to areas beyond those directly touched by the project.

Recommendations

- o That post-project appraisal of farm practices be made within the next five years to study the extent to which they have been successful internalized by local agriculture and who in particular have benefited.
- o If and when the zone stabilizes, the area should be considered as a promising site for a future project.

E. Issue: Opportunity to Test Biological Insecticide - Neem

Insect damage and crop losses to vegetable and grain crops take a huge toll in Chadian wadi's each year. The wadi farmer often will lose his entire crop after expending his labor and meager resources to produce a crop only to watch it destroyed by insects.

Integrated Pest Management [IPM] has been recommended for controlling various insects in wadi's and small grains being produced on sand dunes. Due to the high cost in organic and inorganic insecticides, including most PVO's and USAID's restrictions on their use, the approach to control insect pests is often the farmer's principal problem and most costly.

IPM as properly identified does not entirely exclude the judicious use of selected insecticides with low LD/50 or mammalian toxicity. Pesticides can include those manufactured from plant sources [botanicals] in nature.

Until some safe inexpensive insecticide of a botanical nature can be developed for controlling insects productivity increases due to other types of "shelf" technologies will not raise the level of production needed for a sustained income for these farmers.

Recently, there has been some interest in ingredients or a group of compounds [Azadirachtina] extracted from the neem tree [azadirachta indica] which shown control of various insects in Asia and Africa. Neem is widespread throughout Chad and the Sahel. Neem can also be utilized for fuel wood, shade, windbreaks etc. Azadiractin has received a non-food registration in the US for food crops and its registration for its use on food crops is pending with the FDA, with registration expected in 1993. The Africa Bureau, USAID, has funded several small projects to study neem as a botanical insecticide [AELGA project].

Farmers have had a difficult time with white fly, aphids, crickets and grasshoppers in Chad. In the Abeche area, several farmers that were contacted had replanted their tomatoes up to seven times due to being destroyed by crickets. There is some evidence that azadirachtin will control the above pests although more data is needed.

A method of extracting azadiractin as a cottage industry at the village level has been developed. The extract is prepared from the leaves and seeds of the neem tree and the insecticide can be applied using water as a carrier with a simple watering can.

Reference is made to, Review and Analysis of Neem Research and Development, Y.T. Belayment, USAID, Africa Bureau, Office of Technical Resources, Agriculture and Natural Resources Division.

Recommendation: Trials should be set up using neem extract at the village level. One method would be to dip the bareroot tomato plants prior to planting in the wadi to determine if azadirachtin will control crickets. If some degree of control can be determined, azadirachtin could find a needed place.

ANNEX D

Ouaddai Economic Strengthening
Initiative Project, Africare

**The Ouaddai Economic Strengthening Initiative
Sub-Project Evaluation**

Date of Authorization, 18 June 1991

Revised PACD, 17 June 1994

Date of Last Evaluation, None

LOP Obligation, US\$1,800.6

Project Implemented by Africare

I. INTRODUCTION AND BACKGROUND

A. Introduction

The project did not come into full implementation until early 1992, such that progress towards project objectives is now being made. Although a base line study was prepared in March 1992, so little time has elapsed that even preliminary estimates of project impact upon beneficiaries would be premature. Nevertheless the DIP evaluation has identified both immediate progress and situations that are cause for concern in the long term.

Africare has worked in the Ouaddai area since 1984 when a program of reconstruction and rehabilitation was initiated. This was followed by a second phase beginning in 1986 which stressed sustainable food security through the improvement and repair of two earth dikes and drilled 20 PMB wells for irrigated onion and garlic production that impounded water flowing in periodic streams and in effect created a form of recession agriculture. A form of cooperative was established by the villagers and commercial vegetable production - okra, tomatoes [grown recessionally] and onions and garlic [with irrigation] - began. There are three of these plus a fourth which does not use recessional agriculture but has joined the marketing initiatives. Other activities include reforestation nurseries, some testing of drought resistant millet, sorghum and cowpea varieties.

The third and present phase seeks to build on this production base through the improvement of post-harvest handling, storage, processing and marketing of these crops - and in particular onions and tomatoes. This phase represents a significant shift in orientation from almost total emphasis upon production to one equally complete upon marketing. It is expected that additional villages will join the project's program to take advantage of the various marketing related opportunities it provides. Of special interest will be the Ouaddi-Bithea onion and garlic producing area.

Location	No. of Villages	No. of Members	Cult./ha.
Matar	5	110	80
Oeure	3	60	50+
Tarbaka	5	280	120
Hidjilidji	7	130	na

NOTE: estimates of area are necessarily approximate as areas affected vary by level of annual rainfall and other factors. Similarly the number of members is expected to increase. Typically each village family has one parcel. There are over 3500 persons included within these families.

B. Project Background

1. Project area

The project area lies over 500 km east of N'Djamena adjacent to Sudan's Darfur province. Actual project sites are scattered in a 50 km radius to the north and south of Abeche, the area's principal town [population 70,000?] and market.

2. Commercial agriculture in the area

Ouaddai [the name is taken from the principal geographic feature of the region, the wadi's] is economically remote from both national most international markets and this is reflected in high transport margins. N'Djamena, for example, is a three to five day truck drive away. The Abeche area is, however, widely known for the quality of its produce - especially onions, which fetch a premium on the N'Djamena market. Fresh tomatoes cannot stand the trip but the produce is sold in dried form in Chad and in neighboring countries.

Vegetables have been grown in wadis using shadouf-supplied water. The present project has, through the provision of a dike built in phase two, created several hundred hectares of land which can be cropped taking advantage of the moisture provided as water recedes. The cultivation depends upon quantity of rainfall impounded behind the dike.

Virtually all of the newly 'watered' land is devoted to vegetable production, mainly garlic and tomatoes, and it is to the marketing of these that the Ouaddai project is directed.

II. PROJECT STATUS

A. Ouaddai Economic Strengthening Initiative

1. Project purpose

The purpose of the Ouaddi Economic Strengthening Initiative is:

- o To increase the number of marketing options through provision of post-harvest technologies. To increase the proportion of produce marketed and total quantity of quality tomatoes marketed; and
- o To increase the average prices received by farmers - through the provision of timely market information, promotion of storage, delayed marketing and by supplying groupements with, or access to, certain processing equipment for both peanuts [oil] and tomatoes [powdered].

2. Technical and economic problems addressed - strategy

The Ouaddai Economic Strengthening Initiative centers its operations at Matar, Oeure and Tarbaka - one located at semi-irrigation perimeters - plus Hidjilidji and with activities planned for Marchout/Bithea [for onions]. At each site farmers have organized a pre-cooperative which, and in addition to managing the dikes, manages credit monies, improved storage facilities, organizes group marketing efforts and, in collaboration with other pre-cooperatives, processing of dried tomatoes.

The project is designed to help raise the farmers ability to maximize income from a given level of production through the simultaneous provision of: [1] current information regarding market prices; [2] reducing cost of transportation by reducing bulk; and [3] means by which the farmer can hold his produce until average market prices rise. The farmers overall bargaining position will be strengthened and this will ultimately be reflected in increased net income.

The first objective is met through a market price collection and dissemination mechanism provided under the project - a functioning market information system. This depends upon information gathered in N'Djamena and radioed to Abeche where it is diffused to three local markets. Price information is also collected in Abeche and various local markets.

The second objective provides farmers the means to sit out the period of post-harvest low prices until these begin to rise again, several months later, and earn a premium sufficient to offset risk and pay all costs. The project introduces to farmers methods of drying produce and helps them build family and group storage units. Improved storage methods are introduced and tested for onions, garlic and tomatoes. The project has supported the construction of various sizes of storage unit to demonstrate options - group owned, and family-owned both modern and improved

traditional. A very substantial storage unit has been built by villagers at Ouere of which a third of the value, CFA 424,800 has been village-supplied. A second one has been built, to different specifications, at Tarbaka, of which half of the CFA 1,000,000 has been made by the village. Other models exist in as well. A demonstration family-level storage unit has been built as well, of which the direct beneficiaries paid about two-thirds. A more modest unit has been built in Ouere at a cost of CFA 62,500 of which over half was paid by the beneficiary.

The project assists in the establishment of a revolving fund at each groupement which is used to provide a living loan to producers meant to provide income at a time when market prices are at their lowest, at harvest, until they rise - increasing by three fold - which may be five to eight months later. Finally the project introduces simple machines which are used to process tomatoes into powder and peanuts into oil.

Next year an electrically powered machine to powder dried tomatoes will be supplied under the project. The intent is to sell this to the production-marketing groupements as a whole and use it to provide custom milling for farmers. The machine, which will cost CFA 4,000,000, will be run in conjunction with the project over the first season and then offered at value for sale to the association in the second year. A SME loan will be sought from VITA/PEP [but this is not guaranteed].

The project proposes an interesting intervention to gain value added. At present powdered tomatoes are sold in bulk in national and international [regional] markets and sold to consumers from open bags in small quantities [tins, cups etc]. It is known that consumers favor Abeche tomato powder. The proposal has been made to use this consumer preference which would be exploited by packaging of powder in small quantities and sold under a label.

By training the pre-cooperatives in maintenance of the dikes production will be protected in the long run. This may in the long run be a vital project output because the economic opportunities provided by the dikes is so promising. But, in the absence of sufficient or proper maintenance the dikes could become unusable within as little as five years.

Finally, certain soil studies, introduction of live fencing etc are to be introduced as well.

Beneficiaries and beneficiary groupements must make an up-front contribution to become eligible for project help. They must provide a substantial portion of the resources needed to build the storage units which the project matches. Similarly individual farmers must build their own drying platforms. The processing machines must be paid for.

B. Progress to Date of Evaluation

1. Impact on beneficiaries

The project has not had time to produce any visible let alone measureable impact upon farmers. Farmers interviewed spoke of the potential which they foresaw as likely, and these included the outputs of the various initiatives.

Twenty training sessions in pre-cooperative organization and management for farmer groups may in time improve the capacity of farmers to club together to store, sell, arrange transport even take production contracts.

Four improved peanut handmills have been introduced for processing peanut oil to two womens groups. Two of these reported their income had more than doubled as a result of increased oil extraction efficiency.

Finally, it has been made clear to us by the farmers themselves that they are sensitive to and are prepared to take action to protect the dikes and fields behind them.

2. Effectiveness of interventions towards purpose

The evaluation was not able to provide an independent measurement of the project's progress with respect to project measures. The project claims to to have made substantial progress during the approximately ten months since implementation of phase three began. These include training in maintenance of water diversion structures, preliminary farm trials of onion harvesting and curing, demonstration of value-adding techniques - drying, storage and oil extracting hand mills. The market information system is still in its infancy. In the long run it is expected that current price information will be collected and broadcast as a result of interventions undertaken by the AMTT project.

3. Has the private sector been affected?

In the brief life of the present phase it is fair to say that relatively little impact upon the private sector has yet been sustained. The speculation can be made, however, that local commercants and transporters, who are informed about the project, are aware that important quantities of produce will be coming on to market in different seasons than before and that transport will be required to take these to local and national markets. In time groupements will have relatively large [by local standards] of peanut oil and tomato powder for sale to local retailers and national wholesalers. Eventually it is expected the private sector will be a supplier of agro-inputs used by project farmers, such as double sacks for tomato powder.

4. Particular constraints

The evaluation considered constraints to both the marketing of produce and the protection of the production base.

The implicit assumption has been made that total marketings encouraged under the DIP are sufficiently small, economically, that prices will not be affected. The market, in other words, is sufficiently large that incremental quantities being sold through it will not bring on downward pressure. It is likely that final markets for foodstuffs in Chad are fairly thin, which is to say prices can be readily reduced by even modest increments to supply and that they will decline more than proportionately. A final point must be made - although dried and fresh tomatoes are not the same product they are in competition when both are marketed at the same time. Thus dried tomatoes from Abeche could compete with fresh tomatoes delivered from Karal if Karal could supply [as is intended] an off-season product.

Production and marketing figures in the country are estimates, and annual changes can only be guessed at. Further, annual production does not catch the important seasonal production fluctuations. A small total producer may be the key producer in a particular month. National figures are insufficiently precise to provide a good measure. Ouaddai produces about 40 percent of estimated national production and in 1989 2660 MT of dried tomato were reported. A ten year analysis of the project estimates that the [estimated] 1500 adopters would produce 280 kg each or 420 MT annually - which would be 20 percent of the current production in Abeche and is less than ten percent of the estimated national production. Were Karal to sharply increase marketings a month after tomatoes would have otherwise been produced, and these held for some time thanks to cooling, Abeches expected market could be adversely affected. A future phase of DIP could have this effect. In a market characterized by inelasticities on both the supply and demand side a ten percent change in quantity supplied can have serious downward effects on price - and brings into question a central project assumption.

Of at least equal concern is the protection of the production base. Water barriers must be constructed to withstand a flood of a certain magnitude - greater security costing more. A barrier capable of surviving the worst likely flood in five years will be less robust than one designed to withstand the worst likely in, say twenty or even fifty years. Such fine tuning requires that engineers have confidence in local flood history. The Ouaddai dikes were built

¹. By way of illustration one farmer reported the following figures. The value of a sack of onions at harvest is CFA 5000 - the farmer decides to hold it until the price rises in a few months. The farmer can borrow half of the value of the onions at harvest, CFA 2500, paying a monthly interest rate of one percent, CFA25. In four months he sells the bag at CFA9000, less eight percent in shrinkage in storage, or CFA 8280. He pays back the loan plus interest [CFA 2500+100 = CFA2600] plus the value lost in storage, [.08% or CFA 720] and earns a net income of CFA 5680 per bag. This is in excess of what he would have earned by 13.6 percent in four months, being an annual rate of 41 percent.

under conditions of less than full knowledge regarding the local rainfall history. Absolute levels of rain can vary enormously from year to year in this area [from 900 mm to nothing, with an average of 441 mm over 46 years]. In fact a fourth dike which was built during the second phase failed to survive its first season - being under-engineered with respect to flood. Even if the dikes are adequate serious concern is expressed regarding the gullying noted around the edges of the dikes. In the case of the Matar dike, there is fear that gullies now in place may reach the stream bed, effectively negating the dike, within three to five years.

The project is described as serving a 'bridging' role, with respect to the provision of market information. This is taken to mean that the present reporting system is not expected to survive EOPS and the service will hopefully be provided as a result of AMTT.

Most of the tomato plants observed in the Abeche area were producing tomatoes known as "catface" [presenting a wrinkled skin] in the trade. These tomatoes are commonly rejected in the processing industry and do not have the characteristics of producing a high yielding type of tomato.

Farmers may secure an important additional stream of income from vegetables and oil seed crushing but this will only be practicable so long as the dikes are maintained and the various post-harvest technologies are understood and implemented.

Other plants observed indicated widespread tomato virus in all of the wadi's visited. This type of virus spreads very quickly but can easily be controlled with virus-free plants produced from virus-free nurseries. Although the plants observed were showing good growth otherwise, new improved varieties, in time, should be introduced in the area.

C. Impact on Women

What constitutes women's work in other parts of Chad is not necessarily the same as women's work in the Ouaddaï. Women and men both engage in tomato and okra drying, for example, in the Ouaddaï. Women work their own fields and help men in theirs on an occasional basis, rather than doing the bulk of agricultural cultivation. Money women earn from their own production is theirs to spend, but typically they spend it in ways that directly benefit their family and children, while men may be more likely to use their earnings as venture capital or spend it on themselves.

The main activity directly affecting women that Africare is undertaking at present is the organization of women's groups that grow peanuts and process them to make peanut oil to sell. To make one liter of oil, which sells for 500 CFA locally, it takes 200 CFA of whole peanuts, so this is a potentially lucrative undertaking. The problem is that it is also extremely labor-intensive, at least with the technology available at present.

In addition to the women's peanut growing-and-processing groups, some women, divorcees or widows, are members of the barrage perimeter groupements, though they are a small

minority. One of these asserted, though, that cultivation of her barrage plot was more work and less rewarding than the activities of the peanut group to which she also belonged.

Despite Africare's commitment to working with women it has no female staff member and has had great difficulty in finding any woman from the area with sufficient training to qualify--in fact, it has not succeeded in finding anyone.

D. End of Project Situation and Sustainability

By June 1994, the present EOPS, the Quaddai project is expected to have in place four or more groupements capable of supporting members ability to gain extra value added from his produce by being able to hold stocks for some period until prices rise substantially above what the farmer could realize if selling at harvest. Farmers will be able to follow this marketing strategy using some or all of the following: [1] having access to good storage facility; [2] being able to get a short term loan to carry the farmer over until he does sell; [3] being able to control at least the first processing step [shelling and grinding]; and [4] having reasonably accurate and timely information regarding prices at various markets. All of this depends, ultimately, upon the farmer's actually having produce for sale, and thus upon the production base. Can these all be sustained?

The production and marketing groupement is not included in the project paper as an integral part of the design. Farmers having personal reserves and an appropriate storage unit may not need its marketing services at all. Non-members, for example, will be able to make use of the custom grinder to make dried tomatoes into powder. For those three groupements which depend upon recession agriculture and thus a functioning dike, a competently managed groupement will be vital.

The project was built in part upon the assumption that the marketing system linking producer to the retail buyers is inefficient in sending appropriate market signals through price. This assumption appears to be overdrawn - there appears to be competition sufficient to provide choice.

The most serious concern has to do with the potential early loss of the dike's capacity to retain and spread water. If remedial maintenance work is not undertaken immediately gullying will shortly ruin much of the productive area in addition to seriously weakening the berms. Should Even if remedial action taken within the next year a maintenance plan must be put in place and funded. Even an effective farmers maintenance organization will require some input from the local genie rurale to provide technical guidance.

III. PROJECT SUPPORT AND LINKAGES

A. AID Support of Project

On the whole, additional USAID support is not needed. However, visits by the project officer are useful. The USAID called a PVO conference which was very useful, more are needed.

B. Linkages with Other PVOs

None in terms of implementation.

C. Linkages with NGOs

None relevant to implementation.

D. Role of GOC

The GOC has lived up to its commitments. It has provided office and housing compounds in Abeche rent free. A good relationship exists with respect to administrative support - each prefect has been helpful [and there have been three since beginning of project]. ONDR has provided two agents to do data collection and diffusion of prices. They worked on the base line survey as enumerators. Also an extension agent works closely with it at the village level. Cooperation from the Chef du Secteur ONDR. The government engineer visits the group storage unit under construction and has discussed technical supervision of the dikes.

IV. ISSUES AND RECOMMENDATIONS

A. Issue: The Need to Institutionalize Maintenance of the Dikes

The management of areas behind the dikes has become one of the, if not the most, important source[s] of income to the various villages and populations associated with them. The two phases of the project have established pre-cooperatives which are responsible for the maintenance of the dike, spillways, berms and overflow zones. The villagers have provided the labor used to build the dikes, but heavy stones needed to fill gullies, are too heavy for farmers to move without trucks. Similarly farmers may not recognize or, having recognized, understand the necessary remedial actions to maintain the dikes.

It is possible that the dikes may require levels of maintenance beyond the means of local people to ever cope alone. For example, if reversal of gullying requires large quantities of rocks costly transportation will be required.

Recommendation: The recommendations made in the technical report prepared by R. Gaddis in early 1992 should be taken to heart and acted upon. This includes the recommendation to review and if necessary to re-engineer whole or part of the dikes and their systems with the view to creating a system which can be maintained using only local labor and materials locally available. Both technology and costs must be within reach of their beneficiaries. The long term implication of maintenance must be kept in mind in any future project which includes their construction.

B. Issue: Need to Upgrade Quality of Tomatoes

A tomato is produced in the Abeche area using recessional agriculture. This tomato, a local variety, appears to be well-adapted to the rigors of plant transplantation as a bareroot plant into deep holes to reach water. The tomatoes are destined for drying or processing into powder.

All of the tomatoes seen by this consultant exhibit the 'catface' character on their skins. There are many virus-stunted plants which are highly contagious resulting in low yields.

Recommendations: New varieties should be tested building on trials at the Gassi research station.

C. Issue: Sustainability of the Groupements

Most development organizations throughout Chad consider it axiomatic to organize beneficiaries into groupements--groups dedicated to the development activities the organization proposes--without giving much thought to what local organizations already exist, how and for what purposes they function, and whether they can be mobilized to carry out the work at hand. Africare, thanks to its assistant administrator in Abéché, is the exception to the rule. This staff member has had the job of establishing and organizing the groupements for barrage perimeters

and for other activities. He approaches the task by learning as much as possible about the already existing social organization of the communities in which he works, enlisting their leaders, and adapting rather than creating organizations whenever he can.

Barrage perimeters serve three to five villages and, typically, over a hundred individual cultivators who are members of the barrage groupement. Groupements of this size the assistant administrator considers "too heavy" to manage well, given the experience of their members. His strategy is to consider at what level the various management activities can best be dealt with. Africare has decided to build individual improved storage sheds because, he contends, individual families prefer to store their grain privately, without revealing the size of their stocks to all their neighbors, and because each family feels ownership and so accepts responsibility for the shed's maintenance, while community sheds, being everyone's responsibility, are more likely to end up no one's. He is also planning to split the main management activities for the perimeters among as many village-level groups as there are villages, since the fields on their rims are divided into village sections and then into individual plots. This would produce groups of around a score of members. For overall barrage management, he is advocating that each of these groups elect a member or members to an executive board. By keeping groups composed of members who are long-time neighbors, friends, or relatives, he is convinced participants will be able to trust each other and will remain honest in their activities. These conclusions are based on five years' experience in rural Abéché as well as on sensitivity to its social context.

Sound social analysis also supports basing development on well-entrenched local institutions. The resulting groups are far more likely to continue their activities beyond the end of a project than ephemeral groupements established under an external impetus as a way of promoting a development program.

Recommendation: Africare's sensitivity to the existence of local institutions that can be enlisted to support development activity, as well as its staff's awareness of the size and capacities of viable groups provide examples and experience worth sharing among other PVOs/NGOs.

D. Issue: The High Cost of Road Transportation

The single greatest constraint to economic growth in the Abeche area is its economic isolation from the N'djamena and other markets and the poor network of feeder roads around Abeche itself. It is true that road upkeep, either in whole or part, will be beyond Chad's means to maintain.

Recommendation: That all donors continue to emphasize the upgrading of dirt roads and keeping them in a usable condition. Donors are going to have to face up to the likelihood that Chad will not have the means to support a road network for the indefinite future - the implication being that if the network is deemed to be vital, and it is, then donors will have to pick up recurrent costs for some time to come.

E. Issue: Meeting Women's Needs

Africare has provided two women's groups with two hand mills apiece for grinding peanuts, a technology that is an improvement over pounding them with mortar and pestle but is still slow and tiring. The resulting peanut butter must then be cooked and stirred vigorously to release the peanut oil. A woman who devotes a whole day to this process can produce ten liters of oil, but obviously she cannot find the time to do it day after day.

Africare is investigating another form of peanut press that uses a car jack as the means of squeezing oil from peanuts but has not been able to make it operate satisfactorily with the jacks used for their own vehicles and is importing a heavy-duty jack from N'Djaména for further trials. It is not clear whether, in the end, the device will be easy enough to operate so that women can use it by themselves. Evidently large-size presses operated by camels also exist which extract the oil directly, without cooking, but these are major pieces of equipment, hardly appropriate for a group of ten to twenty women or so. Still, it is clear that the labor constraint on peanut oil production has not yet been solved. Meanwhile, the group members are eager to pay off their loans so that they can move on to higher performance presses and are not only on time in their loan payments but are interested in prepaying some of the installments.

The Africare staff member in charge of training the groups and credit management reports that three more groups would like to be organized and obtain mills, too. He expressed strong interest in learning how to teach comptabilité par symboles from VITA, in order to help the groups to manage their accounts. This would particularly benefit women in this region, since among men many are literate in Arabic, but almost no women are.

Recommendations:

- o Investigation and adaptation of improved presses is clearly a priority for Africare and should be, since it will be of immediate benefit to women engaged in peanut oil production.
- o Africare staff should be offered the opportunity to come to N'Djaména to learn how to use and teach comptabilité par symboles from VITA trainers, since they perceive a need for it among the groups with which they work.

F. Issue: Relationship with Chadian NGOs: Al Taawoun

Abéché is also headquarters for a Chadian NGO, Al Taawoun, which operates in a region to the north of the town. Its approach resembles that of SECADEV in that it starts with community organization to develop a list of development priorities for each community in which it works. It then mobilizes resources to address those development needs. As a result, it is involved in a wide variety of activities, from building termite-resistant school classrooms (stone,



though slow to work with, proved best) to seed production, improved agriculture of various sorts, clinics and health, wells--the list goes on.

Like Africare, Al Taawoun works with women's groups; unlike Africare it does have some women staff members and has used women to address groups of women. It has encountered difficulties in recruiting suitable woman staff members; the director noted that, even if one succeeds in finding a suitably trained woman from the area under consideration who knows the local language, there can still be troublesome cultural conflict between the attitudes of an urbanized staff member and her rural sisters. Housing a single woman in a rural village is a further problem; they have resolved it best by building her a house of her own. Al Taawoun has also trained local woman leaders and traditional birth attendants to be their community-level promoters (déléguées techniques) for activities involving women. Despite the difficulties Al Taawoun frankly admits in enlisting woman staff members, its experience in using them and the ways it has found for using women to deal with women are worth sharing with Africare. The same may be true of other activities in which Africare and Al Taawoun engage.

Recommendation: Encourage two-way sharing of experience and technical exchange or training between Africare and Al Taawoun. Consulting with Al Taawoun on fruitful ways of addressing women's development needs using woman facilitators would be a good way to start, since it has had experience in doing this and Africare has not.

G. Issue: Environmental Sustainability of Africare's Interventions

Continuity is an important element of PVO programs which should not be sacrificed to the newest development solution being promoted by donors. The issue of dealing with environmental impact of Africare's barrage construction in the late 1980s is a case in point.

An earlier phase of Africare's activities involved building barrages to spread water within several wadis at the flood season, creating an artificially enlarged flood basin for recession agriculture. These are essentially areas to guarantee the possibility of growing a subsistence crop in drought years, when rainfed dune crops fail. A delegation of shareholders from one of the barrage areas convened and waited most of a morning to make sure that the evaluation team take note that the barrage they had worked so hard to build was creating an erosion ditch at one corner and needed attention.

A recent environmental impact evaluation report notes and comments on the same problem. Its author explains that, in most of Africa, the kinds of rainfall data one would need to "get it right the first time" are non-existent. To avoid failure, either structures are vastly over-built--a possibility precluded here by the participatory collaboration with the farming communities who would use the structure--or the first structure must be considered experimental, "trial engineering," and modifications to it expected as time, weather, and soil conditions dictate. But the barrage project ran out of funds before it could transport the additional rocks for modifications and repairs from the place where the farmers had cut and stacked them to the

barrage sites where they would be needed. No further funding for this activity was included in this phase. That may prove in the long run to be a serious mistake if it is not rectified

Recommendations:

- o That greater concern be given to the problems arising from an intervention such as building of a dike to determine whether it can be sustained within the local context without longterm donor support. A donor cannot be expected to pick up maintenance costs indefinitely but should not initiate an activity on which people come to depend but which they [GOC or local services] cannot autonomously service.
- o In the meantime if Africare has not found other funding, incorporate some money to be applied to erosion control and barrage maintenance to future Africare support.

H. Issue: Gullying Near the Project Dikes

It is apparent that soil erosion is becoming a serious problem in the recessional wadi's. If not stopped erosion could effectively destroy the recessional culture. Soil erosion beginning with rill erosion at the ends of the dikes is rapidly turning into deep gullies. Within two to five years the situation could become extremely serious with the gullies gradually working back into the growing area and promoting the speed with which flash floods move.

Recommendation: An in-depth survey of these dikes should be undertaken by a competent trained soil erosion engineer. Recommendations should be sought as to maintenance requirements, correction of the existing erosion problems and level of necessary funding to keep these wadi's in production in the long run.

I. Issue: The Need for Living Fencing in the Wadis

Confrontations between nomad herds and wadi farmers have been reported. The use of living fences has been successfully initiated in Kanem [CARE] in and around Cheddra. These fences [prosopis and other species] keep unwanted animals out of the wadi's. Living fences were observed in the Abeche area but many more are needed.

The above said it is only fair to note two shortcomings. First, that the 'fences' attract birds who build nests in them while using the adjacent fields as a source of food. Second, a low survival rate has been registered in many particular instances of living fences.

Recommendation: That additional fencing be undertaken case by case. Where survivability seems likely, anti-bird measures will have to be undertaken.

ANNEX E

Pilot Fruit and Vegetable
Marketing Project, ACDI

The Pilot Fruit and Vegetable Marketing
Sub-Project Evaluation
[677-0051.G]

Date of Authorization: June 1, 1990

Present PACD: December 30, 1992

Date of Last Evaluation: None

LOP Obligation: US\$2,429.3

Project implemented by ACDI

I. INTRODUCTION AND BACKGROUND

A. Introduction

This annex will address the problems confronted by the Fruit and Vegetable Marketing Project and measure the results actually achieved against the end-of-project expectation. It is important to note at the outset that the implementing team has been completely turned over once during the LOP and that the present chief of party has been in place for about a year. The project is scheduled to end by the end of 1992. The Chief-of-Party has asked the USAID for an extension of six months to allow a new agronomist to attempt to carry out some of the planned activities. It is not clear that this will be agreed. In this context an evaluation of management takes on more of a historic note than a direct input towards the improvement of management, nevertheless important lessons are there to be pondered. Although the project has been problem plagued, important insights have been achieved and the recommendation is made that the Karal area continue to receive attention.

B. Project Background

1. Project area

The project is located at a site about 100 kilometers [60 miles] north of N'Djamena along the southern rim of Lake Chad. The horticulture production area extends 60 kilometers [36 miles] along an axis east of the Chari river. The area is divided into three areas. The western zone, the area along the Chari and the lake, produces mainly tubers and melons. The middle project area produces tubers but also okra, melons and watermelons along with some tomatoes. In the final zone, in the east, produces mainly tomatoes and melons.

2. Commercial agriculture in the area

The area is one of the most important horticulture production areas in Chad supplying much of the produce sold in N'Djamena markets. Karal is the principal local marketing center. Important marketed crops include corn, watermelon, melon, tomato, and okra. Tomato is the principal cash crop and the one farmers feel they have the most serious marketing problems. Project interventions have focused on this crop. The growing periods for tomatoes are fixed by dependance upon moisture left in the soil by rain [December - February] and flood recession [March - June]. The crop matures at the same time all over the country. This means that all of the tomatoes produced come onto market at about the same time with the result that seasonal variations for this highly perishable crop are directly reflected in market prices.

3. The Technical and economic problems addressed by the project

Activities to place tomatoes onto the market later than the crop as a whole. Several thrusts were planned using a late date tomato planting program.

- o A harvest maturity program. A test run or two were attempted - changing the picking date to an earlier time when green on the vine. Farmer behavior in this regard will not have changed by the PACD.
- o Program for Sorting and Grading at the Field Level. Several trials planned. The produce was to be taken directly from the field to the Cholera market hanger.
- o Improved Transport System Program. Trials aimed at finding alternative shipping arrangements were planned.
- o Program to Evaluate Field-Market Containers. Tests were planned with tomatoes, melons and watermelons during the first year of the project. Several alternative containers were to be tested - plastic, two sorts of wooden containers, the half tea chest and the full tea chest.
- o Federation Point of Sale Hanger Facility. This hanger was to be located at the Cholera market in N'Djamena. ACDI supplied the machine to cool the tomato storage room.
- o Program for Commercial Processing of Produce to add an additional source of value added to farmers.

The project addressed the principal assumption underlying the DIP through a broad gauge study of tomato marketing systems from producer to wholesaler to retailer and consumer. The market information was planned to collect, analyze and disseminate farm gate, wholesale and retail prices. N'Djamena wholesale prices are radioed to Karal thrice weekly and is posted near the Karal market.

4. The federation of groupements

The ACDI project did not include direct support to the farmers groupements known to exist in the project area and brought into being with the help of SOCADEV. Indeed the groupings may have been in the process of formation at the time of the design. These informal marketing groups are based on village associations formed in 1988 by farmers concerned at their vulnerability to market induced price variations for their principal crop - tomato. Following an early, and unsuccessful attempt to control farm marketings through voluntary restraint the producers looked for alternative marketing strategies. The associations organized themselves into a federation which came into contact with the newly launched fruit and

vegetable marketing project. It was quickly recognized that the federation could play a very useful role as the vehicle by which and through which a number of interventions [3 above] could be implemented. The project took a first important step in this direction providing a complex of buildings in Karal, a point central in the project area. The buildings simultaneously serve as project headquarters, residence for TA [both long and short term], a storage unit and training center. Processing, packaging and transshipment of produce could be performed as well.

Using funds provided by its membership the Federation built a warehouse [hangar] at the Cholera market in N'Djamena as the collection point for tomatoes [the principal cash crop in the project area] and sales point where farmers [both members and non-members, commercants and retailers could form a physical market. ^[1] The Federation operates the hangar, charges a fee for use of the facility, and keep accounts for individual members and account books.

Member groupements are located in 10 villages stretching from the village of Mani in the extreme West of the project to the village of Sidje on the extreme east. The federated groupements have about 1,000 members.

The Federation has been registered with the Ministry of Commerce and Industry, Direction of Industry and Cooperatives as an Association of Groupements requesting status as a cooperative. The procedure is for the Ministry to evaluate the worthiness of the Association and eventually accord it the status of a Cooperative.

¹. The name 'cholera' markets needs some explanation. The market appears to exist on the site of a former dispensary which treated cholera - and the purpose remained as a proper noun describing the whole area.

II. PROJECT STATUS

A. The Fruit and Vegetable Marketing Project Purpose

The purpose of the Fruit and Vegetable Marketing Project is:

- o To improve the efficiency of private sector marketing systems within the project-targeted areas through the development and application of marketing system models employing replicable interventions; and
- o To improve the harvesting and crop-handling techniques and marketing systems utilized by small farmers.

B. Progress to Date of Evaluation

The project got off to a slow start, being dealt several serious blows - the most fundamental of which was a renewal of civil unrest in 1990. A direct effect upon the ACDI project was the subsequent difficulty in filling long-term posts with appropriate TA and even short term needs went unfulfilled at critical times. It is clear that some long term personnel were inadequate to their task, a full turnover in these persons occurred, with the result that the project now has a completely new long term staff in place. The upshot of these events has been that the project effectively missed the first of two projected crop years and important elements of the project were not attempted.

With the arrival of a new chief-of-party [an agriculture economist] and a full-time agronomist [who functioned as a post-harvest marketing specialist] the work plan has been revised to attempt a reduced list of objectives which appear to be more realistic than those written into the original project. An extension of six months was requested by ACDI to allow for two complete winter cropping seasons [December - March] which time had been deemed necessary in the original project paper and to offset the loss of the first season during the LOP caused by civil unrest. This had not been approved by the USAID at the time of the evaluation.

The Project Information System is in place and has been energetic in the attainment of its objective. The system is the only component of the project which has been completed. The program to collect, analyze and publish vegetable produce prices on a weekly basis has been launched and a monthly report is distributed.

C. End-of-Project status

The following represent project management's best estimate of what will have been accomplished by EOPS based on progress accomplished by the end of the most recent quarterly report [July 1 - September 30, 1992].

1. Marketing structures are in place and functioning

- o Vegetable storage facility at Karal is completed with an evaporative cooler installed. The project EOPS objective will only be partially achieved. The storage facility together with open work areas, a room which is used for training, a guest house for TDY and house for the resident TA advisor, and a room intended for cool storage has been completed. A generator and deep well provide the basic services. Although now in place it is unlikely to become operative. The evaluation team finds that the basic layout of the facility is basically flawed - no access exists to allow trucks to enter, access into the storage areas must be widened to be of practical use. Important physical changes would have to be undertaken to convert the facility into an efficient marketing structure. Finally the facility is located at least 20 minutes drive from the end of the paved road - in certain seasons it will be difficult to access - although not totally impassable.

Nevertheless the facility is suitable for use as a base for long and short-term TA; it meets the Federation's needs as an office and training center; and cereals, dried produce, various inputs can be safely stored.

- o It had been hoped to install a cooler in the N'Djamena hangar and indeed the machine has arrived. But the installation cost of the electrical hookup is US\$4,000 with a prospective monthly electrical bill of US\$1,000 makes it doubtful that this can be an economic proposition given the likely level of monthly business. City ordinance forbids the establishment of a generator without permission of the city electrical company.
- o Alternative to fresh market selling - expanded and improved marketing of dried tomatoes and okra. In its final phase the project has focused its entire attention to the marketing of fresh tomatoes. By EOPS one load of tomatoes owned by women's groupements will have been sent for sale in

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N'Djamena and disposed of. The activity will presumably have demonstrated to women that dried produce sold off season can be profitably marketed.

- o Project gives training to wholesalers and retailers at the N'Djamena market. A number of persons will have been involved in the demonstration of the utility of a central sales point for fresh produce and for produce which has some basic grading.

2. Level of harvest and post-harvest techniques and technology have been improved

- o Improved transport arrangements from farm to market tested. No practical demonstrations along the lines envisaged in the project paper will have been attempted and none are planned between time of writing and EOPS. The project has, however, learned much about the efficiency of the farm to market transport system; enough that it is clear this component was not needed. Truck transport has been found to be competitive, no more costly than circumstances justify, and efficient within the constraints generally prevailing.
- o Improved quality of produce. The need for improved varieties of tomatoes, melons and other high value crops has been demonstrated. Especially needed are tomato varieties which mature sufficiently late in the season [May-May] as to catch market prices when they are rising after the main tomato season [April-May]. Need has also been demonstrated for a reliable source of quality seeds.
- o Grading and sorting at the field level. The project has helped put to rest the notion that even poor consumers are not quality conscious. Produce classed by quality fetches different prices. In the case of tomatoes it has been shown that a market exists for the produce in almost any condition. The project is demonstrating that very preliminary sorting can be done by farmers in the field and that they are sensitive to the price differentials.

What is unclear is how the market system in place can manage to keep accounts regarding the amount each farmer sends to market by grade and ensure these are correctly sold and the farmer is finally paid. The project will attempt to solve part of the problem during the final crop season. One possible solution, grading at the Karal center, is ruled out for now because the cost of assembly from farm to Karal, the sorting and repackaging and final shipment from Karal to N'Djamena is not believed to be cost-effective.

- o Evaluation of field-market containers. By EOPS the project will have tested several containers and selected one for small and for larger shipments. These models will be suitable for local manufacture using only locally available materials. It is believed the Federation will own them and that they will last for up to a half-a-dozen shipments.

The project has also found that retailers appreciate having a variety of packaged quantities to choose among. Dealers in small lots have been put off by the availability of only large containers of tomatoes.

- o Economics and technical feasibility of cool storage tested. Nothing will be attempted as cool storage will not have been established by EOPS.

3. Marketing and price information collection structure is in place and functioning

Market [vegetable] price and intelligence gathering structure organized, trained, and in place. The project has established the promised market information system in the N'Djamena markets; three persons from the bureau of statistics, DSA/ MOA, have been trained in collection, analysis and preparation of price data.

At EOPS these persons will return to the DSA. At question is whether the GOC will have the recurrent budget to make use of these skills and continue with the collection and distribution of price information. Among the assumptions which have proven unrealistic found in the project paper is that the GOC will be able to assume the work. The best current guess is that they cannot.

What is equally uncertain is the use to which GOC has made, if any, of the monthly price information circulars produced by the project. No feed back has been received from government, and no apparent demand exists for the information on the part of government.

What is certain is that at minimum a years hiatus will exist between the date of the ACDI project EOPS and the earliest that the AMTT project can pick-up the activity.

4. What gap will remain between project purpose and its status at EOPS?

The project will have demonstrated certain post harvest technologies, and tested others as pilots. None of these appear to have been adopted by farmers. The greatest success marked by the project is one not included in the original plan, and indeed not recognized. This is the fostering of the Growers Federation which existed only in the form of groupements at the time the project was designed.

It should be noted as well that the original project concept included a second project site at Dagarmassa, south of N'Djamena. Project management, in the view of the evaluators, correctly judged that this lay beyond the grasp of the project and was dropped.

D. USAID and GOC Development Strategies - How These Impact on the Project

Since 1988 the USAID/CHAD mission strategy has focused on three key sectors: agricultural marketing, health and transportation. The earlier stress on food production was de-emphasized when it became clear that poor marketing structures placed an effective limit upon crop production. The Agency for International Development places the growth of entrepreneurship and the private sector as a general priority area. A second Agency-wide priority is the encouragement of democratic institutions.

The GOC necessarily must take a wider view than any single donor be it bi-lateral or multi-lateral. The government wants to promote national recovery, begin economic growth and improve general well-being while putting itself back onto its financial feet. There is no inconsistency between the GOC and USAID positions, they are essentially complementary.

With respect to the Fruit and Vegetable Marketing Project a number of these above objectives are served. The structure of marketing for perishable commodities is improved between an important producing area and the country's leading market. Producer incomes will be raised while the urban public finds more produce on the market. Finally, the support of the growth of genuine grass-roots producers organization can be seen as step towards the creation of democratic institutions.

III. PROJECT SUPPORT AND LINKAGES

A. Role of the Government of Chad

An assumption was made in the project paper to the effect that ONDR would be able to provide up to ten extension agents to support the ACDI project in the field. In practice none has been delegated to work with the team although linkage exists with the ONDR agent in the project area. Similarly, it had been assumed that the GOC would be able to provide a number of staff persons from DSN to work with the market information system both to gather numbers and for practical training on the job. In the event only three have been delegated to work. Finally, and as noted above, it was assumed the GOC would be able to carry on a minimum price collection program using this staff post-project. There is believed to be little likelihood for this to happen.

B. Activities of Other Non-Governmental Organizations and PVOs and their Relations to the ACDI project.

One other private voluntary agency, an NGO, functions in the project area - SOCADEV - a Catholic-based agency which engages in broad gauge rural development activities [animation rurale]. The NGO maintains a permanent presence in the area. The original farmers groupements which eventually coalesced into the Growers Federation were stimulated through their efforts. Although good relations exist between the ACDI team and SOCADEV it is believed that there is relatively limited areas of common interest beyond the encouragement of farmers groupements.

The Chief-of-Party for ACDI has been in contact with those PVO's lodged under the PVO project in particular those engaged in the collection of market and price information. An attempt was made by the Federation to get a SME loan from the VITA credit project to build the hangar in N'Djamena, but this proved unnecessary when it was shown the farmers could build it using their own resources.

IV. ISSUES AND RECOMMENDATIONS

A. Issue: The Desirability to Continue to Work in the Karal Area

For a number of reasons touched on above the achievements sustained by the project have been less than expected. Tests undertaken to determine appropriate packaging methods have been inconclusive. Similarly various interventions aimed at increasing farmer's opportunity to achieve extra value added from his produce have not had significant impact upon producer behavior. No marketing model has yet been developed representing alternative marketing strategies for tomatoes. Physical structures have been put in place in both Karal and in the Cholera Market in N'Djamena. The project's management has taken advantage of an opportunity not foreseen in the project paper to work with the local farmer's federation [of which more below].

The project has demonstrated that a price system operates within the technical limits imposed by the country's physical, economic and other constraints. These constraints include a lack of telephone services between the producing area and final markets, [2] costly transport to market, costly assembly of produce, a tomato variety unsuitable to the area's marketing needs [see below], to name the most serious. It has demonstrated as well that farmers are price and market sensitive and that consumers discriminate among perceived quality differences - which they display in a willingness to pay for particular characteristics.

The project has demonstrated as well that the selection of the Karal area as one having considerable agriculture and development potential was correct. This reflects its capacity to grow a second crop, its proximity to both good [by Chadian standards] surface connection to N'Djamena, the country's principal and richest market, and because farmer's have in place an institution with which a donor can work [see below].

Recommendation: That AID continue to give the Karal area priority as one where early achievements are possible if appropriate strategies are used. These are addressed below, but include a renewed emphasis on production, with particular note given to variety and irrigation, stress on grading, promotion of farmer's organization and continued production and dissemination of price information [through AMTT].

B. Issue: The Desirability to Support the Farmer's Federation

There exists in the Karal area an unusual group of groupements, Agderumka, commonly referred to as the Federation Agderumka. The Federation is the brainchild of its founder and president, Al Hadj Ibrahim Abdoulaye. Al Hadj Ibrahim, a development-oriented man who has

². The evaluation is of the opinion that the presence of a telephone system linking market centers is an important aid to commercants. The Abeche commercants were found to make daily and effective use of telephones to keep abreast of current market prices and trends in the N'Djamena market and indeed this was their principal means to obtain current information.

made two trips to Mecca, is a Zaghawa who came to Beltram in the early 1980s along with other refugees in the wake of drought. Forward-thinking and capable of organized effort, the Zaghawas made themselves appreciated in their new community by helping, for example, to put out village fires that threatened their neighbors' houses and granaries. About two years ago, Al Hadj Ibrahim inspired and persuaded the members of a number of groupements in the area (now up to 64) to band together in a dues-paying Federation for community development and betterment. The construction of the ACDI compound, with room for federation meetings, was one facilitating element in the mix of support for this new organization.

Agderumka thinks big. When their hopes that ACDI would provide tomato processing facilities in Karal proved ill-founded, federation members decided to build a warehouse of their own for their products in N'Djamena. They were able to acquire a lot in the Marché de Cholera and in the end pooled their own resources to finance the building of the warehouse itself. ACDI contributed by adding the cool-storage/office room at the back of the mud-brick hangar. The federation next contracted with a head middleman (intermédiaire) and six associates to handle their produce, and has recently hired a general manager to oversee warehouse operation and keep its accounts in N'Djamena.

A speculative venture undertaken by several member groups of Agderumka, however, looks like a financial disaster in the making and illustrates their continuing need for sound commercial and managerial advice. Federation members, cognizant of seasonal price differentials in the maize produced in the area, decided to apply for a loan to buy grain at harvest time and hold it until the price rose several months later. These groups eventually negotiated a loan with the FED, a loan which unfortunately took several months to be processed and granted. When the money finally came through, corn prices were at their peak, and instead of holding the money until they dropped or refusing the loan, the groups bought and now hold some very expensive bags of corn which they store in the Federation warehouse.

The president's vision of a community organization, grander than the sum of its parts, that can lead to economic betterment and, eventually, community investment in such services as a local health clinic appears to be shared by other officials of the federation, one of whom anticipated that it would take about five years before Agderumka would be able to operate on its own. But this visionary sweep requires a management system more ambitious than those of the member groups to remain open and honest, banking skills, and some sophisticated guidance if it is not to give way to disillusionment. Charisma and promise goes only so far - Agderumka has yet to yield a return on investment in it.

Recommendation: Agderumka is a most unusual, completely Chadian grass-roots development organization of considerable promise. However, it needs and seeks guidance and training in management of its funds if it is not to founder, leaving its members embittered. Building support for Agderumka training and technical advice into a USAID project in the area now could have remarkable and positive results; but without sustained assistance with the management issues it faces it may well disintegrate.

C. Issue: Making Tomato Production Dates Conform More Closely to Periods of High and Rising Prices

The project area is unique in Chad having the capacity to grow three crops annually. The area includes a large area having especially good soils, deriving from silt desposition as well as organic material. Soil moisture is sufficient for most of the growing season and for the varieties being grown. The area produce, cowpeas, peanuts, sorghum, millet, corn, sweet potatoes, tomatoes, okra and peppers. Tomato is the principal crop grown in fresh produce markets and the crop has two seasons running from December through April.

To extend this season special varieties which can be set in higher temperatures [hot set] are required. Hybrids are available, but would require new seeds each season as farmers could not grow their own seed. They are also more expensive to grown than varieties now used. Such varieties are readily available from California seed houses where desert-like conditions including high temperatures are needed.

Two tomato varieties now being produced in the Karal area include the Roma variety and a French variety, Marmande. The Roma variety is produced all over the world but is valued in Chad because it can stand transportation on local roads with poor packaging. There are other hybrid tomatoes which could satisfy Chadian needs and should be tested. These include:

Rio Grande:	128 day, determinate, jointless, square round. Long season type.
Flora Dade:	77 day, deep globe, firm, smooth, jointless. Short season.
Enduro:	120 day, pear shape, very firm. Long season.
Tracy:	125 days, very firm, crack resistant, square round Long season.
Gala:	smooth large deep blocking, very firm, jointless. Long season.

Farmers will be able to save seed from the above varieties.

The development of hybrids which have 'hot set' characteristics will have to be field tested under Chadian conditions before they can be recommended. The non-hybrid open pollinated types would also have to be field tested prior to any widespread release in Chad.

N. what?
Recommendation: That USAID attempt to have a grant established with the GASSI experiment station south of N'Djamena. The station has a full time FAO-sponsored agronomist. There is also a competent staff of trained technicians. The USAID grant should be planned to extend for three to four years and would require one full time agronomist/horticulturalist.

D. Issue: Desirability to Strengthen Parallel Support Systems

ACDI's activities in the Karal district are only one of the development interventions in this high-potential area. Other contributions come from SECADEV (Secours Catholique de Development), a PVO that receives support from the Catholic Church; ONDR (Office Nationale de Developement Rurale), the local branch of the Ministry of Agriculture; Since it is to the project's advantage to work harmoniously with these other development organizations it is useful to understand their strengths, weaknesses, and modes of operation, so that the project can build on them without counting on them to do more than they can or are willing to do. The social and institutional issues are how, and to what extent, ACDI or any ensuing project in the Karal area can best interact with these other development actors on the scene.

SECADEV is a PVO that has been operating successfully in Chad, staffed mainly by Chadians (by no means all Catholic), for many years. In the Karal region it practices animation working closely with local farmers, helping them to establish the mutual support groups known throughout Chad as groupements. Once a group has formed, the next step is to meet to discuss their main needs as a group. SECADEV categorizes the resulting list of needs into those which the group can deal with using its own resources, those that require technical advice, and those that require outside funding. The groups themselves prioritize their list of needs. SECADEV agents then assist the group to begin to address the problems they can tackle on their own. The agency has technical experts in N'Djamena which it can send to help with approaches to the second set of needs, and lastly, it acts as intermediary in negotiating loans or grants for those needs and activities that require additional funds. The points to note are that, first of all, SECADEV agents are trained for this program and are fully engaged in it. They are not available to act as agents for projects outside SECADEV's purview, though they may be happy to cooperate with another PVO if what it is doing fits their primary mission. Secondly, SECADEV does keep useful information concerning felt needs, emanating from the local inhabitants themselves, which may be a valuable resource both in project planning and in the ensuing project activities. It is a good conduit to grass-roots concerns.

The ONDR has one agent in the Karal area, a man trained in Chad and Taiwan who has been the Karal agent for nearly a decade. His job is to check on the state of farmers' fields in the area, to offer extension advice, and to procure inputs of seeds, pesticides, and the like, as needed, through the Ministry of Agriculture. In earlier years, he has been the main source of seeds for the area, accepting payment from the farmers but not always providing satisfactory seeds in return. Still, as a well-entrenched government representative in the area he is not someone to be passed over lightly. ACDI has evidently moved diplomatically to include him in meetings and activities while limiting his scope for dictating to the farmers.

Finally ACDI has amicable relations with the local Sultans, though no close involvement. Recent political events in Chad brought the downfall and deaths of several of these local leaders; their sons, including the Sultan of Karal, are younger men with secondary school education, fluent in French.

Recommendation: Continue to cooperate closely with SECADEV and cautiously with ONDR, but do not count on either to do the project's work for it. SECADEV, in particular, is a good source of information and feedback on the concerns of local residents and should certainly be consulted for that, but their field agents have work of their own to do. A future project might want to include training of extension agents as part of its mandate.

E. Issue: Survivability of Market Information Report System

It is important to recall that the market information system put in place by ACDI was intended to be a pilot and was not intended to be continued. Rather it was intended that the new AMTT would build on what has been demonstrated by the present project. The issue is not the need to provide current price information as a general service to Chadian producers and commercants but how it can be done on a cost effective continuing basis.

Recommendation: That the provision of current market prices information be a priority for donors and the GOC. Price information should include vegetables as well as cereals. In addition an effort should be made to collect and analyze crop forecasting information. Because the AMTT project addresses the above, this is added to endorse its importance.

F. Issue: The Need to Introduce Grading and Effective Brand Identification

The project has not developed those types of intervention which would enhance the development of effective grading, transportation to market and final marketing of a better quality tomato [and melon] which is possible in the Karal area. Of the four horticultural crops produced in the project area, tomato is the major crop which demands the most attention based on its production levels and potential in the market place. However, the improvement of various types of melons which will ship and hold their maturity over a longer period of time and other introductions of various vegetables such as zucchini squash including the acorn and other types should be investigated.

Since the Karal project, ^{was} conceived as a pilot project the entire concept of production starting from field production to merchandizing to the final consumer should be re-examined. Although many of the concepts of well thought out interventions from the production level through to the final consumer in an underdeveloped society which offers the simplistic improvements for the farmer's well-being should be scrupulously analyzed and tested.

The idea that even simplistic production improvements can be totally disregarded by launching entirely into a marketing analysis should be re-examined in detail for future project directions. This consultant believes that simplistic improvements should be considered not only

in production but in the entire gamut from planting newer improved varieties of tomatoes in small nurseries to the final sale to the consumer.

The improvement of higher prices for the tomato producer, for example, in the Karal area, can only be ultimately improved by producing a better quality product which can take advantage of higher prices during the season when gluts on the market restrict prices and thus profits.

1. Methodology for testing a production cycle

The above concept could be introduced in the following steps:

- o Mature green tomatoes should be graded, sized and boxed in the packing shed, not in the field as is presently the case. The Federation should consider the infrastructures already in place, both Karal and N'Djamena, as a packing shed complex. This will take some change in behavior on the farmer's part.
- o Produce, mainly tomatoes, should be transported into the packing shed. There latent heat from the field must be removed. This can be accomplished by immersing the tomatoes into a cooling water bath in the packing shed. Once inside the packing shed the tomatoes can be graded and sized.
- o It suggested that 5-10 runs be made through the Federation packing shed in order to obtain sufficient information and to permit a B/C analysis to be performed. testing of half-sized tea cases should be continued. Native grasses might be used for packing.
- o A test run of 10-15 tea cases should be made for each shipment. The cases should be transported to the Federation shed in N'Djamena. Here they could be left to mature in two-four days and then should be sold as a high quality pack.
- o An attempt should be made to develop markets in the capital for Eurovegetables - hotels etc.
- o There may be a market grow up in Karal for small four wheel tractor/motor bike of the sort manufactured in Japan. These sell for about US\$3,000 and could solve the field to packing shed produce movement problem.

- o It is assumed that the Federation will have to be convinced that the additional labor, effort and cost involved to place a quality product under the Federation label has the potential for profit for all concerned. Buyers bid for better quality tomatoes. There is a market for differential quality. This market continues with or without gluts.

2. Recommendation

The pilot project should be continued but with a somewhat different emphasis. A thorough screening and field testing of improved tomato varieties, and other crops, should be initiated, with the help of the Gassi experiment station.

Federation members might be sent to California to observe tomato harvest and processing.

An agriculturalist should be assigned to the project; one with a practical not academic orientation, interested in working in the field with farmers.

The Federation delivery yard at its Karal facility should be widened to permit unloading of produce from transport arriving from the field.

An estimate should be attempted to measure the volume of tomatoes produced in the Karal area, yields and percentages marketed.

The bidon verseur and hand pump should be introduced on a trial basis. One of the small four wheel tractors, noted above, should be tested. These small tractors can be utilized also for pumping water, propelling small threshers and tilling the soil.

G. Issue: Extension of Irrigation

The production of vegetables, primarily tomatoes in the Karal area, depends entirely on the techniques of recessional agriculture. Such techniques assures production even during periods of drought in other parts of Chad. Assuming the hot set tomato may be developed for local production, another 30-40 days past the period when other varieties cut out [due to their inability to set fruit under higher temperatures] recessional agriculture will not carry sufficient soil moisture within the growing zone for later maturing varieties of tomatoes.

It will be necessary to develop irrigation to supply water after the point when recessional soil moisture will not sustain any possible hot set hybrid tomato production. It should be anticipated that a hand pump be installed for trial purposes under recessional systems. Such a hand pump TVC tubing could be capped prior to inundation of the recessional growing areas and could be utilized when recessional soil moisture is depleted.

Recommendation: A hand pump be established in the trial area where hot set tomato varieties are to be field tested.

H. Issue: Women's Activities in the Karal Area

Women's roles in tomato production and marketing have been considered in several project studies, the best of which is a study of tomato processing by a Peace Corps Volunteer, Juliette Monet. A first trial of holding dried tomatoes for marketing when the price rises is under way; the project staff expect to sell the tomatoes in December.

Women group members we contacted were very skeptical about schemes with delayed pay-off. They expressed concern with the dried tomato holding operation. They like to start with what they know best and form groups to improve their buying and selling operations incrementally. Though Agderumka counts some 17 women's groups in its membership as well as some mixed groups, the majority of women's groups in the area have not joined. Toward Agderumka's activities they took a wait-and-see stance: "When they start showing a profit, we'll join." One way in which they expect to benefit from the federation soon, though, is in getting better quality tomato seeds, which in turn, they maintain, will improve the quality of their dried tomatoes. Though they themselves are not Agderumka members, many of their husbands are and will buy seeds both for the family gardens and for the wives' personal plots.

Recommendation: Continue to monitor the effects of project activities on women's work budgets and their perceptions of the practicality of project activity.

I. Issue: Need to Link Improved Production to Market Opportunities

The Karal project area combines proximity to final market, access to transport, the potential to grow three crops which make it a unique area in Chad.

Recommendation: It is recommended that a production-marketing project in collaboration with the Federation be undertaken in the area.

ANNEX F

Private Enterprise Promotion III, VITA

The Private Enterprise Promotion III
Sub-Project Evaluation
[677-0051]

Date of Authorization: September 4, 1990
Revised PACD: June 1994
Date of Last Evaluation: Late 1991
LOP Obligation: US\$
Project Implemented by VITA

I. INTRODUCTION AND BACKGROUND

A. Introduction

This annex focuses on the problem of the long-run sustainability of a small business credit institution expected to come into being as an ultimate consequence of multi-phase private enterprise promotion project implemented by VITA since 1984. Having first examined the present status of the project, following its recent one year extension [VITA/PEP], the appraisal will turn to the project status expected to prevail at the end of the project in mid-1994 and compare this with the conditions which must prevail for the entity created under the project to become a fully Chadian financial institution. The problem is made especially difficult by the likelihood of prolonged instability in an already very poor economy and where the needed legal protection do not exist.

B. Project Background

The private enterprise promotion project is the third of a phased series which began in 1984. Although project objectives have changed, reflecting the gradual recovery of the Chadian economy, the project mode has remained the same - provide short and mid-term loans for the purchase of working capital and equipment and to support trading activities by very small [micro], small and medium size [SME] established private enterprises. The first two phases were seen as a 'pilot' credit intervention focusing on a target beneficiary group not addressed by the existing lending institutions. The immediate objective in phase one was reconstruction and that of phase two agricultural production. The third, and present phase, represents an important change. The pilot scheme has proven itself - a market has been revealed to exist for loans directed at small businesses which have been ignored by the existing Chadian financial institutions. While the immediate objective of the loans is to promote the growth of small sector enterprises its overall purpose is to establish an institution with an emphasis on agriculture which, in the next or following some future phase, could be sustained from its own earnings as a registered Chadian NGO.

The project's core is a revolving fund created by AID from grant and PL-480 supplied funds supplemented by the World Bank and UNCDF. The cumulative value of the fund, from all sources, amounts to US\$1,147,000, including US\$ 550,000 contributed by the World Bank. Since the project began a loan fund worth US\$ 838,197 has turned over four times disbursing a total of US\$ 3,398,658.

Three sorts of loans are made:

- o Micro loans [about ten percent of the total], less than US\$1200 with a duration of up to six months, of which nearly a half are home-based activities;
- o Small and Middle Size Enterprises [SME], being loans larger than US\$ 1200, for up to three years; and

- o Co-financed [with other Chadian credit institutions] loans which are in fact long term 'industrial' loans made to larger concerns.

During the first one and a half years of phase three no co-financed loans were disbursed. VITA/PEP had prepared a joint project with BTCD, but its procedures were so slow that no approval emerged. Although a number of opportunities exist, the slow procedures of partners allows only cautious optimism for much progress and the project has reduced its planned industrial loans from 12 to six for the remainder of the period. BDT may disburse a co-financed loan by the year's end.

VITA/PEP has achieved a very high level of repayments, 94 percent, in the third phase. The earlier two phases had recovered less than eighty percent. Many of these unrepaid loans were agricultural production loans made to farmers growing crops for market. Because the project did not have staff on the ground the repayment levels for this class of loans were in the range of 60 percent. In phase three loans are only made to enterprises with a successful history and which can satisfy still conditions. Of the six percent written off, most of the persons in default had good repayment records but sustained important losses during the most recent civil unrest which have effectively precluded their ability to generate new incomes streams. This record strongly suggests the project has developed an effective borrower screening methodology.

For most of its life the project has had one lending office, in N'Djamena, although during the second phase an US\$10,000 of agricultural production loan activity was centered in Bongor 240 km south of the capital. In 1990-92 steps were taken to establish a second 'window' in Moundou, the center of the Chadian cotton industry and second largest city in the country. Tardy funding by UNDP delayed the opening of this office until mid-1991.

The project has never had funds to satisfy the total demand for loans, indeed SME lending in the first part of the third phase was twice the amount originally expected. Micro lending has exceeded expectations in numbers of loans disbursed, amounts disbursed, and repayment performance. Most micro loans are lent to women [80 percent] and other clients engaged in agriculture related activities.

In summary, VITA/PEP has made loans which otherwise would not have been made to a class of entrepreneurs otherwise unable to borrow. A business expansion has occurred that would not have in the absence of the project. The loans appear to have increased both productive capacity and incomes for the borrowers. Some jobs have been created for unskilled persons. A young institution is coming into being which can play a role not fulfilled by any existing financial institutions in the country.

II. PROJECT STATUS

A. Project Goal and Purpose

The three phases have shared the same long-term purpose and goal.

1. Project goal

The project goal is to stimulate production in Chad's small and micro business sectors under economic conditions and to improve the quality of life for the lower income portion of the population.

2. Project purpose

The project purpose is to institutionalize a credit delivery system created under the project which can deliver credit [more than US\$ 1200 per loan] to small and medium size enterprises [SME] and support very small loan requests [less than US\$1200] on a sustainable basis. These last include family income generating activities.

In the long run the lending institution should be able to survive without subsidies in any form.

Finally, the project is implemented through a particular PVO [VITA] and in close cooperation with other PVO's with the intention to mutually support one another's efforts.

B. Progress to Date of Evaluation

The present phase was planned as a three year project- -1990-1993. Because the demand for loans increased beyond the capacity of the project as originally designed it was decided to take steps permitting a three fold increase in the number and value of loans. A fourth year was added with a new PACD of July 1994. With the extra year end-of-project objectives have been revised upwards. An important change was introduced as well.

Whereas it had been expected that the project would be a registered Chadian financial institution by the end of the project the continuing unsettled political environment, making economic ventures of all sorts more risky than they otherwise might have been, the revised EOPS has the institution ready for registration. This allows for final steps to be taken in a succeeding phase when, presumably, the Chadian political and economic environment is somewhat less problematic. A Chadian national has been selected and oriented for the post of project director and will succeed the present director when the latter's contract end's in mid-1993. The staff of trained Chadian loan officers has steadily risen to meet the increased volume of work and by the PACD there will be seven SME loan officers and five micro loan officers plus a supporting staff. Finally, and as planned, a Chadian Advisory Committee has been created which includes all of

the donors [USAID, UNDP, World Bank], VITA/PEP, GOC/Ministry of Planning, two banks, the secretariat for NGO's, etc.

1. Value and number of loans lent since the beginning of Phase 3

The VITA project has been revised to make it more ambitious with the addition of an extra year. The revised project uses the title VITA/PEP which is now the approved scheme under which the project will continue until its revised PACD in July 1994. In Table 1 the original [a] and revised [b] LOP objectives are presented.

Table 1: Number and Value of Loans Planned for the Third Phase of the Project

class of loan	number of loans	value of loans, US\$
SME	159	940,600
co-financed	12	600,000
micro	642	241,900
Total	813*	1,782,500

* 494 loans worth US\$ 1,396,800 let in N'Djamena and 319 loans in Moundou worth US\$ 385,700. The value of the loans are converted from CFA to US\$ at an exchange rate of 1:300.

2. Loans to agriculture and related activities

During Phases I and II [July 1984 - June 1990] over half one-half of the number and nearly half of the value of loans went to clients engaged in the production, transformation and/or transportation of agricultural products. During Phase III [July 1990 to mid 1992] the proportion has increased slightly [Table 3].

Table 2: Revised Objectives with Project Extension

class of loan	number of loans	value of loans, US\$
SME	474	4,826,508
co-financed	6	150,000
micro	2197	662,568
Total	2677	5,639,076

Source: VITA/PEP records

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Note: under the original three year project it was planned to make 22 loans per month, under the extended project the number is 87. The exchange rate used in [b] is 1US\$=254CFA.

Table 3: Loans to Agriculture and Related Activities
[all amounts in US\$]

	Phase I & II		Phase III	
	No.	Amt	No.	Amt
Agricultural production	115	280,770	42	42,595
Transformation	19	93,741	139	226,599
Transportation/Mktg	17	222,773	416	851,434
Total All Ag. Loans	151	597,283	597	1,120,628
Percentage of All Loans	59	42	79	57

Source: VITA/CHAD Project Expansion Proposal

3. Impact on beneficiaries

a. Expected increase in production due to loan

The planners expected that extra output could be measured and attributed to the loan. In practice it was found that the simpler approach was to use financial statements from each firm to measure incremental incomes.

- o SME expected - 10 percent extra production.
 actual - an increase in 24 percent in
 gross margin.
- o micro expected - 10 percent extra production.
 actual - 133 percent growth in gross
 margin.

b. Employment creation

One job created for every US\$ 1,755 lent, or 1,015 full time jobs were expected. In fact 539 full time jobs have been created at an individual cost of US\$ 2693.

c. Value of loans made since July 1990

Class of Loan	Value in US\$
SME	1,788,404
Micro	192,319
Total loans	1,980,723

d. Reduction in cost per dollar lent

The project expected to lend money at a cost per dollar lent of US\$ 2.52. In practice the cost, at both N'Djamena and Moundou, is about US\$ 1.

e. Stress agriculture-related lending

In practice 79 percent of the loans and 57 percent of the value of loans distributed have been to clients engaged in agriculture and related activities.

f. Other accomplishments

The loan portfolio has been fully automated - with a 'user-friendly' computerized system.

A methodology for the screening of loan applications is in place and tested and a lending manual has been prepared. As noted above in the discussion regarding the redemption level of loans the very low level of bad loans and the linkage between nonpayment and events beyond the control of borrowers indicates the screening methods and quality of loan officers applying them to be sound.

g. Impact upon women

As is evident from the rest of this evaluation, women have benefitted from over 13 percent of SME loans and, at 80 percent, have been the overwhelming beneficiaries of micro-loans. Their repayment rate is better than men's; many have therefore been able to get second, third, and fourth loans of increasing amounts. Women have also been the primary beneficiaries of the bookkeeping training for illiterates and have proved apt, capable of mastering the system in the course of an hour or so.

4. Particular constraints

The evaluation team is of the belief that the VITA/PREP credit project should accomplish its purpose so long as the security situation in Chad, and in particular the leading cities, does not deteriorate. Should this happen the willingness by entrepreneurs to borrow and assume new risk and the ability to repay loans will decline.

In recent months a new constraint has appeared. Economic activity has declined since mid-1992 resulting from the non-payment of government employees' salaries. Consumer confidence and ability to pay for goods and services has consequently fallen sharply. This is bound to be reflected in a slow down in loan repayments.

5. Consistency with USAID and GOC strategies

Since 1988 the USAID/CHAD mission strategy has focused on three key sectors: agricultural marketing, health and transportation. The earlier stress on food production was de-emphasized when it became clear that poor marketing structures placed an effective limit upon crop production. The Agency for International Development places the growth of entrepreneurship and the private sector as a general priority area. A second Agency-wide priority is the encouragement of democratic institutions.

The GOC necessarily must take a wider view than any single donor be it bi-lateral or multi-lateral. The government wants to promote national recovery, begin economic growth and improve general well-being while putting itself back onto its financial feet. There is no inconsistency between the GOC and USAID positions, they are essentially complementary.

The GOC is in no position to follow an independent rehabilitation-development strategy of its own, but it articulates the need to rebuild infrastructure, train and meet domestic agricultural requirements by the population. Donor programs roughly conform to this imperative. USAID concentrates on health, agriculture marketing

Other donors focus on adaptive research, seed multiplication, extension, strengthening of farmers organizations, credit etc.

C. Suitability of Progress Measures

Extra production, which is advanced in the logical framework as a basic progress indicator may not measure actual change in well-being. USAID's measure of productivity is gross return. A better measure is change in net income which represent both extra production and current price and thus the value of extra sales which can be linked back to changes in production, efficiency and sales skills. The project performs a financial analysis with each borrower and this provides its principal source of information to measure the borrowers improved well-being. Incremental income, financial ability to pay, new jobs created can all be calculated from this source.

D. End-of-project status

The VITA-PEP project has been extended for one year, with a new PACD of 30 July 1994. The extra year will add 517 additional loans to the three year target of 2160 having a total value of US\$5,363,076. Of this total project leadership believes no more than six percent will be unrecoverable. The cost per dollar lent will be US\$1.05. The project now covers its banking costs. By 1998 it is expected to be able to cover its local costs [including all support of local staff] - if substantial growth is achieved. At this time all project revenues should be equivalent to 121 percent of banking costs [the costs associated with letting a loan] and 36 percent of local costs [total project costs less technical assistance].

By the end of the project, June 1994, the mechanism established through VITA should be [1] under full Chadian management and [2] ready to become a Chadian non-government small loan credit institution, licensed by the GOC with articles of association allowing it to engage in activities currently undertaken by the project.

III. PROJECT SUPPORT AND LINKAGES

A. USAID Support for the Project

USAID is the principal funding source for the project which is implemented by the agency under a PVO umbrella project.

B. Collaboration with other PVOs.

VITA/PEP has kept in close contact with other PVO's and has established a special working relationship with CARE. The project meets with ACDI, Africare, ORT, AMTT and World Vision. Collaborative relationships have been discussed with ACDI, Africare and ORT to provide credit to groupements involved in projects supported by those agencies.

The credit project has worked with a CARE/Chad project aimed at helping promote the economic and social well-being of women merchants in the N'Djamena market [which project is covered under the AID umbrella project]. In this instance several groupements of market women have borrowed and repaid through three loan cycles. Members of these VITA/PEP groupements tend to be poorer than the average beneficiary of a micro loan, indicating the project is reaching a class of borrowers beyond any likely conventional financial agency. The repayment record of these groupements has been excellent.

C. Chadian Financial Institutions

The Chadian financial institutions are few in number and reflect both the country's level of economic development and its historic orientation towards the promotion of export crops and trade. These institutions too have not been strengthened by nearly two decades of political unrest and associated economic disruptions. The banks are privately owned and, in common with banks all over the continent, have not cultivated small entrepreneurs. The banks include:

Banque Tchadian du Credit et de Depot [BTCD]- partly owned by Credit Lyonnaise, is Chad's largest bank. Due to this banks' extremely slow internal review process no co-financed projects between it and VITA have emerged.

Financial Bank, a Swiss owned financial bank serving large private firms. It deals with large firms.

Banque International au Afrique et Tchad [BIAT]- owned by Meridian Bank, itself a Greek-owned firm, can only provide limited lines of credit. The bank provides services for international trade - letters of credit etc.

Banque Developpement du Tchad [BDT]- The bank described by VITA/PEP as the bank most likely to be compatible with its objectives and at time of writing the two are close to disbursement of a co-financed loan.

D. Links With Other Donors

VITA/PEP submitted a request to the UNCDF for loan funds in the amount of US\$ 500,000 for the newly opened VITA/Moundou banking 'window'. The UNDP pays the operating costs of this branch.

The project has taken action to enlarge the World Bank's contribution to the loan fund under the banks' Project d'Action de Developpement Sociale [PADS project]: US\$1,000,000 of additional money has been asked for and US\$500,000 this should become available in early 1993.

E. Contacts with the Government of Chad

The Ministry of Planning is an important actor in that it must clear changes, that is to say increases, in the rate of interest charged to borrowers. The Ministry originally argued for highly subsidized lending to small businesses but USAID's insisted that borrowers pay the market rates for borrowed capital. The result has been a compromise - interest rates less than the presumed market but still subsidized. The project is currently negotiating to raise the effective rate from 13 to 15 percent for SME loans and from 13 to 18 percent for micro loans. Discussions among World Bank, PADS and VITA/PEP and the Ministry of Planning seek flexibility for possible future increases to 18 percent and 24 percent for SME and micro loans respectively.

IV. PROJECT ACCOMPLISHMENTS AND SUSTAINABILITY

A. What the Project has Accomplished

The VITA/PEP project has, in the opinion of the evaluators, made real accomplishments in a country unusually poor and unstable even by African standards. Credit for this success must be shared between the real entrepreneurial spirit of Chadian traders on the one hand and a well-conceived and managed project on the other. Small business loans are not commonly included in loan portfolios of African banks. There are practical reasons for this. Available capital can be fully utilized at low risk profitably at low cost per dollar lent servicing traditional commercial firms. Established banks are loath to move into what is perceived to be a largely unknown and therefore risky sector. It is difficult to obtain the necessary information about small business at a price bank's are prepared to pay. Small loans frequently mean high costs per dollar lent and for collection. Banks have little incentive to spend the money to develop the information needed to appraise loans requests for businesses which usually keep few or no records and lack fungible assets for collateral.

The VITA/PEP project has performed a number of services using donor money as venture capital. The project has demonstrated once again that adequate working capital is the greatest financial need of most small and medium size enterprises. Projects that supply this class of loan generally have better track records than those providing term loans. These loans too are easier to track, being short term but may require specialized technical assistance such as simple book-keeping. The project has revealed the approximate extent of a market for small loans, mainly used for working capital to buy inputs, inventory, and capital equipment which manifests a high willingness to repay. A proven methodology has been developed by which applications from micro and SMEs can be effectively screened. This information has been translated into a simple loan application form. The project has demonstrated that SME and micro loans can be made at an acceptable level of risk. Additionally, the project has discovered the potential rates of return to small investments in the context of continuing uncertainty can be very high indeed. The project has found that small loans are a cost effective way of reaching poor but entrepreneurially motivated people. It is evident as well that both short and long term jobs can be created indirectly using loans for unskilled persons. The cost per job created is estimated to be on the order of over two thousand dollars, not including the employment of the entrepreneur himself. In sum, VITA/PEP has provided development capital to reduce the entry cost to lending institutions to a more acceptable level.

The project has demonstrated that loans to small dealers need not be subsidized and made in the context of government guarantee. Indeed the budgets indicate that interest rates could be substantially higher and still produce a very positive return to the borrower. Representatives of the AMTT argue that returns to dealers can be on the order of hundreds of percent [reflecting the high risk premium of doing business in Chad], but always with the possibility of complete loss during social unrest. But even here small businesses have proven resilient and able to get back onto their feet following disheartening reverses. All of this suggests that financial interest

rates on the order of 25 percent and higher could be charged and be well below the true scarcity value of capital.

Finally, the project has shown once again that even poor people save and can find investible money. This is shown by the projects requirement that SMEs have a debt-equity ratio of 4:1 or a secured assets-debt ratio equal to or greater than 2:1 - borrowers can turn to a number of traditional mechanism by which savings can be mobilized - tontines, family reserves, and various savings associations. These systems, while providing a way to save often cannot provide individual borrowers with lumps of capital on demand. The capital market, certainly for small scale business in Chad, remains segmented and underdeveloped. In particular no market exists which can link savings with capital needs by the private sector. It is the belief of the evaluators that a fourth phase of VITA/PEP should act to link savings with investment - working to promote at the same time the habit of institutional savings by small savers while helping to develop a capital market. This should be the underlying strategy in the establishment of a sustainable financial institution serving that class of borrowers neglected by conventional lending agencies.

B. Steps Towards Long-Term Sustainability - Future Project Phases

Sustainability is defined as the ability of an institution to meet all of its obligations and earn a competitive return to its owners in the long run. For sustainability to be ensured certain criteria must be satisfied. There must be probity and prudence exercised by the chief executive officer and the loan officers. Although the VITA/PEP has enjoyed a high level of repayment by Chadian [and African] standards [around six percent losses] they are poor in comparison with those in developed countries [where losses are a fraction of a percent] not the least due to the overall lack of security prevailing in the country. Nevertheless interest earnings provide growth to the loan fund.

Finally, any institution which is or is seen to be repository of cash is vulnerable in an insecure political environment. Sustainability means that the institution must be in some way sheltered from the consequences of a break down in law to the extent possible. Formal legal arrangements in Chad have only a limited meaning, nevertheless suitable law covering the small credit institution will have to be introduced at some stage and donor[s] can have an important role in determining what sort of language is ultimately adopted. Finally, a sustainable institution must have sufficient freedom to engage in price driven competition - as a capital market emerges. Below a series of recommendations will be made

It is the belief of the evaluation team that the credit institution created under this project cannot expect to become sustainable until the political stability of Chad is assured and where investors are reasonably confident their assets will not be seized or destroyed on any account. It should be underscored that similar credit institutions elsewhere in Africa have not on the whole had brilliant histories and that the VITA/PEP project appears to have achieved some measure of success even under difficult conditions. The poor record elsewhere derives not infrequently from poor and often corrupt management. The social, not to say political, pressures on an African manager of any institution able to hold or lend money can be intense. So long as the manager

can persuasively demonstrate that his hands are tied with respect to the making or collection of loans, the institution has some chance of avoiding being plundered. The problem is cultural and not primarily one of security, although this probably adds to the pressure. As the project approaches the end of the present phase a decision must be found how the Chadian manager can be buffered from such demands.

With respect to the ultimate form of ownership - a number of alternatives are possible, but any form must produce a management which can manage the firm in such a way that it is quarantined from politics - management should not be selected on political grounds nor loans made on these grounds. Additionally debt owed to the institution should be such that they cannot be forgiven as a result of political intervention.

C. Viability of Assumptions

The Project Expansion Proposal for the VITA/CHAD Private Enterprise Development Project includes in its logical framework an unusually long list of 25 assumptions. It is worth recalling that an assumption is defined in the logical framework context as an external factor lying outside of the project which cannot be affected by the project but which has a direct impact upon it. A project should be so designed that as many critical factors are included within it as possible. Interest rates and particular policies obnoxious to business, for example, may be influenced by negotiation, and included as a covenant or condition precedent. Many of the sub-project assumptions, when inspected critically, are not in fact vital to the success of the project having to do with timing, growth etc. A particular rate of growth, for example, is not a necessary condition. Individual firms can exist and even flourish in a stagnate economy if they are able to successfully compete - growth only acts to reduce the intensity of competition as absolute final markets expand.

Only two assumptions are in fact absolutely central to the long term outlook for the project: [1] political stability and [2] preparation and enactment into law of the necessary legislation that will support the particular needs of the lending institution post-project when it in becomes in fact a fully Chadian financial institution.

Perhaps the most critical assumption is that of continued political stability - and it will become more critical the more visible the institution becomes. The 'bank' is not presently a target as it holds practically no cash that can be looted. Were the bank to take in and accumulate savings accounts, some part of which would be in cash at any given time, the bank would become better known to would-be looters and of more interest to them. Of equal importance in this connection is the impact of instability upon the ability of a borrower to flourish and repay debt. The current inability of the GOC to pay salaries is a direct result of prolonged political instability.

V. ISSUES AND RECOMMENDATIONS

A. Issue: Continued Donor Support

Is there need for continued donor support for the small loan credit institution beyond the end of the present third phase?

Recommendation: For the reasons outlined above there are good grounds to continue and even increase the provision of credit at commercial rates to micro and small and intermediate businesses. These include credit's impact on overall growth, the provision of goods to consumers at competitive prices, the creation of employment among poorly educated low skilled persons, and the encouragement of entrepreneurship among society as a whole.

B. Issue: Provision by the Bank of Technical Assistance

Should the bank continue to provide a range of technical assistance? If the bank is to become fully self-sustaining it will not be able to provide gratis training or other assistance, such as helping fill out application forms, bookkeeping for the illiterate, simple accounting for the literate etc.

Recommendation: In fact, the bank now charges a four percent fee on all clients before loan disbursements which together with the interest fee on the loan itself covers these costs. But in those instances where financial advice is needed and /or some business training [keeping basic accounts for example] a bank could find itself with a conflict of interest or supplying free help at bank expense. In either or both of these situations training and advice should be provided outside of the bank. The AMTT project may be able to add this sort of assistance. Or, a dedicated sub-project might provide another solution.

C. Issue: Ownership of the Small Credit Bank

So long as the institution is clearly a development project ownership is not a problem. It will only become a problem as the post-project era approaches and a fully Chadianized institution is in prospect. In the present political and security context this may be sometime away.

Recommendation: Below, a range of alternative management arrangements are presented together with four concerns. The five management arrangements include [1] management by an existing bank under contract; [2] sale of the VITA/PEP to a bank; [3] set up a banking cooperative; [4] continue under VITA and [5] set up the bank as a sort of Chadian VITA. The four concerns include: [1] full commitment to the VITA goals; [2] ability of the fund to remain financially independent; [3] willingness to provide services now supplied and [4] willingness to support small micro loans with a high cost per unit lent. These concerns are scored in an attempt to put them into some perspective - the scores ranging from low commitment [L], through medium [M] to high [H]. The scores are subjective based on judgement.

The matrix appearing below shows the array of estimated values for combinations of management and concern. Management might be accomplished through linkage with an established bank under, say, a management contract between a consortium of donors and a bank. The contract would be renewable but subject to strict guidelines regarding lending and other procedures. But a board of directors may have a more limited commitment [L] to the credit institution and its objectives were it to be managed by them under contract as opposed to a very strong [H] commitment were the bank - or another system -to actually own the institution.¹

An important dimension of the present arrangement lies in its ability to provide a range of assistance free to borrowers, paid for by the donor as a social or developmental transfer. A privately owned firm would have to charge beneficiaries a price sufficient to cover the full cost, or, allocate the cost across the bank's fixed operating costs. This last would raise prices to all users adding to that extent an uncompetitive element in user costs. An NGO could perhaps work out a tax benefit with government to cover this. A donor could include it in the fee paid under a management contract.

Alternative Management Arrangements	Full Commitment to Goals	Ability to be Financially Independent	Willingness to Provide Services	Support of Micro Loans
Management Contract With Bank	L	M	L	L
Sell to Bank	H	H	L	L
Set up Co-op Bank	H	M	M	M
Continue Under VITA	H	M	H	H
Set up as Chadian NGO	M	M	M	M

Score: H, high; M medium; L low.

Note: the columns cannot be meaningfully summed because the criteria measured are so different among themselves.

¹. The scores are admittedly subjective but reflect a judgement made jointly with persons close to the subject of bank management.

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Similarly, conventional commercial banks might find it difficult to continue to use funds to support micro lending.

It is recommended, however, that in the longer run some form of a credit cooperative be given serious consideration. This would permit greater involvement by direct benefactors who could be counted on to look after their own interests as small savers and borrowers. It may be that a special arrangement in law could be devised which would address donor concerns while building a truly indigenous commercial entity. Such an arrangement would not carry much weight at a time when law and legal forms are of little account but could become more important as the country settles down.

It is recommended that the institution be maintained as one clearly linked to and protected by a donor or a consortium of donors. The Chadian manager should be protected under the VITA umbrella as a paid employee at least through a fourth phase and for the indefinite future beyond that. Of concern as well is the need to ensure the fund is put to proper use. Donors could assure probity only as long as they held ultimate control over the fund such that a manager could be held responsible if anomalies were found. The policy to keep the manager as an employee of VITA/Arlington finesses the problem of accountability, removal, appointment and supervision and this arrangement or a comparable equivalent should be kept.

D. Issue: Increasing Loanable Fund

How can the loanable fund be increased apart from donor input?

Recommendation: That the bank establish a savings window linkage of savings with investment. This will require that the bank have the power to set and at least raise its interest lending rate to cover interest payments on savings funds. And this may require a considerable increase in that the opportunity cost for savings and loanable funds may be much higher than the current officially recognized interest rates.

Borrowers should be encouraged to save. This may be accomplished by linking creditworthiness to the maintenance of a savings account. The account should represent collateral which the bank can access. One can imagine two credit streams - one to depositors and one to non-depositors.

Building on the experience of the Krishi Bank of Baroda in India savings accounts could be opened for very small savers. The referenced bank encouraged small depositors by agreeing to open an account for as little as ten new paise [US\$.04 at the time] - in the long run the bank created a very considerable number of clients and found that it had tapped into an important market used by no other bank.

E. Issue: Range of Services

Should the range of services offered by the bank be widened? Possible services include savings by deposit, provision of consumption credit, loans to buy houses or places of business.

Recommendations: Any additional service would require the bank to add specialized staff with some new organization within the bank itself and introduce necessary interest rates to provide the necessary spreads between savings and loan rates. Consumer loans, for motor scooters and similar pricey items, are arguably a useful way to promote business sales while providing goods which can be repossessed. Provision of housing loans socially would be a way to increase net worth among city dwellers converting rents to loan repayments. Presumably this class of large loans will require considerable technical preparation and training of loan officers.

Interest rates of savings must be high enough to cover opportunity costs of capital but at the same time provides a new base from which interest rates for loans will have to be calculated. Introduction of any additional type of lending activity will require an additional project agreement.

F. Issue: Need to Reduce Unrecoverable Loans

Although important progress has been made to reduce bad debts, loan collections have increased each quarter, much remains to be done before serious consideration can be given to letting the institution stand on its own feet.

Recommendations: Continuation in the effort to facilitate procedures to seize goods. This includes getting courts to carry out seizures. Where relevant agreement might be reached to allow salaries of debtors to be garnished. At some point, under a future non-project agreement, an effort might be made to accomplish some judicial reform.

G. Issue: Training of Illiterates in Bookkeeping

VITA presently offers several forms of training for its clients. For borrowers with some schooling, it offers simple bookkeeping. For informal sector merchants it provides a form of rapid training known as comptabilité par symboles in keeping records of expenses and income. Using a system developed by Oxfam employing seven easily-drawn symbols representing the four banknotes and three coins of the local currency a trainer can teach an illiterate merchant (a category that encompasses the majority of market women) to record costs and income in a period of about an hour. The system builds on the merchant's already honed mental ability to calculate with CFA currency. VITA has been offering this training to interested borrowers; it is not required for a loan. It is clearly handy for VITA, as well as for the merchant, to be able to establish a balance sheet for an applicant's recent business operation.

Training at this level, though, is unlikely to pay for itself; if a fee were charged, many of the businesspeople most in need of it would be unlikely to sign up. Training in bookkeeping

for market sellers and in management for small- and medium-scale entrepreneurs may prove too costly to VITA's core operation to be sustained without donor support.

Recommendations

- o VITA should continue its training and lending activities in support of the micro sector, since they contribute to the well-being of VITA's most needy clients and to the health of the private sector. It should continue to seek donor support to underwrite these development functions.
- o Since other PVOs have expressed widespread interest in receiving training in comptabilité par symboles as VITA currently uses and teaches it, VITA should consider offering training to trainers in it, possibly charging a fee for such training.

VI. VITA'S CLIENTS: WOMEN VENDORS

Every Monday VITA loan officers go to the workplaces of applicants to review their operation on the spot, as a way of screening them for the loans they seek. They can form an opinion of the size and complexity of the enterprise and the woman's ability to manage and use a loan fruitfully. This week we do not find any applicants who are not actually operating the commerce they claim to conduct - though this has happened in the past. But we talk to women ranging from a doughnut seller whose stock in trade is one koro of flour every morning and whose daily profit is 300 CFA on the resulting koro of doughnuts to a woman who has bought 30 sacks of charcoal yesterday and has already sold 18, clearing 500 CFA profit per sack, only one of several commercial activities in which she is engaged.

Our first stop takes us a few steps down a path between mudded walls to a neat open courtyard where a hen and her chick squat on the swept earth and a kitten peeks from a doorway as the woman of the house, wrapping her bright skirt more firmly round her waist, conducts us to a corner formed by a verandah wall where two sacks of millet sit along with four empty sacks. This is her stock in trade; she acts as intermediary for the women who buy from her and sell millet retail in the little neighborhood market around the corner. She is a member of a group of three women. The others work in the Central Market, but she knows them because they see each other at church. Church groups, the loan officer remarks, are generally very reliable.

Next we plunge through the vendors and shoppers of the Central Market to one of the covered sections where two rows of women sit back to back with their displays of dried produce and peanut butter before them. One of these is the loan applicant; she has a number of condiments and sauce ingredients in neat piles, as well as a tray of peanut butter from which she scoops a hundred francs' worth and packs it into a small plastic bag as she explains her operation. Under her makeshift counter she shows us two koros, of roasted and unroasted peanut butter, from which she can replenish her tray. She roasts the peanuts herself at home, then takes them to a mill in the market where for a small fee she has them ground, a koro at a time.

While the loan officer continues the interview, I move to the opposite side of the section where one of VITA's regular borrowers is minding her wares--the same sort of wares as those of the applicant. With another section occupant translating, I ask about her previous loans. She's on her fourth: she started out with 30,000 Fcfa, repaid that and borrowed 40,000, then 60,000, and now 70,000, which permits her to renew her stock when the price is good. Has she been able to turn extra profit with these loans? Yes indeed, her most recent purchase with the proceeds for her family has been a large metal pot. I ask if she's married; yes, her husband is a teacher, so at the moment she's the one supporting her family. I turn to my translator: has she ever sought a loan. No, she replies, she does well enough on the profits of her business. But, despite the fact that she's had some education, she sees the market as the only viable way to make some money. It's not hard to see how the idea of forming a group and applying for a loan spreads among these women sitting hip to hip under their tin roof.

We move on to another section to interview a young woman, another seller of varied condiments. I ask how long she's been selling in the market. Ten years, she replies, since the age of twelve when she began by helping her aunt. She set up her own operation with 3000 Fcfa seed money from her husband; she estimates that the stock we see displayed in front of her now represents about 5000 Fcfa worth of goods. With a loan she'll be able to buy and stock peanuts and *néré* when the price is attractive.

Sitting virtually in the path in the same section is Solkam, with a covered, vat-sized bowl of sweet millet beverage at her side, a smaller container of *koro* drinking bowls behind it, and a crocheted cloth laid over the coins she keeps for change near the rim of the vat cover. Her drink sells for 25 Fcfa the *koro*. She offers us a taste of the milky liquid, sweet and refreshing. This is only one of the two products she vends--some days she sells fish soup instead, clearing 3500 Fcfa in profit every two weeks. She brings her wares to the market in her own pushcart, so she has no transportation costs, but she pays 2000 Fcfa a month to rent her place. It's not much of a place, we comment, but she replies it's on a well-frequented path with enough room for her to sit under the edge of the roof and have easy access to her customers. Her loan would be used to buy millet for her drink and sesame seed for the soup.

With that we leave the market, threading our way past men carrying wooden stands covered with fresh meat, young pickpockets hopeful for an opportunity to profit from the crowd, women intent on dinner purchases, to the street. The last three visits will be to women whose place of business is in their home.

First is the home of another trader in millet, a widow, who goes regularly to her natal area where she herself has a field. She harvests her crop and buys from others as well at 4000 Fcfa a sack, which she sells for 7000 Fcfa in town. Depending on the market, she sells three to six sacks a week. Two young women, dressed in western skirts and blouses sit together on a bench watching us converse, and several younger children swirl around the open courtyard overhung by a vine at the end. I ask whether any of the other household members bring in income, but she says, no, the girls are students--it's just that school hasn't opened yet. With her loan, she thinks she might like to branch out into buying rice. Since she's never done that before, the loan officer counsels her to stick with what she knows for the first loan. Then if she establishes a good credit record and expands her operation with the first loan or two, she can think of diversifying.

Next stop is the household of the top merchant of the day. A collection of sacks of charcoal occupy center stage in her courtyard, and that's by no means all. She leads us back into one of the dwelling quarters opening onto the central court, past a man seated at a desk with a math text at his side giving his whole attention to writing up a chart, into a bedroom which, in addition to its double bed, shelters several large sacks of millet in the penumbra. It is she who bought thirty sacks of charcoal the day before and has already sold two-thirds. The millet, which she purchases at 3000 Fcfa the sack, plus 350 a sack for transport, fetches 4500 in town for the red and 7500 for the white. Meanwhile, the man has emerged from his study; she introduces him as her husband. No, he's not a teacher--he used to work for the State Treasury, now empty, so

he's out of work for the moment. Just now, aside from her earnings, one of her husband's brothers brings in a little, but she's the main breadwinner. She does keep accounts of sorts. She produces a notebook filled with jottings in red ink in a neat hand, recording in French the purchase price of various commodities, the sales price beneath, and the profit margin. It's her writing, she asserts. Her husband helps her out if there's a complicated transaction, but otherwise she does it herself. The VITA staff agree she's a prime candidate for their simple bookkeeping course, to help her organize her random notes.

Last of all, we are conducted into a narrow courtyard where, under an overhanging roof, Loreyem, the young doughnut seller, shows us her hearth and cooking utensils. Stock? she has none--the koro of flour she bought this morning has been cooked into beignets and sold by the end of the breakfast hour. She is able to produce only a half-empty bottle of cooking oil at this time of morning. All told, her ingredients cost her 600 Fcfa a day, her koro of beignets sells for 900. To her, a step up would be to be able to buy a whole sack of flour and twelve liters of oil all at once, at a lower price than the koro-a-day rate--and then, maybe, make more than a single koro of wares at a time to sell. Her husband's a policeman, another man with a job now surviving somehow without the wages to go with it.

As we leave, discussing whether she should be given the 35,000 she's asking or be started at 25,000, so as not to swamp her with debt at the beginning, I'm both heartened and saddened by the pluck and resourcefulness of these women who step into the breach to keep their families afloat when their men's salaries disappear.

ANNEX G

Evaluation of the DIP Umbrella Management Project

I. INTRODUCTION AND BACKGROUND

A. Introduction¹

The SOW calls for the evaluation to consider the effectiveness of the "umbrella" mechanism for supporting the PVO effort in the agricultural sector including its appropriateness for future AID interventions in the agricultural sector and its feasibility in other sectors. No formal definition of a PVO umbrella project exists. As used by AID it generally refers to an implementation mechanism that provides funding, as grants or subgrants, to a number of organizations, in the present case PVOs, under the "umbrella" of a single AID project.² Reduced to its essence the common denominator of umbrella projects is the capacity to distribute financial resources to a number of agencies under one funding obligation.

PVO's differ from other members of the donor community in a number of important regards. A PVO may represent a particular constituency including regional concerns [Africa], development philosophy [training, cooperatives, humanitarian] and have specialized skills reflecting these. A PVO may have had a long presence in a particular country and consequently may enjoy special contacts and other linkages with people, institutions, other donors etc. They may have access to specialized skills unknown to conventional donors. They may be close to particular beneficiary communities. Many have especially dedicated staffs. And, they may have cultivated close contacts with the local NGO's. For all of these reasons PVO's represent an important resource with reference to project identification, design and implementation. Because PVO's represent different and often competing constituencies on the one hand and particular developmental concerns on the other PVO's may not always pull together efficiently when in joint harness. In this case external direction can work to make their collective impact greater than either might have working alone.

A study of umbrella projects has shown them to be a flexible mechanism for working with PVO's, both in design and subsequent collaboration. The following is an attempt to evaluate the performance of the Chad PVO Development Initiatives Project [DIP] with particular regard to its appropriateness for future AID interventions in the agricultural sector and, perhaps, others as well.

¹. This annex was prepared using the following document to provide insight into issues related to umbrella projects as an implementation tool. Designs for Collaboration: A Study of PVO/NGO Umbrella Projects in Africa, Otto, John and Drabek, Anne, USAID, Bureau for Africa, September 1992.

². PVO refers to agencies registered as PVO's with AID/Washington. Below the term NGO refers to Chadian private organizations registered and recognized as such by the GOC.

B. Background

USAID/Chad recognized and took advantage of US PVO's installed in the country when planning and implementing its rehabilitation and food security oriented programs in the 1980's. The PVO's demonstrated a capacity to perform effectively at the village level, to work with such GOC units as existed and as change agents with farmers. The chosen vehicle to provide the reins to control this diverse team was the so-called project umbrella. The DIP was launched at a time when AID activities in Chad were low and budgetary and financial resources limited the mission's new programming to one new start. The umbrella mode was chosen as a means to link PVO's in a joint thrust to assist agriculture, first in food security, then in production and, later, in marketing and private sector activities. This latter shift represented a major realignment of umbrella project priorities. The overall project was initiated in 1985 with a four year life, but has been extended until mid-1995.

Chad DIP subprojects were focused on a single sector and several subsectors - food production and marketing and food-related micro and small scale enterprises. These involved growers, suppliers of water lifting equipment, farmers organizations, commercants.

Three of the four subgrantees, all US PVOs, were active in Chad and were essentially pre-selected by the Mission. A fifth subgrant with a US PVO has since been negotiated and one PVO has two subgrants. The rationale for preselecting the subgrantees was based on getting rapid results and on the proven effective operation of the US PVOs. Local and national NGO's were not considered.

In response to a call for proposals five were received of which four were funded. In the Chad umbrella project only US PVOs were allowed to submit concept papers which AID reviewed subject to very strict criteria. Project proposals were subsequently submitted reflecting comments; AID was able to minimize the design burden by shifting the work onto the PVOs in this manner while retaining close control over the process.

The Chad DIP, oriented to rehabilitation and relief under emergency conditions, was designed within the USAID with little or no input from outside. The project funded three PVOs already funded by USAID in Chad. The 1989 audit of the project indicates that the project design failed to consider adequately the constraints faced by the intended PVO subgrantees in designing and implementing community-level subprojects. The project paper for the DIP states that "the PVO umbrella structure of the project will minimize the management burden of AID and the GOC."

The Chad umbrella is unusual among similar projects in only dealing with subgrants. Almost all others include elements of training, provision of TA, coordination among PVOs, NGOs, information services, commodity procurement, etc. The Chad subgrants, however, provide TA, training, loans, etc. to agriculture and small scale enterprises. The Chad umbrella is similar to the others in having a wide geographic area.

Because the subgrants for this project were made as individual Cooperative Agreements they are subject to the rigors of all AID procedures and standards for field approval of projects.

Even though the umbrella project was designed with existing PVO activities in mind, the applicant PVOs had to carry out extensive pre-project studies and other proposal preparations. The Mission therefore provided selected PVOs with pre-award funding to assist with technical design issues.

With respect to the 'Umbrella' the scope of work for the present evaluation asks that the appropriateness of the mechanism for this sort of project be examined and recommendations made which may be of relevance to future AID interventions. Concerns in this connection include: what is the management burden on the USAID? how may it be lessened? Is this approach a useful way to link PVOs together?

C. AID - PVO Relationship

An AID mandate exists to work with PVOs. The question remains as to what form this relationship should take? PVOs represent particular humanitarian, sectoral and geographic concerns by different domestic US constituencies. The USAID, on the other hand, implements the interests of the USG as determined by the US Congress. Although these may agree in general terms they often do not with regard to priority or approach. The problem that PVOs face in practical terms is that the USAID in a given country is an important funding source for the PVOs, and certain cases perhaps the only one. This dependence puts a serious limit to a PVOs' independence and can make the USAID-PVO relationship a highly unequal one. The PVO-USAID relation in the case of the DIP has become progressively more akin to that of a horse and rider with each successive phase of the relationship.

The PVOs are seen by AID as 'primary vehicles for design, implementation and monitoring' of pilot efforts which will inform future AID program development. The PVOs see themselves in a quite different light. With the regard to the current phase of the DIP project in particular, PVOs as a group can be said to feel that they have had little significant input into the conceptualization or direction of the project has taken in its current phase and that the USAID has effectively made all of the decisions. During the initial relief effort made in phase one a partnership could be said to prevail - the PVOs on the spot at the time saw this as the primary challenge and USAID supported them in this. Phase two saw AID shift its attention to crop production, a focus with which the PVOs, with their orientation towards food security, could feel comfortable. The USAID's sharp de-emphasis of production, to one of exclusion, in favor of marketing, was built on assumptions the PVOs did not share. In this instance the application of the umbrella mode of management does not appear to have provided much scope for the PVOs concerns to be taken account of.

D. Management Implications of Cooperative Agreement

DIP is managed internally by the USAID. Although this is an important decision the project paper did not explain the rationale of this choice. Making and managing sub-grants to the PVOs is virtually the only project element. The design called for no new structures within the USAID for project management. The Project Development Officer is a direct hire. After several years of recruitment efforts a PSC was hired in 1990 to fill the position of Project Manager. This

has resulted in a consolidation of management responsibilities within the mission. TA, monitoring and evaluation assistance can be provided by REDSO staff.

E. Project Implementation

1. Project policy committee

Unlike many umbrella projects in other missions no internal steering committee exists.³

2. Host government role

In Chad, the host government's role is limited to Ministry of Plan approval and counter-signature of cooperative agreements. This reflects the GOC's limited capacity especially at the time the umbrella was set up.

Formal protocols exist between the GOC and all of the PVOs [except ACDI]. The GOC was required to review and counter-sign an individual Cooperative Agreement for each subgrantee which amounted to its approval of their selection. The Ministry of Plan and Reconstruction approves and counter-signs each PIO/T for Cooperative Agreement with PVOs.

GOC is involved in a number of particular matters concerning subproject implementation. For example, a number of PVOs have close links with local government agencies and parastatals. GOC involvement also includes policy decisions, for example, in regard to interest rate levels in VITA/PEP project and its role on the subproject subcommittee.

3. PVO responsibilities

The monitoring, evaluation, reporting, subgrantees management functions are usually more extensive for direct mission management of an umbrella project, compared to projects with an external implementing agency.

The Audit of Chad DIP found that there was little coordination among the PVOs. Since the Audit, and following the arrival of the Project Manager, there have been more regular formal and informal contacts and exchanges among subgrantees.

There are no partnerships among Chad DIP subgrantees.

4. Life of project

In the Chad DIP, even though the three pre-selected US PVOs were already active in the sectors and zones selected for the umbrella project, it was 15 months before the mission

³. Our sources differ on this point. It may be safe to say that while no formal steering committee exists, an ad hoc committee can be assembled from mission staff.

received the first acceptable proposal, for the first phase. In part this delay was due to the application of standard field-level criteria for approval of Cooperative Agreements including environmental and other assessments.

The second phase of the project is in some disarray due to the repeated outbursts of civil disorder in Chad. This led to tardy project starts, disrupted implementation, difficult recruitment etc. Two of the subprojects, N'Gouri and Kanem, are being terminated early because of the disruption. A third, Karal, will end early in part because of these difficulties. The PACD of the VITA credit project, however, has been extended by one year, through mid 1994.

II. PROJECT MANAGEMENT WITHIN USAID VERSUS OUTSIDE USAID

A. Organizational Alternatives

The present institutional arrangement managing the DIP depends upon a PSC hired for the job and located within the USAID. The system appears to have worked well once a PSC was actually hired - which took some time. The evaluation finds no imperative need to change from this pattern. The USAID has expressed, through the present SOW, to consider whether an interally managed umbrella is the most appropriate mode of PVO management in Chad? To answer this alternatives must be considered and their management needs appraised. This will be attempted below.

A number of alternative modes are possible but some are so improbable in the present case as to amount to staw horses in any comparative analysis. One choice might be implementation through a host country contract. But this approach, originally conceived by AID in the context of Latin America, is inappropriate where a government is under as much stress as is the GOC. A second approach, at the opposite extreme, could be direct management by direct hire staff. Mode levels, limited budget, and other concerns preclude this approach being given serious attention.

This leaves implementation using various contract or contract/sub-contract arrangements.

1. Inside of the mission management

In the case of inside management the Mission would have a PSC, or possibly a direct hire, linked directly or indirectly to PVOs and seated within the Mission. This is the present implementation approach. Its advantages include: [1] a possibly more rapid initiation of a new project; [2] where a difficult or risky work environment makes it preferable for the Mission to have tight control over operations.

Presumably coordination and the uniformization of terms of service among PVO could be promoted through both the contract-subcontract mode and internal AID management. But practical limits exist in that practices differ among PVOs themselves for various reasons deriving from their constitutency, self-perception, mission etc. Some want to go first class others are content with [indeed insist upon] steerage.

2. Role of an intermediary contract firm

An intermediary firm, whose use implies management from outside of the Mission is a plausible alternative. The main advantages of external management are [1] reduction in the USAID management burden; [2] the flexibility and ease of operations afforded by funding through a grant mechanism. With an intermediary firm taking fiduciary responsibility, subgrants can be made to local NGOs that a Mission cannot fund directly; [3] the creation of a buffer between the PVOs and AID regulations; and [4] the provision of services by a specialized unit with direct links to the PVO/NGO world.

Their main disadvantages include: [1] include a somewhat higher start-up time; [2] possibly higher management costs [but possibly with more services provided]; [3] less control by the Mission over daily operations.

Candidate firms should be limited to among those which have demonstrated experience working with PVOs or, and of equal if not greater importance, provides a chief of party who has had such experience. A PVO firm should not be selected to manage other PVOs as a general rule.

Perhaps half of the umbrella projects in Africa employ this approach.

3. Which is best?

As a general statement direct AID management appears to present more constraints than advantages when compared to employing an intermediary management unit.

B. PVO Concerns When Linked with a Mission

PVO-umbrella projects have been found to work best when systems are worked out which promote a mutually supportive relationship among them. An intermediary facilitator would be in a good position to promote this sort of exchange and collaboration.

Umbrella/PVO projects are most successful where the PVOs base their programs on activities with which they are familiar and build on a firm base before branching out. PVOs fear, rightly so, being treated as an adjunct rather than a partner by the infinitely stronger Mission. A collaborative relationship is desired but one between equals insofar as this is possible.

In this same connection a Mission can make good of PVOs in project identification and design by making use of its special knowledge.

C. Impact of Having More than one Sector

In the majority of umbrella projects in Africa more than one sector is addressed. The Chad umbrella is unusual in having only one, which is the management of firms dealing in [now] agriculture marketing. One of the reasons 'inside management' by PSC has worked in the Chad case is the essential singlemindedness of the project. If, however, the Mission were to determine to add sectors, so that PVOs and NGOs having quite different interests and skills had to be in some manner coordinated the present arrangement might not be sufficient. In this case the Mission might find it useful to have a PSC looking after two contracts, one for each sector - say, agriculture and health.

IV. ISSUES AND RECOMMENDATIONS

A. Issue: Should the Project be Managed From Within or Without the Mission?

The above analysis makes a strong case for the umbrella approach as opposed to direct internal management of separate projects. A less clear case can be made between the externally and internally managed project as an umbrella. Our judgement comes down in favor of the external management contract by a non-PVO, with the possibility for a renewal depending upon performance. The differences would be narrowed if a PSC candidate could be found who would be allowed to devote most if not all time to the project, had a strong deputy to handle particular work to release the manager for more field work, and one able to promote project interest within the mission.

Recommendation: Our management recommendation is for an externally managed umbrella with a non-PVO let a management contract and with subcontracts let to the PVOs as subgrantees.

B. Issue: From the PVO Point of View, Does the Approach Have Any Particular Advantages or Disadvantages and How Should these be Addressed?

The umbrella meets a number of AID's needs but does it meet the PVOs? The DIP umbrella, from the vantage point of the PVO's, is essentially an AID funding device. PVO's do not see any particular difference in 'flexibility' or speed in decision making from that observed with conventional AID projects implemented by a PVO. What difference does exist is mainly attributed to the personality of the incumbent project manager. The project manager does not appear to have any particular discretionary powers that would enable him to expedite decisions. The particular history of the Chad umbrella has not included any real collaborative relationship. Indeed PVOs have been required to assume some uncongenial postures to remain in the project - for example, the unwelcome need to shift from production oriented work - consistent with their concerns with food security - to a marketing orientation where they had no particular comparative advantage.

C. Issue: AID Speaks of the Need for a Collaborative Approach to Project Design and Implementation. What might a Reasonable Approach Include? How can AID treat PVO's in an umbrella project as partners instead of just implementing vehicles?

What does the 'substantial involvement' clause of the cooperative agreement mean in practice? AID makes rhetorical bows towards collaboration in its official language - but practice falls short of pose. The reality is that AID, the piper, calls the tune and the PVOs, as seekers after funds, have little choice but to go along. This said, AID can make much more effective use of the particular skills and experiences had by PVOs in Chad. PVOs usually have special knowledge of local circumstances and it would behoove AID to make use of these in project identification and design.

The above characteristics could vary depending upon the care taken in writing the contract[s] and the particular delegations of power agreed upon. For example, things to be determined include - who would handle subgrant proposals, pre-award assessment of prospective subgrantees managerial capabilities, monitoring financial reporting and subgrant progress, field visits and liaison with GOC, mission supervision & control. What about the degree of coordination among mission personnel working on the project? The powers retained by the ADO? Would the mission permit simplified clearance procedures?

Would the Mission have to set up a steering committee to Although AID must set the goals, Congress demands no less, useful input could be gotten with respect to the means by which objectives are achieved, reasonable progress measures, the PVOs legitimate concerns and objectives, appraisal of constraints, timing and duration of commitment.

Recommendation: That enough time be made in the preparation of whatever follow on umbrella scheme is undertaken with the PVOs to allow for a collaborative effort in project planning and in the actual design. This does not mean AID give up final decision making, rather it means that AID give serious attention to PVO input.

D. Issue: Should the 25 Percent Rule be Waived?

A related issue is that the Chad DIP called for to supply 25 percent of the value of each subgrant OPG's. The project paper noted that waivers would be sought if 25 percent requirement could not be met and may be allowed if US policy in the country so merits.

Recommendation: If the external mode of umbrella management is decided upon, AID may find PVOs reluctant to accept a subcontract position without some tangible incentive to do so. A waiver of the 25 percent rule could be one sweetener to offset what a PVO might have gotten had a alternative mode been adopted.

E. Issue: Concern has been Expressed that Sub-Projects Lacked Adequate Technical Backup. Should the USAID Strengthen its Support Staff?

The evaluation team noted at several project sites that success in producing marketable produce varied and depended upon the quality and intensity of agronomic input on the part of the sub-project. Both difficulty in recruitment and failure to include this technical skill figured in the problem and did not seem to be made by short term TDY persons. The provisional recommendation was made to add an agronomist or perhaps additional skills to the project management unit to supplement sub-project staff. When the list of short term TDY needs among all of the subprojects was checked it was found that demand had been for support in doing base line surveys, small enterprise work, statistics, extension, hydrology, sociology, cooperative management etc, but none in sufficient quantities to warrant a full time extra staff person. REDSO/W is not a reliable source of these skills.

What is needed, from an agronomic point of view, is that an agronomist be supported at the research station charged with tomato variety trials who could be available for part-time back up work with the PVOs.

Recommendations: The addition of a full time technical person of any sort cannot be justified in terms of costs and benefit. An exception may be found in the case of an agronomist brought in to manage tomato trials recommended elsewhere. There may be Chadian technically trained persons available to do certain selected work. Although some use is made of them, with mixed results, now no inventory apparently exists listing skills, location, reputation, rates etc of this class of Chadian nationals. The recommendation is made such an inventory be prepared.

F. Issue: Should an Effort be Made to Strengthen NGO's?

Several of the PVO projects work in areas in which other PVOs/NGOs or donors are working. In several cases there are Chadian NGOs operating nearby. There are some differences in management style between the PVOs supported by the PVO/DIP and other NGOs. Because of the nature of the USAID project, the American PVOs typically offer a limited service or services, take it or leave it, while NGOs like SECADEV or Al Taawoun start with community meetings, listing community needs, desires, and priorities, and move on from there. Typically, too, each PVO or NGO is assigned a discrete area to avoid redundancy because of overlap. Despite these differences, both types of organization confront similar problems when they are working within the same general region. Both Chadian and American organizations have experience and strengths they could share with each other. It is worth exploring what kinds of technical or social expertise each could offer the other and whether other sorts of partnership would be useful, as well.

Recommendation: Investigate the possibilities of offering technical assistance to Chadian NGOs or contracting for short-term training or other forms of assistance from them. Explore other forms of partnership as appropriate.

ANNEX H

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ANNEX I

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Women's groupement of Matar (Ouaddaï)

Representatives of the barrage groupement of Matar (Ouaddaï)

Two women members of the barrage groupement, Matar

ANNEX J

Evaluation Team Itinerary

Evaluation Team Itinerary

Week	Dates	Location	Activity
1	15-16 October	Washington DC	AID and Devres briefing
travel to N'Djamena 16-17 October			
2	19-24 October	N'Djamena	USAID and PVO briefings Background reading
3	26-31 October	N'Djamena	VITA review
4	2-7 November	Karal	ACDI review
5	9-14 November	Cheddra/N'Gouri	CARE and ORT review
6	16-21 November	Kim	CARE/Kim review
7	23-28 November	Abeche	Africare review
8	30 Nov./5 Dec.	N'Djamena	write 1st draft/submit
9	7-10 December	N'Djamena	2nd draft/submit, debriefing of GOC, Ambassador, PVOs, Mission.
depart Chad 11 December			
10	14-18 December	Washington CT/DC	final write-up and submission.