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CARE
(NEW COOP
AGREEMENT)

POBBX711



UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT

Yaounde

UNITED STATES ADDRESS:
YAOUNDE (AID)
DEPARTMENT OF STATE
WASHINGTON, D. C. 20520

INTERNATIONAL ADDRESS
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22-02-69

October 25, 1990

Tom Friedeberg
Country Director
CARE/Chad
B.P. 106
N'Djamena, Chad

677-0051- A-00-0001-00

Reference: Cooperative Agreement No. ~~XXXXXXXXXX~~ 0001-00

Dear Mr. Friedeberg:

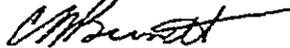
Pursuant to the authority contained in the Foreign Assistance Act of 1961, as amended, the Agency for International Development (hereinafter referred to as "A.I.D.") hereby grants CARE International in Chad (hereinafter referred to as "CARE" or "Recipient") the sum of \$1,149,742 to implement the Kanem Pumps and Agricultural Marketing Project in collaboration with the Government of Chad as fully described in Attachment A, entitled "Schedule," and Attachment B, entitled "Project Description."

This Cooperative Agreement is effective and obligation in the amount of \$388,370 is made as of May 1, 1990, and shall apply to commitments made by the Recipient in furtherance of project objectives for a period of approximately twelve months starting May 1, 1990. Additional funds may be committed by A.I.D. during the period of this Agreement, subject to the availability of funds, up to the total amount of \$1,149,742. The detailed cost estimate which appears in Annex VI of the CARE Project Proposal will be used for the purpose of tracking expenditures.

This Cooperative Agreement is made to CARE on condition that the funds will be administered in accordance with the terms and conditions as set forth in Attachment A entitled "Schedule," Attachment B entitled "Project Description," Attachment D entitled "Mandatory Standard Provisions for U.S. Nongovernmental Grantees," and Attachment E entitled "Additional Standard Provisions for U.S. Nongovernmental Grantees," which have been agreed to by your organization.

Please sign the original and seven (7) copies of this letter to acknowledge acceptance of the Cooperative Agreement, and return the original and six (6) copies to the A.I.D. Regional Contracts Officer indicated below.

Sincerely,

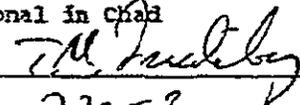

Carlton M. Bennett
Agreement Officer
Regional Contracting Office
USAID/Cameroon

Attachments:

- A: Schedule
- B: Project Description
- C: Unofficial French Translation
- D: Mandatory Standard Provisions for U.S. Nongovernmental Grantees
- E: Additional Standard Provisions for U.S. Nongovernmental Grantees

ACKNOWLEDGED:

CARE International in Chad

By : 
Title : Director
Date : 11/7/80

FISCAL DATA

Appropriation : 72-1191014
Budget Plan Code : GSSA-89-21677-KG13
PIO/T No. : 677-0051-3-90058
Project No. : 677-0051
Total Estimated Amount : \$1,149,742
Total Obligated Amount : \$388,370
IRS Employer Identification No: 13-1685039
FRLC No. : 72001483
Funding Source : USAID/Chad
Technical Office : USAID/Chad

Attachment A

SCHEDULE

A. Purpose of Agreement

The purpose of this Cooperative Agreement is to provide support for CARE's implementation of the Kanem Pumps and Agricultural Marketing Project in collaboration with the Government of Chad, as more specifically described in Attachment B of this Agreement entitled, "Project Description." The project will be implemented as a sub-project funded under the USAID/Chad PVO Development Initiatives project (677-0051).

B. Period of Agreement

1. The effective date of this Cooperative Agreement is May 1, 1990. The estimated completion date is April 30, 1993.
2. Funds obligated hereunder are available for estimated project expenditures, as indicated in the Financial Plan, for the 36-month period beginning May 1, 1990 and continuing until April 30, 1993.

C. Amount of Agreement

1. The total estimated amount of this Cooperative Agreement for the period indicated in Section B.1 above is \$1,149,742.
2. A.I.D. hereby obligates the amount of \$388,370 for project expenditures during the period set forth in Section B.2 above and as indicated in the Financial Plan.
3. Additional funds up to the total amount of this Agreement shown in Section C. 1 above may be committed by A.I.D. during the period of the Agreement, subject to the availability of funds and to the requirements of the Standard Provision of this Agreement entitled "Revision of Grant Budget."

D. Financial Plan

1. The following table presents the financial plan for this Agreement. Total A.I.D.-funded expenditures shall not exceed the total amount of funds obligated under this Agreement. Revisions to this budget shall be made in accordance with the Mandatory Standard Provision of this cooperative agreement entitled "Revision of Agreement Budget".

FINANCIAL PLAN
KANEM PROJECT

<u>BUDGET LINE ITEM:</u>	Year 1	Year 2	Year 3	Total
Technical Assistance	\$119,006	\$130,331	\$119,322	\$ 368,658
Local Project Support	\$173,355	\$200,673	161,357	535,385
Shared Project Support	\$135,026	141,527	148,354	424,907
Indirect Cost Recovery	<u>\$ 30,425</u>	<u>\$ 31,869</u>	<u>27,778</u>	<u>90,072</u>
Total	\$427,812	\$504,400	\$456,810	\$1,419,022
USAID Contribution	\$388,370	\$406,796	\$354,576	\$1,149,743
CARE Cash Contribution	\$ 69,442	\$ 97,604	\$102,234	\$ 269,280
CARE In-Kind Contribution				\$ 195,286

This project is to be incrementally funded over 36 months.

2. Cost Sharing/Matching Contributions

Definition: Cost sharing/matching is a required contribution by the grantee from non-Federal sources toward the total cost of the program, either in cash or in-kind, usually described as a percentage of total costs.

The determination as to the requirement for a level of cost sharing/matching is the responsibility of the cognizant program officer. All grants designated by the program office as matching or cost sharing grants will contain the Standard Provisions entitled "Cost Sharing/Matching". The Grantee's contribution shall be at least 25% of the total cost of the program.

Criteria and procedures for the allowability of cash and in-kind contributions made by grantees to satisfy cost sharing/matching requirements are set forth in paragraph 1K, "Cost Sharing and Matching," of A.I.D. Handbook 13 and "Optional Standard Provisions," entitled "Cost Sharing/Matching". Except for these requirements, no other requirements set forth in the standard provisions are applicable to costs incurred by the grantee from non-Federal funds.

Cost sharing/matching percentages will be applied to the total cost of the grant program. Cost principles applicable to grants prohibit the accomplishment of cost sharing/matching through arbitrary limitations on individual cost elements. This is particularly important in the area of indirect costs (overhead). When a negotiated overhead rate agreement is in effect between A.I.D. or another cognizant agency and a grantee organization, the negotiated rate will be applied to the agreed upon direct costs to determine the total cost of the program, and the cost sharing/matching percentage will be applied to the total cost.

Unless otherwise specified in the schedule of the grant, verification that the cost sharing/matching requirement has been met will be made at the end of each funding period or on an annual basis as determined by the cognizant program office. Verification is based on expenditures. Individual expenditures do not have to be shared or matched provided that the total expenditures incurred during the designated funding period or year are shared or matched.

The grantee must account for the A.I.D. funds in accordance with the standard provisions entitled "Accounting, Audit and Records". However, in the event of disallowances or expenditures from A.I.D. grant funds, the Grantee may substitute expenditures made with funds provided from non-Federal sources, provided they are otherwise eligible in accordance with the Mandatory Standard Provisions clause entitled Cost Sharing/Matching.

E. Method of Payment

Payment shall be made to the Recipient in accordance with the procedures set forth in Attachment E, Additional Standard Provisions: "Payment - Letter of Credit" (November 1985).

F. Reporting

1. Financial Reporting

Financial reporting shall be made in accordance with the requirements discussed in Attachment F, Additional Standard Provisions: "Payment - Letter of Credit" (November 1985).

In addition, since Letter of Credit reports are not generally received by USAID/Chad in a timely fashion, the Recipient shall submit a certified quarterly financial report to the USAID/Chad Project Officer. Information submitted on this report must be presented by Cooperative Agreement line item in the following format:

<u>Project Budget</u>	<u>Expenditure This Period</u>	<u>Previous Expenditure</u>	<u>Total Expenditure To Date</u>
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The quarterly financial report must be submitted within thirty (30) days of the close of each quarter.

2. Annual Workplans

Within ninety days after the arrival of the Recipient's designated Chief of Party, the Recipient shall submit for the approval of USAID/Chad and the GOC a complete workplan for the first year of project implementation. A workplan for the second year and for the final eight months of project implementation shall be submitted no later than eight weeks in advance of the beginning of those periods. Each workplan shall include a detailed discussion of project activities which will be undertaken during the coming period, with specific reference to required project inputs to be provided by CARE, the Government of Chad, A.I.D. and any other sources. The workplan shall also include a detailed calendar of activities, indicating the anticipated completion of specific activities by month.

3. Quarterly Progress Reports

The Recipient shall also submit quarterly progress reports to USAID/Chad and to the Government of Chad. The report should demonstrate that the progress being made is consistent with the project purposes and objectives. The narrative section of the report shall include a detailed discussion of the project activities which have been initiated, completed and are in progress during the period, with specific reference to the achievement of implementation targets presented in the project's Logical Framework and annual workplan. In addition, on-going or anticipated problems related to implementation shall be frankly discussed and resolutions to problems shall be proposed. Reports submitted by CARE field technicians, consultant's reports and any other special reports and studies which have been completed during the reporting period shall be attached to the quarterly progress report. The reports shall be submitted to USAID/Chad in English (three copies) within fifteen days after the end of the quarter, and to the Government of Chad in French within 30 days.

4. Evaluation Reports

(a) A formative (in-progress) evaluation of the project will be conducted by a team of two-three consultants after approximately 18 months of implementation. This team will include one member of CARE's Regional Technical Advisory Team; it is expected that USAID/Chad and the Government of Chad will also participate. The composition of the team, exact timing of the evaluation and external recruitment of the team members shall be agreed upon jointly by CARE, the Government of Chad and USAID/Chad.

The evaluation will focus on progress to date in achieving the project's goal, purposes and outputs. Project inputs provided by CARE, the Government of Chad and USAID/Chad will also be validated as being sufficient in quality and quantity to achieve project outputs. If there are deficiencies, in collaboration with the interested parties, the evaluation team will recommend remedial actions which can be undertaken within the remaining period of the project.

It is estimated that the evaluation will be completed over a period of 3-4 weeks, including site visits, interviews and preparation of the report which will be presented and discussed prior to the team's departure from Chad.

(b) A final evaluation of the project will be scheduled several months before the scheduled completion of the project. The approach for completing the final evaluation will be the same as that discussed above for the formative evaluation. The final evaluation will measure achievement of project goals and purposes. It will also assist the Recipient in deciding whether follow-on support in the project area is warranted, or whether expansion into other geographic areas is desirable.

The final evaluation will be conducted by a multi-disciplinary team, including an agronomist and a socio-anthropologist; it is expected that USAID/Chad and the Government of Chad will also participate.

In both the formative and final evaluations, special provision will be made for an assessment of the environmental impact of project interventions, particularly on soil and water salinity and groundwater levels.

5. Other Reports

The Recipient agrees to submit to USAID/Chad any other reports as may be reasonably requested. The Recipient also agrees to share with USAID/Chad any reports which have a bearing on the successful implementation of the project.

G. Indirect Cost Rate

Pursuant to Attachment E, Additional Standard Provisions: "Negotiated Indirect Cost Rates," a rate or rates shall be established for each of the Recipient's accounting periods during the term of this Agreement. Pending establishment of final indirect cost rates for the initial period, provisional payment on account of allowable indirect costs shall be made on the basis of the following negotiated predetermined rate applied to the bases which are set below.

Overhead

<u>Type</u>	<u>Period</u>	<u>Rate</u>
Predetermined	7-1-90 until 6-30-91	8.0%

Base of Application

Total direct costs less exchange fluctuations; less ocean freight; less non-cash donations including agricultural commodities, ocean freight and contributions in-kind, and less U.S. Government grants that due to legal restrictions do not permit indirect cost recovery.

If the overhead rate is later adjusted, the total estimated amount of \$1,149,742 remains in force unless this Cooperative Agreement is otherwise amended.

H. Title to Property

Standard provisions related to title and use of property are included in Attachment E, Additional Standard Provisions: "Title to and Use of Property (Grantee Title)" (November 1985).

I. Authorized Geographic Code for Procurement

The Recipient shall procure goods and services financed by this Agreement in accordance with Attachment E, Additional Standard Provisions: "Procurement of Goods and Services" (November 1985) and "AID Eligibility Rules for Goods and Services" (November 1985).

Commodities financed by A.I.D. under this Cooperative Agreement shall have their source and origin in the Cooperating Country or in countries included in A.I.D. Geographic Code 941. However, a special waiver granted in the DFA authorization allows for procurement of commodities from countries in A.I.D. Geographic Code 935. Insofar as the funding for this Cooperative Agreement will be drawn from the Development Fund for Africa (DFA) account, it will be incumbent upon CARE to establish a procurement plan which specifies the following information:

<u>item</u>			
<u>description</u>	<u>amount</u>	<u>source</u>	<u>account</u>

The procurement plan will be submitted with the annual workplan as indicated in Section F.2 above.

J. Statement of Substantial Involvement

1. USAID/Chad reserves authority to review nominations for the long-term position of Project Manager and the Pumps Technician which will be financed under this Cooperative Agreement and to collaborate with CARE on the final selection of the best qualified candidates. In addition, USAID/Chad requires that the Project Manager of the long-term technical assistance team be a U.S. Citizen.

2. In accordance with standing USAID/Chad policy, USAID/Chad's approval must be sought for all travel outside of N'Djamena.

3. In the event of an evacuation order from N'Djamena and/or outlying areas of the country which may be issued by the U.S. Embassy, the Recipient's evacuation plan will go into effect. The Recipient's evacuation plan shall be jointly reviewed with A.I.D. on an annual basis.

4. USAID/Chad will designate a Project Officer who will monitor implementation of the project and provide guidance and clarification to the Recipient concerning the terms and provisions of this Cooperative Agreement.

5. Accommodation exchange privileges will be offered to the Recipient as authorized by the Embassy.

6. Access to the diplomatic pouch for first-class personal mail will be offered to the Recipient as authorized by the Embassy.

7. Access to the services and facilities of the Embassy Health Unit will be offered to the Recipient to the extent authorized by the Embassy, provided that the Recipient has obtained medical clearance. It is strongly recommended that the Recipient obtain SOS medical insurance.

8. The Recipient is responsible for obtaining security clearance for all long-term and short-term expatriate personnel assigned to this project.

9. The Recipient is eligible for the privilege of membership with the American Recreation Association in accordance with procedures set forth in the American Recreation Association Bylaws. Such privilege includes use of certain Association facilities including the snack bar/restaurant, swimming pool, and video library. Use of any other Association facilities will require the specific approval of the Chief of Mission.

Attachment B

PROJECT DESCRIPTION

The Recipient shall perform the activities under this cooperative agreement as described in detail in the Recipient's proposal entitled "Kanem Pumps and Agricultural Marketing" (April 1990), which is hereby incorporated by reference as a part of this Agreement. To the extent of any inconsistency between the Recipient's proposal and the Covering Letter and Attachments A, B, D, and E of this agreement, the covering letter and attachments A, B, D, and E shall control.

A. THE PROBLEM AND ITS CAUSES

The sustainability of agro-pastoralism in the Kanem is threatened by the effects of extended drought and deforestation. Pastoralism is constrained by the limited carrying capacity of the rangelands. Cultivation of basic grains outside the wadis is highly vulnerable to unreliable rainfall.

In recent years, irrigated wadi agriculture has become an increasingly important component of farmers' survival strategies. It, too, is subject to serious constraints, however. Intensive vegetable gardening is vulnerable to diseases and pests, while some areas are affected by soil salinity and sand dune encroachment. Traditional land tenure systems sometimes limit access to wadi lands. Water-lifting and the marketing of surplus produce are among the most serious problems.

Farmers throughout the region consistently identify water-lifting as the main constraint to increasing the profitability of wadi agriculture. The traditional shadouf, a human-powered, counterbalance bucket and rope technique, has traditionally been used in the region to lift water from hand-dug open wells for irrigation. Although familiar to users and quite efficient at very shallow water depths, the maximum area that can be irrigated by working full-time with a shadouf is 0.12 ha. It also makes heavy demands on increasingly scarce wood resources: palms for the shadouf itself, and branches for lining wells. Maintenance costs have become particularly high in the Nokou area, where wells collapse frequently in sandy soils and wood products are even scarcer than in Cheddra.

Inefficient marketing practices and structures are a major constraint to increasing farmers' incomes, but have been largely neglected by development projects and agencies. The main constraint to the marketing of agricultural produce in the Kanem is inadequate transport infrastructure. Because of its

isolation, production from the Nokou area is consumed by the farmers or sold on local markets. Cheddra-area farmers sell most of their onions, tomatoes and melon for the N'Djamena market, 250 kms away. Traders provide a fair and competitive service to Cheddra-area producers; however, farmgate prices are necessarily suppressed due to the high transport costs and spoilage rates of up to 25% of tomatoes and melons due to inadequate packaging practices.

Marketing risks are further increased by uncertainty about market prices in N'Djamena, particularly for new crops and those subject to dramatic price fluctuations. Although farmgate prices for onions increase four or five times within three months of the main harvest, farmers' cash flow needs and lack of group organization often prevent them from storing a part of their crop for later resale.

B. PROJECT OBJECTIVES

1. Purpose

The purpose of this project is to promote a sustainable increase in incomes from wadi agriculture for 1,800 families of the Kanem.

The project will not attempt to compete with pastoral or rainfed agricultural activities, nor necessarily to enable more farmers to settle permanently in the wadis. Rather, to the extent that farmers turn to wadi agriculture, the project will seek ways to increase their net returns from that option. This implies efforts to decrease production costs and risks; increase the quality and quantity of production; and improve the producers' position within the market system.

2. Project Outputs

a) Improved water-lifting technology will be provided on a sustainable basis through the private sector to 1,800 Kanem farmers. Achievement of this output will be evidenced by the following:

- 500 Kanem farmers will purchase tubewell handpumps, at full cost;
- Tubewell handpumps will be repaired and maintained by users and local artisans, without project intervention or subsidy;

- All parts for the tubewell handpump will be supplied and manufactured through the private sector, without project intervention or subsidy;
- Private artisans and entrepreneurs will install at least 100 tubewell handpumps per year in the Kanem, without project intervention or subsidy.

b) Improved storage and packaging practices, combined with better market information, will increase the income generated from the sale of wadi produce of 1,000 Cheddra area farmers. Achievement of this output will be evidenced by the following:

- 50% of Cheddra farmers and traders will adopt packaging technologies that reduce transport losses of perishable produce by 20%;
- 300 farmers will store onions for later sale at 50% higher prices;
- 70% of Cheddra area farmers and traders will obtain accurate and timely information on N'Djamena market prices through a service operated by GOC agencies without CARE support.

C. PROJECT STRATEGY AND COMPONENTS

Previous CARE experience in the project zone suggests that little more can be done to improve upon the agricultural techniques and practices of a significant number of resource-poor Kanem farmers living in such a heterogenous and fragile environment. Water-lifting and marketing have been identified as the two interventions most likely to contribute to a sustained increase in wadi farmers' incomes.

1. Improved Water-lifting technology: The tubewell handpump has been chosen as an intermediate technology between the shadouf, at one extreme, and motorpumps at the other. Other technologies were tested under the previous CARE project without success. The cost of the tubewell handpump is within reach of a large number of farmers, yet it could make a significant impact on their production systems while posing little threat to the wadi environment. Sustainability considerations dictate that private sector mechanisms be chosen to assure dissemination and replication of the pump.

- a) Enterprise development

Traders, artisans, laborers and others interested in the tubewell handpump technology will be trained in all aspects

of its manufacture, operation and repair, as well as in the "hand sludger" method of tubewell installation. Procurement visits will be made to Cameroon and Nigeria to forge links between traders and suppliers of pvc materials.

Local artisans and merchants will be fully associated with the supply, manufacture, installation and maintenance of 500 pumps over three years (in addition to 100 installed during the previous CARE project). The role of project staff will rapidly develop to that of observers, on hand to provide technical assistance and advice as needed. Farmers trained by CARE and employed on a casual basis to install pumps under the previous project will be available to work for entrepreneurs and others wishing to install pumps.

If cash-flow proves to be a constraint, either to farmer-purchasers or to pump entrepreneurs, additional funding may be sought for a credit component in the second year. Credit to farmers would be short-term (up to one year) and designed to ensure widest possible access to the technology. Similarly, credit to suppliers or artisans would be designed to facilitate the development of private service capabilities. Loans would be managed through community-managed revolving funds in order to ensure their availability after the project.

b) Farmer training

- All farmers who purchase tubewell handpumps will be trained to ensure that repairs and maintenance can be carried out by the users themselves. Training sessions will be limited to one day in order not to disrupt the farmers' work. By the end of training, farmers will be capable of diagnosing the most frequent faults, dismantling the pump and replacing the piston cup. Field Assistants will help the Pumps Agent to conduct the training in local languages.
- Field Assistants will also carry out follow-up visits to provide any further assistance that may be necessary. These follow-up visits will also be critical to ensuring a lively, two-way flow of information concerning problems and potential solutions between technicians and users.

c) Technology adaptation

- The Project Pumps Technician will be responsible for refining design aspects of the tubewell handpump. Success will depend on achieving the broadest possible input from users, artisans, counterparts, staff, other development agencies and projects within Chad, and resource people from other countries.

Designs and prototypes of any alternative parts or features will be produced in close association with artisans from both N'Djamena and the Kanem. Close contact with Kanem farmers, through the Kanem field staff, will facilitate the highest possible degree of interchange between the technician and users. Innovation and technology adaptation by the users will be encouraged, studied and documented, rather than guided by the project staff.

d) Technology dissemination

The tubewell handpump will be disseminated through publication of a bilingual (French and English) technical manual, to be completed by October, 1990. The Chadian television service will be encouraged to make a brief documentary on the technology. Project staff may also present it at appropriate seminars in N'Djamena. Such minimal, low-cost efforts to facilitate replication of the technology will contribute to the achievement of project objectives in the Kanem by stimulating demand and supply of the requisite materials and services within Chad.

2. Marketing: Analysis of marketing structures and potential interventions suggests that, rather than attempt to bypass middlemen and market their own produce in N'Djamena by means of a producers' transport cooperative, Cheddra-area farmers should make better use of existing market channels through improved storage and packaging practices. Further hypotheses implicit in the project strategy are, a) that producers' sales revenues may be increased through access to adequate and timely price information, and b) that reduced transport losses will be passed on to producers through higher farmgate prices.

- a) Monitoring and analysis

Market price information from Nokou, Mao, Cheddra and N'Djamena will continue to be collected and analyzed. Data on a range of grains and vegetables will be collected every two weeks according to a standard form and maintained in a computerized database. This effort will be coordinated with those of other agencies (BIEP, ACDI, ONDR, ONC) in order to avoid duplication of effort and to share information. The data will be analyzed to identify trends and actual or emerging market opportunities, as well as contributing to an improved understanding of the complex interchange of factors that influence market prices.

Early in the project, current farm-level transformation, storage and packaging techniques will be documented. With the help of short-term technical assistance, project staff

will then evaluate opportunities for improving the techniques, and test alternatives together with farmers and traders.

b) Market information

Innovative methods of disseminating market price information at the major regional markets (Nokou, Mao, Cheddra, Mouzraki and others) will be explored. Methods will include establishment of market information stands and small group discussions. Information disseminated will include the prevailing prices for key grains and vegetables in N'Djamena and other markets, communicated at first via CARE's radio network. If the service is found to be useful to farmers and traders, alternative methods will be found to transmit the information, such as via the ONDR or Radio Rurale.

c) Group formation and capital accumulation

Building on the results of market studies and experience gained in CARE's previous marketing and storage activities in the Kanem, the project will provide technical assistance, training and short-term credit to farmers wishing to form small storage and marketing groups. Approximately three hundred farmers, organized in thirty small, self-formed groups, will be encouraged to build their capital by matching their savings with small loans (up to CFA 150,000). The loan element will be eliminated over one or two marketing cycles, by which time the groups will have stabilized their own capital, together with the confidence and group management skills to continue activities.

Technical assistance and training for these groups will focus on animation, organization and simple book-keeping, while developing farmers' skills relating to savings and credit.

d) Technology

Other opportunities to increase economic returns through transformation, storage and marketing activities will be explored. These will include alternative drying techniques for Spirulina algae; improved packaging for tomatoes and melons; and improved storage technologies for onions and potatoes.

Such efforts will be carried out in close collaboration with not only participant farmers, but also truckers, artisans and produce dealers. Prototypes of simple technologies will be designed, tested and evaluated by the users involved. Success of this activity will depend on combining a) a creative approach to user participation with b) good collaborative relationships with sources of technical assistance available among other projects and the private sector in Chad.

D. INPUTS TO BE FINANCED BY A.I.D. (\$1,149,743)

The following inputs will be financed by A.I.D. under this Cooperative Agreement. A detailed cost estimate with budget worksheets appears in Annex VI of CARE's Project Proposal (Attachment G).

1. Technical Assistance (\$368,658)

Long-term technical assistance costs are those for the Kanem-based Project Manager and the N'Djamena-based Pumps Technician (50%). Short-term technical assistance costs are those associated with the Tubewell Handpump Engineer, the Enterprise Development Specialist, Produce Packaging/Storage Specialists, and the mid-term and final evaluations. Job descriptions for long and short-term technical assistance appear in Annex VII of CARE'S Project Proposal (Attachment G).

2. Direct Project Support (\$458,408)

These costs are those which are directly associated with project operations in the field, including national staff and commodities. However, other activities being implemented in the same project zone require that only 70% of Kanem field support costs, including staff, rent, utilities and maintenance for the Nokou and Chedra facilities, be charged to this project. This percentage represents the proportion of Kanem staff and administrative functions attributable to the Kanem Pumps and Agricultural Marketing Project, which will be the focus of CARE's activities in the Kanem. Project staff, administrative supplies purchased for management of the pumps and marketing activities, and all vehicle expenses directly linked to these activities, are charged 100% to this project. A line item breakdown of direct project costs appears in Annex VI (page 5) of CARE'S Project Proposal.

3. Shared Project Support (\$232,604)

CARE allocates common N'Djamena costs among the different projects in the mission. These costs include those of procurement, transit, accounting, garage, personnel and general administrative functions as well as program support. Three expatriates are included under this heading (Country Director, Assistant Country Director and Program Coordinator) together with a total of 38 national staff. The allocation of these costs is determined by the number of projects, the relative size of their budgets, proximity to N'Djamena, and the type of activity. The 25% share attributed to the Kanem Pumps and Agricultural Marketing Project corresponds to the support given by CARE's N'Djamena office relative to its other projects.

4. Indirect Recovery (\$90,072)

The newly negotiated indirect cost recovery rate for CARE projects funded by A.I.D. is 8.0%.

E. INPUTS TO BE FINANCED BY CARE (\$269,280)

The following inputs will be financed by CARE under this Cooperative Agreement.

1. Direct Project Support (\$76,977)

CARE will cover a portion of the salaries (\$61,889), per diem costs (\$10,088) and will procure furniture/equipment (\$5,000) with its own funds.

2. Shared Project Support (\$192,303)

CARE will cover some of the costs (\$177,303) of its international personnel and will procure furniture/equipment (\$15,000) which will be shared with other projects.

F. IN-KIND CONTRIBUTIONS (\$195,286)

In addition to the above inputs, other contributions of non-USG origin will be provided. These contributions, most of which represent the Government of Chad's participation in the project, are listed on page 12 in Annex VI of the CARE proposal. The total value of these in-kind contributions is \$195,286.

The Government of Chad shall also furnish to CARE all such documents and assistance as may be needed to permit importation of materials, personnel and funds for its projects free of all taxes, duties, imposts and other like charges.

DESCRIPTION DE PROJET

La description de projet qui suit a été extraite de la proposition élaborée par CARE et intitulée "POMPES ET COMMERCIALISATION DES PRODUITS AGRICOLES AU KANEM" (Avril 1990). La proposition est intégrée par référence au présent Accord de Coopération (Annexe G).

A. LE PROBLEME ET SES CAUSES

La viabilité des activités agro-pastorales au Kanem se trouve menacée par les effets d'une sécheresse et d'un déboisement à grande échelle. L'élevage est entravé par une capacité limitée des zones de pâturage. La culture des céréales hors des ouadis est sujette aux aléas climatiques.

Au cours de ces dernières années, la culture irriguée dans les ouadis est devenue une composante de plus en plus importante des stratégies de survie adoptée par les paysans. Mais elle fait également l'objet de sérieuses contraintes. La culture maraîchère intensive est vulnérable aux maladies et aux parasites alors que certaines régions sont affectées par la salinité des sols et les dunes de sable. Les systèmes fonciers traditionnels limitent quelquefois l'accès aux terres dans les ouadis. Les moyens d'exhaure et la commercialisation de produits excédentaires font partie des problèmes les plus sérieux.

Les paysans dans la région identifient régulièrement l'exhaure comme étant la principale contrainte à une mise en valeur accrue des cultures de ouadis. Le chadouf traditionnel, un appareil à bascule servant à tirer l'eau d'un puits, a depuis toujours été utilisé dans la région pour tirer l'eau des puits à ciel ouvert creusés à la main pour l'irrigation. Bien qu'il soit bien connu des usagers et tout à fait efficace à de très faibles profondeurs, le chadouf peut irriguer au terme d'un travail à plein temps, une superficie maximale de 0,12 ha. Il fait également de plus en plus appel aux rares ressources en bois: le palmier pour le chadouf lui-même et les branches pour le cuvelage des puits. Les coûts d'entretien sont particulièrement élevés dans la région de Nokou où les puits s'effondrent fréquemment à cause des sols sableux et où les bois sont même plus rares qu'à Cheddra.

Des structures et pratiques commerciales inefficaces constituent une contrainte importante à l'augmentation des revenus des paysans; néanmoins, elles ont été en général délaissées par des organismes et des projets de développement. La principale contrainte qui entrave la commercialisation de produits agricoles dans le Kanem est l'insuffisance de l'infrastructure de transport. En raison de l'isolement géographique de la région de Nokou, sa production est consommée

par les paysans eux-mêmes ou bien écoulée sur les marchés locaux. Les paysans de la région de Cheddra vendent la plupart de leurs oignons, tomates et melons au marché de N'Djamena, distant de 250 kms. Les commerçants offrent un service juste et compétitif aux producteurs dans la région de Cheddra; cependant, les prix à la production sont nécessairement assez bas en raison des coûts de transport élevés et des pertes allant jusqu'à 25% pour les tomates et les melons, occasionnées par des pratiques d'emballage peu adéquates.

Les risques commerciaux sont d'autant plus importants en raison de l'incertitude concernant les prix sur le marché de N'Djamena, en particulier pour les nouveaux produits agricoles et ceux faisant l'objet de dramatiques fluctuations des prix. Bien que les prix offerts aux paysans pour les oignons augmentent quatre ou cinq fois pendant les trois mois après la récolte, les besoins financiers des paysans et l'absence d'organisation en groupements les empêchent de stocker une partie de leurs produits en vue d'une revente ultérieure.

B. OBJECTIFS DU PROJET

1. But du projet

Ce projet a pour but de mener des actions qui pourrout augmenter de manière pérenne des revenus provenant des cultures de ouadis pour 1.800 familles au Kanem.

Le projet ne cherche ni à se mettre en concurrence avec les activités pastorales ou avec des cultures pluviales, ni à attirer encore d'autres paysans à s'installer de manière permanente dans les ouadis. Le projet cherchera plutôt à trouver, dans la mesure où les paysans se tournent vers la culture de ouadis, les moyens d'accroître leur rendement net à partir de cette option. Ceci implique des efforts afin de réduire les coûts et risques de production; augmenter la qualité et la quantité de la production; et améliorer la situation des producteurs dans le circuit commercial.

2. Résultats escomptés du projet

a) 1.800 agriculteurs du Kanem bénéficieront de manière pérenne d'une technologie d'exhaure améliorée fournie par le biais du secteur privé. Ceci pourra se manifester par les réalisations suivantes:

- 500 paysans du Kanem achèteront des pompes manuelles;
- Des pompes manuelles seront réparées et entretenues par les usagers et artisans locaux, sans l'intervention ou la subvention du projet;

- Toutes les pièces de rechange pour les pompes manuelles seront fournies et fabriquées par des entreprises privées, sans l'intervention ou la subvention du projet;
- Les artisans et entrepreneurs privés installeront au moins 100 pompes manuelles par an dans le Kanem, sans l'intervention ou la subvention du projet;

b) Des pratiques de stockage et d'emballage améliorées, combinées à de meilleures informations sur les marchés, permettront d'accroître le revenu généré par la vente de produits cultivés dans les ouadis par 1.000 paysans dans la zone de Cheddra. Ceci sera mis en évidence par les réalisations suivantes:

- 50% des paysans et commerçants adopteront des technologies d'emballage qui réduisent de 20% les pertes pendant le transport des denrées périssables.
- 300 paysans stockeront les oignons pour vente ultérieure à des prix de 50% plus élevés;
- 70% des paysans et commerçants de Cheddra obtiendront des informations précises et opportunes sur les mercuriales à N'Djamena grâce à la prestation d'un service effectué par les agences publiques tchadiennes sans le soutien de CARE.

C. STRATEGIES ET ELEMENTS CONSTITUTIFS DU PROJET

L'expérience acquise par CARE dans la zone du projet suggère que l'on peut faire un peu plus pour améliorer les techniques et pratiques culturales utilisées par nombre de paysans du Kanem dépourvus de ressources dans cet environnement hétérogène et fragile. L'exhaure et la commercialisation ont été identifiées comme étant les deux interventions qui ont le plus de chance de contribuer à une augmentation durable des revenus des paysans exploitant les ouadis.

1. Une technologie d'exhaure améliorée: La pompe manuelle a été choisie comme technologie intermédiaire entre le chadouf à un extrême et les motopompes à l'autre. D'autres technologies ont été également essayées dans le cadre du précédent projet de CARE sans atteindre les résultats escomptés. Le coût de la pompe manuelle est à la portée des bourses d'un grand nombre de paysans, néanmoins elle pourrait avoir un impact important sur leurs modes de production tout en constituant une moindre menace pour l'environnement dans les ouadis. Les considérations sur la viabilité des interventions exigent que des mécanismes privés soient choisis pour assurer une vulgarisation et une fabrication soutenue de la pompe.

a) Développement des entreprises

Les commerçants, artisans, ouvriers et d'autres personnes intéressés par les pompes manuelles d'exhaure seront formés dans tous les aspects de leur fabrication, fonctionnement et réparation ainsi que dans la méthode "hand siudger" de forage de puits. Des visites au Cameroun et au Nigéria seront organisées pour faire des achats et établir des liens avec des commerçants et fournisseurs de matériaux en PVC.

Les artisans et commerçants locaux seront pleinement associés à la fourniture, la fabrication, l'installation et l'entretien de 500 pompes pendant une période de trois ans (en plus des 100 pompes installées au cours du précédent projet CARE). Le rôle du personnel du projet deviendra rapidement celui d'observation, pour apporter l'assistance technique et les conseils nécessaires. Les paysans qui seront formés et employés par CARE à titre journalier pour installer les pompes dans le cadre du précédent projet seront disponibles à travailler pour des entrepreneurs et autres désireux d'installer les pompes.

Si le flux de liquidité s'avère être une contrainte, soit pour les paysans acheteurs soit pour les entreprises chargées d'installer des pompes, on pourra rechercher d'autres fonds pour constituer une composante crédit dans le cadre de ce projet au cours de la seconde année. Le crédit à octroyer aux paysans doit être fourni à court terme (jusqu'à un an) et conçu pour assurer l'accès le plus large possible à la technologie. De la même façon, le crédit aux fournisseurs ou aux artisans serait conçu pour faciliter le développement des structures privées pour la prestation de services. Les prêts seraient donnés en forme d'un fonds de roulement géré par la communauté afin d'assurer qu'il soit disponible après la fin du projet.

b) Formation des agriculteurs

Tous les agriculteurs qui achètent des motopompes seront formés pour assurer la réparation et l'entretien par les usagers eux-mêmes. Les cours de formation se limiteront à une journée afin de ne pas interrompre les travaux des paysans. A la fin de cette formation, les paysans seront à même de diagnostiquer les pannes les plus fréquentes, de démonter la pompe et de remplacer le piston. Les assistants nationaux prêteront main forte à l'expert en pompes en utilisant les langues locales pour assurer la formation.

Quatre assistants nationaux effectueront également des visites de suivi sur le terrain pour apporter l'assistance complémentaire si le besoin se fait ressentir. Ces visites de suivi seront aussi essentielles pour assurer un échange animé entre techniciens et usagers d'informations relatives aux problèmes et aux solutions potentielles.

c) Adaptation de la technologie

Le technicien du Projet pour les pompes sera chargé de mettre au point les aspects techniques de la pompe manuelle. La réussite de cet effort dépendra de la participation et les contributions par le plus grand nombre possible d'usagers, d'artisans, d'homologues, de personnel et d'autres agences et projets de développement ayant des projets au Tchad, ainsi que des experts qui travaillent dans d'autres pays.

Les modèles et prototypes des pièces de substitution ou des composantes de la pompe seront fabriqués en étroite collaboration avec les artisans de N'Djaména et du Kanem. Un contact étroit avec les agriculteurs du Kanem, par l'entremise du personnel local originaire du Kanem, facilitera la meilleure échange des idées entre le technicien et les usagers. L'innovation et l'adaptation de technologie par les usagers seront encouragées, étudiées et notées plutôt que guidées par le personnel du projet.

d) Vulgarisation de technologie

La pompe manuelle sera vulgarisée grâce à la publication d'un manuel technique (en français et anglais) à réaliser avant le mois d'octobre 1990. La télévision tchadienne sera encouragée à faire un bref documentaire sur ladite technologie. Le personnel du projet pourrait également la présenter dans des séminaires appropriés tenus à N'Djaména. Ces efforts moindres et de faible coût destinés à faciliter la reproduction de la technologie contribueront à la réalisation des objectifs du projet dans le Kanem en stimulant la demande et l'offre de matériels et services nécessaires au Tchad.

2. Commercialisation: L'analyse des structures commerciales et des éventuelles interventions suggère que, plutôt que d'essayer de contourner des intermédiaires en cherchant à commercialiser leurs produits à N'Djaména par le biais d'une coopérative de transport créée par les producteurs, les agriculteurs de la région de Cheddra devraient faire un meilleur usage des circuits commerciaux existants en s'appuyant sur des pratiques de stockage et d'emballage améliorées. Les

autres hypothèses implicites relevant de la stratégie du projet sont: a) le revenu du paysan peut être augmenté si les informations précises et opportunes sur les prix du marché lui parviennent régulièrement, et b) une réduction en pertes dues au transport se traduira en des prix à la production plus élevés que bénéficiera le paysan.

a) Suivi et analyse

Les informations sur les prix du marché pratiqués à Nokou, Mao, Cheddra et N'Djaména continueront à être collectées et analysées. Des données sur une série de céréales et légumes seront recueillies toutes les deux semaines selon une formule standard et seront maintenues dans une base de données informatisées. Cet effort sera coordonné avec ceux des autres organismes (BIEP, ACDI, ONDR, ONC) afin d'éviter une duplication d'effort et pour partager les informations. Les données seront analysées pour identifier les tendances et les possibilités commerciales réelles et potentielles, ainsi que pour contribuer à une meilleure compréhension de la mise en jeu complexe des éléments qui influencent les prix sur le marché.

Au début du projet, les techniques de transformation, de stockage et d'emballage qui sont pratiquées actuellement par le paysan seront notées et enregistrées. Ensuite, le personnel du projet évaluera, avec l'aide de l'assistance technique à court terme, la possibilité d'amélioration des techniques et essaiera les alternatives avec les commerçants et les paysans.

b) Informations sur les marchés

Les méthodes innovatrices pour diffuser des informations sur les mercariales dans les grands marchés régionaux (Nokou, Mao, Cheddra, Mouzraki et autres) seront étudiées. Ces méthodes porteront sur la mise en place des stands aux marchés et l'organisation des discussions en petites groupes. Compris dans les informations ainsi disséminées seront les prix en vigueur pour les céréales de base et légumes principales à N'Djaména et sur les autres marchés, communiquées préalablement par le réseau radio de CARE. S'il s'avère que le service est d'une certaine utilité pour les agriculteurs et les commerçants, d'autres méthodes de substitution seront trouvées pour transmettre les informations, par exemple via l'ONDR ou la Radio Rurale.

c) Formation de groupements et accumulation de capitaux

Sur la base des résultats obtenus à partir des études et expériences commerciales faisant partie des activités

menées par CARE en matière de stockage et commercialisation au Kanem, le projet offrira une assistance technique, une formation et un crédit à court terme aux paysans désireux de former de petits groupements pour assurer le stockage et la commercialisation de produits agricoles. Environ trois cents paysans organisés en une trentaine de petits groupements autonomes, seront encouragés à constituer leur capital en ajoutant une partie de leurs épargnes aux crédits fournis (jusqu'à 150.000 FCFA). L'élément prêt sera éliminé au cours d'un ou de deux cycles commerciaux pendant lesquels les groupements auront stabilisé leur propre capital, en même temps que la confiance et les compétences des groupements en matière de gestion seront consolidées, leur permettant ainsi de poursuivre les activités déjà entamées.

L'assistance technique et la formation en faveur de ces groupes seront axées sur l'animation, l'organisation et la comptabilité simple tout en développant les compétences des paysans concernant les épargnes et le crédit.

d) Technologie

D'autres possibilités d'augmenter les rendements économiques par les activités de transformation, de stockage et de commercialisation seront étudiées. Il s'agira entre autres des techniques alternatives pour le séchage de la Spiruline; un meilleur emballage pour les tomates et les melons; et de meilleures technologies de stockage d'oignons et de pomme de terre.

Ces efforts seront déployés en collaboration étroite avec non seulement les paysans participants au projet, mais également avec les transporteurs, les artisans et ceux qui commercialisent les produits agricoles. Des prototypes de technologies simples seront élaborés, testés et évalués par les usagers concernés. La réussite de cette activité dépendra de l'association a) d'une approche créatrice de participation des usagers avec b) de bons rapports de collaboration avec les sources d'assistance technique disponibles parmi les autres projets et secteur privé au Tchad.

D. INTRANTS DEVANT ETRE FINANCES PAR L'AID (\$1.149,743)

Les intrants ci-après seront financés par l'AID au titre du présent Accord de Coopération. Une estimation détaillée des coûts ainsi que le budget prévisionnel figurent en Annexe VI de la proposition élaborée par CARE (Annexe G)

1. Assistance Technique (\$368.658)

Les coûts de l'assistance technique à long terme sont ceux du directeur du projet basé au Kanem et ceux du technicien pour les pompes basé à N'Djaména (50%). Les coûts de l'assistance technique à court terme sont ceux de l'ingénieur des pompes manuelles, des experts en emballage/stockage de produits et ceux des évaluations intérimaires et définitives. La description des tâches pour l'assistance à long et court terme sont présentés en Annexe VII de la Proposition de Projet faite par CARE (Annexe G).

2. Charges directes du Projet (\$458.408)

Ces coûts sont ceux directement liés aux opérations du projet sur le terrain, y compris le personnel national et le matériel. Cependant, l'existence d'autres activités en cours d'exécution dans la zone du même projet fait que seulement 70% des coûts occasionnés par le personnel, le loyer, l'eau et l'électricité, et l'entretien des infrastructures à Nokou et Cheddra soient imputés à ce projet. Ce taux représente la proportion du personnel affecté au projet du Kanem et des coûts administratifs imputables au Projet Pompes et Commercialisation des Produits Agricoles au Kanem, lequel sera le point de mire des activités de CARE au Kanem. Sont imputées à 100% au présent projet toutes les dépenses directement liées à la gestion des activités portant sur les pompes et commercialisation des produits, y compris le personnel du projet, les fournitures administratives et les frais encourus pour l'opération des véhicules. Une répartition par rubrique des coûts directs du projet figure en Annexe VI (page 5) de la Proposition de Projet faite par CARE.

3. Charges Communes au Projet (\$232.604)

CARE partage les frais généraux d'administration engendrés par son bureau à N'Djaména aux différents projets de la Mission. Ces coûts comprennent ceux relatifs à l'acquisition, au transit, à la comptabilité, au garage, au personnel et aux fonctions administratives générales ainsi qu'au soutien des programmes. Trois cadres expatriés font partie de la Direction (le Directeur National, le Directeur National Adjoint et le Coordonnateur des Programmes) appuyés par un personnel local composé de 38 agents. L'affectation de ces coûts est déterminée par le nombre des projets, l'importance relative de leurs budgets, la proximité de N'Djaména et le type d'activité entreprise. Les 25% des coûts imputés au Projet de Pompes et Commercialisation des Produits Agricoles au Kanem correspondent au soutien accordé par le bureau de CARE à N'Djaména par rapport aux autres projets.

4. Recouvrement des coûts indirects (\$90.072)

Le taux de recouvrement des coûts indirects récemment négocié par les projets de CARE financés par l'USAID est de 8,5%.

E. INTRANTS DEVANT ÊTRE FINANCES PAR CARE (\$269.280)

Les intrants ci-après seront financés par CARE au titre du présent Accord de Coopération.

1. Charges directes du Projet (\$76.977)

CARE couvrira une partie des salaires (\$61.389), les frais de per diem (\$10.088) et se procurera du mobilier et des équipements (\$5.000) utilisant ses propres fonds.

2. Charges communes du projet (\$192.303)

CARE couvrira certains des coûts (\$177.303) de son personnel international et se procurera du mobilier et des équipements (\$15.000) dont l'utilisation sera partagée par d'autres projets.

F. INTRANTS EN NATURE (\$195.286)

En plus des intrants ci-dessus indiqués, d'autres contributions d'origine non-américaine seront fournies. Ces contributions, dont la plupart proviennent de la contrepartie du gouvernement, sont énumérées à la page 12 dans l'Annexe VI de la Proposition du Projet CARE.

Le Gouvernement de la République du Tchad mettra aussi à la disposition de CARE tous les documents et toute l'assistance nécessaires pour permettre les importations des matériels, personnel et fonds pour ses projets, exonérés de toutes taxes, droits à l'importation et autres charges similaires.

ATTACHMENTS D & E

STANDARD PROVISIONS

The Standard Provisions set forth as Attachment 3 of this grant consist of the following Standard Provisions marked by an "X", which are attached hereto and made a part of this grant:

1. MANDATORY STANDARD PROVISIONS FOR U.S., NONGOVERNMENTAL GRANTEEES

- (X) Allowable Costs and Audit (November 1985)
- (X) Accounting, Audit, and Records (January 1988)
- (X) Refunds (January 1988)
- (X) Revision of Cooperative Agreement Budget (November 1985)
- (X) Termination and Suspension (May 1986)
- (X) Disputes (March 1987)
- (X) Ineligible Countries (May 1986)
- (X) Nondiscrimination (May 1986)
- (X) U.S. Officials Not to Benefit (November 1985)
- (X) Nonliability (November 1985)
- (X) Amendment (November 1985)
- (X) Notices (November 1985)

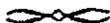
2. OPTIONAL STANDARD PROVISIONS FOR U.S., NONGOVERNMENTAL GRANTEEES

- (X) Payment - Letter of Credit (November 1985)
- () Payment - Periodic Advance (January 1988)
- () Payment - Cost Reimbursement (November 1985)
- (X) Air Travel and Transportation (November 1985)
- (X) Ocean Shipment of Goods (May 1986)
- (X) Procurement of Goods and Services (November 1985)
- (X) A.I.D. Eligibility Rules for Goods and Services (November 1985)
- () Subagreements (November 1985)
- (X) Local Cost Financing (May 1986)
- () Patent Rights (November 1985)
- (X) Publications (November 1985)
- (X) Negotiated Indirect Cost Rates - Predetermined (May 1986)
- (X) Negotiated Indirect Cost Rates - Provisional (May 1986)
- (X) Regulations Governing Employees (November 1985)
- () Participant Training (May 1986)
- () Voluntary Population Planning (August 1986)
- (X) Protection of the Individual as a Research Subject (November 1985)
- () Care of Laboratory Animals (November 1985)
- () Government Furnished Excess Personal Property (November 1985)
- (X) Title To and Use of Property (Grantee Title) (November 1985)
- () Title To and Care of Property (U.S. Government Title) (November 1985)
- (X) Title To and Care of Property (Cooperating Country Title) (November 1985)
- (X) Cost Sharing (Matching) (November 1985)
- (X) Use of Pouch Facilities (November 1985)
- (X) Conversion of United States Dollars to Local Currency (November 1985)



UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT

Yaounde



CARE
NEW COOP
AGREEMENT

UNITED STATES ADDRESS :
YAOUNDE (A I D)
DEPARTMENT OF STATE
WASHINGTON, D. C. 20520

INTERNATIONAL ADDRESS
USAID
E. P. 817
YAOUNDE, CAMEROON
Tel : 23-05-81
22-02-69

November 7, 1990

Tom Friedeberg
Country Director
CARE/Chad
B.P. 106
N'Djamena, Chad

Reference: Cooperative Agreement No. 677-0051-A-00-0004-00

Dear Mr. Friedeberg:

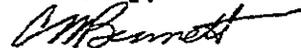
Pursuant to the authority contained in the Foreign Assistance Act of 1961, as amended, the Agency for International Development (hereinafter referred to as "A.I.D.") hereby grants CARE International in Chad (hereinafter referred to as "CARE" or "Recipient") the sum of \$811,365 to implement the Kim Area Agricultural Marketing Project in collaboration with the Government of Chad as fully described in Attachment A, entitled "Schedule," and Attachment B, entitled "Project Description."

This Cooperative Agreement is effective May 1, 1990 and obligation in the amount of \$270,677 is made as of the date of this letter, and shall apply to commitments made by the Recipient in furtherance of project objectives for a period of approximately twelve months starting May 1, 1990. Additional funds may be committed by A.I.D. during the period of this Agreement, subject to the availability of funds, up to the total amount of \$811,365. The detailed cost estimate which appears in Annex IV of the CARE Project Proposal will be used for the purpose of tracking expenditures.

This Cooperative Agreement is made to CARE on condition that the funds will be administered in accordance with the terms and conditions as set forth in Attachment A entitled "Schedule," Attachment B entitled "Project Description," Attachment D entitled "Mandatory Standard Provisions for U.S. Nongovernmental Grantees," and Attachment E entitled "Additional Standard Provisions for U.S. Nongovernmental Grantees," which have been agreed to by your organization.

Please sign the original and seven (7) copies of this letter to acknowledge acceptance of the Cooperative Agreement, and return the original and six (6) copies to the A.I.D. Regional Contracts Officer indicated below.

Sincerely,



Carlton M. Bennett
Agreement Officer
Regional Contracting Office
USAID/Cameroon

Attachments:

- A: Schedule
- B: Project Description
- C: Unofficial French Translation
- D: Mandatory Standard Provisions for U.S. Nongovernmental Grantees
- E: Additional Standard Provisions for U.S. Nongovernmental Grantees

ACKNOWLEDGED:

CARE International in Chad

By : T.M. Ludbey
Title : Director
Date : 11/7/90

FISCAL DATA

Appropriation	: 72-1181014 & 72-1191014
Budget Plan Code	: GSSA-88-21677-KG13 & GSSA-89-21677-KG13
PIO/T No.	: 677-0051-3-80025
Project No.	: 677-0051
Total Estimated Amount	: \$811,365
Total Obligated Amount	: \$270,677
IRS Employer Identification No:	13-1685039
FRLC No.	: 72001483
Funding Source	: USAID/Chad
Technical Office	: USAID/Chad

Attachment A

SCHEDULE

A. Purpose of Agreement

The purpose of this Cooperative Agreement is to provide support for CARE's implementation of the Kim Area Agricultural Marketing Project in collaboration with the Government of Chad, as more specifically described in Attachment B of this Agreement entitled, "Project Description." The project will be implemented as a sub-project funded under the USAID/Chad PVO Development Initiatives project (677-0051).

B. Period of Agreement

1. The effective date of this Cooperative Agreement is May 1, 1990. The estimated completion date is April 30, 1993.
2. Funds obligated hereunder are available for estimated project expenditures, as indicated in the Financial Plan, for the 12-month period beginning May 1, 1990 and continuing until April 30, 1992.

C. Amount of Agreement

1. The total estimated amount of this Cooperative Agreement for the period indicated in Section B.1 above is \$811,365.
2. A.I.D. hereby obligates the amount of \$270,677 for project-expenditures during the period set forth in Section B.2 above and as indicated in the Financial Plan.
3. Additional funds up to the total amount of this Agreement shown in Section C. 1 above may be committed by A.I.D. during the period of the Agreement, subject to the availability of funds and to the requirements of the Standard Provision of this Agreement entitled "Revision of Grant Budget."

D. Financial Plan

1. The following table presents the financial plan for this Agreement. The total A.I.D.- funded expenditures shall not exceed the total amount of funds obligated under this Agreement. Revision to this plan shall be made in accordance with the Standard Provision of this Cooperative Agreement entitled, "Revision of Agreement Budget".

FINANCIAL PLAN
KIM PROJECT

<u>BUDGET LINE ITEM:</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Total</u>
Technical Assistance	\$ 77,639	\$ 80,734	\$ 83,679	\$242,052
Local Project Support	\$116,836	\$115,478	95,001	327,315
Shared Project Support	\$110,670	\$113,221	118,680	342,571
Indirect Cost Recovery	\$ 21,205	\$ 21,796	20,582	63,563
TOTAL	\$326,350	\$331,229	317,922	\$975,502
USAID Contribution	\$270,677	\$278,222	\$262,465	\$811,365
CARE Cash Contribution	\$ 55,673	\$ 53,007	\$ 55,457	\$154,137
CARE In-Kind Contribution				\$109,595

This project is to be incrementally funded over 36 months.

2. Cost Sharing/Matching Contribution

Definition: Cost sharing/matching is a required contribution by the grantee from non-Federal sources toward the total cost of the program, either in cash or in-kind, usually described as a percentage of total costs.

The determination as to the requirement for a level of cost sharing/matching is the responsibility of the cognizant program officer. All grants designated by the program office as matching or cost sharing grants will contain the Standard Provisions entitled "Cost Sharing/Matching". The Grantee's contribution shall be at least 25% of the total cost of the program.

Criteria and procedures for the allowability of cash and in-kind contributions made by grantees to satisfy cost sharing/matching requirements are set forth in paragraph 1K, "Cost Sharing and Matching," of A.I.D. Handbook 13 and "Optional Standard Provisions," entitled "Cost Sharing/Matching". Except for these requirements, no other requirements set forth in the standard provisions are applicable to costs incurred by the grantee from non-Federal funds.

Cost sharing/matching percentages will be applied to the total cost of the grant program. Cost principles applicable to grants prohibit the accomplishment of cost sharing/matching through arbitrary limitations on individual cost elements. This is particularly important in the area of indirect costs (overhead). When a negotiated overhead rate agreement is in effect between A.I.D. or another cognizant agency and a grantee organization, the negotiated rate will be applied to the agreed upon direct costs to determine the total cost of the program, and the cost sharing/matching percentage will be applied to the total cost.

Unless otherwise specified in the schedule of the grant, verification that the cost sharing/matching requirement has been met will be made at the end of each funding period or on an annual basis as determined by the cognizant program office. Verification is based on expenditures. Individual expenditures do not have to be shared or matched provided that the total expenditures incurred during the designated funding period or year are shared or matched.

The grantee must account for the A.I.D. funds in accordance with the standard provisions entitled "Accounting, Audit and Records". However, in the event of disallowances of expenditures from A.I.D. grant funds, the Grantee may substitute expenditures made with funds provided from non-Federal sources, provided they are otherwise eligible in accordance with the Mandatory Standard Provisions clause entitled Cost Sharing/Matching.

E. Method of Payment

Payment shall be made to the Recipient in accordance with the procedures set forth in Attachment F, Additional Standard Provisions: "Payment - Letter of Credit" (November 1985).

F. Reporting

1. Financial Reporting

Financial reporting shall be made in accordance with the requirements discussed in Attachment F, Additional Standard Provisions: "Payment - Letter of Credit" (November 1985).

In addition, since Letter of Credit reports are not generally received by USAID/Chad in a timely fashion, the Recipient shall submit a certified quarterly financial report to the USAID/Chad Project Officer. Information submitted on this report must be

presented by Cooperative Agreement line item in the following format:

<u>Project Budget</u>	<u>Expenditure This Period</u>	<u>Previous Expenditure</u>	<u>Total Expenditure To Date</u>
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All project expenses incurred both in and outside Chad, including home office expenses, must be reported. Home office expenses will furthermore specify the name, title, amount and type of personnel services provided.

The quarterly financial report must be submitted within thirty (30) days of the close of each quarter.

2. Annual Workplans

Within ninety days after the arrival of the Recipient's designated Chief of Party, the Recipient shall submit for the approval of USAID/Chad and the GOC a complete workplan for the first year of project implementation. A workplan for the second year and third years of project implementation shall be submitted no later than eight weeks in advance of the beginning of those periods. Each workplan shall include a detailed discussion of project activities which will be undertaken during the coming period, with specific reference to required project inputs to be provided by CARE, the Government of Chad, A.I.D. and any other sources. The workplan shall also include a detailed calendar of activities, indicating the anticipated completion of specific activities by month.

3. Quarterly Progress Reports

The Recipient shall also submit quarterly progress reports to USAID/Chad and to the Government of Chad. The report should demonstrate that the progress being made is consistent with the project purposes and objectives. The narrative section of the report shall include a detailed discussion of the project activities which have been initiated, completed and are in progress during the period, with specific reference to the achievement of implementation targets presented in the project's Logical Framework and annual workplan. In addition, on-going or anticipated problems related to implementation shall be frankly discussed and resolutions to problems shall be proposed. Reports submitted by CARE field technicians, consultant's reports and any other special reports and studies which have been completed during the reporting period shall be attached to the quarterly progress report. The reports shall be submitted to USAID/Chad in English (three copies) within fifteen days after the end of the quarter, and to the Government of Chad in French within 30 days.

4. Evaluation Reports

(a) A formative (in-progress) evaluation of the project will be conducted by a team of two consultants after approximately 18 months of implementation. The evaluation team will be composed of two consultants to be provided by CARE. It is expected that both USAID/Chad and the Government of Chad will participate on the evaluation. The composition of the team, exact timing of the evaluation and external recruitment of the team members shall be agreed upon jointly by CARE, the Government of Chad and USAID/Chad.

The evaluation will focus on progress to date in achieving the project's goal, purposes and outputs. Project inputs provided by CARE, the Government of Chad and USAID/Chad will also be validated as being sufficient in quality and quantity to achieve project outputs. If there are deficiencies, in collaboration with the interested parties, the evaluation team will recommend remedial actions which can be undertaken within the remaining period of the project.

It is estimated that the evaluation will be completed over a period of 3-4 weeks, including site visits, interviews and preparation of the report which will be presented and discussed prior to the team's departure from Chad.

(b) A final evaluation of the project will be scheduled several months before the scheduled completion of the project. The approach for completing the final evaluation will be the same as that discussed above for the formative evaluation. The final evaluation will measure achievement of project goals and purposes. It will also assist the Recipient in deciding whether follow-on support in the project area is warranted, or whether expansion into other geographic areas is desirable.

5. Other Reports

The Recipient agrees to submit to USAID/Chad any other reports as may be reasonably requested. The Recipient also agrees to share with USAID/Chad any reports which have a bearing on the successful implementation of the project.

G. Indirect Cost Rate

Pursuant to Attachment F, Additional Standard Provisions: "Negotiated Indirect Cost Rates," a rate or rates shall be established for each of the Recipient's accounting periods during the term of this Agreement. Pending establishment of final indirect cost rates for the initial period, provisional payment on account of allowable indirect costs shall be made on the basis of the following negotiated provisional rate applied to the bases which are set below.

Overhead

<u>Type</u>	<u>Rate</u>	<u>Period</u>
Predetermined	8.0%	7/1/90 until 6/30/91

If the overhead rate is later adjusted, the total estimated amount of \$811,365 remains in force unless this Cooperative Agreement is otherwise amended.

H. Title to Property

Standard provisions related to title and use of property are included in Attachment F, Additional Standard Provisions: "Title to and Use of Property (Grantee Title)" (November 1985).

I. Authorized Geographic Code for Procurement

The Recipient shall procure goods and services financed by this Agreement in accordance with Attachment E, Additional Standard Provisions: "Procurement of Goods and Services" (November 1985) and "AID Eligibility Rules for Goods and Services" (November 1985).

Commodities financed by A.I.D. under this Cooperative Agreement shall have their source and origin in the Cooperating Country or in countries included in A.I.D. Geographic Code 941. However, a special waiver granted in the DFA authorization allows for procurement of commodities from countries in A.I.D. Geographic Code 935. Insofar as the funding for this Cooperative Agreement will be drawn from the Development Fund for Africa (DFA) account, as indicated on page 4 of the PIO/T, it will be incumbent upon CARE to establish a procurement plan which specifies the following information:

<u>item</u>			
<u>description</u>	<u>amount</u>	<u>source</u>	<u>account</u>

The procurement plan will be submitted with the annual workplan as indicated in Section F.2 above.

J. Special Provisions

1. USAID/Chad reserves authority to review nominations for the long-term position of Project Manager which will be financed under this Cooperative Agreement and to collaborate with CARE on the final selection of the best qualified candidate. In addition, USAID/Chad requires that the Project Manager of the technical assistance team be a U.S. Citizen.

2. In accordance with standing USAID/Chad policy, USAID/Chad's approval must be sought for all travel outside of N'Djamena.

3. In the event of an evacuation order from N'Djamena and/or outlying areas of the country which may be issued by the U.S. Embassy, the Recipient's evacuation plan will go into effect. The Recipient's evacuation plan shall be jointly reviewed with A.I.D. on an annual basis.

4. USAID/Chad will designate a Project Officer who will monitor implementation of the project and provide guidance and clarification to the Recipient concerning the terms and provisions of this Cooperative Agreement.

5. Accommodation exchange privileges will be offered to the Recipient as authorized by the Embassy.

6. Access to the diplomatic pouch for first-class personal mail will be offered to the Recipient as authorized by the Embassy.

7. Access to the services and facilities of the Embassy Health Unit will be offered to the Recipient to the extent authorized by the Embassy, provided that the Recipient has obtained medical clearance. It is strongly recommended that the Recipient obtain SOS medical insurance.

8. The Recipient is responsible for obtaining security clearance for all long-term and short-term expatriate personnel assigned to this project.

9. The Recipient is eligible for the privilege of membership with the American Recreation Association in accordance with procedures set forth in the American Recreation Association Bylaws. Such privilege includes use of certain Association facilities including the snack bar/restaurant, swimming pool, and video library. Use of any other Association facilities will require the specific approval of the Chief of Mission.

Attachment B

PROJECT DESCRIPTION

The Recipient shall perform the activities under this Cooperative Agreement as described in detail in the Recipient's proposal entitled "Kim Area Agricultural Marketing" (April 1990), which is hereby incorporated by reference as a part of this Agreement. To the extent of any inconsistency between the Recipient's proposal and the Covering Letter and attachments A, B, D, and E of this Agreement, the Covering Letter and attachments A, B, D, and E shall control.

A. THE PROBLEM AND ITS CAUSES

The development of irrigated agriculture in Chad has been hindered by generally poor economic returns and a lack of effective irrigation management models. Both of these constraints can be addressed through the flexibility provided by small-scale irrigated perimeters managed by autonomous user groups.

While significant progress has been made over the last three years in the proposed project zone, the five perimeter groups in the Kim area, which are the focus of this project, remain weak in internal organization, financial management and marketing. Each committee of farmers' representatives has to market up to 5 tons of paddy each year in order to reestablish stocks of fertilizer and fuel, pay salaries, cover depreciation, etc. They have to project prices, evaluate and choose among at least seven different marketing options, and time the sales so as to maintain a cash-flow profile sufficient to cover start-up of the following production season. This is a complex planning process for which the committees require further training and more accurate information. Although transport represents a major constraint to marketing, options are also limited by the absence of rice-hulling facilities within the project villages.

Marketing is also a major constraint to increasing producers' economic security from taro. Women, who are responsible for all aspects of taro production and marketing, often travel as far afield as Moundou, Sarh and N'Djamena to sell their produce. The logistical complexities involved are compounded by inadequate information on market prices.

There remains a need to diversify the agricultural base of the Kim area, particularly as the long-term viability of taro as a major cash crop may be threatened by its effects on soil fertility. Pilot activities have demonstrated the potential for dry season vegetable gardening. Continued expansion of this activity is likely to be constrained, however, by eventual saturation of local markets.

B. PROJECT OBJECTIVES

1. Purpose

The purpose of this project is to increase substantially the economic security of 600 households in the Kim area.

The notion of improved economic security is chosen to include both increased income and greater diversity or security of income. Interventions are targetted towards the marketing of rice, the staple food grain, taro, currently the major cash crop, and vegetables, which have potential for diversifying cash income.

The Kim area is defined as including the villages of Kim, Koyom, Djouman, Kolobo, Mouroup and Ere. In addition to approximately 450 members of the rice irrigation groups, the target population includes an estimated 150 families who will participate in vegetable and taro marketing activities but are not members of the irrigation groups.

2. Project Outputs

a) Improved strategies for marketing the produce of group-managed irrigated agricultural operations will be regularly implemented by 600 farmers in 5 villages of the Kim area. Achievement of this output will be evidenced by the following indicators:

- All 5 perimeter groups will continue to cover operating and capital costs and achieve a 20% increase in the average net sale value of in-kind user fees by 1993;
- 30 members of 5 group management committees will be trained in marketing;
- Kim area irrigation management groups will improve marketing and value added of rice through access to a local private, self-financed and sustainable rice hulling facility by 1993;
- A market information system will be established providing Kim farmers with accurate price data from 4 major markets by 1993. Group management will have access to market information necessary to evaluate and compare at least four rice marketing options.

b) More effective strategies for the marketing of agricultural products will be regularly implemented by 300 women, organized in groups throughout 5 project villages. Achievement of this output will be evidenced by the following indicators:

- 200 women in the villages will market surplus produce from dry-season vegetable gardening in area villages and beyond, by 1993.
- 300 women will participate annually in taro marketing operations promoted by the project by 1993;
- 75% of participant women will increase income from sales of taro and vegetables by at least 30%.

C. PROJECT STRATEGY AND COMPONENTS

The proposed project strategy and mix of project components derive from the basic assumption that the economic security of the target population can best be increased by efforts to address problems in the marketing of their agricultural produce. Production constraints have been addressed and partially resolved by various CARE interventions during the past six years, an experience which suggests that marketing and organizational problems are now the most critical.

Furthermore, given the current transport and technological constraints, Kim area producers can best improve the marketing of their agricultural produce through planning: that is, conscious and organized collective efforts to analyze various and changing market options, based upon accurate and timely information, and to implement and evaluate marketing strategies accordingly. With the exception of rice hulling, the strategy is not based on technology transfer, but rather, on empowering area producers, through training and information, to make optimum use of available marketing opportunities.

D. INPUTS TO BE FINANCED BY A.I.D. (\$811,365)

The following inputs will be financed by A.I.D. under this Cooperative Agreement. A detailed cost estimate with budget worksheets appears in Annex IV of CARE's Project Proposal (Attachment G).

1. Technical Assistance (\$242,052)

Long-term technical assistance costs are those for the Project Manager whose job description appears in Annex VIII of CARE's Project Proposal. Short-term technical assistance costs are those associated with rice hulling (one month), market planning (one month), and the mid-term and final evaluations.

2. Direct Project Support (\$317,019)

These costs are those which are directly associated with the implementation of this project, including national staff and commodities. A breakdown of national staff appears in Section 2.5 and in Annex IV (page 8) of CARE's Project Proposal. Other costs include building maintenance, rent and utilities, furniture and equipment, vehicles (one pick-up, one station wagon and three mofylettes), vehicle operating costs, training costs, administrative and miscellaneous supplies.

3. Shared Project Support (\$188,731)

CARE allocates common N'Djamena costs among the different projects in the mission. These costs include those of procurement, transit, accounting, garage, personnel and general administrative functions as well as program support. Three expatriates are included under this heading (Country Director, Assistant Country Director and Program Coordinator) together with a total of 38 national staff. The allocation of these costs is determined by the number of projects, the relative size of their budgets, proximity to N'Djamena, and the type of activity. CARE's program will likely include five projects; 20% of common support costs have thus been allocated to the Kim Area Agricultural Marketing Project.

4. Indirect Recovery (\$63,563)

The newly negotiated indirect cost recovery rate for CARE projects funded by A.I.D. is 8.0%.

E. INPUTS TO BE FINANCED BY CARE (\$164,137)

The following inputs will be financed by CARE under this Cooperative Agreement.

1. Direct Project Support (\$10,296)

CARE will cover per diem costs (\$5,296) and will procure furniture/equipment (\$5,000) with its own funds.

2. Shared Project Support (\$153,840)

CARE will cover some of the costs (\$141,840) of its international personnel and will procure furniture/equipment (\$12,000) which will be shared with other projects.

F. IN-KIND CONTRIBUTIONS (\$109,595)

In addition to the above inputs, other contributions of non-USG origin will be provided. These contributions, most of which represent the Government of Chad's participation in the project, are listed on page 11 in Annex IV of the CARE Proposal.

The Government of Chad shall also furnish to CARE all such documents and assistance as may be needed to permit importation of materials, personnel and funds for its projects free of all taxes, duties, imposts and other like charges.

ATTACHMENTS D & E

STANDARD PROVISIONS

The Standard Provisions set forth as Attachment 3 of this grant consist of the following Standard Provisions marked by an "X", which are attached hereto and made a part of this grant:

1. MANDATORY STANDARD PROVISIONS FOR U.S., NONGOVERNMENTAL GRANTEEES

- (X) Allowable Costs and Audit (November 1985)
- (X) Accounting, Audit, and Records (January 1988)
- (X) Refunds (January 1988)
- (X) Revision of Cooperative Agreement Budget (November 1985)
- (X) Termination and Suspension (May 1986)
- (X) Disputes (March 1987)
- (X) Ineligible Countries (May 1986)
- (X) Nondiscrimination (May 1986)
- (X) U.S. Officials Not to Benefit (November 1985)
- (X) Nonliability (November 1985)
- (X) Amendment (November 1985)
- (X) Notices (November 1985)

2. OPTIONAL STANDARD PROVISIONS FOR U.S., NONGOVERNMENTAL GRANTEEES

- (X) Payment - Letter of Credit (November 1985)
- () Payment - Periodic Advance (January 1988)
- () Payment - Cost Reimbursement (November 1985)
- (X) Air Travel and Transportation (November 1985)
- (X) Ocean Shipment of Goods (May 1986)
- (X) Procurement of Goods and Services (November 1985)
- (X) A.I.D. Eligibility Rules for Goods and Services (November 1985)
- () Subagreements (November 1985)
- (X) Local Cost Financing (May 1986)
- () Patent Rights (November 1985)
- (X) Publications (November 1985)
- (X) Negotiated Indirect Cost Rates - Predetermined (May 1986)
- () Negotiated Indirect Cost Rates - Provisional (May 1986)
- (X) Regulations Governing Employees (November 1985)
- () Participant Training (May 1986)
- (X) Voluntary Population Planning (August 1986)
- (X) Protection of the Individual as a Research Subject (November 1985)
- () Care of Laboratory Animals (November 1985)
- () Government Furnished Excess Personal Property (November 1985)
- (X) Title To and Use of Property (Grantee Title) (November 1985)
- () Title To and Care of Property (U.S. Government Title) (November 1985)
- () Title To and Care of Property (Cooperating Country Title) (November 1985)
- (X) Cost Sharing (Matching) (November 1985)
- (X) Use of Pouch Facilities (November 1985)
- (X) Conversion of United States Dollars to Local Currency (November 1985)

"Budget

	<u>Previous Obligation</u>	<u>This Obligation</u>	<u>Total</u>
Personnel			
Expatriate Staff	\$ 871,407	\$ 25,000	\$ 896,407
Chadian Staff	881,358	26,144	907,502
Subtotal	<u>\$1,752,765</u>	<u>\$ 53,144</u>	<u>\$1,803,909</u>
Operations			
Office rents, utilities	\$ 232,409	\$ 2,280	\$ 234,689
Office operations	185,481	1,500	186,981
Field operations	515,460	2,750	518,210
Subtotal	<u>933,530</u>	<u>6,530</u>	<u>939,880</u>
Vehicles, Materials and Equipment			
Vehicles	\$ 195,000	\$ 0	\$ 195,000
Materials, equipment	763,948	0	763,948
Subtotal	<u>\$ 958,048</u>	<u>\$ 0</u>	<u>\$ 958,048</u>
Overhead	\$ <u>334,937</u>	\$ <u>4,909</u>	\$ <u>339,839</u>
Total Estimated Cost	<u>\$3,980,000</u>	<u>\$ 62,576</u>	<u>\$4,042,576"</u>

4. Project Description: Attachment A is hereby incorporated into the project description for this activity.

Except as herein amended, all other terms and conditions remain the same.

Sincerely,



Carlton M. Bennett
Agreement Officer
Regional Contracting Office
USAID/Cameroon

Attachment:

Attachment A: "Activities for the Month of April, 1990"

ACKNOWLEDGED:

T. M. [Handwritten Name]
Director
11/7/90

ATTACHMENT A

CARE-International in Chad

Irrigated Agriculture Development Project

Activities for the month of April, 1990

Mayo-Kebbi Irrigated Rice Perimeters

- 1) Technical assistance for dry season rice campaign in Koyon.
- 2) Repairs to rice storhouse in Djouman and completion of that at Mouroup.
- 3) Technical assistance to pilot women's vegetable gardening groups at Djouman and Kim.

Forestry

- 1) Technical assistance to 13 school nurseries in the Mayo-Kebbi.
- 2) Technical assistance at 10 Eaux et Forêts village nurseries and farmer-managed nurseries in 48 ouaddis in the Kadem.
- 3) Computer analysis of 1989 planting data.

Kadem agriculture

- 1) Preliminary identification and animation of 4 new onion storage groups; follow-up of 3 groups from last year.
- 2) Final stages of 4 varietal and factorial trials at Cheddra Demonstration Farm.
- 3) Test alternative foot-valve for tubewell handpump and other techniques in conjunction with John Naugle, visiting wells/pumps specialist from LWR/Niger.
- 4) Train further 20 farmers in maintenance and repair of tubewell handpump.
- 4) Host OKER regional conference for the Sahelian zone at Letena, April 28-30.
- 5) Follow-up 6 farmer-managed, decentralised demonstration plots in ouaddis.