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**MID-TERM EVALUATION
TARA II IRRIGATED AGRICULTURE PROJECT**

**NIGER
(683-0245)**

**RONCO Consulting Corporation
1629 K Street, N.W.
Suite 401
Washington, D.C. 20006**

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EVALUATION REPORT
TARA II IRRIGATED AGRICULTURE PROJECT

NIGER

Alice L. Morton, Organization
Specialist (Team Leader)*
Glenn Anders, Agricultural Engineer

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The conclusions and recommendations of this report are, however, solely our responsibility.

ACRONYMS

AF	Alphabetisation Fonctionnelle - official Minsitry of Education Functional literacy approach
AI	Alphabetisation Intensive - modified, accelerated Ministry of Education Functional literacy approach
AR	Alphabetisation Rapide (accelerated functional literacy approach)
CLUSA	Cooperative League of the USA
CNCA	Caisse Nationale de Credit Agricole
INRAN	Institut Nigerien pour la Recherche Agronomique
MDR	Ministere du Developpement Rural.
ONAHA	Office Nigerien d'Amenagement Hydro-Agricole
SE	Service de L'Elevage - Livestock service of the MDR
SRFMP	Sahel Regional Financial Management Project
UNC	Union Nigerien des Cooperatives
UNCC	Union Nigerien de Credit et de la Cooperation

EXECUTIVE SUMMARY

This report presents the findings of an evaluation of the Tara II Irrigated Agriculture Project, implemented by AFRICARE under an AID OPG for \$750,000 over three years. The evaluation team consisted of an agricultural engineer from REDSO/WCA and a contract rural organization specialist (provided by RONCO Consulting Corporation.) The team visited the project area three times, and received excellent support from the AFRICARE staff, and the GON Project Staff as well. Despite AID's special interest in the irrigated rice component of the project, the evaluation scope of work stressed all components of this second-phase integrated rural development effort, and especially the development of self-managed, economically self-reliant local organizations (cooperatives).

The team found that the irrigated perimeter, the most expensive asset of the project, was in operational condition, subsequent to repairs and improvements made to the pumping station and paid for by AFRICARE, with some help from the Rice Cooperative and ONAHA, the GON executing organization. However, it also found that there are problem areas in water management, agricultural practices and extension, perimeter maintenance, and locally-adapted applied research. Despite these problems, and mounting operating costs, the component seems to be economically viable, given increases in prices paid for production outputs, and despite increases in input prices. The Rice Coop is paying for most of the costs of production, and is fairly up to date in credit repayments. It has become increasingly independent from Project Staff in Phase II, but needs additional support in management skills training, literacy and numeracy skills, and marketing. Training must also be provided to improve water management by Coop members and Project Staff, including TA specialists.

The Women's Poultry Cooperative at Tara is less far along in self-management, but its egg sales are still profitable, despite poultry management difficulties, misunderstandings with Project Staff, and the rising cost of inputs. Here again, more must be done with coop and literacy training, and Staff should more effectively assist the Coop members to be self-managing, and to understand the cost and benefit principles involved, including those for credit and reinvestment of profits. New marketing options should also be explored.

More problems have recently arisen with the Fishermen's Cooperative sections in Tondika and Momboy Tounga. Here, there is little economic incentive for cooperative marketing, and

with low water levels in the river, fishing is becoming less profitable, and fishermen are supplementing their incomes with dryland farming activities. If the Coop sections are to be maintained, their loans should be rescheduled, new elections held, management and literacy training strengthened, and marketing strategies improved, while transport costs should be incrementally transferred to the Coop from the Project.

The Artisans' Cooperative has been on hold for some time, given design assumptions that have proved faulty, and limited sources of supply for needed materials. This component should be redesigned, and care taken not to impose cooperative manufacture or sales, but rather to stress savings through collective purchases of materials. A good market assessment should be done with the Coop members to find the kinds of equipment, spare parts and other products for which there is most local demand.

Training activities should be re-focused and reinforced, including training for Project Staff, as well as for TA specialists. The functional literacy component should be reviewed and improved, using the same contractor. Coop training should be accelerated, and its content and style, as well as its source, reviewed.

Overall, AFRICARE TA and project management have been reasonably successful, despite delays in project start-up, the drought, some design flaws that were not corrected quickly enough, and some gaps between the requirements of project components and the qualifications and efforts of the TA specialists provided. More back-up TA should have been provided by AFRICARE in some areas, and greater decentralization of management from Washington to Niamey, and from Niamey to the TA specialists in Tara should be implemented. Working through the GON Project Staff has been largely successful, but better personnel management and monitoring efforts should be developed and transmitted to the GON Project Director as part of the technical assistance.

From now to the end of the LOP, AFRICARE and AID should work together to sharpen project focus, reinforce successes, assist in a real transition from "project" to cooperative management of all components, which may have implications for reductions in GON and project-supported project staffing.

Where appropriate, more use should be made of expertise available from other AID-financed projects, or other-donor projects. At the same time, AFRICARE should consider providing more resources for the development of its human capital in general, and to increase its core staff in Niamey in

particular. It should also arrange to improve data collection and analysis of project activities so that by the end of the LOP, the significant "lessons learned" will be available for AFRICARE, AID, the GON and other organizations to build upon in future irrigated agriculture projects, and for the development of truly self-managed cooperatives.

I. BACKGROUND

Objectives

The objectives for this mid-term project evaluation are as follows:

- Measure progress toward achievement of project purpose;
- Identify significant implementation problems;
- Assess performance of AFRICARE as implementing agent;
- Gather information from project experience that may be relevant for future USAID interventions in the area of irrigated agriculture and development of rural, self-managed and financially self-reliant organizations.

In order to meet these objectives, USAID/Niamey requested the services of a contract rural organization specialist (and team leader) and of an agricultural engineer from REDSO/WCA. The organization specialist was provided under an IQC Work Order by RONCO Consulting Corporation. The scope of work developed by the USAID's Project Development Office, in consultation with AFRICARE and the GON Project Director at Tara, specified a set of key questions to be addressed by each member of the evaluation team.

On arrival in Niamey, the team members met with the PDO representative and the USAID Mission Director, and requested some minor adjustments to the scope of work. The Mission Director at that point also requested that the team examine AFRICARE's overall management capacity, insofar as would be possible in the context of this evaluation, as well as AFRICARE's plans for phase-out between the evaluation and the PACD.

Prior to the arrival of the evaluation team, the PDO had contracted with a Nigerien sociologist who speaks Zarma, the language of the village of Tara, to carry out a preliminary study of relationships between and among the GON Project Staff, the AFRICARE TA specialists, the members of the Tara multipurpose cooperative, and the villagers in Tara in general. The report prepared by the sociologist was available to the team upon the arrival of the team leader.

TABLE I
Key Dates in Chronology
Tara II Rural Irrigated Agriculture Development Project
(683-0245)

- (August 1975 - Initial feasibility studies for Phase I Project by AFRICARE at request of Government of Niger.)
- (1977 - GON Project Director Alzouma Sououna appointed.)
- October 1982 - AFRICARE submits proposal to AID for Phase II Project.
- July 1983 - AID/Washington approves "PID-like" document.
- August 26, 1983 - Grant Agreement signed for Grant No. AID-683-0245-G-SH-0001 between AFRICARE and AID.
- December 14, 1983 - Conditions Precedent to Grant Agreement fulfilled by AFRICARE to satisfaction of USAID/Niamey.
- May 1983 - Contract signed by AFRICARE with first Project TA specialist, Kenneth Byrd (before AID Phase II Request).
- February 1984 - Contract signed with second Project TA specialist, Dr. Oumar N'Diaye.
- June 1984 - Six-Month Joint Review by AFRICARE and AID.
- January 1985 - Six-Month Joint Review by AFRICARE and AID.
- April 1985 - Commencement of this AID-sponsored Evaluation.
- April 1985 - Appointment by GON of new Project Director.

Approach

The agricultural engineer arrived in Niamey several days before the team leader, met with GON representatives from ONAHA, one of the services most critically involved in project implementation, and traveled to Tara to conduct a preliminary examination of the project-related irrigated perimeter. (Arrangements had previously been made for participation in the evaluation of the head of Mise en Valeur of ONAHA.) Aside from ONAHA, the Mission had taken the view that this was primarily an evaluation for AID and AFRICARE, and had not asked for official GON participation.

AID's contribution to Phase II of the Tara Project has been limited to \$750,000. The project is designed in the integrated rural development mode, and includes several components. While recently AID's attention has been focused on the irrigated perimeter and related rice production, the evaluation team wished to assess all components--cooperative development, functional literacy, poultry, fisheries, artisanal activities--as well as rice production. In order to compensate for the rather short stay of the agricultural engineer, it was possible to recruit informal assistance from Mr. Thomas L. Price, an FAO-sponsored anthropologist working in the Fisheries Direction of the Ministry of Hydraulics and Environment, and of Dr. Mary White Kaba, a linguist who is carrying out a study of literacy for the Mission's HRD Division, and who speaks Zarma.

Despite the team's desire to give proportional weight to all project components, the irrigated agriculture component will receive somewhat greater emphasis in this report given its visibility, the significant sunk costs which have been required to make it operational in both the wet and dry seasons, AFRICARE's provision of a Ph.D. agronomist to work on applied agronomic research--a component added for Phase II--and the Mission's concerns about appropriate models for design of its proposed irrigation project. In assessing the import of the findings and recommendations of the report, however, AID and AFRICARE readers may wish to note that the team accepted the IRD nature of the original and Phase II project designs.

The team's schedule was based on three trips to Tara, with intervening days in Niamey for meetings with AID, GON services, and AFRICARE, and review of documentation. A report was submitted in draft three

days prior to the departure of the team leader, as had been requested in the scope of work.¹

1 The team leader interviewed several AID officials who had been involved with the Phase I project, as well as present and former AFRICARE staff, before leaving Washington.

II. IRRIGATION DEVELOPMENT

System Infrastructure and Operation:

The irrigated perimeter at Tara is situated on a narrow portion of the Niger River flood plain adjacent to the village of Tara. The plain is relatively flat but contains significant relief from ancient dunes and sand bars, and has approximately the same average elevation as the recent high (flood) stages of the river. The river level falls some four meters below the plain during the low (drought) flows.

The irrigation system or "perimeter", was constructed in 1977-78, and encloses approximately 140 hectares with the following major infrastructure:

- an earthen flood-protection dike, 3800 m. long;
- two concrete-lined principal canals, each approximately 2800 m. long with associated drop gates and masonry turnouts;
- several dozen earthen secondary canals from the principals, each approximately 50-100 m. long;
- several hundred leveled and banded paddies 0.2-0.5 ha. in size (for a total area of approximately 85 ha);
- a rudimentary system of drainage channels;
- two 20-m², concrete-masonry pumping stations, an older one on the dike with an intake sump, floor slab, stilling basin and roof, and a newer one on the riverbank composed of a slab and stilling basin;
- four 12HP diesel motorpumps (centrifical) with associated intakes.

The estimated value of this infrastructure in current dollars is \$1.5 million.

The system is currently in operational condition. The pumps were overhauled in January and a new pumping station was constructed in 1984, both financed by AFRICARE and executed with ONAHA assistance. Forty-eight paddies (parcels) were just re-leveled with a motorgrader (by ONAHA, funded by AFRICARE, with some

farmer contributions), bringing the total area irrigable to about 85 ha. A new, trailer-mounted 48HP diesel motorpump has been lent on rental terms and installed next to the new pumping station by ONAHA, bringing the total installed pumping capacity to approximately 600 l/s, with a reliable average maximum of 400 l/s at a gravity head of 6 m. during the lowest stages of the river.

The canal and drainage systems within the perimeter are not well maintained. Seepage and leaking are evident throughout. The drainage network is not functional, although low rainfalls and river levels since 1981 and the generally high infiltration rates of perimeter soils have prevented major drainage problems.

The perimeter has several serious design flaws and operational shortcomings which continue to affect crop production. First and foremost, the original pumping station was installed too high and far from the river preventing continuous pumping during low river stages in the dry seasons since 1981. Secondly, land within the perimeter, although for the most part flat with clayey hydromorphic alluviums, also contains many ridges, deeper basins and deposits of loose sandy soils. Approximately 55 ha. of the 140 ha. within the dike are either too high, too low or too sandy to irrigate without substantial additional investment. Due to deposits of sandy soils in the perimeter, overall infiltration rates are also probably high. Finally, the principal canals were not well placed in some areas, and the gates and turnouts do not allow effective flow control and measurement.

The irrigated perimeter is, in principle, managed by the Cooperative. The Cooperative through its elected officers (president, treasurer, etc.) employs two pump operators. The perimeter is divided into sections controlled by "Groupments Mutualistes", one for each of the secondary canals, which are supposed to elect a watermaster to control the distribution of water in the secondary canal to each farmer of the Group. Although this system may be workable, it is not presently how things happen. Control of main system operation is presently in the hands of the Project Director, as is amply demonstrated by his "Notes de Service" or directives on pumping hours and cooperative work days. The "Project" also usually decides, albeit with the Cooperative President's agreement, the rotation schedule of water distribution to the secondary canals. However,

the distribution of water along the secondary canals remains solely in the hands of the Cooperative, although frequent, vocal intercessions by the President appear necessary to resolve conflicts.

The preceding is the situation in the dry season when water needs are high and supply is less certain. In the wet season, the Project is somewhat less involved in directing perimeter operations. AFRICARE has had almost no role in actual operations of the perimeter. However, AFRICARE does assume a large, active role whenever a major problem occurs such as a fuel shortage, or the need for repairs. Therefore, the relationship of management roles within this perimeter can be viewed as triangular with the MRD Project staff responsible for the main system, the Cooperative responsible for the secondary subsystem, and AFRICARE responsible for major infrastructure problems.

Despite serious physical constraints, AFRICARE has worked hard with the MRD and the Cooperative to keep the system operational at relatively low cost. Approximately 80 ha. are cropped in rice each wet season with yields averaging 4 tons/ha. (with much of the remaining land within the perimeter productively cropped in sorghum, maize or floating rice). Through AFRICARE's own financing and efforts, a dry-season rice crop has been planted on 27 ha. for the first year since the failure of the water supply and consequent crop failure in 1981. AFRICARE has also just financed the major portion of the re-leveling costs for 48 paddies which will result in improved production on about 8 ha. and an increase in irrigable area of about 4 ha. AFRICARE would probably have been able to achieve more production one season earlier had its staff had more intensive involvement in perimeter works and operations. Due to the very late planting, early rains may yet damage this season's crop. Mistakes and delays might have been avoided with timely, appropriate technical assistance in irrigation. Yet, the fact remains that despite the "loss" of a year, there would be no dry-season crop in Tara today without AFRICARE's perseverance and financing.

Major problems remain to be resolved. Only a huge, personal effort by AFRICARE convinced any Cooperative members to plant this dry-season crop. There is considerable resentment by Cooperative farmers over credit charges debited to their accounts from last year's abortive project-initiated attempt at a dry-season maize crop, and continued skepticism over the

dry-season water supply. Further, over a hundred tons of rice remain stored and unmarketed from last year (see Marketing).

The areas of sandy soil, the poorly-designed and maintained distribution system, and careless field practices cause high rates of water use and, consequently, high pumping costs and leeching of costly fertilizers. Rudimentary water control and maintenance (cleaning of main canals) does occur but is characterized by exhortations of the Cooperative President, dissension and poor participation. The pump operators are untrained and have neither proper tools, operational checklists nor record books, and pump operations and maintenance consequently suffer. Livestock is often herded carelessly across the perimeter, exacerbating maintenance problems with breakage and erosion.

Maintenance

The irrigation system is not being adequately maintained by participatory Cooperative labor. In fact, this approach has made some situations worse by excessive deepening of the secondary canals by undirected, untrained labor. Also, farm labor requirements seem heavy enough in the perimeter without this additional requirement of heavy maintenance labor. Nor is this participatory approach necessarily equitable since participation is never 100%, causing additional resentment and dissension within the Cooperative.

A better solution would be for the Cooperative to hire groups of workers as needed to carry out maintenance work on the canal systems under the supervision of the ONAHA resident agent and/or technical staffers from Niamey. This should result in more equity by charging the maintenance to all members as a proportional operating cost, and in better-supervised, higher-quality work. Overall operating expenses should not increase; better maintenance would lead to lower water use and, hence, savings in pumping costs which would then be used to pay for better maintenance.

The diesel pumpsets represent the single most necessary and valuable element of the infrastructure of the the irrigation system. The maintenance of this machinery must be upgraded. The two pump operators are farming members of the Cooperative, and naturally do not have much technical background. They have apparently only

received basic oral instructions on pump operations. More intensive practical training will be required. One of the dealerships or shops in Niamey (e.g. CAMILO or AutoTechnica) should be contacted and a short, demonstration field course organized. AFRICARE's \$25,000 investment in the renovation of the pumping station gives it the right to expect better maintenance from the Cooperative.

Some of the heavy work necessary within the perimeter could be eased and improved with animal traction. The first Phase of the Project was successful in expanding the use of animal traction by Cooperative farmers. These farmers are reputed to be very skillful with their oxen teams and equipment, and almost all the paddies within the perimeter are now plowed with oxen-drawn equipment. The time appears right for expanding the use of animal traction into more demanding leveling and shaping operations. Oxen-drawn wheeled scrapers (i.e. a two-wheeled polycultivator with a scraper blade) are useful to level small farm plots, as well as to shape small dikes, canal banks and roads. The use of leveling boards for wet puddling within paddies would also ease labor requirements, and lower the infiltration rates of the soil, decreasing water use. AFRICARE should purchase several scrapers and boards and introduce their use to some of the Cooperative's better equipment operators. If they catch on, more could be manufactured by the Artisans' Cooperative.

Finally, maintenance is one aspect of the larger issue of water control and management. Although the Cooperative, through the dynamism and toughness of its President, works out the distribution of water, much remains to be done to make farmers aware of the high cost of water, the requirements of their crops, and the ways to improve distribution and application. Sloppy irrigation practices not only increase water costs, but also directly affect seeding, fertilizer, and labor requirements causing high production costs which eat away at profitability (this is discussed in more detail below). There is no water management program at Tara. Appropriate and applied, mid-level technical training is required. Management savvy is a critical necessity, without which coop-run perimeters will not be profitable. High-yielding and improved varieties will not be productive without proper water management.

Agricultural Practices

The agronomic recommendations from INRAN/ONAHA for the rice perimeter at Tara are standard and the same as those recommended at the other irrigated perimeters north (despite Tara's relatively higher rainfall and differentiated soils). The recommended practices are basically as follows:

- Paddy preparation by oxen-drawn plowing and harrowing;
- Nurseries or direct seeding (80-100 kg/ha.):
 - dry season, mid-January to end-February
 - wet season, mid-July to end-August;
- Plant density: 20 x 20 cm.;
- Varieties (120-day): BG 90-2, BR 51-46.5, and IR 1529-680.3;
- Water applications (depth \pm 10 cm.):
 - dry season, 5 days
 - wet season, 10-20 days;
- Fertilizer dosage:
 - NPK, 15-15-15: 200 kg/ha. at plowing
 - Area: 200 kg/ha, after weeding;
- First weeding o/a 15 days after transplanting

Many of the best perimeter farmers appear to follow most of these recommendations with consequently good results (6 tons/ha.). But the majority of the farmers do (can) not seem to adhere strictly to these recommended practices.

The more usual practices include direct seeding or, less often, transplanting late, mixed seeding of different varieties, non-uniform applications of water and fertilizers, and incomplete weeding. There appears to be better crop husbandry during the dry season, indicating that one reason for the failure to follow the guidelines is labor competition from dryland, rainfed cropping needs. Since there are no demonstration plots within the perimeter, another reason for the failure may be that farmers are simply not convinced of the benefits of the extra work required. The crop failures of recent dry-seasons did not enhance the project's credibility with the farmers. A program of demonstration plots with

varied cultural practices and crops (e.g. corn and sorghum) should be included in the project's remaining year and a half.

All in all, the project does not know for sure (and is not finding out) exactly what the farmers are doing. Even yield figures are based on rather general estimates of household consumption (i.e. the non-marketed portions) rather than on field measurements. It is reasonable to assume that due to the higher rainfall in the area, some modifications to the standard INRAN/ONAHA package of recommendations would be desirable. The farmers may in fact already be practicing their own cost-effective modifications. Yet this will remain supposition until the Project begins to work more closely with farmers and collect representative farm data.

Production:

Since 1981, there has been no significant dry-season production in the irrigated perimeter until this year. Small amounts of rice and corn were produced in some years but were not significant enough to measure. The rice production figures since the Phase II Project began in 1983 are shown below:

	<u>1983</u>	<u>1984</u>	<u>1985</u>
Dry-season (Feb.-March)	-	0	(27 ha)
Wet-season (July-Dec.)	346 tons	278.5 tons	

These figures do not include substantial wet-season yields of about 25 ha. of sorghum and corn and several hectares of floating rice within the perimeter, both of which are affected by the irrigation water.

This falls far short of the production targets in AFRICARE's project proposal. The proposal planned for total production in the perimeter to leap from 336 tons in Year 1 to 800-900 tons in Years 2-3. This was to be accomplished by a 14% increase in yields and the resumption of double cropping over a total area of 80 ha. However, no dry-season rice crop was planted in the 1984 dry season due to the delay in the AFRICARE-ONAHA work on a new pumping system, and this year only 27 ha. were irrigated due in large part to farmers' continued skepticism over the reliability of the water supply.

The actual rice yields over this period are also lower than anticipated, seldom exceeding 4 tons/ha. This shortfall is probably due to poor crop management: late seeding/transplanting dates, uneven fertilizer applications, non-uniform irrigation, incomplete weeding and pest problems.

The practicality of expanding the area under cultivation will be limited by the widespread number of sand deposits and the uneven relief within the perimeter. Expansion beyond the currently irrigable 85-90 ha. will require considerable and probably uneconomic earthwork and water costs. The area cultivated during the dry season is significantly influenced by the farmers' perception of the reliability of the water supply (due to their costly crop failures and debts from previous years). Yet, even when their reticence is overcome, it is highly doubtful that the entire perimeter will ever be fully cropped in the dry season, given the present poor irrigation efficiencies (30%, crop requirement vs. head canal supply), the canal system's limited capacity (300 l/s) and high pumping costs. An area of about 60 ha. is a more likely possibility.

With regard to rice yields, it is difficult to foresee average yields exceeding 4.5 ton/ha under current conditions. Major increases in yield will only be achieved by a considerable effort with the farmers to improve their crop and irrigation management. This is not presently happening, and is further discussed in detail elsewhere.

Production Costs:

The costs of production in the perimeter are also greater than those estimated for the Economic Analysis in AFRICARE's proposal. For the 1984 wet-season rice crop, project records show the following direct production costs attributable to the Cooperative:

Agricultural Supplies		
Seeds	720 000	PCPA
Fertilizer (Urea and NPK)	1 520 000	
Fungicide/Insecticide	48 000	
Pumps and Maintenance		
Fuel and Lubricants	2 231 000	
Repairs	622 040	
Management		
Salaries	596 390	
ONAHA	240 000	
Cooperative Expenses	160 000	
Other		
Supplies	307 690	
Sacks	750 000	

Compared to the initial estimates in the proposal, the cost of the agricultural supplies has increased by approximately 25%, adding almost 600 000 FCFA to the estimates of production costs. Fuel costs are also greater than estimated since prices have risen and the Nigerian border is closed. However, the cost increases appear to be compensated by increases in the official price of paddy rice: from 90 FCFA/kg. to 125 FCFA/kg. Therefore, higher costs are substantially balanced by increases in benefits, and the B/C analysis upon which the project was based remains positive. Nevertheless, when the records from this year's dry-season crop are completed, AFRICARE with USAID/Niger's guidance should carry out a new B/C analysis to track the economics of production in the perimeter.

There is a disturbing trend towards increased fuel consumption and, hence, pumping costs. For example, for the 1980 wet-season crop 13,735 l. of fuel were consumed for irrigation pumping while in 1984, 16,906 l. were used for approximately the same area and yields. This increase is probably attributable to poor pump maintenance and control, and low irrigation efficiencies. Reversal of this trend will require a substantial effort toward improved irrigation management. A system of flow measurement on the canals to quantify water use would be a first step towards improved irrigation efficiencies. Once such a system is in place, farmers could be charged on the basis of water use, rather than paddy area. Training in water management (as discussed later) is also needed. AFRICARE must concentrate more of its efforts on perimeter and crop management, if the Cooperative is to become profitably self-sustaining.

Applied Research

As the thrust of its agricultural assistance, AFRICARE planned an applied research effort in the perimeter which consisted of several separate, but related activities:

- Financing and interpreting a survey of perimeter soils by INRAN;
- Design and implementation of a record keeping system of data on soil, water and crop management in the perimeter;

- Installation and operation of a basic meteorological station at the perimeter;
- Monitoring and interpreting research conducted by INRAN, and
- Financing the installation of two river gauges and a survey of the riverbed.

The AFRICARE Agronomist is generally responsible for these activities and for relating these technical findings to improved crop and Cooperative management.

The soil survey has been completed by INRAN. It essentially concludes that the perimeter contains 75 ha. of homogeneous clayey soils on the plain which are very suitable for rice, 42 ha. of heterogeneous clay soils in channels which are less suitable for rice, and 21 ha. of sandy or silty-sandy soils on banks, ridges and bars which is not suitable for rice. Regrettably, save for some penciled remarks on an old plan, the location of these various soils was not mapped. Infiltration/percolation information could also have been included. No use has apparently been made of this information, even though it would be useful for comparison with water use problems and in deciding which areas to re-level.

An agricultural record keeping system of sorts is being maintained by the ONAHA/UNC agents. It includes only half of the information listed in AFRICARE's proposal, and omits much of the most valuable crop management data (eg. fertilizer dosages and irrigation depth and frequency). It is also an officious bookkeeping operation and does not encourage candid, straight answers from farmers. Granted that the proposal's expectation of recording 17 pieces of information for each of the 350-odd paddies was unrealistic, the present data system is of little use agronomically. The project should develop a data system wherein the agricultural practices of a sampling of farmers are monitored and accurately recorded. This is a sensitive undertaking which must be carried out with the farmers in the paddies, but would be well worth the effort in providing first-hand information on current practices.

The meteorological station was set up in June, 1984. AFRICARE financed fencing and shelter and the Direction Nationale de Meteorologie furnished equipment on loan. The measurements are taken three times daily and include

rainfall, air temperature (min/max), relative humidity and soil temperatures at four depths. Other solar, wind, and evaporation data are obtained from a station in Gaya. The records are being maintained by AFRICARE's Agronomist. but data were only recorded in final form through March at the time of the evaluation.

INRAN, with AFRICARE's financing, conducted a series of varietal trials in the perimeter from 1981 to 1983. The resulting report recommended three varieties: IR 1529-680-3, BG 90-2, and BR 51-46-5. These are in fact now in use since seeds were delivered by INRAN. The report also recommends demonstration trials in the field to convince farmers of the usefulness of recommended cultural practices. AFRICARE's Agronomist has outlined a program of fertilizer tests and work on the physiology of rice yields, but these appear outside the needs of the Project. INRAN sets research priorities which are generally not practical enough to be useful to the Project.

One of the two river gauges has been installed, and the riverbed survey is planned for late May, during the river's lowest stage. These are not immediate Project priorities, but will provide important information for any major work on any new pumping system.

In sum, the applied research aspect of the Project was not particularly well conceived, or well executed. Classical agronomic testing adds a technically-demanding, long-term research activity to this otherwise sharply-focused cooperative development effort. The only element of the research activity which relates to, and directly impacts on, the Cooperative farmers (i.e., truly "applied") is the data base, and this has not really been implemented. The applied research aspect of the Project should be sharply streamlined to concentrate on quantifying and analyzing present soil, crop and water management practices and ways to improve them. Needless to say, this will require close working relationships with Cooperative farmers in the field.

III. ORGANIZATION DEVELOPMENT

Broad Evaluation Questions

The scope of work included a number of quite general questions about organization development. Some were clearly directed toward AID's broader interest in potential "lessons learned" from the Tara Project experience. By first addressing the more specific, project-related questions about progress and problems, the background to answers to the broader questions will emerge. Summary generalizations will be made at the end of the report.

Background from Phase I

Under the Phase I Project for which AID support ended in 1981, the Tara Rice Farmers Cooperative was organized. Officers were democratically elected, apparently from among local village notables, and the membership included the village chief. During the initial years of Phase I, Coop members were taken to visit other irrigated perimeters, where they were able to discuss irrigated farming and cooperative management with other coops' officers and members, and received some more formal coop management training as well. The 1981 AFRICARE evaluation noted the need for a greater emphasis on functional literacy, and continued stress on cooperative management skills.

It is not entirely clear how much further progress may have been made in management training in the period during which AFRICARE was supporting the Tara Project activities with its own funds. As far as cooperative management, literacy, and a division of labor between the Cooperative and the GON project staff for financial management and decision-making are concerned, the triangular arrangement present today seems to have evolved during that period.

Phase II - The Rice Cooperative

At the beginning of the Phase II Project, however, the Nigerien Project Director, apparently in concert with the AFRICARE TA specialists and the other GON agents with relevant service affiliations, decided that the majority of management activities for the perimeter, the rice dehuller, the Cooperative warehouse, and rice marketing, should be turned over to the Cooperative. During this period there was a change in Coop

leadership. The first President of the Coop died, and was replaced by another member. The new President seems recently to have achieved considerable credibility. The Cooperative is divided into 12 Groupements Mutualistes (GM), each of which has a president. The Cooperative has not, however, been divided into subcommittees for marketing, management, water management, or other activities.

With the literacy rate remaining low, the Cooperative took the decision to hire its own bookkeeper. This individual is a native of Tara village, is literate in French, has worked for the GON as an extension agent, and appears to have an adequate grasp of book keeping, cooperative principles and--as a farmer himself--a good understanding of the motivations and concerns of the other Cooperative members. His efforts are supplemented, at present, by advice from the Project staff and, hypothetically, oversight and audit by the local agents of the UNCC (now defunct) and of the replacement agency, the UNC. (Prior to his hiring, credit repayments were actually being handled by the ONAHA perimeter manager, in association with the UNCC agent).

At present, to the extent that there remain problems with farmer motivation to participate in the functional literacy program, this appears to be an effective management solution, and one which the Cooperative took itself. There is considerable confidence placed in the judgment of the Coop bookkeeper, and he seems to be performing quite effectively both as a record keeper, and as a sort of internal advisor to the Coop leadership. His success may serve as a further disincentive to other Cooperative members and officers to continue to invest energy in becoming literate and numerate in Zarma, the local language in which functional literacy training is offered. Yet, under the present circumstances, having an employee of this kind who is literate in French may be more effective for the Coop's relationships with the government bureaucracy and with local and intermediate markets than would be increased literacy in Zarma. (See Section VI for discussion of functional literacy.)

Revolving Credit Fund Management

At present, there is still a lack of clarity about who is responsible for management of the credit funds which are critical to the activities of the Cooperative,

including the loan guarantee fund and any funds which may remain after loans to the CNCA are repaid and the operating costs of the dehuller and the irrigated perimeter have been met. The Cooperative officers and the GON Project staff both make distinctions between "le projet" and the Cooperative. The basis of these distinctions, and the way in which they have been arrived at and may be reviewed from time to time, was not made completely explicit to the evaluation team, and seems not to be entirely explicit for those concerned.

At the time of the evaluation, the GON Project Director, the AFRICARE TA staff, and the Niger AFRICARE Representative had been involved for some weeks in an effort to review the entire credit history of the Project and the Cooperative with the appropriate representatives of the CNCA, the national agriculture credit agency.²

Depending upon the outcome of this review, the Cooperative may or may not have to take steps to accelerate its repayment of old loans. It has, however recently repaid about 60% of old loans and 70% of its then-current loans. It has more recently achieved an 85% repayment rate.³

It is fair to note that the Cooperative(s) and the "Project" are essentially hostage to the increasingly complex policy changes being made by the GON in the area of agricultural credit and input supply. AFRICARE, for

2 The CNCA is probably in the process of being put out of operation, partly at the behest of the World Bank. When the evaluation was taking place, UNCC, the Cooperative and credit arm of the GON, had just been abolished and replaced by a revamped organization, the UNC. This has had, and will continue to have, an impact on the self-management of the Tara Rice Cooperative as well as on the operation of the other Cooperatives in Tara.

3 (Here, it should be noted that as far as CNCA is concerned, there appears to be one Tara multipurpose cooperative made up of four sections, one for the rice growers, one for the women poultry producers, one for the fishermen, and one for the artisans. This is also the view of the GON Project Director, although the project documentation regards each of these "Sections" as a separate Cooperative, and they are essentially treated as such here, at least in the following discussions of lending activity and self-management.)

example, has over the years provided funds which were placed with CNCA in a loan guarantee fund (apparently without earning any interest), but which are now frozen, as are all the other accounts with CNCA which relate to the Project's activities, and thus to the Cooperatives'. Meanwhile, the Cooperative leadership has been exhorted to repay CNCA as quickly as possible, so as to avoid increasing interest charges. On the face of it, the leadership has taken this exhortation seriously, but has not yet been able to collect all the money that it is owed by local civil servants and others in Gaya who have bought rice from the Cooperative on credit. Nor has it found a reasonable market for over 123 tons of paddy that are presently stored in the Cooperative warehouse.

In this period of flux in the credit and banking system, and in the absence of sufficient market information, the Cooperative would be well advised to make representations--through the GON project staff and AFRICARE--to the appropriate level of authority in the GON to place any future loan repayments in an escrow account with a "private" bank, so that it will not find itself having repaid an essentially bankrupt and defunct CNCA in a year or so from now.

Management of the Irrigated Perimeter

Devolution of management of the Tara irrigated perimeter has also been recently made to the Cooperative leadership. Rather like the situation for credit, however, this devolution has only been partial. Officially, the ONAHA agent is responsible for overall perimeter management. Theoretically, he is also responsible for providing agricultural extension to the farmers who have parcels on the perimeter (members of the Coop), as well as guidance in water management. In fact, although he spends a good deal of time on the perimeter, and discussing cultural practices with individual farmers, he does not have much formal training if any in water management or extension and the present reality is that the Coop president decides when the pumps will be turned on and off each day, while the farmers take an individualistic approach to cultural practices.

The model of the Rice Cooperative as divided into the GMS of a variable number of members each, provided for 12 watermasters, one for each GM. According to all informants, this model was not implementable, and has

thus been replaced by the role of the President as de facto watermaster. No steps have apparently been taken to review the original model, to re-elect GM watermasters, or to find another solution to problems in the organizational aspect of water management. As has been noted in Section II, there are also significant problems with the technical aspects of water management which have gone unresolved despite a great deal of lively argument among the farmers themselves.

Cooperative Self-Management

The Rice Farmers' Coop:

One of the signs of effective self-management has been, however, that the Cooperative has been able in the last year to absorb the major operating costs of the perimeter, including the fuel for the pumps, and the salaries of the pump operators. It is also paying rent to ONAHA for the use of the new Italian portable pump which was installed to help provide adequate water for this dry season's rice crop.

Another sign of self-management effectiveness is the fact that a number of Rice Farmer Coop members have been expelled from the perimeter--that is, their access to parcels rescinded--because they have been unable or unwilling to repay their loans from the Cooperative. (Since there is at present no other way of assessing water usage by farmer, water user fees are assessed by parcel size. Parcels are said to vary from one-fourth to one-half a hectare.) It is said that one of the farmers who was evicted in this way was the village chief. In the context of Tara's traditional socio-political organization, this is startling. Although the present chief is a weak successor to his deceased elder brother, to have sanctioned him in this way is actually quite unusual, and a sign of Cooperative vitality. (Apparently, after some help and encouragement, including from the AFRICARE Agronomist, he repaid his loan and was readmitted to the perimeter.)

One interesting facet of the history and present reality of the Cooperative is the nature of membership. There were in all three lotteries for access to parcels, and thus to membership in the Coop. There have been about twelve evictions out of a total of approximately 250 members. Several other parcels were taken back from farmers in order to provide INRAN with sufficient plots for field trials. No new formal allocation of parcels

has taken place since. However, this does not necessarily mean that distribution of access to irrigated plots is as inequitable as it might first appear. In fact, a number of parcel holders have been allowing their sons to work one or more parcels without inducting them formally into the Cooperative. Another alternative has been to lend a parcel to a more distant relative or other village farmer. (It is frequently noted that all of the people are related to each other in Tara, and the Coop leaders affirmed this when interviewed by the evaluation team, as did individual members when interviewed by the sociologist.) This is done without any rent being charged.

While there is nothing wrong with this kind of ad hoc approach to equitable access in the short-term, it is probably more appropriate, now that the water availability problem has been solved, either for some of the older members who hold parcels to withdraw and cede them to the younger farmers, or for another lottery to be held so that there can be some access for other villagers to the perimeter and its very real economic advantages. This could be done by reallocating shares, or re-defining plots (which have not been measured in several years at least), so that there would be more plots, shares, and members altogether. This could well be a matter to be raised in the anticipated cooperative management training course for the Rice Cooperative members if it is redesigned.

The problem of cooperative management skills training in general will be discussed further below. Here, however, it should be noted that insofar as there is a very intimate relationship between what goes on the perimeter, and what should and does go on in the Cooperative, there is some need for a linkage between agricultural extension and management training for Cooperative members. The issues that are involved in designing and implementing a new system for water management and water-user charges are crucial to decisions about broader Cooperative management activities, and the skills that are required to perform them effectively.

The Women's Poultry Cooperative:

Phase II of the Project was designed to build upon poultry raising activities begun in Phase I. These had included the construction and equipping of a central poultry station, which was designed to raise table and

laying hens. The table hens were to be sold, and the eggs from the layers were to be divided into unfertilized eggs to be sold, and fertilized eggs that would be hatched to produce chicks to stock and re-stock the poultry houses to be built for women Coop members in Tara and Tanda under Phase II. The women of these two villages were to contribute to their projects by producing bricks for the construction of their own poultry houses, which were to be designed to hold 100 chickens each. Each GM of ten women was to have and manage its own poultry house (see below, Infrastructure).

The AID financing for this effort was restricted to the GM houses and training for the Tara women's Coop members in functional literacy and cooperative management, and similar training for the Tanda Coop. AFRICARE provided funds for the well construction and for poultry houses in Tanda from other funds.

The Tara and Tanda women's Coops purchased their initial stocks of laying hens on loans from CNCA through UNCC. From the proceeds of egg sales, they were to repay the loans, pay for chicken feed, and make some profits for reinvestment and/or savings. The central station was to provide them with new stocks every year, which they would pay for either out of loan funds or profits, also selling the old hens.

In Tara, the first group of women, who are among the senior women in the village, were organized in 1981, and the first lot of chickens was provided to them in May of 1982. At that time, according to records, they received 364 layers of which 224 were replaced in 1983, but of which 140 died. These layers were purchased from the Service d'Elevage (SE) rather than coming from the central station, which had seemingly had problems with its own production. In June, 1983, 400 chicks were purchased from Elevage for the Tara women's poultry Project, and of those, 42 died. In 1984/85, the third lot was purchased from SE, and of these some 40% died, causing extreme consternation among the women and the project management staff. Representations were made to SE that the chicks were diseased when they were delivered, and that therefore, they should either be replaced with healthy chicks at no cost or the funds returned.

By the time of our visit, there were eight poultry houses which had been constructed under Phase II--four in Tara and four in Tanda. In Tara, these were in

addition to houses that had been constructed under Phase I. Each GM, of which four new ones had been created in Tara, was responsible for maintenance of the house, and feeding and watering the chickens, collecting the eggs, and initially, bringing them to the Livestock agent to be counted and recorded. Subsequently, after the women complained repeatedly about record keeping by the Livestock agent, each GM was given its own record book, and a woman from each Group was to do the recording. The women take turns in doing the work with the chickens, so that each woman only does about three days of work a month.

In Phase II, there have been a number of problems with the running of this Women's Cooperative poultry sub-project. First, when the drought began, the women agreed to allow other villagers to use the well that had been constructed for watering the chickens. This has meant that there is always a crowd at the well, and that the women have to carry water to the poultry houses. Formerly, there was a pump on the well, but this was removed when it was opened to the villagers (see below). According to the women, there had been plans to improve the area where the Coop poultry houses are located--next to the central station--by digging canals which would be fed by pumped water so that market gardening could be done, and trees planted for shade for the poultry houses.

After the well was opened up to the village, this plan was not implemented. Instead, after considerable discussion with Project staff, it was agreed that the Coop members should get together to raise some money for the digging of another well nearer the chicken installation. If they made a contribution then AFRICARE, under the project, would pay for the remaining costs of the new well. (AFRICARE had actually suggested that the women begin the well themselves, but under local custom, they were more likely to hire someone to begin it for them.) So far, work on the second well has not begun. The women claim that they have not made enough money on their egg sales to pay for starting the well, and asked the evaluation team to "beg" AFRICARE to do it for them.

A second, related problem has to do with the whole matter of poultry management. The houses were designed to hold 100 layers, and the PP economic analysis was based on this number of layers per house, and thus a certain rate of egg production and sales. At the time of our visit, each Tara GM poultry house had only about

25 layers, many of which seemed in poor health. The Livestock agent argues that of those that survived from the latest re-stocking exercise, many are suffering from heat-related stress. Formerly, the assumption had been that they were suffering from stress connected with movement of people around the houses, so the area was fenced off.

Theoretically, the Livestock assistant is responsible, with the Livestock agent, for inspecting the chickens daily to see if there are any disease problems. If there are, the Livestock agent is supposed to provide treatment from his stock of medicines. During our visit, this kind of inspection did not seem to be happening. The women themselves said that they tried to check the health of the chickens, and if they saw a problem case, or a dead hen, they would then report it to the agent. The assistant's extension role seems completely unperformed.

During our second field trip, the agent was, in fact, called to Tanda where there was said to be an outbreak of disease among the chickens. The next day, at least one chicken died at Tara, and was left sitting near the poultry houses for several hours during our interviews with the women. (The interviews were purposely done without the Livestock agents being present).

Despite these problems, egg sales have been quite good. Trucks come from Malanville in Benin and are said to take all the eggs that the women's Coop can produce. These eggs are sold at 40 FCFA per egg. This marketing system has evolved over time with help from the Project staff, and appears adequate, despite a high breakage rate.

There are still problems, however, with loan repayment because total production is down. The newer, Phase II GMS still have several annual loan repayments to make, and are said to be afraid that they won't have enough sales to cover this year's payment. The older GMS were told, they say, that they had paid off their loan by last year, but are now being told that they owe money to CNCA after all (see below). Meanwhile, the cost of chicken feed has gone up considerably, which the women are aware of but do not understand. The Livestock agent gives them sacks of feed from a central stock which, in turn, is brought down from Niamey. The women claim that they are being charged for more feed than they are using, but when it was suggested that they have

the agent weigh the sacks in their presence, they said that they do not understand the weighing process well enough to make their own records and monitor them.

A further, related misunderstanding has to do with the timing of payments to the women. Formerly, they say that they received some payment from egg sales each month. Now, they have been told that they will only be paid quarterly. This year, they say they have been paid less for the same number of eggs than before, if they have been paid at all. This is probably because the feed is more expensive, and is deducted from the periodic reimbursement for egg sales.

Project staff explain that the system of payment has been changed because otherwise it is not possible for payments to the women to be commensurate with profits from sales, since sales do not take place all the time. Thus, the women might be overpaid if they were paid on a monthly basis, and then it would be hard to recoup the money when loan repayments were due. This seems a credible argument, but since expectations have already been raised, instituting the new payment schedule has caused considerable resentment, and was part of the basis for the Tara women's "strike" against the poultry sub-project.

Overall, there are also problems with functional literacy, but these are discussed below in Section VI. Here, a general point can be made about Project management. The two agents from SE seem to cause more problems with the women than they solve. Their credibility is nil. The Project Director has several times complained about them to their superiors at SE, but with no results. In a further effort to ameliorate the situation, he designed a recording system that the women could operate themselves, without the agent. They, however, say that they don't do this record keeping themselves, but still go to the senior Livestock agent despite their distrust of him.

Everyone agrees that there have been a number of meetings with the women Coop members, but the Project staff say that they are basically recalcitrant. The women themselves say that the meetings always wind up with decisions being made in French, which they don't understand, so that they are never satisfied that they really understand the system and therefore continue to be suspicious. This is the group that has yet to receive management training under Phase II (see below).

Hopefully, as such training becomes available, some of these problems in communication will be resolved.

Meanwhile, improvements to the poultry houses have been delayed for "lack of funds". Thatch was supposed to have been put between the tin roof and the walls of each house to reduce the heat. The women say they didn't have the money to buy the thatch because egg sales are down since production is down, partly because of the heat. The houses built under Phase I, which are in poor repair, have not been renovated. The market gardening component and the tree planting have not been started, and morale about the entire poultry enterprise is low in Tara, although performance and attitude are said to be excellent in Tanda. Given this comparison, Project staff have tended to place more emphasis on building on success in Tanda, which is understandable, but not likely to improve morale or performance in Tara.

A final point should be made about the central station. This operation receives no funding under the present Project, since it operates on the basis of revolving fund set up under Phase I. However, it is not clear what function it is performing. It takes the time and energies of the Livestock agent, as well as considerable funds, but does not produce chicks for the Women's Cooperative efforts as was the initial intention of the project designers. Meanwhile, there are allegations from the women that they are actually subsidizing its operations.

When it was suggested to the Livestock agent that he could solve his central station space problem by putting some of his surplus hens with the Coop members so that they could make up their shortages, he registered considerable shock, since for him--and now for the Project in general--these are regarded as two completely separate operations, and do, in fact, have separate accounts, which was not always the case. This seems to be a good area for project redesign (see Recommendations).

Fishermen's Cooperatives:

Tondika

Under Phase I, in 1982, 20 fishermen were recruited from the traditional fishing population of the village of Tondika. They received some coop training and took out a loan to buy fishing equipment for 2,615,000 PCPA

(approximately \$6,500), repayable over four years. They also received new boats free under a UNICEF grant. The Coop paid back its loan properly for the first two years. However, in 1983-84, the catch was significantly reduced as the level of the river dropped, and there were problems with repayment. The Coop President apparently absented himself from the village for some months, taking with him a large proportion of Coop funds. Subsequently, he returned and is said to have paid back the money. During the 1983-84 season, records indicate that this Coop only caught 1,956 tons of fish, which were sold for 385,900 FCFA. The annual loan payment is 553,918 FCFA. The third payment has thus still not been met. The Project has tried to get CNCA to agree to reschedule the loan over a longer period, but so far, there has been no decision taken.

Project staff indicate that initially, when the river was high, this Coop did well. It caught and sold a lot of fish, which were marketed through the Coop, at or near the official price. Some of the fish was even sold fresh at Dosso, where there is a big demand. More recently, however, the catch has been smaller, but there have also been internal management problems, and the Coop is in disarray.

Momboy Tounga

When Phase II was designed, the Tondika Fishermen's Coop seemed to be operating well, so a similar Coop was organized under Phase II in Momboy Tounga (MT), a new village founded by a fisherman originally from Tanda. Here, 30 fishermen were helped to form a Coop, which began its activities during the 1983-84 season. They caught 6,981 tons of fish which they marketed cooperatively at the higher official price (at least in theory), for a total of 1,792,000 FCFA (about \$4,500). At the beginning of the season, they had been given a loan of 6,319,369 FCFA to purchase equipment--nets and boats--in Nigeria. Of this amount, 1,792,8000 was for the purchase of 30 boats, with the loan to be repaid over two years. The remainder, for nets, etc., was to be paid back over two years. (In each of these cases, the repayments are supposed to be made once annually. Thus, the repayment annually for the boat loan is 448,200 FCFA.)

The evaluation team, with the help of the Fisheries Direction, spent considerable time interviewing the fishermen of Tondika and MT to see what the problems and

potential benefits are of cooperatives for fishermen, and to try to verify assertions about the catch, and the market price for fish as opposed to the price the Cooperatives claimed they were getting for their fish in Gaya.

In MT, the fishermen seem to be very prosperous, based on a number of visual indicators. They are doing a great deal of building in the village, they are well-dressed, their houses are well and expensively furnished by local standards. Yet, their joint loan repayment for each year being 2,861,485 FCFA, and their stated total receipts for fish sold being only 1,794,055 FCFA, they claimed they were unable to meet their loan payments. The Project tried to get this loan rescheduled as well, but so far with no results. Meanwhile, the Nigerien Head of State some months ago, when CNCA was clearly not being repaid by various institutional and cooperative debtors, declared an emergency repayment campaign. Lists of debtors were given to the Gendarmerie, which came to MT, without consulting the Project staff, and arrested the Coop leaders. Eventually, they were released, but this caused a great deal of resentment against the Project since the fishermen thought that the Project staff had sent in the Gendarmes.

In fact, the Project made representations to help get the fishermen released. But aside from this, the situation is even more confused since AFRICARE had established a loan guarantee fund with CNCA which could have been drawn down to meet the unmet fishermen's annual loan payment. No one seems to understand why this was not done.

Like the Tara women cooperators, the fishermen of MT and those of Tondika feel that they have been inveigled into working as a cooperative and taking out loans for reasons that were not clear to them, and following a process that they do not completely understand. In the MT case, they claim that they were not told in advance how much they would have to repay in the end of each season, and so were not prepared, although they did pay in the proceeds from their cooperative sales during the season to their Coop Treasurer. After the incident with the Gendarmerie, they feel that their dignity has been seriously blemished, and they indicate that the majority of their members would like to get out of the Cooperative as soon as possible.

In fact, aside from the matter of repaying their respective CNCA loans, there seems to be very little reason why these fishermen should be in cooperatives. It would be more reasonable for them to constitute buying groups to purchase new equipment when necessary, and possibly to market some of their catch together, especially in Dosso, which would require more organization and up-front transport costs than marketing fish in Gaya, which is what they are presently doing.

The storing of frozen or smoked fish that was foreseen in the project design for Phase II seems inappropriate given the low capture rates since the river has dropped, and since there has been increased competition from other fishermen--including from Benin and Nigeria--who are allowed to use different equipment and are said therefore to catch more fish. Further, it is probable that this part of the river is being over-fished at present, so that the catch may not increase significantly over the next few years.

Problems concerning cooperative management here are similar to those for the other coops as discussed above--poor literacy and numeracy rates, poor understanding of Coop principals and management. Presently, the Project pays for running the Toyota pickup to collect all the fishermen and their fish four days a week so that they can bring them to Tara to be weighed, and then be taken to Gaya to sell them. (The Tondika Coop members claim that they pay 3,000 PCFA per trip for diesel for the pickup. The Project staff indicate that these costs are borne by the Project). Management training has been lacking for the MT Coop except for some rudimentary lessons provided by the Project's UNCC agent at the time they took out the loan.

The Artisans' Cooperative:

Under Phase I, six local blacksmiths (artisans) were encouraged to form a Cooperative. They received some cooperative management instruction, and some literacy training. In addition, a workshop was set up and equipped for them at Tara, where they could work together on a common sub-project activity. For Phase II, this activity was to be assembly of animal-drawn carts, using pre-made parts to be supplied by a GON agricultural machinery parastatal. In order to purchase materials for this purpose, the Project staff helped the Artisan Coop to prepare a loan application to CNCA through UNCC. The application was based on ball-park

costs of materials which were to be supplied by the parastatal when the loan was approved. The loan was eventually approved, and would have been guaranteed by the Project's loan guarantee fund. An additional six blacksmiths had by this point received training. The assumption was that the Cooperative would be able to fill orders for traction equipment--especially carts--from Tara project farmers as well as from other projects once the materials were available in Tara. They would thus be able to repay the loan.

It soon became apparent to the Community Development Specialist, however, that there were several problems associated with this approach. First, given the subsidized prices for traction equipment provided through various GON sales points and the UNCC equipment credit system, it would not be possible for the Tara artisans to assemble and sell carts locally at a profit. Second, it was impossible to get firm price information from the various parastatal entities and other projects involved in traction equipment manufacture. Third, it began to appear that there was a growing surplus of carts, both in Niger and in neighboring countries.

To verify these impressions, and to seek alternatives, the CD Specialist undertook several trips with Artisan Coop representatives to appropriate centers in Niger, as well as in Togo and Nigeria. The information obtained during these trips confirmed the impression that cart assembly in Tara would not be an economically viable option. This determination was discussed with the other Coop members and with Project staff and it was concluded that some other option would have to be found for cooperative artisan activities. Very fortunately, this conclusion was reached before the artisans had accepted any funds from their approved loan. The cost of the study trips was paid for by the Project.

This negative determination was reached toward the end of 1984. The artisans discussed other options, and came up with the possibility of making aluminum cooking pots, improved hand tools, wheels for plows, other traction spare parts. In order to do this however, they still needed a good source of supply for iron and also one for aluminum and funds. Neither existed nearer than Dosso, and the costs of transport were seen as posing a problem, in addition to the problem of regular supply of aluminum, which is usually obtained from deadlined Landrovers.

Unable to solve the supply problem, the artisans and the Project staff delayed further activities, including the induction of a further six artisans into the Cooperative, which had been planned for Phase II. Before much more effort could be directed toward the affairs of the Artisan Coop, new troubles arose with the Fishermen's Coops and the Tara Women's Poultry Cooperative. Since the artisans were in fact back at their home villages doing traditional blacksmithing, and since they were not subject to any loan repayment pressures, the CD Specialist turned his attention to the more urgent problems of the other two Coops. This was the status obtaining when the evaluation team arrived.

The team met with the two TA specialists and the Artisan Coop President. He was still hopeful that the supply problems could be resolved, leading to increased production of traditional hand tools, for which there is always a local market. He was not, however, sure that the supply problem could be resolved in a cost-effective way without further study, especially given transport costs and the influence on local market conditions of the proximity of Benin, where tools are plentiful and cheap. It was suggested by the team that a further feasibility study be made, but that even if loan funds again became available, the artisans should be clear about what they wanted to achieve qua Cooperative, rather than as an informal group of blacksmiths trying from time to time to work together to improve production and maintain their respective market share.

This discussion confirmed the team's impression that, while opportunities for redesign have existed in a number of instances during Phase II, there has been a general reluctance to accept that some of the original design assumptions were faulty, and to go on to redesign so that momentum would not be lost. This was certainly the case for the artisan activities, and was at least partly true for the fishermen. In the case of the irrigated perimeter, considerable pressure was exerted on the Project staff, the TA specialists, AFRICARE/Niger, and especially the rice farmers, to adhere to design assumptions concerning water supply and profitability of dry-season rice cropping that left room for considerable doubt. Possible reasons for this reluctance to change will be discussed in Section VII below.

IV. MARKETING

A key question for the evaluation team was whether an effective marketing structure had been developed that provides an outlet for produce, and what the major constraints have been and are to the development of such a structure. There is no simple answer to this question even if it is restricted to the Rice Cooperative, and discussed separately for the other three Cooperatives, as will be done here.

At the beginning of Tara Phase I, the borders between Niger, Nigeria and Benin were relatively open. Malanville, across the river from Tara in Benin, was a recognized tax free zone and Tara's farmers were able both to purchase and to sell goods and produce in Benin or Nigeria advantageously. While access to Benin is still easy, costs of production and official prices for rice in Niger are sufficiently high that neither the selling price of paddy nor of hulled rice in Malanville is high enough for it to interest the Tara farmers. Thus, while Benin was formerly a good market for rice as well as for eggs, this is no longer the case. Meanwhile, Nigeria as a source of cheap petroleum products has effectively disappeared for the Project, if not necessarily for individual farmers, due to the closing of the border with Nigeria since the recent change of regime there. This has increased most Project operating costs.

Rice, Hulls and Paddy

This, together with increasing prices of inputs in Niger, reduced availability of institutional credit, and increased requirements for fuel for the overhauled pumps and the new, larger pump from ONAHA, has meant that the Tara Project, and the Rice Cooperative, have now to reconsider the marketing possibilities for paddy, rice and rice hulls. At the time of the evaluation, this was a problem that was raised by the farmers themselves, in a meeting between the Cooperative leadership and the team. It had also apparently been the topic of several recent meetings between them and the Project staff.

One of the main preoccupations of the TA Community Development Specialist has been the problems recently presented by marketing in general, but especially marketing of fish and eggs. Thus, he has had less time to devote to the question of paddy or rice marketing. Meanwhile, the Rice Cooperative is for the first time in

some years interested in selling its paddy unhulled because its dehuller is now old and very slow and the warehouse is overstocked. The Coop leaders also point out that it may be less profitable to sell hulled rice than paddy at the moment because they stand to make a loss of some francs per kilogram. This is because they buy paddy from the members when it is damp, and by the time it has dried, and is then hulled, it gives less than the anticipated 65% or so bulk of hulled rice. In their view, even if the rice hulls are sold as well, this will not make up for the cost of dehulling, and necessary transportation of large quantities of rice to a market or several markets. Nevertheless, at least until this present dry season, they have wanted to buy a new dehuller, in light of their understanding that there is value-added available from transforming their paddy themselves.

There is, however, another policy change occurring in Niger at the moment which may make this a less important assumption than it was when the first dehuller was purchased. One of the key characteristics of the Project in Phase I was that Project staff and AFRICARE got a waiver for the Tara Cooperative from the requirement to sell its paddy to Riz du Niger, the then official parastatal monopoly. At that time, RINI was virtually the only entity dehulling rice. The mark up between the price at which RINI purchased paddy from the farmers, and the price at which it sold rice to consumers through OPVN, another parastatal, was considerable. The view of the Project staff was that it was to the advantage of the people of Tara that they be able to capture some of this value-added and this approach met with considerable success. When their own dehuller broke down, the Coop made arrangements to rent the one across river in Malanville that was not being used.

Now, however, RINI seems to be on the way out along with OPVN, and at any rate, there has been for some time a considerable liberalization in paddy and rice marketing. Thus, along with the loss of the Benin market, the Tara Rice Cooperative is less unique in marketing hulled rice outside the "official" system than it was. In these conditions, there should be an analysis carried out before the Cooperative's desire to buy a new dehuller is implemented, even in the event that it can find an adequate source of credit to make the purchase.

If there exists, then, no adequate marketing structure for the rice produced on the Tara perimeter, this has only been the case for about a year. Prior to that time, as the team kept hearing, people who wanted rice would come to Tara to buy it, presumably because it was the best local source of rice outside the government-run system. Thus, the Cooperative didn't have any incentive to carry out its own market survey, and the Project staff did not see a particular need to carry one out either. Nigeria and Benin also played a part as potential markets if, for some reason, local Nigerian customers were to suddenly become more rare.

In fact, the rapport between the Cooperative and local rice purchasers in Gaya seems to have been sufficiently good, even in the last months, that some three million FCFA worth of rice was purchased on credit from the Cooperative. There now remain about two million FCFA to be collected from these "good customers" in the Gaya area. Since most of them are civil servants, who are paid only once a month, if that, and who are traditionally quite heavily in debt, it remains to be seen how successful the Cooperative will be in ensuring a high repayment rate from these individuals and groups.

Eggs

The marketing situation for eggs has remained more favorable than is presently the case for rice. Initially, there was no local market, and what traditional demand there may have been was filled seasonally by guinea fowl eggs. Over Phase I and the interim before Phase II, however, information about the egg supply at Tara seems to have spread and by the beginning of Phase II, virtually all the eggs produced at Tara were purchased by Beninois merchants who sent trucks to pick them up. Table II presents production and sales figures for the Tara and Tanda Coops as of December 31, 1984. From the Table it may be seen that there is considerable breakage--at a 5.26% rate. Though production was down from previous years due to the large number of deaths caused by poor health of chicks delivered by SE, as well as various kinds of "stress" experienced by hens once in the poultry houses, profits were still considerable.

As may also be seen from the Table, the majority of eggs are sold at 40 FCFA each, while some are sold in Niamey "to reputable stores", at 45 FCFA each. They are carried to Niamey in vehicles that would be going there

empty for other purposes, so there is no transport cost deducted when assumptions are made about profitability.

Unfortunately, since the revised credit records for all the Cooperatives were in the hands of the CNCA when the evaluation team made its visits to Tara, we were not able to get as good data on sales proceeds versus costs, including credit, as we otherwise would have. Still, it seems that the poultry operation is profitable, except for the increasing price of chicken feed in Tara. The TA specialists are exploring the possibility of producing chicken feed at Tara, using maize purchased locally, and some imported concentrates. So far, no formal cost calculations have been possible.

Fish

In Section III, we have given some data on the prices obtained by the Fishermen's Coops, as well as some of their difficulties. Initial assumptions about marketability of smoked or frozen fish have proved to be non-viable in Phase II. Fish are currently only being sold fresh by the Coops in Gaya ; sales in Dosso are not possible since a) there are no surplus fish to sell, and b) the ice machine has broken down. It is also probable that with the various operational, financial and organizational problems the Fishermen's Coops have experienced under Phase II, there isn't sufficient cooperative will for them to undertake longer-distance marketing even if it were profitable.

The Fisheries Direction personnel who accompanied the evaluation team during the second visit to Tara/Tanda/Tondika/Momboy Tounga, got the strong impression that a) the fishermen were not giving all their catch for recording and marketing through the Cooperatives even during the Coop fishing season, which does not last the whole year; b) that this was probably because they were not actually receiving the official prices for the established grades of fish through Coop marketing channels, despite the fact that they had agreed twice with project and Fisheries staff to raise the price on the basis of which individual fishermen were credited with sales, and c) that traditional marketing practices as well as some chicanery were reducing profits. In all, there certainly seems to be room for improvement in the fish marketing "structure", and this should be made a priority if there is any desire on the part of Project staff to maintain the Fishermen's Coops in operation on some sound economic and financial basis.

TABLE II

COSTS, OUTPUT AND SALES OF EGGS FOR TARA AND TANDA POULTRY COOPERATIVES*

VILLAGE/# GMS	Feed-Quantity	Feed-Costs	Eggs-# Produced	Eggs-# Broken	Eggs-Remainder	Sales-@ 40 PCPA		Sales-@ 45 PCPA		Total Receipts	Profit Margin
						#	Amt. PCPA	#	Amt. PCPA		
TARA - FIRST GROUP= 4 GMS (40 Women)	3,312.5 kg	331,250 PCPA	10,290	239	10,051	7,405	296,200	2,646	119,070	415,270	84,020
TARA SECOND GROUP= 4 GMS (40 Women)	3,240 kg	324,000	12,179	206	11,973	3,374	354,960	3,099	139,455	494,415	170,015**
TANDA=4 GMS (40 Women)	<u>4,967.65</u>	<u>496,765</u>	<u>24,664</u>	<u>457</u>	<u>24,207</u>	<u>11,038</u>	<u>441,520</u>	<u>13,169</u>	<u>592,605</u>	<u>1,034,125</u>	<u>537,360</u>
TOTALS	11,520.15 kg	1,152,015 PCPA	47,133	902	46,231	27,317	1,092,680	18,914	351,130	1,943,810 PCPA	791,795 PCPA***

* Adapted From Table In Rapport Diactivities, Project De Developpement Integre De Tara, Trimestre Du 1 Aout Au 31 Decembre 1984, GON, MDR, Dir. De L'Agriculture.

** Actually, the newer, Phase II AMS made more in 1984 than the first, Phase I Group at Tara.

*** 6,498.30 PCPA per woman if all projects were equally distributed, which they are not given differential production and costs/AM.

Artisan Manufactures

The problems of supply and demand of artisan manufactures have also been discussed above in Section III. Here, it should be noted that the evaluation team can see no immediate economic advantages to the artisans working cooperatively, although they may experience savings if they buy supplies of materials in bulk together, and may make better profits if they agree to some minimum price at which members will sell particular implements. It is not clear to the team why a central workshop at Tara was constructed and equipped for all members unless it was assumed that Tara provided the best local market, and transportation costs for manufactured items were taken into account rather than transport costs associated with bringing the artisans back and forth to Tara. Tanda seems to be a much more likely market, since this "village" is bigger than Gaya, and a number of the Coop members are resident there, and have their own forges there in any case.

Social and Economic Soundness

One of the key variables in assessing success of the various components of the Tara II project is the question of profitability, and economic soundness. Social soundness, in the sense of activities being designed to be appropriate in socio-political terms, and thus more likely to be wholeheartedly adopted, should also be a continuing concern. Unfortunately, a socioeconomic baseline study planned for Phase I was never implemented, so it is difficult to judge the extent to which household incomes have increased due to Project activities overall, or by each kind of activity.

Nevertheless, it is clear that rice production, egg production, and even fishing are profitable enterprises. Increased use of animal traction on fields cultivated under rainfed conditions, as well as on the irrigated perimeter seems to have increased yields, and led to growing surplus production, although no data on this aspect have been collected either. Generally, project staff indicate that "these farmers are millionaires compared to others as well as when their present situation is compared with the pre-project one." They have considerable cash at the household level, according to all accounts.

Yet, it is also seen as a problem for the Project that the rice farmers particularly, as well as the Tara women

poultry raisers, do not seem to be motivated to make more money by investing more labor in Project activities. One explanation given is that they have developed an "assistance mentality" and/or have been "spoiled" by the Project. It is also often said that they are risk averse.

While these may be elements which contribute to "reticence" about project activities, especially dry-season rice cultivation, there are probably other elements that are equally or more important. Among these are the apparent lack of local investment possibilities for the increasing profits already realized from Project participation. Aside from house improvement, which has been considerable, and investment in traction animals that are later fattened and sold creating more liquidity, and the purchase of consumer goods, there doesn't seem to be much to do with more money.

This, in turn, seems to pose a constraint to more effective marketing behavior. Why market the extra paddy at disadvantageous prices when it can eventually be consumed locally? Why produce more paddy when the warehouse is still full? The community has already contributed to building a mosque, and some members have paid for the Hadj to Mecca. Beyond this, it is not known what other social values may have been maximized aside from men taking more wives, and what seems a local birth rate boom.

These are the kinds of data and understanding that should be available and taken into account for Project implementation and redesign. It may not be too late for AFRICARE to find a means of improving data gathering and analysis along these dimensions, to provide more realistic "lessons learned" as well.

General Observations

Overall, the Tara project still has a number of marketing problems to solve. Some of these have only arisen during Phase II. Others might have been foreseen when Phase II was being designed. On the positive side, this Project has more market potential for the output of its various sub-projects than do many PVO and bigger projects in West Africa and elsewhere. Marketing is an aspect which is often poorly planned when micro-enterprise projects are designed and implemented, and the state of the art has only improved quite

recently, with emphasis on income generation rather than on community development and handicrafts as ends in themselves.

V. TECHNICAL ASSISTANCE

GON Technical Assistance

In Niger, projects, whether assisted by WCOs or by other types of donor entities, have a special status. In the case of the Taza Project, additional steps have been taken from time to time by ARD/CAS to ensure that its activities at Taza--in conjunction with GON services--could operate as smoothly as possible. In its first Phase, the Project received considerable GON attention at high levels and was also lucky in having as its Director (from 1977 to April 1981), Mr. Alzouma Souma from the WDR. All informants agreed that Mr. Alzouma has worked long, hard and intensively to make the project a success. Within the limits of common Sahelian bureaucratic constraints, he appears to have been as expeditious a Project Director (PD) as possible over the years. His successor will have a good base on which to build in the remaining months of the second Phase.

Nevertheless, he will have to cope with the local implications of a variety of important policy changes that are taking place at the national level. Given the present implementation structure of the Project, he will be assisted in this task by the ARD/CAS TA specialists and by the staff of ARD/CAS/Niger, by the agents of the various GON services who are posted to Taza, and by the Departmental-level coordinating committee for the Project which operates within Dosses Departments.

Given these policy changes, which imply the demise and reorganization of a number of GON entities that have in the past had an impact on Project activities, there is likely to be some change in the posting and responsibilities of individual agents at the Taza level. But, within the limits of local bureaucratic practice, it may also be possible for the PD to request that specific changes be made.

The current staffing pattern of the Project from the GON side is reflected in Table III, along with the Project staff whose salaries are paid by ARD/CAS and by AID. As may be seen, the majority of the latter category are paid by AID through ARD/CAS, which would, ideally, decide with the new Project Director which of these staff members are really still useful to Project activities, and to the increasingly independent Cooperatives. The evaluation team's specific

recommendations on this score appear in Section VIII. Here, more general comments will be made.

To the extent that the Tara Cooperatives become more and more self-managing and independent from government authority, following the new GON policies, reduction in the number of GON agents posted to Tara would be to the advantage of Project performance. A similar reduction in the numbers of staff whose salaries are provided by APRICARE and AID might also facilitate implementation of the progressive change from "Project" decision-making and operation to Cooperative self-management and self-reliance that is at the heart of the Project's purpose and objectives.

A selective phase-out of GON and local-hire Nigerien staff, if begun now, will be more likely to lead to institutionalization of Project implementation lessons by the people of Tara (as represented through the Cooperatives) than would be a sudden withdrawal of most of them at the end of phase II. Conversely, encouraging the GON to leave so many local agents in place and later to assume the cost of the donor-supported clerical staff and manual laborers would contribute to increased recurrent costs while diminishing the likelihood of increased Cooperative self-reliance.

At the same time, it should prove possible to encourage the Departmental-level coordinating committee to enhance the availability of more senior technicians to the Tara Cooperatives on those occasions when particular problems arise that are beyond the scope of local agents, APRICARE TA Specialists, or the people themselves. Since USAID/Niamey has encouraged APRICARE to desist from paying per diem to senior GON technicians for such visits, the team has the impression that fewer of these visits have taken place. On the other hand, APRICARE, under the terms of its understandings with the MDR and with the USAID, has been encouraged to continue to pay for services--such as those in applied agronomic research from INRAN--which are of questionable use to the farmers of Tara and to the Project as a whole. This seems to be true at the same time that other, more directly relevant services, such as increased agricultural extension and irrigation management advice, are lacking (see Section II).

What is being suggested here is not that APRICARE abrogate its understanding with the GON that it will work through its structures, but rather that the opportunity provided by this evaluation and by the change in GON Project Director be taken to make some changes in emphasis in terms of the type and range of services the GON undertakes to provide in Tara for the duration of Phase II and beyond.

TABLE III
PROJECT STAFFING*

FUNDING SOURCE	GRADE	FUNCTION	STATUS
GON	Conseiller Agricole A.T.A. 2/2	Project Director Perimeter Manager & Ag Extensionist	(Newly Appointed)-GONS Cadre GON (ONAHA)
	A.T.C.	UNCC Credit Agent	(Technically Unemployed)
	A.T.C.	UNCC Credit Agent	Newly Appointed GON-UNC
	Infirmier d'Elevage Livestock Aid	Manager of Poultry Station Poultry Extension	GON SE
	Prepose Peche	Fisheries Extension	GON SE
			GON-MH&E
AID	Assistant Bookkeeper	Project Bookkeeping	Paid by Project
	Typist		"
	Assistant Ag. Extensionist	Rice Culture Record System	"
	Driver	Driver For Project	"
	Driver	"	"
	Guard	Fishermen's Office Guard	"
	Assistant Electrician	Generator Maintenance	"
	Laborer	General Labor	"
	"	"	"
	"	"	"
	"	"	"
Guard	Poultry Station	"	
Data Collector-Meteorology Station	Poultry Station	"	

*Source - January 1985 AFRICARE Progress Report, amended during evaluation. This list does not include two pump operators and two dehuller operators whose wages are paid by the rice Cooperative.

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Long-Term AFRICARE TA Specialists

There are now two TA specialists provided by AFRICARE to the Tara project. One, the Agronomist, arrived in 1984, subsequent to the agreement between the USAID and AFRICARE that an applied research component should be added under the Phase II Project. The other, presently called the Community Development Specialist, is now in the middle of his second two-year contract and has been assigned to the Tara Project since May of 1982. Thus, his services have been made available by AFRICARE since before Phase II began, and he was the major link--along with the GON Project staff--between the two AID-sponsored phases of the Project. As the only TA specialist involved with the Project at the beginning of Phase II he was obliged, essentially, to take on all external TA responsibility for a multi-component effort to which at least one additional component had been added. Further, he and the GON Project Director had been faced with a number of hard decisions during the AID funding hiatus in terms of allocating his services (which may be defined as a scarce resource) in order to keep all of the Project components alive and functioning. By all accounts, this was as successful a process as could be expected given a variety of constraints.

With the arrival of the Agronomist, however, this individual appears to have been given the understanding that his role would, henceforth, be more limited, given the skills the Agronomist brought to bear, and the additional weight being given by AID under Phase II to the irrigated rice component of the Project and to applied agronomic research. The new scopes of work which the Agronomist brought with him in February 1984 appeared to bear this out. The Agronomist had also, apparently, been given an additional agenda by AFRICARE/Washington in terms of potential new activities to be developed in Tanda, a village near Tara in which AFRICARE has been active using non-AID funds (with the exception of training funds from AID's Tara Phase II obligation which are being used for literacy and management training for the Tanda Women's Poultry Cooperative).

It is the evaluation team's understanding that the advent of the Agronomist led immediately to some problems in the allocation of responsibility between him and the Community Development Specialist. Not only were their respective scopes of work closely overlapping, but

their respective seniority in terms of Project decision-making was understood to be such that the Community Development Specialist appeared to have been demoted. Given the fact that it was stressed that the individual who had been chosen by AFRICARE to fill the Agronomist position had a doctorate, and the other TA specialist did not, the GON Project staff seem also to have been led to believe that there was a new, if unstated, hierarchial element introduced into Project implementation.

Although the two TA specialists eventually came to an agreement on an informal division of labor, this was never formalized by a change in their respective scopes of work. Nor have events made it possible for either specialist to carry out all of the activities included in the over-lapping scopes still in effect. At the same time, an attempt to develop a system of work plans for the specialists and for other members of the Project staff was suspended after a few months. This system would have allowed performance to be assessed from time to time, and a reallocation of responsibilities made on the basis of changing local and national conditions and local internal Project imperatives.

The Agronomist has concerned himself primarily with applied agronomic research on which he has worked with INRAN/Niamey, and on meteorological record keeping that was instituted after the 1981 AFRICARE evaluation. He has also participated in the informal council meetings which occur from time to time at the request of the Project Director, the Cooperative leadership, or the Department-level coordinating committee. Further, he suggested and helped to implement the maize experiment that was carried out in the the dry season of 1984. He himself says, however, that he has not had much to do with the management of the Cooperatives per se despite the fact that this is part of his scope of work, except for participating in general meetings to solve problems. Nor does he appear to have been able to do much in the way of providing agricultural extension advice to individual farmers or to the Rice Cooperative, especially in the area of improved water management. His activities with the other Coops have primarily been limited to trouble-shooting along with the Community Development Specialist, the PD and other senior Project staff. He is active in farm-level data collection and has designed some new trials (see Section II above).

The Community Development Specialist has retained from his scope of work virtually all of its elements. That is, he works with all four Cooperatives and with a number of the local GON agents; undertakes marketing trips; undertook a series of trips to explore with the Artisan Coop representatives alternatives to the original activities they had intended to pursue; monitors all other Project activities, and writes reports. He also helped plant the ill-fated maize experiment, and was active with the Agronomist in convincing the farmers to grow a dry-season rice crop this year. By his own admission, especially since the January review, he has had some difficulty in prioritizing his multiple responsibilities and has tried to deal with the various problems that have arisen on a case-by-case basis in order to keep as many of the components going as possible. At the same time, he has been the main channel of communication with AFRICARE/Niger, and with the GON agencies relating to the project aside from INRAN and ONAHA.

A key element in assessing what the impact of these two TA specialists has been is understanding that they are regarded by the Nigerian Project Director as advisors (conseillers techniques) who work with him, his project staff, and with the Cooperatives. He sees them as having played this multifunctional role quite effectively but also points out that because of their range of responsibilities, and the number of problems that have arisen recently, they have not always been able to keep everything covered, and that he has had to step in and fill some of the gaps. As an example, he pointed out that when the decision had been made to get the Livestock agent out of the business of recording egg production and sales, and giving this to the Poultry Cooperative to carry out, he himself had to design the new record keeping system and institute it. That this should have been the case is not really a poor commentary on the TA specialists, but the PD used it as an example of the problem of meeting all priorities and carrying out all necessary tasks. (One might well ask why the Livestock agent couldn't have developed this simple record keeping system).

Like many TA specialists who are regarded by their counterparts as "advisors," the two provided at Tara by AFRICARE and funded by AID are given broad responsibilities, but are not given commensurate authority. In this case, the situation is maintained in part by AFRICARE's philosophy of working through GON

structures and personnel rather than supplanting them. This is a good development philosophy, but as it has been implemented in this case, it has not in fact protected the TA specialists from requests to provide help to the PD, or to substitute for him, in bypassing some of the heavy GON bureaucratic procedures. The AFRICARE/N Representative or AFRICARE/Washington staff on visits to Niger have had to exert similar leverage. In some instances, help has also been sought and received from the AID Project Manager.

Thus, while apparently not questioning AFRICARE's basic philosophy, the TA specialists have had to make a number of decisions about priorities in project implementation, as well as technical decisions, without having been given the necessary authority to see that these decisions were effectively carried out. Further, they see themselves as advisors to the GON Project Director, rather than as advisors to the Cooperatives. The project/cooperative dichotomy which has been inherent since Phase I means that there has been an additional constraint to their effectiveness in supporting a change-over to self management by the Coops.

There have been some instances in which the TA specialists themselves have needed technical advice and support which has not been forthcoming. The relationship between them and USAID/Niamey technicians and centrally-funded AID TDY personnel has been quite distant. This seems to have been the case despite good relationships between AFRICARE/Niger, AFRICARE/Washington and USAID/Niamey. It may derive in part from the fact that this project is, in AID's terms, an OPG, and thus an activity that is supposed to be essentially self-managed.

That the evaluation team, with the benefit of hindsight, should conclude that there have been instances where the TA specialists needed technical support should not be taken to mean that we see them as under-qualified. Rather, our observations are based on the nature of their respective qualifications as these relate to the kinds of problems and issues presented by the project and the circumstances in Tara.

The Ph.D. Agronomist is a plant physiologist who did his initial research on peanuts. He has had considerable project experience in the Sahel, including projects which were producing maize and rice, but has no particular training in irrigation management, or

agricultural engineering. He has worked for AFRICARE for several years, and has apparently had project management duties in the past.

The Community Development Specialist has a B.S. in Botany, and some graduate-level coursework in Horticulture. He has served as an agriculture technician in a horticulture project in Honduras, and as a PCV in Liberia. He has not, however, had any formal or informal training in community development or cooperative management techniques. Nor has he had any formal training in agricultural extension, which is also the case for the Agronomist.

Both, however, have been asked to carry out scopes of work which entail cooperative management and administration, marketing, production agronomics, water management, equipment manufacture monitoring, poultry and egg production, functional literacy, fisheries, road maintenance, and supervision of physical infrastructure. With the best will in the world, and an outlay of considerable energy, neither should be expected to solve all problems related to these activities, or to be able to provide all the requisite economic, management or technical advice for all of these components. The objectives of this project are not limited, after all, to traditional community development or village "animation", but are rather more sophisticated.

Short-Term AFRICARE TA

The proposal for Tara Phase II included provision for short-term TA. In going over project documentation, as well as in assessing present and future project needs derived from the above analysis, the evaluation team assumed that this really meant TA. However, from what we were able to gather, these funds have, to date, been spent for trips of the AFRICARE/Washington Agronomist, who is also the Regional Director for West Africa. In the Phase II period, he has traveled to Niger several times. However, it does not appear that on these occasions, he has actually provided technical assistance, either to the AFRICARE team in Tara, or to the villagers through their Cooperatives, nor yet to the staff of AFRICARE/Niger in Niamey. Rather, his visits have been largely for management or monitoring, as have the visits of the AFRICARE Executive Director.

In the latter case, there have been several occasions when the Director has visited Tara and exhorted the farmers to plant dry-season crops in the interest of the nation, and also undertaken to make it possible for them to do so by promising to absorb the costs of pump overhaul, for example. These have apparently been command decisions which might have been made at a lower level in the AFRICARE management structure, and thus in a more timely fashion, or relayed by telex which would have reinforced credibility of AFRICARE/N staff with project participants.

What has been missing has been the kind of agronomic, managerial, and organizational technical advice that would have enabled the team in place in Tara, supported by the Niamey office of AFRICARE, to solve a number of problems relating to management of the irrigated perimeter, the change-over to self-management for the Cooperatives, and to engage in some serious redesign of the project as Phase II reached its mid-point. Such assistance would seem to be well within the capability of AFRICARE, at least to the extent that, among its staff based in Africa both on other projects in Niger and in other countries, it may well already have on board the kinds of expertise mentioned in Section II for the perimeter, and in this Section for some management and organizational issues relating to the other dimensions of the project.

Even if the appropriate staff were not already on-board in AFRICARE, the organization has had the funds, and therefore the ability, to contract for such short-term TA under the AID-funded OPG. Further, from among the various centrally-and regionally-funded projects with personnel in Niger, the USAID could, if asked, have been able to provide needed human and technical resources.

VI. TRAINING

Both in Phase I and Phase II of the Tara project, considerable attention was to have been given to various kinds of training, primarily for the villagers themselves. Sources of this training were to have been GON services involved with the project UNCC, Animation, Direction d'Agriculture of the MDR, and subsequently ONAHA, INRAN, Elevage, and Fisheries. Another key contribution was to have come from the Functional Literacy Direction of the Ministry of Education. An additional source of training was to have been the TA specialists assigned to the project, although they could not provide direct training to villagers since neither speaks Zarma. Further, at least in some areas, their own qualifications do not match the training needs and plans presented in the Project Paper (Proposal) and the Grant Agreement.

The Irrigated Perimeter:

The irrigated perimeter represents the highest cost and most productive capital "asset" under this project. Yet, although the AFRICARE Proposal and Grant Agreement call for intensive training of farmers in many different rural skills, irrigation (crop, soil and water) perimeter or water management is nowhere mentioned.

This omission in the project's design and subsequent implementation is evidenced by the lack of progress made in improved production and profitability of the perimeter in Phase II. Most of AFRICARE's project resources to date appear to be directed toward relatively small numbers of artisans, fishermen and chicken farmers. The hundreds of perimeter farmers and their extension agents, although benefiting from major investments in irrigation infrastructure, have not received significant training, demonstrative or otherwise, in the agricultural use and management of this investment. Without intensive, demonstrative extension of the principles of crop, soil and especially water management, the Cooperative will be handicapped by limited production, increasing operating costs, and continuous disputes.

The training aspect of the project, presently focused on literacy and cooperative management for the members of the Cooperative, should be substantially expanded to include irrigation management at two levels. First, the ONAHA agent and his two extension agents require

intensive, short-term training in crop, soil and water management. Secondly, at a more basic level, the "paysanes-encadreurs" (demonstration farmers) and farmers themselves need repeated, practical demonstrations in irrigation practices. The training and demonstrations should concentrate on the following technical themes: the costs and problems of pumping; the measurement, control and distribution of water, leveling and maintenance of paddies; the effects of water on the soil and fertility; soil moisture and crop/water requirements; and water-related health problems. The pump operators will also require intensive training in motorpump operation and maintenance as noted previously.

Where to go for such training is a difficult question, and a major issue raised in Niger's recent Irrigation Subsector Assessment. Neither ONAHA nor the national agricultural school offer intensive short courses. For now, AFRICARE should contact other PVO/NGO's both in Niger (e.g. LWR or GTZ volunteers) and out (e.g. VITA). Peace Corps/Niger has also expressed interest in local irrigation training. Ray Norman, an AID-sponsored graduate student conducting irrigation research in the Maggia Valley, is another resource. Institutions which may be helpful for training materials and short courses include the WMS II Project at Colorado State University, the French National Agricultural School (ENSAM) in Montpellier, and University Amadou Bello in Zairia, Nigeria.

In the longer run, if AFRICARE expects to continue its involvement with development programs in irrigated agriculture, whether in small gardens or larger rice paddy systems, it will have to develop its own staff resources with appropriate training as well as establishing training programs for extension agents and farmers.

Functional Literacy

Functional Literacy has been a key element of the Tara project virtually from the beginning. In this, the project corresponds quite directly to the national policy of the GON. In Phase I, according to the documentation, there was considerable success in FL training for men and women, and it is said that the Tara beneficiaries were eager to have more literacy training available for more members of the community. AFRICARE's First Progress Report for the Phase II project for the

period October 1981 - December 1982 (when AID funding had stopped) says the following:

"Adult literacy classes will be expanded to one hundred fifty five men and women working in the Tara Project. In addition to cooperative training, villagers of Tara benefitted from adult literacy training offered by Alphabetization (sic). Demands for more educational instruction increased after the successful introduction of farmer training in rice production. The Adult Literacy course expanded and reinforced knowledge taught under the extension program by teaching reading, writing, and arithmetic relative to farming activities. The first cycle (beginners) lasted one year. These 25 advanced to the intermediate level and an additional 22 men enrolled in the Beginners class. After one year of training, the intermediates moved to the Advanced class and an additional 25 enrolled in the Beginners class. Class size is controlled by space and teachers. The students' motivation is reflected in the high attendance record (89%) as reported by the instructors."

Despite these apparently glowing results--and what appears from the report to be a genuine demand for literacy and numeracy skills on the part of male and female Coop members--during Phase II, a number of problems have arisen. Some of these have to do with availability of instructors, some with design and content of courses, some with relevance, and yet others with the performance of participants (auditeurs) in terms of attendance and skills acquisition.

Part of the background is that functional literacy training was to be extended, under Tara Phase II, to the women members of the Poultry Cooperatives at Tara and at Tanda, as well as continuing the program in Tondika and starting at Momboy Tounga, the two villages where the majority of members of the Fishermen's Coop reside. By this point in time, the blacksmiths (artisans) seem to have completed at least the first cycle of their literacy training; in any event, their President, a former jeweler, speaks French and Bambara quite well in addition to Zarma.

Extending literacy training to three additional villages created a need for more instructors. Under Phase II, there were some difficulties in obtaining sufficiently well-trained instructors through the Alphabetisation

Fonctionnell (AF) Direction of the Ministry of Education, and Project staff sought alternatives.

The alternative chosen was a contract with El Hadj Abdoul Karim Nargoungou, who had been posted at Dosso as the Departmental head for AF during Phase I, and was thus known to Project staff. Since that time, El Hadj had developed a literacy training system called Alphabetisation Rapide (AR), and resigned from the civil service. In brief, this accelerated system places more emphasis than does AF on training of trainers, numeracy, and availability of "post-literacy" materials in Zarma for those who have tested as passing the first stages of literacy and numeracy. It also involves more frequent testing, and starting earlier with arithmetic operations than does AF.

After receiving and approving a substantive and budget proposal from AR, Project staff and AFRICARE/N managers were convinced that this approach was more appropriate for the training needs of Tara Phase II. However, in order to avoid bureaucratic difficulties with AF at the Departmental level, a decision was taken to run AF and AR simultaneously at some training sites. AR training began in September 1984.

Shortly thereafter, however, for a variety of reasons having to do with the change-over to "self-management" for the Rice Cooperative, and allegations of mismanagement coming from the Women's Poultry Coop in Tara, attendance at both AR and AF classes dropped off sharply. Eventually, through a series of meetings including the AFRICARE/Niger Representative, the Tara women agreed to go back to caring for their chickens, but maintained their "strike" against AR/AF, because they claimed that they were too busy, and could not see the point, and were still not satisfied with other matters.

The Rice Coop members, in turn, also began to miss classes, so that overall, AR--which is a closely-timed approach--suffered from a methodological point of view, and in terms of results. What seems to have caused this adverse participant reaction was not the classes themselves, but rather discontent on the part of participants with other aspects of management by project staff. A further exacerbating issue was, apparently, the matter of whether or not the farmers would finally agree to plant a dry-season rice crop in 1985, which led to a considerable amount of dissension, as has been discussed above.

In March 1985, some of these problems were on the way being resolved, and attendance at some AR classes began again. Unfortunately, however, delays had been such that by April 16, only 12 men had finished level VI of AR phase I, and therefore been graduated into the "post-literacy" phase II. Prior to this partial success, all those concerned had tried to find some appropriate incentives to induce the Tara participants to attend class more regularly. There were several discussions about possible kinds of incentives, during which paying small sums for good attendance in the future was one suggestion made.

One way or another, this idea was communicated to the Rice Farmer Coop members, who began to request retroactive payment for attendance, and to threaten to boycott further classes unless they were paid daily. Despite the remonstrances of the AR contractor, the Project Director, and the AFRICARE/Niger Representative--who had been thinking of a prospective bonus or prize payment--in mid-April, while the evaluation team was in Tara, the Tara men were, in fact, paid for their prior attendance in phase I classes on the basis of 150 FCFA per day of attendance.

Once this had taken place, all concerned agreed that a very poor and troublesome precedent had probably been set, since from now on, at least at Tara if not in the other villages, the women too would demand daily payment for attendance. This seemed all the more likely because they had gone back to class only because they were envious of their counterparts at Tanda, who were filmed in a combined AR/AF literacy class by a visiting film crew in February. Since no one had filmed the Tara women, who were not in class, they felt that perhaps there were, after all, some incentives for participation, and little by little started back to class in March/April.

As for the fishermen, some were attending class regularly and some were not. In Momboy Tounga, AF and AR classes go on simultaneously, as they do for women in Tanda. The Momboy Tounga AF instructor says he thinks that he is encouraged to perform well due to what he perceives as competition with the AR program. In Tanda, the AF program does not appear to be going well given the performance of the instructor, who seems herself to be poorly trained. When AF was providing an instructor at Tara, that individual seemed to be following the Ministry's Alphabetisation Intensive (AI) approach, which is quite similar to AR.

After being informed of these intricacies, the evaluation team was mainly interested in whether or not participants were, in fact, becoming sufficiently literate and numerate to begin to have more success in taking over management functions formerly carried out by GON agents--e.g., from Livestock, Fisheries, IMCC, etc. The artisans were left out of this equation since their cooperative activities were in abeyance during our visit (see Section III above).

While we were not able to do any testing ourselves, we observed some testing of first stage lit participants in Tara. From what we could see, they were able to write in Tara from dictation and to do some arithmetical operations well. Due to various problems in program implementation, fewer had 'graduated' from the first stage to the 'post-literacy' stage than had been planned for. Twelve men had, however, graduated, and a further 12 were well on their way to passing the same test.

Interviews with men and women in Tara and Mondry Bounge, however, included their expression of several concerns about literacy training, as did interviews with key GON Project staff.

The fishermen, for example, indicated that while they appreciated their brief Coop training, they were ambivalent about literacy training because the hours were inconvenient, and they still didn't have the skills to do their own weighing of the catch and keep the necessary records for Coop management. (They made this point despite the fact that the fisheries agent is supposedly no longer involved directly in weighing and other record keeping since complaints had been made about his prior role in this area.)

Similarly, the women poultry raisers of Tara--aid by all Project staff to be particularly difficult--indicated very clearly that they are not, in fact, doing their own recording of egg production, and that they suspect that they are being debited for the chicken feed they are actually using. They say they cannot verify this, however, because they do not know how to read the scale and transfer the information to a written form. When asked if this and other real-world examples didn't mean that they were more rather than less motivated to become literate and numerate, they did not respond overwhelmingly in the affirmative.

We go into this matter in some detail because the literacy and numeracy skills envisioned for large numbers of beneficiaries by the end of Tara Phase II are actually fairly critical to effective self-management, cooperative or otherwise. On the other hand, as the GON Project Director pointed out, there are some real difficulties with the GON approach to literacy for rural people. That is, literacy is only offered in local languages rather than French. In urban areas, literacy programs are offered in French and not in local languages. As the PD points out, literacy in Zarma will not actually be relevant to the kinds of interaction that Cooperative management will have to carry out. It is not useful in dealing with merchants or with civil servants (UNC and others) with whom it is difficult to interact on an equal footing to begin with. Similarly, since a number of GON agents assigned to Tara do not speak Zarma, they cannot give out technical information, for example, in Zarma unless they find someone else to translate and write it out.

Even if the premise that functional literacy in Zarma is better than nothing is accepted, the targets established for Phase II are unrealistic given present performance and beneficiary attitudes. Also, it is likely that some of the GON agents who should be encouraging beneficiaries to participate in literacy classes are not doing so because they perceive the possibility that as more and more of the villagers become literate, their own jobs will become more tenuous.

At the same time, the villagers have become used to relying on the agents, and though they frequently allege that they are being overcharged or cheated in other ways, they are still willing to defer to the agents rather than take on the job themselves, at least in some instances.

It is difficult to determine during a brief evaluation what all of the underlying causes may be for what seems to be a diminishing rate of return in the literacy training area. On the one hand, it seems that this, like the agricultural extension area, is one in which insufficiently clear and relevant explanations or sensitization have been provided by Project staff to convince beneficiaries that these programs are worthwhile. On the other hand, with the exception of AR classes, the pedagogic approach seems to have to leave a good deal to be desired. For both AR and AP, not enough thought has been given to providing real-world

experiences of the value of literacy and numeracy--for example in the matter of weighing agriculture produce, or telling time, or keeping records. While AR is much more effective than AF from what we could see, this is an area which could be further improved in the "post-literacy" phase as more participants achieve basic literacy and numeracy skill levels.

A final possibility is that one of the reasons villagers are indifferent toward literacy training is that they are really doing quite well economically and financially without being literate in Zarma. As they point out, discussion of significant problems and issues usually goes on in French when Project staff are involved. Further, as is the case with the Rice Coop, where they really feel they need the skills of someone who is literate in French and numerate, they prefer to hire someone rather than taking on the job themselves. It is possible that this is actually the best adaptation for these people at the present time, although in principle, functional literacy is, or should be, a desirable program.

Cooperative Management Training

The matter of management training, and associated problems, is closely related to that of functional literacy training. In Phase I of the project, the artisans received some coop training from UNCC, as did the officials and some members of the Rice Coop. While the content and duration of this training may have left something to be desired, at least some the basic principles of cooperation and the rudiments of an understanding of credit--loans, repayments and "service charges" or interest charges--seem definitely to have gotten across, at least to these two groups. The fishermen also indicated that while at first they hadn't a clue about what cooperatives were, or why they should join one, now they felt that this had "increased their dignity and their ability to deal with others on a more equal footing."

Under Phase II, it was foreseen that the Women's Coop members in Tara and Tanda would receive similar training, and that all the Coops would get additional training in management and cooperation on an intensive basis for each of the three years of Phase II. At the time the Phase II was designed, and when implementation with AID funding for this training component finally began in January 1984, UNCC was still the

officially-recognized source of such training. In due course project staff, including the UNCC agent, developed a proposal for "cooperative redynamization" training, which they submitted to UNCC. They also submitted a budget estimate.

UNCC accepted the proposal and requested prepayment for the project. The prepayment, in the amount of 956,000 FCFA (approximately \$2,400) was made by the Project Director although, between the time the funding had been authorized by AFRICARE and the time the check was sent to UNCC, AFRICARE staff had voiced additional reservations about the content agreed to by UNCC, and had asked that the check not be sent.

In the event, due to the evolving demise and reorganization of UNCC, only the Tanda Women's Coop received any coop management training from the UNCC under this funding. The rest of the program has never been started, despite numerous letters and requests from project staff and AFRICARE. Finally, UNCC has simply been asked to return the balance of the funds. After a period of over a year, neither the funds nor the complement of training has been forthcoming from UNCC or its successor agency, the UNC.

AFRICARE, and the local UNCC agent, after this experience, decided to try to provide some management training on their own. Fishermen in Momboy Tounga got some of this training from the local UNC agent. Further efforts were still under discussion when the evaluation team visited Niger. The newly-posted UNC agent also began to give some training to the men in the Rice Coop, but mainly in Hausa, since he is not a Zarma speaker. (At this point, AFRICARE was not yet aware of the presence of a CLUSA team provided to UNC under the AID-funded Agricultural Production Support Project. Now that this linkage has been made, it is possible to foresee additional progress in this area.)

There remains the outstanding issue of the content and style of the management training to be offered, which should be based on: 1) a realistic understanding of the level of skills and comprehension already available among the leaders and members of each of the Coops; 2) the kinds of tasks they have already been asked to undertake and their present performance; 3) the likely future of cooperation in Niger with the advent of the Societe de Developpement model, and 4) the economic situations of the four existing Cooperatives. Without

this kind of predesign consideration, there is a real risk that these villagers will continue to get more in the way of rhetoric than skills, which will probably act as a disincentive to further strides in real, as opposed to hypothetical, self-management.

Training for GON Project Staff

Training can be used to fulfill a number of objectives. In the case of this Project, it should be used both as an end in itself--that is, for the skills and empowerment that it can bring--as well as to provide incentives and rewards for work effectively performed. As we indicated in Section V above, the quality of GON staffing of the Tara project has been variable, but at least some of the agents in place at Tara have made considerable efforts implement their assigned components of the project, if often with considerable prompting from the TA specialists and the Project Director.

The latter, however, was quite frank in pointing out that applying negative sanctions to those agents who did not perform well was largely beyond his manageable interest, given that they all report not to him, but to their respective services and/or ministries. While he can and does write "notes de service," which are copied to their Departmental superiors, these are not in themselves sufficient to induce improved performance or reassignment. It is very rare, however, for further steps to be taken. Only one agent seems to have been reassigned for poor performance in the history of the Tara project, and this was for moral delicts rather than technical ones.

The majority of agents, then, simply stay on. Their own services do not provide the resources or opportunities for them to attend workshops or seminars, to do coursework by correspondence, or otherwise to upgrade their skills. Such opportunities do exist in Niger and in neighboring countries (see below), but for some reason these have not been made available to these particular agents.

Since there is little in the way of incentive pay, training can serve a double purpose as an incentive and as a reward. Here, we focus on training needs in connection with the irrigated perimeter, but we also believe that if CLUSA is approached for assistance with the cooperative management training component, the UNC (C) agent(s) in Tara should be given this opportunity to

improve their skills if at all possible. Similarly, additional training should be provided for the project-funded bookkeeper, as well as for the Coop-funded one. Here, training can be arranged with the Sahel Regional Financial Management Project team in Niamey, or on a less formal basis, with AFRICARE financial management staff if their time permits.

On-the-scene training in Tara can also be provided for agents and villagers alike by AFRICARE staff assigned to other projects, the AFRICARE/Niger Representative (time permitting), staff of the other AID-funded projects or other donor projects (ICRISAT), and short-term AFRICARE TA personnel. Care should obviously be taken to design and coordinate such training over the remaining 14 months of Phase II so as to avoid overload, but this may be the most valuable component of the project to stress during the period, all things considered. Fortunately, there are ample funds remaining in the budget line item for training; some of the sources mentioned could provide services free to this project.

Training for TA Specialists

The following discussion is based on the assumption that the two TA specialists will remain in place until the end of Phase II. In the case of the Community Development Specialist, this would mean a gap of about three months between his departure and the end of Phase II. For the Agronomist, there would be no gap.

Aside from the need for training in water management for the ONAHA perimeter manager, there is also a perceived need for a short-course in water management for the Agronomist. As was mentioned above, there is a suitable course given in English at Amadou Bello in Nigeria, from which the Agronomist could benefit. Appropriate short courses in French for the ONAHA agent may be more difficult to find, although complementary courses in project management and some training in farming systems research methods are available in West Africa through a number of sources. WARDA in Monrovia also has a training division, which can meet some needs for the ONAHA agent's training in rice-related technologies.

Another alternative would be for training to be given locally, to the TA team represented by the Agronomist and the ONAHA perimeter manager. This could be arranged through the Water Synthesis II Project in Niger, and/or through the good offices of the ICRISAT Farm Management

Specialist, who has considerable experience and formal training in irrigation management as well as in animal traction equipment applications. Local training options could either be substituted for, or complement short-courses elsewhere, with the latter being potentially the most beneficial. In that case, the local training could be carried out on the perimeter at Tara, and could be designed to include the Rice Cooperative farmers--either all the members in a series of groups or else the "demonstration farmers" who were named under Phase I, but whose anticipated demonstration role in Phase II seems to have been de-emphasized.

For the Community Development Specialist, short-courses in credit and cooperative management could probably be made available through the CLUSA team in association with the APS Project. On the assumption that his comparative advantage for the duration of his contract is to focus his TA efforts on credit self-management and cooperative marketing approaches, he should be given an opportunity to upgrade his skills in these areas as soon as possible, either in Niger, elsewhere in Africa, or in conjunction with leave in the U.S. Again, such training could be complemented by related training that would be designed for selected members of each of the four Coops. For the TA specialist, training could be in French or English, while for the Coop members, it would have to be conducted in Zarma.

VII. AFRICARE PROJECT MANAGEMENT

AFRICARE is a private, non-profit organization that "works to improve the quality of life in rural Africa. It conducts self-help programs to cultivate the land's full potential, develop water resources, provide health care, teach literacy and deliver emergency assistance to refugees." A major tenet of AFRICARE's philosophy or development approach is as follows:

"AFRICARE projects are African projects. Responding to local initiatives, AFRICARE cooperates closely with African planners, field experts, village leaders and workers--complementing rather than preempting local resources and skills. AFRICARE marshals only the technical counsel and funds that may be necessary to sustain and encourage African efforts at the national and grassroots levels. Financial assistance is applied in stages carefully monitored by AFRICARE and African project managers."

This philosophy is important background to an assessment of AFRICARE's management performance under this Phase II Project. Yet, this performance should also be assessed in terms of more mundane examples of management effectiveness in seeking to achieve project objectives. Under the Phase II Project, these objectives were as follows: "to increase the productive capability and economic opportunities of the people of Tara... through the following interventions:

- Exploitation of existing irrigation systems to increase rice production;
- Development of self-management and economic independence among local cooperative groups, and
- Practically-oriented technical training for producers, artisans and cooperatives."

We have already discussed TA and training provided by and through AFRICARE in some detail in Sections V and VII. Here, we will make some observations about more general features of AFRICARE's implementation effectiveness under Phase II.

Internal Communications

Although AFRICARE/Niger is a small unit of a relatively small PVO, it is presently operating eight projects in

Niger with a core staff of two professionals--the Representative, whose background is in management, and a Financial Management/Administrative Specialist with a Masters degree in International Development who is assigned 90% of her time to one project. They, in turn, are supported by one secretary and a clerk. The evaluation team was informed that the operating budget for core staff from AFRICARE/W has never been increased despite the increase in the number and complexity of projects in implementation and design. Only recently have administrative or management staff positions been written into project proposals in order to supplement these minimal core staff resources.

Despite the small size of its core staff in Niamey, AFRICARE is a layered organization. Key management decisions--and financial ones--are made by AFRICARE/Washington, often on the basis of brief telexed communications, and sometimes, apparently, despite them. Visits from the Executive Director and from the West Africa Regional Director, both based in Washington, do occur on a fairly regular basis. At those times, some further command decisions about implementation of this and other Niger projects are made after consulting in-country staff. Personnel decisions are made in Washington, usually without input from the respective country Reps.

Down the organizational ladder, there are the TA specialists collaborating with GON cadres to implement the projects. As was noted in Section V, these specialists accept the AFRICARE philosophy of working through their GON associates. While this is a good philosophy it also means, in the Tara instance at least, that they have no decision-making authority, although they are constantly called upon to make decisions and most recently, to take and implement them in an atmosphere of crisis. This apparent "crisis mentality" seems to derive in this instance from several factors:

- Pressure from AFRICARE/Washington to accomplish all the original project objectives despite changing circumstances;
- The pyramidal structure of relations among the TA specialists, AFRICARE/Niger and the GON project staff with occasional AID intervention; and

- The persistence of obstacles to efficient project implementation deriving from GON policy changes at the national level and from the elaborate, layered GON bureaucratic structures, and resulting poor communication links between and among these implementing agents.

In recent months, additional pressure has come from the combination of USAID/Niamey and AFRICARE/Washington views that the Project's success was seriously jeopardized by the reluctance of the Tara Rice Coop members to plant a dry-season rice crop. The negative Joint Six Month review which occurred in January 1985 seems to have resulted in a considerable outlay of emotion on the part of all parties concerned rather than in a more relaxed and considered analysis of perceived problems and possible solutions. This, in turn, resulted in an example of problems of communication effectiveness within AFRICARE itself, as well as between AFRICARE and the Niger AID Mission.

Without the participation of the TA specialists or the GON Project Director, the AFRICARE/Niger Representative, based on conclusions that had been reached during the January review, telexed AFRICARE/Washington with the suggestion that funds be suspended for project activities except for those that had already been funded in advance (actually a majority of activities). When the project-level staff were informed of this step, they (understandably) took it as a unilateral expression of no confidence in their effectiveness and that of the villagers under what is supposed to be a self-managed cooperative effort, and were thus considerably demoralized. They traveled to Niamey with the PD to put forward their point of view.

Subsequent discussions within AFRICARE/Niger, and with AFRICARE/Washington led to the decision to continue funding. In fact, AFRICARE proceeded to spend considerable funds to overhaul the pumps so as to encourage the Rice Coop members to plant the second crop. AID, having raised this issue to a high level of visibility, on the basis of its review of this aspect of one component, then seems to have withdrawn again to its more usual "hands-off" approach to the Project.

While this is a somewhat unusual instance, it is an example of the kinds of communication problems that have led to some anomalous decisions about the implementation of Phase II of this Project, and it is the evaluation

team's impression that the organizational features that led to this occurrence have not been modified since. The type and amount of management decision-making decentralization within AFRICARE to the Niger Representative's level, and from there down to the project staff level that would make implementation smoother and more efficient has not taken place.

Financial Management

A similar problem exists in terms of project financial management. Tara II is not subject to the certification requirement of Section 121 (d) of the Foreign Assistance Act "because local cost financing will be disbursed and accounted for directly by a Private Voluntary Organization" (see GA Action Memorandum, August 25, 1983.) AFRICARE has, in good faith, set in place an accounting system for the Project which provides the basis for effective financial management. It has also recently hired a bookkeeper for the project in Tara, who has had to be trained from scratch by the Niamey office staff. This is indicative of an attempt to ensure that project funds--both from AID and from other sources--are properly allocated, disbursed and accounted for.

Despite these efforts, the tenet of working through GON structures and civil servants has meant that there has been room for a certain amount of "creative financing" activity at the Tara level. While the AFRICARE/Niger Representative has the authority to authorize disbursements under the project that are actually then made by the PD on the basis of specific approved proposals submitted by him, the local TA specialists do not have any sign-off authority or other financial management involvement. Checks for disbursements are signed by the PD and counter-signed by the Sous-Prefet at Gaya.

In most instances, this system has worked well enough. However, there have been a number of instances in which the PD has reallocated funds among line items beyond a 15% fungibility limit, and without the prior authorization of the AFRICARE/Niger Representative. This has occurred, for example, with regard to house renovations and salaries. The check that was sent to UNCC to pay for the cooperative training that is still awaited used up funds that should have been reserved for the monthly salaries of non-GON project staff.

When these kinds of problems have arisen, the AFRICARE/N Representative has had few options for action. Either she could reduce the amount of funds authorized for disbursement in the next month of operations, which she has sometimes done, or she could "find" the extra money to make up the difference in the appropriate line items. This, too, has been the solution in some instances. Fortunately, there has been enough flexibility in the project budget, and a large enough pipeline, that no real crunch has occurred for any project component. However, it is also true that despite a system of intended safeguards, the PD has sometimes been able to make non-authorized disbursements and to overdraw the commercial bank account.

A more serious difficulty has arisen concerning the various project credit accounts with the CNCA. (Here, AFRICARE is only one of many clients of the CNCA presently finding itself in a confusing situation.) The PD has been in charge of monitoring these accounts with the CNCA. These number either four or, possibly, seven or eight, depending on whose information one accepts. The accounts are for seasonal ag input credit for the Rice Coop, loan guarantee funds, animal traction equipment credit, the Fishermen's Coop loans, the Poultry Coop loans, the central poultry station revolving account, and amortization of the pumps and the dehuller. Presently, all of these accounts are frozen and being reviewed.

By having delegated the monitoring of these accounts to the PD, AFRICARE may now find itself at risk of losing some 3 million PCFA (approximately \$7,500, or one-tenth of the total AID obligation for Phase II) because the loan guarantee fund is frozen and CNCA may make representations that because various of the other accounts are in the red, these funds must be used to make up for those deficits. Meanwhile, no interest has reportedly ever been paid by CNCA on the funds in the loan guarantee account, although at one point, these were up to over 7 million PCFA.

It was only in the process of the joint project-CNCA credit review that AFRICARE--and the evaluation team--became aware that some of the Coop credit accounts were allegedly seriously in the red. Prior to that time, they had been informed that all the Coop accounts were 85% paid up at minimum, since this is the pre-condition for withdrawing funds. This is an exceptionally good repayment rate for a Nigerien Coop, especially during a period of drought.

There is no reason to believe that funds have been permanently taken from the project by any of the project staff. However, what we have chosen to call "creative financing" at the project level in Tara has now led to considerable confusion and some risk of loss at the CNCA level. Insofar as the project staff are, in a sense, the fiduciary representatives of the Cooperatives, which are only really beginning to become effectively self-managed, this is a regrettable precedent, and one which might have been avoided by more intensive monitoring on AFRICARE's part. However, greater monitoring intensity for financial management is beyond the present staffing means of AFRICARE/Niger and should therefore probably be delegated to the TA specialist in charge of Coop Development. (The AFRICARE/Niger Representative has just requested an internal audit from AFRICARE/Washington.)

Infrastructure

Outside of the infrastructure associated with the irrigated perimeter the physical works completed in other AFRICARE activities include eight 30-m² chicken houses (four each in Tara and Tanda), a large-diameter, 15-m deep well in Tanda, minor repairs to two local roadways, and renovation of several houses and the Coop office/warehouse.

This has all been accomplished relatively well and inexpensively. However, it does appear that better monitoring of the various local jobbers and contractors involved is warranted to ensure quality and quantity control of workmanship and materials. A quick inspection of some of the work indicated that there is some room for improvement (e.g. screens over the ventilation ports in the warehouse and exposed wiring at the guest house). Since the AFRICARE Representative and Financial Management Specialist are in Niamey, more effective control over construction expenses (as well as other expenditures discussed elsewhere) would probably be attained by giving the on-site Cooperative Development Specialist a role in monitoring these expenditures.

A note concerning the wells constructed under both phases of the AFRICARE project is also appropriate. These wells were destined to serve the poultry sub-projects, yet they have also given their respective villages, Tara and Tanda, an assured source of clean water throughout the recent drought. The large numbers

of women drawing water from the wells throughout the day are testament to the value of the wells. This project activity has no doubt had a substantial impact on both the overall health and sanitation in the villages as well as on the labor expended for water hauling during the dry season.

With this unforeseen positive impact comes a serious responsibility. To protect the wells from contamination, AFRICARE should insist on control of the method used to draw water. Although a hand/foot pump would be the safest alternative, the lack of any assured servicing precludes pump installation at present. A simple solution would be the installation of "drawbars", iron pipes imbedded on the well walls in a circle, or in a four-square arrangement on the well wall. Water would then be drawn up by rope over these, keeping the women off of the well wall.

A set of the traditional ropes with containers should be tyed to these bars, and the entire length of rope and the container should be left hanging in or over the well at all times. No children should be allowed near the wells. A small fee system might be instituted by the Cooperative for cleaning and maintenance.

There are a variety of other structures that were constructed and equipped under Phase I, which are rarely used in Phase II. These include the artisan's center at Tara and the nearby fisherman's offices and freezing/drying facilities. The drying/smoking facility has never been used, but is still in good repair. Apparently, projections for smoking fish were made on the basis of redundant statistics about rates of consumption of smoked fish in Niger and elsewhere in West Africa. Since the drought, there has not been sufficient "surplus" fish available from the Cooperative catch to warrant drying or smoking. Similarly, the storeroom and offices--as well as the freezer--for the fishermen seem disused and the furniture has been "reallocated". The ice-making machine and the generator that was installed to power it are both out of service; it is said that there has been no need for them, again because of the relatively small catch of the past two fishing seasons.

Funds were provided under Phase II to renovate existing housing for agents at Tara, and to construct some new housing. A brief visit indicates that most of this has been accomplished, and AFRICARE staff informed us that

in fact, additional funds had been spent on renovation of the Project Director's house at his request. Still, the construction budget is on track.

Vehicles

A variety of vehicles was purchased by AFRICARE under Phase I, both with AID and non-AID funds. There has been considerable difficulty beginning in Phase I and continuing to the present, in maintaining these vehicles. The worst cases have been the Community Development Specialist's project vehicle and the seven-ton truck that was given to the Rice Cooperative for marketing rice in Niamey before the dehuller was purchased and installed. When the Coop received a waiver to dehull its own paddy, the PD and the TA Specialist decided that this truck was no longer needed by the Coop. At about that time, it broke down and was sent for repair to Niamey. Having been 'repaired' once, it broke down as it was being delivered back to Taza. This happened again, and the truck has still not been repaired and put back on the road three years later, since AFRICARE's view is that the garage is responsible for making the repairs without further charges, and the garage maintains either that parts are not available and/or that the owner does not have sufficient funds to buy the parts.

A similar situation obtains for the CD Specialist's project vehicle, which was sent for repair to the same garage. The Agronomist's project vehicle is badly in need of additional repairs, although it is less than two years old. The PD's service car and the Toyota pick-up appear to have caused fewer maintenance problems.

Although vehicle maintenance is an endemic problem in Niger as elsewhere in the Sahel, AFRICARE's bad experiences are somewhat extreme. The fact that the truck has been allowed to remain out of service for so long seems particularly counter-productive since the decision had been made to sell it to recoup the cost of repairs. Since that decision was taken, however, the price as well as the availability of diesel has changed, so there is a possibility that the truck will be kept, once it has finally been repaired, and will be shared by the Rice Coop and other AFRICARE/Niger projects on a pro rata basis. In this way, a savings could be realized on the procurement at Dosso of diesel for the Taza project, and the considerable stock of paddy in the Coop warehouse could be brought to a suitable market before the harvest of the dry-season rice crop takes place.

Project Reporting

As was mentioned in Section V, various internal reporting systems have been used over the Phase II LOP and before. AFRICARE produces quarterly and annual activity reports for AID and its other donor groups, and annual activity reports are also prepared by the GON Ministry of Rural Development, Direction de l'Agriculture, based on reporting from the GON Project staff. In addition, at various points, the TA specialists have prepared either weekly, monthly and/or quarterly reports. These, in turn, are used as the basis for the quarterly and annual reports prepared by the AFRICARE/N Representative.

This seems to be a heavy reporting requirement for a project of this size. More effort might effectively be put into establishing a useful, simple monitoring and reporting system at the project level, which would facilitate both planning and ex-post assessment of progress. Such a system would also have value as a training tool for the GON project staff. Even if performance assessment is effectively beyond the manageable interest of AFRICARE as far as GON staff are concerned, AFRICARE should be carrying out more formal assessments of the performance of staff whose salaries and wages are paid for by AID and AFRICARE, to improve personnel management.

Reintroduction of such a monitoring and reporting system would aid all parties concerned to prioritize activities, plan for contingencies, implement needed redesign decisions and execute an effective phase-out plan for the AFRICARE staff and financial support.

Collaboration with Other Projects

AFRICARE is operating eight projects in Niger alone. Some of them have components and staff which complement needs of the Tara project. There are also a number of projects in the USAID/Niamey portfolio which provide expertise that is relevant to solving some of the technical and managerial problems being experienced at Tara. Finally, there are personnel in Niamey and elsewhere in Niger from centrally-funded AID projects whose skills could be borrowed by the Tara project to improve implementation effectiveness, as could skills of AFRICARE personnel posted elsewhere in West Africa.

Evaluation teams often turn up information about ways in which improved collaboration among projects can take place in a given project context. Often, the reasons for lack of such collaboration derive, at least in part, from AID's own internal organizational behavior. This is particularly true regarding centrally-funded projects, which are not really locally managed or seen as part of Mission's own portfolio.

While relations between USAID/Niamey and AFRICARE are good, some communication gaps remain. AFRICARE staff indicate that the USAID has always been responsive when asked to provide technical or other support. However, AID doesn't have a system by means of which it can keep AFRICARE regularly informed of technical and documentary resources that could be made available to the Tara project. AFRICARE staff in the field are quite remote from the USAID, and AFRICARE/N staff are quite over-extended as it is.

Hopefully, this evaluation process will yield better and more complete communication between AFRICARE and AID concerning resources that can readily be made available at no additional cost to the project. Examples are:

- CLUSA technical advice on cooperative management, including financial and credit management;
- SRFM project technical support in project and sub-project accounting;
- Water Management Synthesis II technical support for water management organizational improvement for the irrigated perimeter;
- Program Office support for revised cost/benefit analysis and IRR calculations given new project circumstances;
- ADO support in acquiring appropriate French-language technical documentation suitable for use by GON project staff and the Kolo Institute students who are sent to Tara to do project-related applied research.
- Support from the ICRISAT project training component, for dry-land and irrigated farm management aspects of the Tara project.

All of these entities are working with the GON in the agriculture sector, so we are not suggesting that AFRICARE "preempt local resources and skills", but rather that they be assisted by the USAID to take better advantage of those that exist.

VIII. CONCLUSIONS AND RECOMMENDATIONS

The preceding sections of this report have presented background and assessments for each project component in some detail, in response to specific questions in the evaluation scope of work. This was done so as to provide AFRICARE, the GON project staff, and AID with a thorough, and hopefully objective, external review of project progress and problems. The evaluation team felt that sufficient detail should be provided that readers from each of the parties involved in project implementation could see on what facts and reports the team based its observations.

Here, it remains to try to answer the broader evaluation questions posed in the scope of work, and to make recommendations that correspond to our analysis, and which we hope will be useful for some selective mid-course correction and more effective phase-out.

Irrigation Development

The conclusions of the agricultural engineer's assessment of irrigation development are included in Section II. His recommendations for that project component regarding training appear in Section VI, and those on other infrastructure design, construction and maintenance are found in Section VII. His overall recommendations follow.

- Concentrate efforts and funds on perimeter operations rather than new earthworks or infrastructure;
- Carry out biannual canal maintenance with work crews hired by the Cooperative and closely supervised by ONAHA technicians;
- Upgrade pump operations with fuel controls, recordkeeping, checklists, appropriate tools and materials, and training for operations;
- Introduce oxen-drawn scrapers and leveling boards for small-scale earthworking, leveling and puddling operations;
- Install with ONAHA assistance gauges to measure water flow on principal canals and begin gauging farmer water use;

- Set up and monitor several demonstration plots within the perimeter and test variations in cultural practices as well as different crops;
- Monitor and maintain complete records on the farming practices of a sample of representative farmers in the perimeter;
- Limit applied research activities to the farm records (noted above), meteorological data, and liaison with and support of INRAN testing;
- Train ONAHA and extension agents, and set up training/extension programs for farmers in irrigation (crop, soil and water) management;
- Develop AFRICARE staff expertise in irrigation through short courses in the U.S.;
- Improve construction and expenditure tracking through active involvement of project technical assistants, and
- Protect new wells with an improved system of drawing water.

Organization Development

The evaluation scope of work asks whether the people of Tara, particularly farmers, are actively participating in the management of their affairs. Overall, the answer must be affirmative. Since Phase II began, there has been an effort to transfer management--and costs--of project component operations to the four Cooperatives. This effort has been somewhat variable in its extent and effects, however. For Rice Cooperative, sometimes referred to as the "mother cooperative," the majority of costs of rice production and associated irrigation and denulling have already been transferred from the project. The key exception here was the cost of overhauling the pumps. Now that this Coop has hired its own member-bookkeeper, it is also beginning to play a more active role in credit management at least to the extent of keeping its own records, and is taking more responsibility for marketing than was formerly the case.

As far as credit management is concerned, there are still some anomalies, and the project staff still takes an active role as far as dealings with UNC and CNCA are required. As was noted above, the situation of

CNCA--and the new UNC--is ambiguous at present. It may be as well that project staff "run interference" for the Cooperative leadership and members with these national and departmental-level structures until broad policy issues are resolved, and until the credit review has been completed for all the Tara accounts with CNCA.

Fundamentally, however, more effort should now be put into preparing this Cooperative to manage its credit and other financial affairs itself. This kind of devolution of responsibility will be difficult in the circumstances obtaining in Niger, given the strongly interventionist history of the GON in cooperative organization and execution. Added to this history are the habits of the project staff, and of the Coop members themselves, which have led to continuing reliance on the project for advice, administration, decision-making and funding. As we suggested above, the way to accelerate the transition to more genuine and complete self-management for the Rice Cooperative is to:

- Provide more and better-designed training to Coop leaders, the Coop bookkeeper, and other members;
- Provide skills upgrading for the GON cadres responsible for working with this Cooperative and the others;
- Progressively reduce the number of such cadres assigned to the project as this transition takes place;
- Consider expanding membership through reallocation of existing shares or creation of new shares by re-measuring and dividing some of the paddies (plots) on the perimeter.

The Tara Poultry Cooperative is less far along than the Rice Coop in the self-management area. On the other hand, it seems to have broader membership participation in discussing management issues and making representations to project staff than does the Rice Coop. It is said that the older women who were formed into GMS earlier in the project are particularly recalcitrant. However, they expressed a number of reasonable concerns to the project evaluation team. Those younger women who were organized under Phase II may be less vocal, but seem to share the views of the older women; they also went "on strike." This may only reflect the normal relationships of juniority and seniority in societies of this sort, or may mean that the problems are real.

What is not clear is why the women in Tanda are more activist. The AFRICARE staff believe that the villagers in Tanda are generally "more dynamic" and suggest that this may be partly because they are only at the beginning of developmental activities, and are thus more motivated and have not encountered many implementation problems. Also, it is thought that they have not yet developed an "assistance mentality." We might add that the project staff is also probably less tired of working in Tanda than they are in Tara after many years.

During the remaining months of project implementation, the following steps toward improving self-management effectiveness should be taken with the Tara Women's Poultry Coop:

- Meet again with all the members to clarify what is involved in self-management, and specifically in record keeping, credit and repayment, poultry management, relations between the GON project staff and the Cooperative;
- Ensure that this and subsequent communications occur in Zarma, and that French not be used when decisions are being taken that are supposed to be participatory;
- Check carefully that Coop members are not, in fact, being charged more than their share for chicken feed and medicines;
- Consider what may be done about the central poultry station and its future relationship to Coop poultry production, if any. The present situation does not conform to the project design and does not seem to make any positive contribution to project activities in Tara or Tanda;
- Take whatever steps possible to limit the involvement of the Livestock agent and his assistant with the Coop, unless they can be made to carry out their functions as these were originally designed, and for which they are ostensibly there;
- Provide better or more realistic incentives for the Coop members to start again actively to participate in functional literacy training; if the older women continue to refuse to attend, either reinforce attendance by the younger women and have the older women's section hire a literate and numerate younger woman to do the record-keeping, or consider disbanding the section comprised of the older women;

- Continue to make representations to the Service d'Elevage to refund the money paid for the diseased chicks, or provide replacement chicks free of charge;
- Improve the cost/benefit analysis for the poultry operation to make sure that it is actually profit-making, and explain these principles and conclusions to the members;
- Accelerate the investigation of ways to mix feed locally to decrease input costs for the poultry production component;
- Provide appropriate management training as soon as possible, and
- Progressively devolve management to the women themselves, even if their decisions are not optimal at first.

We discussed the situation of the two Fishermen's Cooperative sections in some detail in Section III. Here, we will make limited recommendations:

- Consider disbanding these cooperative sections if possible once loan repayments have been rescheduled; social pressure to repay based on cooperative membership seems illusory, and there is no convincing economic argument as to why the fishermen should be in a Coop under the present conditions of scarcity of fish;
- If this is not possible politically, reinforce literacy training, increase cooperative management training, and encourage the Tondika Coop section to hold new elections;
- Review marketing approaches and prices, as well as possible marketing improvements, cooperative or otherwise, and
- If time and human resources permit, explore the possibility of designing a fish pond component to complement the irrigated rice production as is being done elsewhere, and discuss the outcome of such analysis with villagers and the Fisheries Direction of MHE.

For the Artisans' Cooperative, the discussion has also been quite detailed in Section III. Here, there has

been no "trouble," but nor is there much efficiency created by cooperative work, as opposed to cooperative purchasing or marketing of manufactured products. Emphasis should be placed, starting now, on:

- A new feasibility study for production of spare parts for traction equipment to be made individually and sold individually, but for which primary materials would be purchased collectively;
- Reconsider what kind of additional training may be required for the 12 artisans already included in the Cooperative, as well as the basis on which others could become members of a collective buying group through the Cooperative, if any; and
- Explore costs and benefits of producing improved hand tools and aluminum pots, as well as equipment for use with animal traction to improve paddy leveling.

Marketing

Marketing has become a weak point for the Rice Cooperative only recently. Marketing of egg production has been quite successful, although additional options for the future should be considered, given potential problems with the "international" system currently used to sell the majority of the eggs to Benin.

So far, fish marketing has gone well enough in a situation of scarcity, except that there are some questions about prices actually being received as opposed to those that are being recorded. As mentioned already, there does not seem to be much convincing logic for the fishermen to be marketing cooperatively under present circumstances. Further, the cost of bringing them and their respective catches together in one place for weighing, and then taking their marketing representatives, the Fisheries agent, and the fish to market in Gaya, and then bringing everyone back again is considerable, and is presently being borne by the project.

There is enough discontent among the fishermen as it is, so it would be difficult at this stage to induce them to absorb these transport costs. Eventually, if the Fishermen's Coop sections are to be maintained, however, these costs will have to be taken on by them and the transport system re-examined. It is for this

Cooperative's account that the project is still most heavily involved in marketing and other management aspects, to the probable detriment of other, more productive components.

Marketing of artisan's manufactures can probably be accomplished best by the individual artisans in their respective villages rather than by the Cooperative at a central place in Tara. On the other hand, there are some sunk costs for the artisans' center at Tara that should, if possible, be capitalized on. The center might be made into a central boutique and storehouse for items individually produced to be sold through the Coop, but the relative costs and benefits of such an approach should be examined carefully before any steps are taken, and artisans should not be coerced into cooperative marketing.

To solve some of the existing marketing problems, and to avoid the occurrence of others over the remaining LOP and beyond, the following steps are recommended:

- Include marketing issues in the management training for all Coops;
- Provide some crash marketing training for the CD Specialist, either in Niger in association with CLUSA, or in the States in connection with his approaching leave;
- Finish repairs to the Rice Cooperative's truck, and provide for cost-sharing between that Coop and other AFRICARE projects in Niger for future operating costs;
- Encourage the Rice Coop to call in its debts from sales to local civil servants and GON agencies on credit, and help the Coop to find ways to market this dehulled rice for cash on a least-cost basis in the future;
- Encourage the Coops to set up marketing committees, since there is presently no marketing structure internal to them; all marketing for the Poultry Coop is being done by the project, and though the fish are marketed by Coop members this is still done with significant project support;

- Through training, assist Coop members to begin to make marketing projections for various outputs, since they are producing large amounts of paddy, rice, hulls and eggs which require markets outside the Tara area;
- Analyze the relative benefits of purchasing a new dehuller, projecting these as well as costs over the next five years, taking into account relevant policy changes and market liberization as well as probable availability of credit for such a purchase;
- Help the Rice Coop to assess the price at which it presently accepts paddy from members at harvest in terms of the price it receives for the paddy once it has been stored and allowed to dry out; there seems to be a possibility that there is an inappropriate internal income transfer going on that is to the detriment of the Cooperative's financial situation.

Physical Infrastructure:

Construction of physical infrastructure outside the perimeter is essentially on track, and some funds remain in the construction line item in the project budget. However, maintenance has posed problems, especially for vehicles and other motorized equipment. It is recommended that AFRICARE consider:

- Eliminating the assistant electrician position currently being paid for with project funds and wait to see on the basis of experience whether a similar position becomes necessary;
- Providing training for one of the existing laborers in motor mechanics; (an alternative would be to train one of the project-funded drivers);
- Paying for a new well for the Tara women's poultry sub-project on the basis that some of the costs will be recovered from the Cooperative's sales of eggs and hens;
- Paying for improvements to the women's poultry houses that will reduce the mortality rate and increase the laying rate on the same cost-sharing basis;
- Considering ways to recycle some of the older structures at Tara so that they may be put to more effective use;

- Introducing, and encouraging project staff to enforce, a system of vehicle logs;
- Changing garage mechanics so that delays in repairs will be reduced and/or explore the use of maintenance contracts;
- Reinforcing the recent change to bid procedures for work to be paid for with project funds where this is reasonable.

Technical Assistance

Successes and problems in technical assistance provided to the project under Phase II have been discussed in considerable detail. Here, we will draw out the specific recommendations from the previous discussion:

Support existing TA specialists by:

- a) More effective TA during visits from AFRICARE/W staff;
- b) Providing them with appropriate short-course and other training to increase their effectiveness;
- c) Decentralizing some portion of project management authority to the TA specialists, including signing off on checks made to vendors in Gaya, and to other GON agencies;
- d) Developing mutually-agreeable work plans and reporting systems which can provide an objective basis for performance assessment for the TA and for other components of the project;
- e) Seeking support from other AID-funded projects, and from other AFRICARE projects to complement the skills of these two specialists;
- f) Revising the respective scopes of work of the specialists to conform more closely to what they are actually doing, to produce a more equitable division of labor, and to enable them to focus on a few priority areas of activity;
- g) Closely observe performance of the agronomist for the next three months; if there is no substantial improvement, replace him with a water management specialist.

Training

The key recommendations for improving and strengthening the project's training component are as follows:

- Make cooperative training more participatory than may have been the case in the past, building on local, real-world examples from the cooperators' own experiences;
- Tailor Coop training to the needs and abilities of the respective Coop members both in terms of content, duration and frequency;
- Continue with the AR method of functional literacy training, but make sure that appropriate incentives--not "payment" for attendance--are offered, and that the underlying purposes of literacy training are understood by the intended beneficiaries;
- Provide short-course training in irrigation/water management for the TA Agronomist;
- Provide training in marketing and coop management for the TA CD Specialist and change his title to Coop Management Specialist;
- Reestablish agricultural extension training either for all rice farmers or at least for "demonstration farmers";
- Relate agricultural extension and training messages to the content and timing of Coop management training for the Rice Coop;
- Use short-courses, workshops and seminars as incentives and rewards for GON project staff, local-hire staff, and project beneficiaries; and
- Explore local sources of training for staff and beneficiaries, including those suggested in Sections V and VI.

Project Management

The discussion presented in Section VII is intended to be constructive to assist AFRICARE and AID to take several steps to improve project implementation for the remaining months of the project, and at the same time,

to organize themselves and the project staff for an appropriately smooth transition to greater cooperative self-management and economic self-reliance on the part of project beneficiaries. The key suggestions are:

- Improve internal communications, and decentralize authority structures to improve project implementation;
- Revise TA scopes of work according to present realities;
- Seek help from the AID Mission to improve project financial management, including through accessing the SFMP team in Niamey;
- Within the present scope of project funding and available human resources--including stagaires from Kolo--improve data gathering, recording and analysis, including on social and economic as well as agronomic aspects of beneficiary activities;
- Work more closely with GON staff at the project level to assist them in increasing their awareness of what is really entailed by a transition to beneficiary self-management and self-reliance, and help them to make specific plans to enhance this process, including phasing down their own activities over the medium term.

Overall Recommendations

Given the delays in project start-up caused by the requirement to meet the CPs, we recommend that the LOP be extended by six months, with appropriate re-allocation of existing funding.

In conclusion, a final observation may be in order, which is based on the findings of the agricultural engineer, but also reinforced by the findings of the organization specialist. While AFRICARE's project is aimed at integrated rural development, the most costly and potentially productive activity within the project is the irrigated perimeter. Due to the expense, complexity and productivity of irrigation systems, irrigation activities will be highly visible and central in any project which includes them, whether they are integrated with other components or not. Therefore, the implementing agent--AFRICARE in this instance--will have

to devote the requisite technical, operational and managerial assistance to the irrigation system to make it work. This is a major "lesson learned" at Tara.

This does not mean that we feel the other project components should be abandoned, although as we have suggested, some of them should be redesigned, and others de-emphasized. Final selection and redesign should, ideally, take place through a dialogue with the beneficiaries, mediated by the Nigerien project staff. It seems likely, based on our experiences in Tara, that farmers at least would place as much stress on the irrigation system as we do today, albeit that they have shown certain reservations about its dependability and profitability in the past.