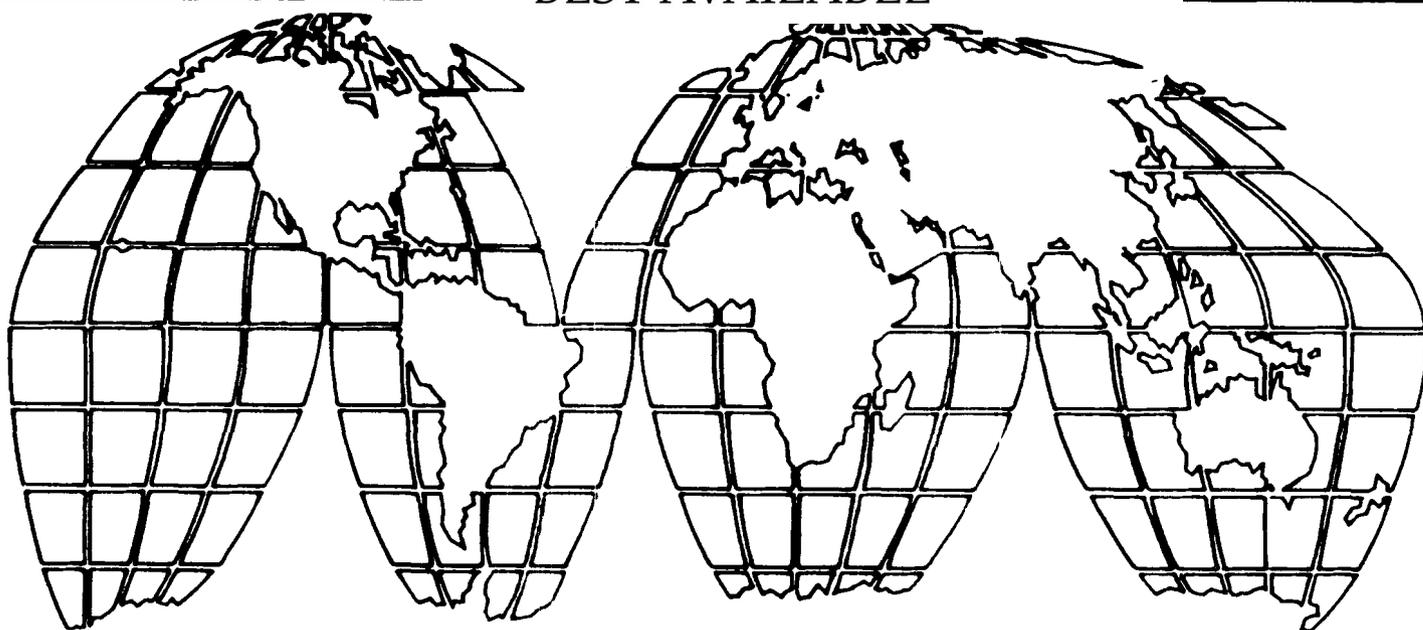

AID Evaluation Special Study No. 36

Development Management in Africa: The Case of the Niamey Department Development Project in Niger

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DEVELOPMENT MANAGEMENT IN AFRICA:
THE CASE OF THE
NAIMEY DEPARTMENT DEVELOPMENT PROJECT IN NIGER

AID EVALUATION SPECIAL STUDY NO. 36

by

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December 1985

The views and interpretations expressed in this report are those of the author and should not be attributed to the Agency for International Development.

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Appendix A. Niamey Department Development Project:
Second Interim Evaluation

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PREFACE

The limited management capacity of developing country personnel and institutions is a common problem affecting the success of development projects. Although this problem is often identified, there is little understanding of what "capacity to manage" means and what interventions are possible to enhance this capacity. The Center for Development Information and Evaluation (CDIE) of the Agency for International Development (AID) has undertaken a series of studies to better understand the nature of these development management problems and to assess the impact of management development interventions that AID and host country project managers have employed.

This series began in September 1984, when all team members attended a workshop on development management organized by CDIE and the AID Africa Bureau and held at Easton, Maryland. Six country studies on agricultural and rural development projects in Africa were carried out between September 1984 and March 1985. A workshop to review the findings of the study teams was held in May 1985 in Washington, D.C. Synthesis reports will summarize and analyze the results of the studies and workshops and relate them to program, policy, design, and implementation requirements. Dr. Irving Rosenthal has been the CDIE coordinator for the series.

This study of the Niamey Department Development Project in Niger was conducted in November-December 1984 as part of the African phase of the Special Studies series on development management. Other African project studies were carried out in Kenya, Liberia, Lesotho, Zaire, and Senegal. The team comprised a development administration specialist; an agricultural economist from the Regional Economic Development Support Office/West Africa, Abidjan; an economist/financial management specialist; and a social scientist. The primary responsibility of the team was to carry out the second interim evaluation, focusing on changes to the project recommended by the first interim evaluation of February 1983. Since their concerns were central to the management study sponsored by PPC/CDIE, a joint scope of work was negotiated which met both PPC's larger objectives and the Africa Bureau's more specific project needs.

SUMMARY

After several years of operation, the capacity of the Niamey Department Development (NDD) project to enhance rural development remains limited. The project's agricultural production technologies only partially address constraints faced by the peasant producers. Their profitability under farm-level conditions is contested, and they are insufficiently responsive to variations in production conditions within the project zone.

NDD's commendable endeavors to link the Government's technical services involved in rural development have had only a modest impact, for reasons largely beyond the project's direct control. The Government's operating style for implementing Government services has not measurably changed. If the NDD project is to improve the management of rural development in the Niamey Department, a basic change of intervention strategy may be necessary.

Among the general lessons on local development management learned from the study of the NDD project are the following:

1. A project strategy that seeks to enhance local management capacities by improving existing technical services for rural development--as opposed to creating new structures--may pay a heavy price in reduced effectiveness of implementation.

2. The impact of projects based on promoting greater cooperation among existing government technical services in project implementation will probably be limited when (a) the commitment of these services to project goals is minimal, (b) horizontal integration among the services is minimal, and (c) cooperation among service representatives is not reinforced by changes in the internal structure of the individual services.

3. Management styles of individual project directors can critically affect the morale and performance of project personnel. A project director whose style is supportive can have a positive impact on efforts to strengthen local management.

4. Projects that seek to improve farm-level resource management must (a) understand the unique constraints faced by local farm families, but not limit attention solely to production constraints and (b) verify that project interventions address the constraints of project zone populations and, if so, that they enhance rather than further constrain local management capacities.

5. Project interventions should include systematic followup and support for beneficiaries' activities. Feedback mechanisms should be incorporated to ensure that project strategies can be rapidly adjusted to achieve this support.

6. Management attention to allocation of material and physical resources for purposes of accountability must not occur at the expense of attention to the human resources so essential for development.

Details on other lessons learned are found in Section 4 of the report.

PROJECT DATA SHEET

1. Country: Niger

2. Project Title and Number:

Niamey Department Development Project II: 683-0240

3. Project Purpose:

To institutionalize a process of rural development by establishing self-managed village organizations to assist farm families in increasing food production on a self-sustaining basis.

4. Project Implementation:

Phase II: Authorization Date: December 19, 1980
Anticipated Completion Date: December 31, 1986

[Phase I: Authorization Date: March 3, 1977
Completion Date: FY 1980]

5. Project Funding:

Phase II: AID funding: US\$13,582,000 (Grant)
Total cost: US\$21,282,000

[Phase I: AID funding: US\$ 4,699,000 (Grant)
Total cost: US\$ 6,237,000]

6. Mode of Implementation:

- a. Project Agreement between AID and the Government of Niger
- b. Technical Assistance: Five Personal Services Contracts, and Peace Corps Volunteers provided at no cost to project

7. Evaluations:

- a. Scheduled: November 1982; November 1984
- b. Effected: February 1983; November/December 1984

8. Project Outputs:

- a. A system of technical service delivery established and functioning in the project zone
 - b. A system of self-managed village organizations established and functioning
-

- c. A system of credit delivery established and functioning
- d. A system of agricultural input delivery established and functioning
- e. A system to increase women's access to development activities established and functioning
- f. A system to test and evaluate proposed technology established and functioning
- g. A coordination and management system for the project zone functioning effectively

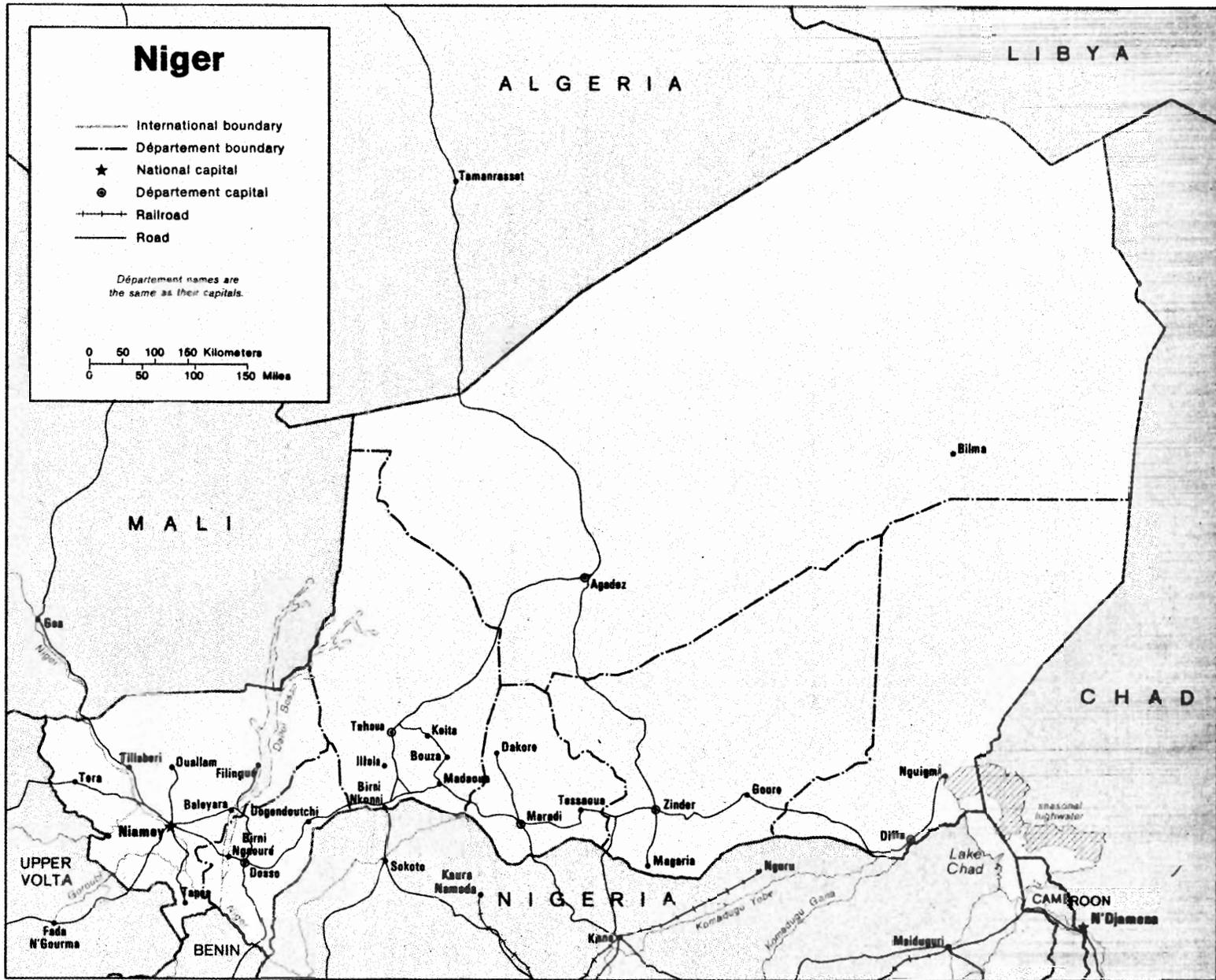
9. Host Country Exchange Rate

- a. Name of currency: CFA francs, or CFAF
- b. At time of project authorization: US\$1 = 200 CFA francs
- c. At time of second interim evaluation: US\$1 = 470 CFA francs

GLOSSARY OF ABBREVIATIONS

- AID - Agency for International Development
- CDL - Local Development Council (Conseil Local de Développement)
- CEPAZE - Center for the Exchange of Information and the Promotion of Handicrafts (Centre d'Echange et de Promotion des Artizans des Zones à Equiper)
- CFA - African Financial Community (Communauté Financière Africaine)
- CFCA - Centre de Formation des Cadres de l'Alphabetisation
- CIS - Credit information system
- CLUSA - Cooperative League of the USA
- CNCA - National Agricultural Credit Bank (Caisse Nationale de Crédit Agricole)
- CND - National Development Council (Conseil National de Développement)
- COTEAR - Arrondissement Technical Committee (Comité Technique d'Arrondissement)
- COTEDEP - Departmental Technical Committee (Comité Technique Départemental)
- CPT - Peasant Couple Training Center (Centre de Perfectionnement Technique)
- CRD - Regional Development Council (Conseil Regionale de Développement)
- CSRD - Subregional Development Council (Conseil Sousregionale de Développement)
- CVD - Village Development Council (Conseil Villageois de Développement)
- DAF - Director of Administration and Finance
- DOT - Director of Technical Operations
- FSR - Farming systems research

- GM (GMV) - Village Mutual Cooperative Group (Groupement Mutualiste)
- GON - Government of Niger
- IG - Inspector General
- INADES - African Institute for Economic and Social Development (L'Institut Africain pour le Développement Economique et Sociale)
- INRAN - Niger National Agricultural Research Institute (Institut National de Recherche Agonomique du Niger)
- MDR - Ministry of Rural Development (Ministère du Développement Rural)
- MIS - Management information system
- NDD - Niamey Department Development Project (Projet Productivité Niamey: PPN)
- NDD I - NDD Phase I
- NDD II - NDD Phase II
- REDSO/WA - Regional Economic Development Support Office/West Africa (Abidjan)
- SRFMP - Sahel Regional Financial Management Project
- UNC - National Cooperative Union (Union National des Cooperatives)
- UNCC - National Credit and Cooperative Union (Union Nigerienne de Crédit et de Cooperation)
- USAID/
Niamey - AID field Mission in Niger



Base 504113 11-79 (544513)

1. COUNTRY DEVELOPMENT SETTING

The rural populations of the Niger Republic, like those of neighboring land-locked states in Sahelian West Africa, depend on rainfed agriculture for their existence. Their vulnerability was poignantly demonstrated during the serious drought and famine from 1968 to 1974. As a result, the Niger Government gave first priority to national food self-sufficiency, and all subsequent major development programs have been organized largely to respond to this priority.

Niger's regional rural development programs, often referred to as "productivity projects," are designed to increase rainfed agricultural productivity through the promotion of improved agricultural production techniques among peasant producers. These techniques are taught as a "package" to peasant couples at rural training centers operated by the projects. The project training programs assume (1) that the trainees from each graduating class will use the methods learned to increase agricultural productivity significantly and (2) that the trainees will act as extension agents in their home villages, further increasing the effect of the training.

Aside from the direct interventions of training programs, productivity projects rely on government technical services (henceforth referred to as technical services or services) for the implementation and followup of their activities in project zones. In Niger these are the Service of Agriculture, the National Credit and Cooperative Union (UNCC), the National Agricultural Credit Bank (CNCA), the National Livestock Service, the Waters and Forestry Service, the National Literacy Service, and Animation.¹ These services are responsible for delivery of technical support--expert advice, commodities, and credit--to Niger's rural populations.

Experience indicates that the "integrated" agricultural development projects in Niger have not been well served by these technical services. The commitment of services staff to project goals appears minimal. Their commitments are primarily to the reward structures within their respective technical services. Technical service staff are paid and promoted within their services, and technical service positions are career positions. Productivity projects rarely have the structure and permanence to meet career interests, as it is common knowledge that projects come and go.

¹"Animation" is a French term which translates roughly as sensitization or awareness/consciousness raising.

Niger's national approach to rural development during the postdrought years began to change in 1982. The occasion for the change was a national seminar on rural development strategies, involving representatives from Niger services and donor agencies, held in the city of Zinder, Niger, during November 1982. The Zinder seminar concluded that alternatives were needed to the productivity project strategy for rural development.

The shift in emphasis away from productivity projects was partly the result of a more participatory approach to rural development that had been promoted since 1975 by the President of Niger and was widely known as the Development Society. The outcome of the Zinder seminar was also partly dictated by the country's fiscal crisis. For several years Niger has been caught between declining uranium revenues and high recurrent costs of large-scale projects, ambitious programs of infrastructure development, high petroleum prices, and increasing debt service.

Since the Zinder seminar, the Government has stressed the necessity for rural populations to assume greater financial responsibility for their own development. To use the official language of the Development Society, rural inhabitants have been called to take destiny into their own hands--roughly by 1987. To facilitate this, a network of development and cooperative structures has been created in rural areas of Niger to bridge the institutional distances between villages and the Government. At the local level, Village Mutual Cooperative Groups (Groupements Mutualistes, or GM) work with and through Village Development Councils (Conseil Villagois de Développement, or CVD) in productive activities. These are supported by the national-level National Cooperative Union (Union National des Coopératives, or UNC) and the central National Development Council (Conseil National de Développement, or CND).

The development setting in Niger was changing during the period of this study. The NDD policy is evolving from a national rural development outlook that promoted large regional rural development projects to one that emphasizes village-level interventions. The outcome of this transition is yet unclear to donors and, possibly, to the Government. The outcome must be even more uncertain to Niger's peasant producers, who are being asked to play an active role in rural development after more than three-quarters of a century of being taught to follow orders rather than take local initiatives.

2. PROJECT DESCRIPTION

The most important intervention of the NDD project is a training program in improved agricultural production techniques, organized for peasant couples at rural training centers (Centres

de Perfectionnement Technique, or CPTs) and at village-level training sites in the project zone. This project expects that CPT graduates will achieve significant increases in levels of rainfed agricultural productivity in their own fields through the use of NDD extension techniques and will use the techniques in their home villages, thus spreading the training's effect. The direct beneficiaries of NDD are couples trained at the CPTs; the indirect beneficiaries are the surrounding farmer populations.

Aside from NDD's training programs, the project's major development management strategy has been to reinforce and work through existing Government technical services (see Section 1) in the project zone rather than to establish a parallel project structure. NDD's approach has been one of institution building within the technical services. It assumes strong commitment of these services to project goals and therefore post-NDD continuation of project-initiated activities.

This approach comprised NDD efforts to link services in the four arrondissements of the project zone. To do this, a project coordinator's position was created in each arrondissement (see Figure A-1 in Appendix A) to link NDD with the arrondissement-level services. The project also provided the services with considerable material support. Through NDD, offices were constructed and vehicles and fuel were purchased to reinforce the operational capacity of the technical staff. Warehouses were built to increase regional storage capacity and to facilitate timely delivery of agricultural inputs to farmers learning the improved production techniques.

NDD also fostered local development institutional structures throughout the project zone. Forty-one cooperatives and 201 GMs were established by 1984. Almost 1,600 cooperative officers have received some training in literacy and arithmetic skills needed for elementary cooperative management tasks.

By the fourth year of Phase II, 10 CPTs and four village centers were operating. By the end of 1984 these centers had trained about 740 peasant couples in improved production techniques and other extension techniques. Plans estimate that there will be approximately 420,000 indirect beneficiaries in the project zone by the end of NDD II (1987).

3. ANALYSIS OF MANAGEMENT IMPACT

3.1 Contextual Issues

3.1.1 Political-Economic Considerations

As noted in Section 1, politico-economic considerations were paramount in the 1975-1982 rise, and the subsequent 1982-present demise, of the regional productivity project approach to rural development in Niger. The goal of food self-sufficiency is no less important now than it was 10 years ago, but new strategies are needed.

3.1.2 Organizational Context and Culture

The structures and linkages of the branches of the Niger Government are the result of an institutional continuity spanning a considerable period and found in many Francophone African countries. If there have been changes since Niger's independence in 1960, they have only accented earlier colonial tendencies toward a centralized administration. The continuing struggle for scarce resources during the postcolonial period has reinforced this centralized style.

The various line ministries and their respective technical services operate within separate domains. Horizontal integration of activity planning and budgeting on policy formulation rarely occurs, and active collaboration among the ministries is not encouraged. Ministries compete for resources (money, personnel, and training), and incursions by one ministry into another's territory are not welcomed. Relations among ministries are reflected in the linkages--and lack thereof--among the technical services under their authority.

Power and authority in Niger are concentrated at national and regional levels. Communication patterns within ministries and their respective services are characterized by unidirectionality (from the top down) of initiatives. In the case of information flow, there is an upward movement of minimally interpretive details from lower levels in the form of monthly, quarterly, and biannual reports. Initiatives by lower level staff are seldom taken and rarely rewarded. The execution of orders is rewarded, but the reward consists more of an absence of negative sanctions: a regular salary and eventual upward mobility in the service and transfer out of rural areas.

Exceptions are individuals who, while nominally attached to a service, occupy important positions (e.g., director) within externally funded projects. Because of their access to development program resources and the privileges this allows, these individuals are able to take initiatives and enjoy status and mobility inaccessible to their nonproject counterparts.

Under these conditions, the "integration" and commitment of technical services required for the success of large regional development projects become problematic. The NDD typifies this trend, as will be seen below. In practice, each service follows a task- or activity-based agenda based on an annual plan, but there are rarely any overall goals that orient specific technical interventions. Service interventions that in principle are the means to defined sectoral ends become ends in themselves. Unless a project director has considerable leverage--which is not the case with NDD--the participating technical services do what they would do normally, and do so on their own.

The implications for project management are several. Under the best of circumstances, much time and energy must be spent by someone (the Niger project director, a district coordinator, project division heads, or liaison personnel from USAID) to inform, coordinate, convince, and occasionally cajole the participating services to become actively involved in the planning of project goals and to regularly contribute to project implementation. During NDD I and the first years of NDD II, the project director and the USAID project liaison officer actively played these roles, despite NDD's limited operational authority.

3.1.3 The Policy Framework

The NDD's capacity to satisfy its mandate is conditioned by the policy framework in which it functions. Government policies that have particular importance for the project are those for inputs and extension techniques.

Inputs. The routine operations of the NDD require that large quantities of agricultural inputs be ordered, purchased, stored, and delivered in needed quantities at appropriate times. Major inputs include farm implements, fertilizers, seed treatments, and draft animals (purchased locally). If these inputs are unavailable, are delivered in insufficient quantities, or are delivered at the wrong time, the impact of the project's extension program is compromised.

Inefficient distribution of inputs by state agencies has been the bane of Niger's rural development projects. In an attempt to deal with this problem, NDD has constructed numerous

cooperative warehouses throughout the project zone and purchased large-capacity trucks to ensure adequate storage and delivery. Ultimately, however, NDD continues to depend on Government procurement and provision of subsidies for its supplies.

Although NDD has made considerable progress in input supply systems, its incomplete control over access to needed inputs limits its management capacity. This limitation affects the farmers in the project zone and their ability to plan and use NDD extension techniques. Production goals cannot be met without a reliable supply of inputs.

Improved Production Techniques. The package of improved production techniques taught to peasant couples at the CPTs closely resembles technical packages that have been promoted by rural development projects in Niger since at least the 1960s. The package, although standard, is far from proven under actual production conditions. Farm-level research shows that several of the components are of questionable utility, much less profitability. After being promoted for more than 6 years in the project zone, several of NDD's improved techniques are not being used, and traditional techniques continue to prevail in many cases.

Why is this largely untested package the standard? This combination of techniques is the only one to have unqualified support from the national Agriculture Service and the Niger National Agricultural Research Institute (INRAN). All extension agents in Niger (including CPT directors, who are assigned by the Agriculture Service to NDD) are trained in these techniques as a package rather than as elements to be used separately or recombined according to regional possibilities or limitations. Most (nontraditional) farm equipment in Niger is designed for the package (which requires two oxen), and INRAN research has consistently sought to improve rather than change or replace it.

No alternative technical packages were available at the beginning of NDD I (1977), and there were no clear-cut alternatives 3 years into NDD II (1984). Because of circumstances, NDD has promoted the only improved techniques available. To do otherwise would have required that NDD duplicate the functions of the Agriculture Service and INRAN and would have entailed deviation from a national model.

Until very recently, deviations from the standard intervention "recipes" of the Government's technical services were discouraged, and support for any innovations by NDD was nonexistent. The NDD is now, however, experimenting with alternatives to the standard package. Techniques better adapted to the considerable diversity of the project zone may become available. Innovation is possible now because of widespread recognition among West

African governments and donor agencies that the standard packages are ineffective and costly.

3.1.4 The Institutional Framework of NDD

NDD's management performance is affected by external institutions linked to the project. Of particular importance are linkages with USAID, the Ministry of Rural Development, department political authorities, and the technical services.

USAID. USAID insists that project goals and objectives are largely qualitative and that they focus on institution building. In practice, USAID is very concerned with quantifiable, accountable inputs, outputs, and timetables. The clearest instance of this during NDD II was the Inspector General's (IG) audit during 1982. Credit reimbursement was low and project accounting was inaccurate. NDD was threatened with closure unless changes were effected. As a result, numerous changes were and continue to be introduced in the project's credit and input inventory and distribution operations.

There can be no doubt that fiscal accountability has become more rigorous in the project, but it is far from clear how this rigor has promoted NDD's objectives. Considerable NDD staff time was required during 1983 to satisfy IG requirements, and considerations of accountability still predominated during the second interim evaluation (November-December 1984). Institution building, now apparently relegated to the "Local Organizational Support Cell (section)" of the project, seems to have been eclipsed, at least temporarily, by other management priorities.

The Ministry of Rural Development. The NDD operates under the Ministry of Rural Development (MDR). This Ministry has historically been concerned that agricultural input and service delivery function properly for rural development purposes, that there be harmony between donor agencies and government officials at the department level, and that the political decisions from the central Government concerning rural development be reflected in current project programs.

Thus NDD and NDD's director must respond to MDR's expectations and those of USAID and AID/Washington. In the project director's case, the possibilities for conflicting expectations are especially great when the director is detached from MDR, as with NDD.

The Department Level. As the organization chart in Figure A-1 shows (see Appendix A), the NDD project director and all par-

ticipating technical services are under the authority of the Préfet (Governor) of the Niamey Department. In practice, the Préfet's involvement in the project is minimal, although he ensures that current national policy orientations for rural development are adequately emphasized in NDD programs. The Préfet has his own departmental resources to manage, in addition to those provided by the project. Because of his considerable power, project resources can be mobilized for nonproject functions. The management of NDD resources is thus subject to yet another actor whose requirements, or the national directives he receives, may not coincide with project needs or plans.

Government Technical Services. The varying influences of USAID, MDR, and the Préfet affect project operations, but these influences are limited on a daily basis. By contrast, contacts with the technical services in the four arrondissements of the project zone are ongoing. Their responsibility for the implementation of NDD's programs is considerable.

Performance of the services is often unsatisfactory, which negatively affects NDD's management capacity. Unfortunately, if the services so critical to the implementation of NDD programs are not provided, very little happens.

Without effective participation by the technical services, the NDD is reduced to a skeletal, foreign-funded structure consisting of headquarters staff, the CPTs, and their trainees, who are trained, sent home, and neglected. Technical service representatives do not consider the NDD to be "their" project. Rather, they often look at it as a drain on already overtaxed personnel resources, despite the additional material resources the NDD provides. Consequently, NDD's capacity to manage is reduced at all operational levels.

NDD's operational authority is limited on a daily basis to the CPT training programs. The CPTs should be an important locus of technical service participation in NDD programs, but in practice their contribution is variable. Thus, even in the area where NDD exercises greatest control, the potential for enhancement of farm-level resource management through well-adapted training and up-to-date information is severely limited by the minimally effective role of the technical services.

3.2 Organizational Structure and Institutional Issues

3.2.1 Authority and Cooperation Within NDD Headquarters

The director of NDD is linked through intermediate levels within the project to section heads responsible for each of NDD's components. These components or cells currently include applied research; credit and input supply (currently reinforced by a credit adviser); support for local organizations (which is also responsible for training programs designed for NDD trainers); support for local artisans (blacksmiths); womens' activities; and extension (which is in charge of CPT training programs).

In the past, planning of annual objectives for each component for overall project goals was done during meetings at NDD headquarters. Internal cooperation for planning and coordination purposes was actively promoted.

This is no longer true. Only two staff planning meetings were held during the second half of 1984. At the time of this study, there was no formal coordination of NDD's various component activities. Any collaboration among section heads occurs informally and, because of high staff turnover during 1983-1984, some of these informal links are just now developing. This turnover included the NDD project director and the USAID liaison officer, both of whom changed in 1984. Because neither person had held the position for very long at the time of this study, it was impossible to assess their efforts.

The working linkages within NDD currently (December 1984) resemble the weak links typical among Niger Government services. The internal structure of NDD risks mirroring the institutional context within which it functions.

3.2.2 Efforts To Promote More Effective Linkages

To overcome the lack of effective integration among the participating services, NDD began a series of training seminars in 1982. The seminars involved review of service representatives' accomplishments within the NDD framework and promoted cooperative planning of objectives for the next year. During the first half of NDD II, the project director was an active participant in these seminars, as was the USAID project liaison officer. Outside consultants were brought in to organize the programs. These are welcome innovations, but they appear to have had little effect on the incentive structures within which the service representatives must operate.

As within NDD headquarters, the possibilities for effective collaboration among services depend less on institutional than on personal links among service personnel. This resource, in turn, varies considerably with service staff turnover and the institutional disincentives described earlier. (Efforts by NDD to promote more effective linkages are discussed at greater length in Section 3.5.)

3.2.3 Scenarios for More Effective Project Implementation

NDD has reached an impasse (or a critical threshold) in its efforts to enhance the management capacity of rural development services in the project zone. USAID and the Niger Government have opted to support and work through existing service structures rather than create parallel structures. They have pursued this strategy under an arrangement that gives only minimal authority to the project director. More effective organization would require greater NDD power, which would mean a change in the current strategy. At present, three options appear to be possible.

1. Continue the present approach, but attempt to increase the project's impact in those limited areas of NDD control. The focus would be on CPTs and on teaching more effective production techniques. Rather than attempt structural changes in service relations, NDD would identify dynamic individuals and work with them through informal links. The risk of this strategy is that identification of the services with NDD goals will remain low. The uncertainty of establishing effective informal links and the high rates of service staff turnover add to the difficulty of this approach.

2. Give more responsibility for planning and allocation of resources to the services currently asked to implement NDD programs. This strategy would further decrease NDD's already nominal power but might lead to increased commitment by the services to a program that is finally perceived as theirs. The potential influence of NDD in this case would be limited to persuasion, although the basis for this is unclear.

Currently, the project has a stated objective of strengthening delivery of services to the farmers. It expects full participation of the technical services in planning and implementation but reserves the budgeting function and control of funds to itself. Were NDD to delegate these latter functions to the technical services, it would lose its leverage for change and achieving specified goals. Although this option might be viewed as the desirable long-term result of the current strategy, if pursued in the short-term it risks a return to a preproject situation of technical services acting in an uncoordinated and ineffective manner--but now with more money.

3. Give more power to NDD by placing the technical services under NDD direction. The project could thus oblige rather than request that technical services play a more effective role in project implementation, and NDD could apply sanctions (positive and negative) when necessary. Of the three possibilities, this conforms most with the nonparticipatory role of technical services in much of Francophone Africa, but it offers the least potential for constructive institution building and change.

3.3 Administrative Process Issues

3.3.1 Adjustments of NDD Training/Extension to Varying Conditions of Production

As discussed in Section 3.1.3, the NDD has been promoting a standard, but only partially effective, combination of production techniques for 7 years. In part this results from dominance of the standard package as a de facto nationwide extension model that NDD had, or believed it had, little capacity to change. The longevity of NDD's technical package results partially from an absence of effective observations and feedback to the project's training programs of the results obtained by CPT graduates in their own fields. NDD has no routine mechanism to allow greater flexibility and responsiveness of NDD extension training to the diversity of production conditions in the project zone.

The project has been moving toward greater flexibility and diversity in extension training, but this just began in 1983. The necessary adjustments in the CPT curriculum have been further hampered by a complete turnover during 1983-1984 of all NDD section heads directly responsible for CPT training.

A final factor in the slowness of adjustment is institutional inertia. The project continues to promote the standard package. A homogeneous technical package is easier to manage, plan, implement, follow up, and evaluate. There is less room for interpretation by followup workers, hence fewer chances for error--and learning. Unfortunately, ease of management for project personnel does not necessarily coincide with the effectiveness of the promoted techniques or with real assistance to project zone producers.

3.3.2 Planning and Evaluation Within NDD Programs

An improved system for project planning, monitoring, and evaluation was introduced during 1983. The potential of this innovation is considerable. It can promote critical program

evaluation of specific objectives by NDD participants. It can also allow NDD planning to become more global and better coordinated, because information on individual components will be available to all section heads. The success of this innovation will depend largely on the support and guidance of the project director.

3.4 Resource Input Issues

3.4.1 At Project Headquarters

Since the IG audit in 1982, project resources management has been improved. Accounting practices have been improved; a system of books of account has been introduced; records are better kept; and periodic reporting will soon be possible. These improvements are described in considerable detail in Appendix A.

3.4.2 In the Project Zone

The CPTs and the newer village-level training centers have provided training in basic arithmetic and national language literacy in addition to extension techniques. More specialized programs have also been provided for those whose positions in cooperatives require accounting and management skills. Since 1983, simple bilingual accounting documents have been designed and tested for use by officers of selected project zone cooperatives. The approach of NDD to these more specialized training programs for local-level management enhancement is sound and practical.

These programs are NDD's response to the Government's promotion of local-level development organizations, and there can be little doubt that in this respect NDD is contributing significantly to enhanced local-level development management. Rural populations, however, do not yet appear ready to assume the increasing responsibilities they are being offered.

Training is one important step in the preparation necessary for a transfer of responsibility. Creative efforts are also needed to support local populations in the transition from a largely passive (occasionally resistant) role to a more active, critical role in the analysis and solution of local problems. Finally, the effectiveness of all the preparation and training oriented toward local-level development initiatives will depend heavily on (1) the resources available to these organizations and (2) the authority they have to allocate resources.

3.5 Human Resources Development Issues

3.5.1 Training for Technical Services Staff

The training seminars organized by NDD for technical services since 1982 have supported collective approaches to problem solving and exposed personnel to new models of social action. Upon the completion of the training, however, participants return to situations that inconsistently reward initiative, despite the Development Society's promotion of the benefits of cooperation for development.

The source of segmented activities so typical of Niger services is structural as well as attitudinal. Niger rural development agents have been socialized from early in their careers to place little value on team work. Their approaches to planning, implementation, and followup have their roots and rewards in their respective service structures. The "problem" addressed by the seminars is actually more an effect or symptom than a cause. These seminars should be promoted, but it must be realized that their effects will be limited unless there is structural support for the innovations they introduce.

3.5.2 Training at the CPTs and Village Training Centers

The NDD's training curriculum assumes (1) that the techniques being taught will help peasant cultivators in the project zone to better manage their allocation of labor and land resources and (2) that greater productivity per unit of land area will result, thus increasing aggregate production. In practice this has not been demonstrated.

The nonuse or partial use of NDD's techniques occurs because elements of the technical package do not improve farm-level operations, or because other constraints, not addressed by the package, are operative. This is a hypothesis, for unlike data on the use of the techniques, information is rarely obtained by NDD on the behavior of project zone peasant producers. The collection of detailed descriptive information is becoming easier, however, because of improvements in data management through microcomputers. The next step must be analysis and explanation--a movement from considerations of "how" and "what" to "why" or "why not."

The most popular ingredient of the technical package is the ox-drawn cart, the use of which is only indirectly related to rainfed agricultural production. Its popularity resides in the perceived diversification of real income it offers during the dry

season months, a period which until very recently has been neglected by NDD's interventions. The cart provides needed income more effectively than the production techniques being promoted by the project. This suggests that the "solutions" being promoted by NDD do not address the more basic problems of resource management faced by project zone populations.

What began as an approach to enhance farm-level management now requires considerable alteration or even replacement with another strategy. Efforts to better understand and adapt training to project zone circumstances are now underway. It is encouraging to see this increased flexibility but premature to make judgments concerning its results. The picture should be clearer by the end of 1987. However, 2 years is a short period, for there are only two rainfed production seasons before the end of NDD II. If adequate adjustments are to be made in the project's production curriculum, active, collaborative planning and followup will be necessary at project headquarters and with arrondissement technical services.

4. LESSONS LEARNED

4.1 Contextual Issues

1. Under conditions of minimal horizontal integration among Government services responsible for project implementation and limited control by the services over resources, expectations for services' commitment to project goals must be modest.

2. Large, multifaceted rural development projects dictate that inordinate attention be focused on means (i.e., accountability) at the expense of ends (i.e., project goals), particularly when goals are qualitative and ill-defined. Examples of this are seen in the goals characteristic of many agricultural development projects in West Africa, such as institution building, food self-sufficiency, or the institutionalization of a development process.

4.2 Organizational Structure and Institutional Issues

1. A project intervention strategy that seeks to enhance local management capacities by strengthening existing structures, rather than by creating new structures, may pay a heavy price in reduced effectiveness of implementation.

2. Successful intervention over the long run requires flexible project strategies and the capacity to learn from past errors. However, flexibility is not enough; adaptability to clear-cut and feasible goals must also be present.

3. Project endeavors promoting greater cooperation in implementation among technical services will be limited when (a) the technical services' commitment to project goals is minimal, (b) horizontal integration among services is minimal, and (c) collaboration among service representatives is not reinforced by the institutional structures of their respective services.

4. Government technical services responsible for implementing project activities should be given a greater stake in the outcome of the project (perhaps through a role in formulating project goals, objectives, and annual work plans, through greater control over resources), or the strategy should be changed to give the project greater power and influence over the services.

5. Management styles of project directors have a critical influence on morale and the integration of project participants at all levels of operation.

4.3 Administrative Process Issues

1. Responsiveness of project extension techniques to varying conditions within the project zone requires regular program feedback by project-trained persons.

4.4 Resource Input Issues

1. Where donor-funded projects are involved, attention to the allocation of material resources for accountability purposes must not overshadow other efforts in development management and institution building.

2. Project interventions must include systematic followup and support for the activities of beneficiaries.

4.5 Human Resources Development Issues

1. Projects that seek to improve farm-level capacities for resource management through training in innovative production techniques must (a) understand the constraints faced by project zone populations and not limit attention solely to production constraints; (b) critically examine all national extension models given the above understandings; and (c) verify that project interventions address the constraints of project zone populations and, if so, that they enhance rather than further constrain local management capacities.

APPENDIX A

NIAMEY DEPARTMENT DEVELOPMENT PROJECT: SECOND INTERIM EVALUATION¹

1. INTRODUCTION

1.1 Background

The Niamey Department Development Phase II (NDD II) project was started in 1980 and is scheduled to terminate in December 1986. This project seeks to establish a self-sustaining rural development process through the introduction of improved agricultural technologies, the creation of development-oriented local organization, and the strengthening of government services. The project has eight components:

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2. strengthening of government services
3. Strengthening of local organizations
4. Credit support
5. Input distribution
6. Women's participation
7. Applied agricultural research
8. Monitoring and evaluation

1.2 Relation to Development Management Special Studies Series

The complete evaluation report is available from USAID/Niger. Because of the more specific focus of the Development Management Series this appendix includes a reorganized and abbreviated version of the overall evaluation.

¹The Second Interim Evaluation was prepared for the Niamey Department Development Project by Roger J. Poulin, Development Alternatives, Inc.; David Harmon, Development Alternatives, Inc.; Thomas Painter, Institute for Development Anthropology; and Douglas Parnett, USAID/REDSO/ Abidjan. The shortened version herein was edited by PPC/CDIE.

2. PROJECT MANAGEMENT

The purpose of this section is to identify the key issues related to project management, determine whether they have been adequately addressed in the project design, and assess their impact on project performance. This section comprises three parts:

1. A discussion of the context within which the NDD project is managed
2. An analysis of the organizational structure of the project
3. An assessment of the internal administrative processes used by the project

2.1 Management Context

There are two sets of external contextual factors limiting the decision-making options of project management. The first set involves the policy framework within which Niger's agricultural projects are implemented. The key elements of Government of Niger (GON) agricultural policy regarding the NDD project are the following:

1. The agricultural input supply system. All agricultural inputs are distributed by the public sector and all inputs that are not imported are produced in the public sector. The project does not have the option of using the private sector for input production and distribution. Further, almost all agricultural inputs are sold to farmers at highly subsidized prices. The rate of subsidy is set yearly by the Government.
2. The role of local organizations. Beginning in 1983, the GON adopted a policy of increasing the role of local organizations in the rural development process. For NDD this meant that the project had to work toward strengthening local organizations so they could assume greater responsibility for development activities, while gradually reducing the size of Government programs.
3. Recurrent costs have become a major factor in the design and size of rural development programs. For NDD this means that any new program that may increase recurrent costs is unlikely to be approved, and project management has been instructed to gradually reduce the recurrent costs of existing programs.

4. The improved technical package. Although NDD was not specifically instructed to extend only one technical package, the only technical package that has been effectively supported nationally uses two-ox traction, fertilizers, and improved seeds. All extension agents received their training based on this package; virtually all of the equipment manufactured in Niger was designed for two-ox traction; and the national agricultural research program has emphasized improving that package rather than finding alternatives to it. In the short-term, NDD has no choice but to disseminate that package. The extension of any alternative technology requires NDD-initiated and -financed retraining of extension staff, applied research, and modification of equipment, with essentially no national-level support.

The GON policies on agricultural inputs and the technical package had the most impact on project performance. The input distribution policies adversely affected project implementation (quantity and quality of inputs, and the timeliness of delivery) and prevented accurate assessment of the viability of agricultural inputs because artificially low input prices distorted farm-level decision-making. Also, the package of improved technical practices has not yet been adapted to the project area. With more GON flexibility and support, progress could have been much greater.

A second set of factors over which project management has had no control concerns the external institutions involved in the implementation of this project. The institutional context has had a much more negative impact on project performance than the policy framework. The institutions that have the most critical roles in the implementation of NDD are as follows:

- USAID
- Ministry of Rural Development (MDR)
- The department and arrondissement-level authorities
- The department-level technical services

The views and priorities of these organizations vary greatly, which has limited project management's influence on project implementation.

Although USAID clearly has the strongest commitment to the overall design of the project (i.e., the project strategy and the end-of-project impact targets), as an organization it is mainly concerned with how well the project is implemented (i.e., the delivery of inputs, the achievement of output targets, and the implementation schedule, as presented in the Project Agreement).

As long as the project achieves its objectives more or less on schedule, AID is generally satisfied. A major impact on AID project management resulted from an audit by the Inspector General in late 1982. The project had to respond to the recommendations of the audit, requiring much staff time. The result was some design changes and tighter control over implementation, especially the credit and input distribution components.

On the GON side, the institution most directly involved in the NDD project is the Ministry of Rural Development. MDR is mainly concerned with how effectively the project is delivering services to farmers, namely, agricultural extension and delivery of inputs and credit. Recently, MDR has also focused on reducing recurrent costs and transferring responsibilities to local organizations. MDR is responsible for overseeing all of the productivity projects in Niger and can be considered to have no particular commitment to the NDD project design. An additional concern of MDR, of course, is to keep the donor (AID) and the Niamey Department authorities (Préfet) satisfied.

The attitude of MDR toward the project is particularly important because the project director is usually an MDR employee and is likely to return to MDR after leaving the project. It would be very surprising if this individual's concerns did not agree with those of the MDR. Therefore, the project director will adhere strictly to the project design only if so instructed by MDR or if in personal agreement with it. In the case of NDD, there is no evidence that MDR is committed to the project design (especially the end-of-project status) as it is presented in Annex I to the existing Project Agreement (the Revised Implementation Plan). The implications for the project are that neither the project director nor MDR field staff are under instructions to give top priority to achievement of project objectives. This does not mean that the present design and end-of-project targets are necessarily the most appropriate, but rather that project performance would have been better if AID and MDR could have reached agreement on a strategy and targets to which both organizations could be meaningfully committed.

At the department level, the Préfet is the head of the project. In fact, the Préfet has responsibility for all Government programs in his department. In this capacity, the Préfet's main concern is to ensure that the project does not diverge from the overall development goals and priorities of the Government, (food self-sufficiency, Development Society, etc.) and meets the needs of the department. The Préfet maintains control over the NDD project and acts as arbitrator, expeditor, and supporter. However, from this standpoint, the project is only one of many activities in his department. It adds resources but also competes for resources, especially human resources. In the latter case, he has no particular commitment to the project over other activities. The Préfet places demands on available resources according to his own priorities, which are mostly political.

At the department level, there are the technical services. These are ministry personnel assigned to departments and arrondissements to implement the programs of their respective ministries. It is the technical services that have primary responsibility for implementing NDD project-funded activities. The services on which the project has been most dependent are Agriculture, UNCC, CNCA, Literacy, and Animation. Since the field staff of these services are employed and supervised by their own ministries, they will implement NDD activities only if those activities have a high priority within their ministries. This constitutes the main management issue for the project and is at the root of most of the shortfalls in project implementation. Field staff are motivated primarily by what their supervisors want, and the supervisors in turn are responsive to the priorities of their ministries. Only if NDD objectives and programs are perceived as ministry objectives and programs will field staff be truly committed to implementing project activities. In the Niamey Department, the technical services have generally not identified with the NDD project and consequently have not participated fully in project implementation.

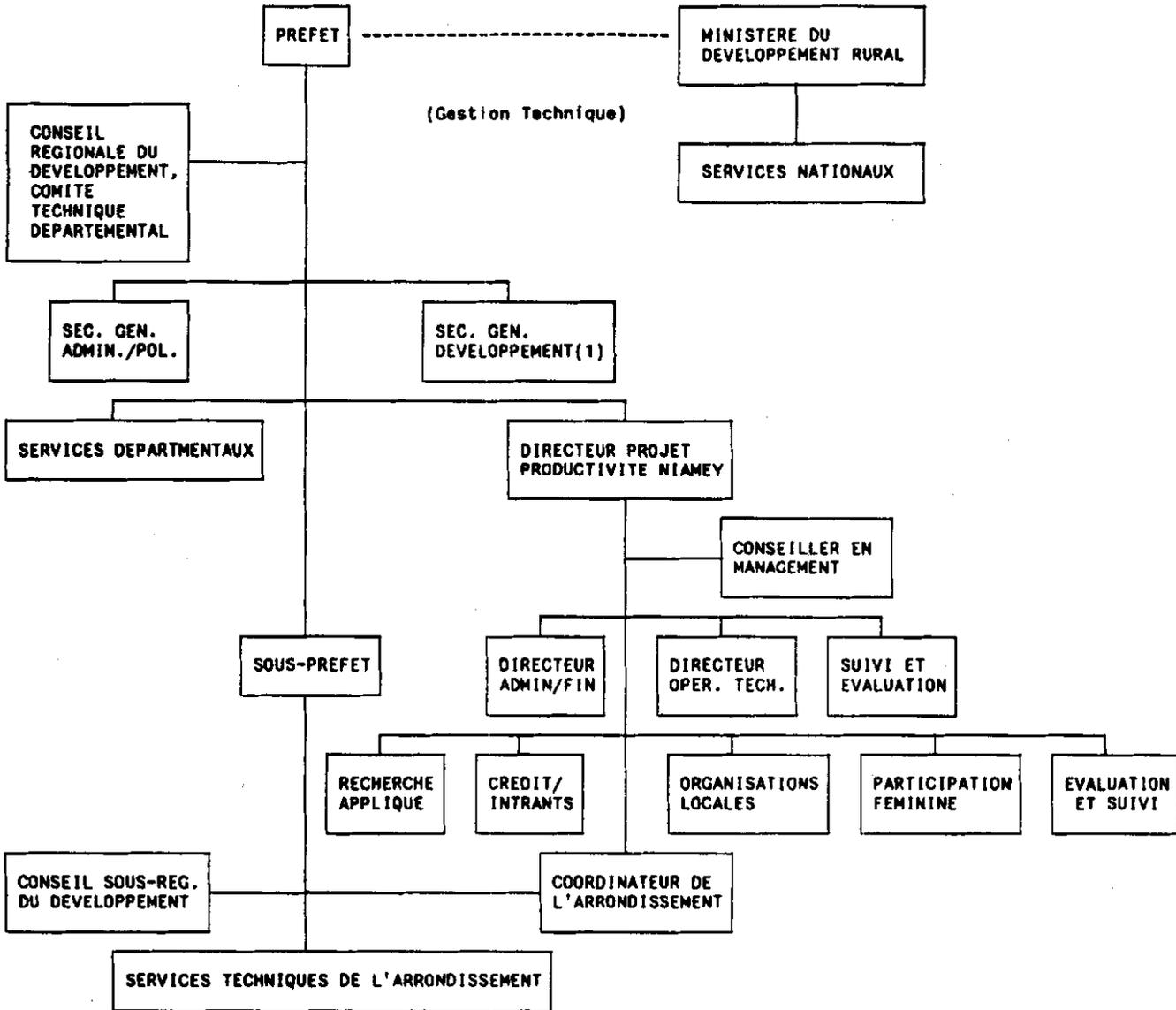
Project dependence on the technical services for implementation was deliberately built into the project design to help ensure the continuation of project-initiated activities after the termination of AID involvement. The organizational structure that was set up to establish effective linkages between the project and the technical services is described and analyzed in the next section.

2.2 Organizational Structure

Figure A-1 presents the organizational structure of the project. The head of the project is the Préfet, and general policy guidance and coordination is provided by the Conseil Regionale de Développement (CRD) and the Comité Technique Départemental (COTEDEP). The Project Director is responsible for the daily management of the project and is supported by a headquarters staff consisting of the Director of Technical Operations, the Director for Administration and Finance, the Monitoring and Evaluation Unit, and the heads of each project component. A coordinator in each arrondissement is responsible for overseeing project activities.

The component over which the project has the most control is CPT training. The CPT chiefs and the literacy instructors are assigned full-time to the project by the Agriculture Service and the Literacy Service, respectively, and the followup agents are employed and paid by the project. All other activities not directly administered by project staff (e.g., agronomic research and monitoring and evaluation) are implemented by the technical

Figure A-1. Organization Chart of NDD Project



services. The most significant of these activities are the following:

- Technical support for CPT training by the Agriculture, Livestock, Animation, and Health Services as well as by UNCC
- Technical followup of CPT graduates by the Agricultural Services
- Credit management by CNCA and UNCC
- Input distribution and stock management by UNCC
- Cooperative development by UNCC and the Animation Service

The project staff analyzes and sets objectives for each project component and identifies and finances activities to achieve those objectives. Although the technical services are asked to participate in this process, they have rarely done so; when they have participated, it has clearly been in a subsidiary role. They are not in the position of setting goals and formulating strategy. As noted above, the result is that the technical services have very little commitment to the project, as demonstrated by project performance. Almost every activity in which the technical services have had primary implementation responsibility has experienced serious shortfalls. Almost invariably, the field staff of the technical services perceive that project activities concern them marginally, if at all, and that they have other responsibilities, as dictated by their ministries.

It was recognized at the beginning of the project that effective implementation would be impossible without close coordination between institutions and a shared commitment to project strategy and objectives. Existing coordinating bodies were to be used to accomplish this--the COTEDEP at the department level and the Comité Technique d'Arrondissement (COTEAR) at the arrondissement level. The members of these committees are the département and arrondissement heads of the technical services involved in the project. These committees met regularly to review progress and resolve implementation problems. Their effect on project performance was minimal, however, because the technical services did not feel that NDD was their project. They were ultimately unwilling to allocate the management time and other resources to ensure project success.

The project also attempted to address this problem through annual seminars for all personnel involved in project implementation. Each seminar had a theme and the objective was to review the past year's performance and set objectives for the next year.

The seminars were to have been attended by project staff and technical service personnel at the department, arrondissement, and village levels, and there were to have been exchanges of views between the technical services and between department-, arrondissement-, and village-level personnel. These seminars were only partly successful, as many key individuals, especially the department and arrondissement chiefs of the technical services, did not attend. Even with these seminars, most employees of the technical services clearly do not understand the project objectives and do not believe that they are or should be closely involved with it.

As noted, one reason for this situation is that the technical services have not been involved in setting strategy and end-of-project goals and have participated only marginally in the preparation of annual work plans. The project attempted to address this problem in late 1983 when a fairly determined effort was made to involve the technical services in planning for 1984. The project asked the technical services what activities they wanted to administer with NDD support in 1984. The project hoped that the technical services would participate in setting objectives, identify and schedule activities needed to achieve those objectives, and allocate the necessary resources.

At that time, NDD and the CNCA were already working closely together. They were in agreement on goals and methods; this close collaboration continued into 1984. Because of the joint planning effort, the Agriculture Service requested responsibility for providing technical support for the CPT graduates. This was a major breakthrough because the project did not have the capability to track all of the graduates (700 at the end of 1984). The success of this component, in fact of the entire project, depended on the Agriculture Service eventually assuming this responsibility. NDD agreed to provide the necessary vehicles and fuel. In the end, however, almost nothing was done, for unexplained reasons. The department head certainly wanted this responsibility, but somehow the message never got to the field staff. What probably happened is that the followup of CPT graduates was added to the workload of an already understaffed service, and the field staff were not told what priority this additional activity should have. The lesson that this provides for 1985 is that the Agriculture Service probably needs management help. The followup of CPT graduates is a major effort and if the Agriculture Service is going to perform that function, it needs to reexamine its implementation capacity, rethink its priorities, and appropriately allocate its resources.

None of the other technical services participated effectively in the joint planning exercise; therefore, there were no significant improvements in the performance of the activities. It does not appear that the effort will be repeated for 1985.

For the NDD management model to work, the technical services must lead in setting targets and priorities and scheduling activities. This, however, would almost certainly produce a very different project. Most technical services would want resources to do more of what they were already doing. The project does have resources that can be used for leverage, but this approach is rarely effective and requires MDR and Préfet commitment to the project design.

The basic question for the project now is, can anything be done to improve this situation for the remaining 2 years of the project? There are three options:

1. Continue the existing system. The project could concentrate its efforts on (1) improving the activities that are within the control of the project, primarily CPT training; (2) continuing the dialogue with the technical services but without much hope of improvement; and (3) working with specific individuals at the arrondissement and village levels who can effectively administer project activities. This approach has the advantage of not departing from the project design, which has a number of valid and important objectives. The main disadvantage is that the technical services will continue to provide only half-hearted support for project activities.

2. Give the planning and resource allocation initiative to the technical services. The project could be a secondary partner in the planning process, attempting to exert influence through persuasion and the leverage associated with its resources. The advantage of this approach is that the technical services would view NDD as their project and changes could occur from within those organizations. The disadvantage is that the project would be supporting existing programs, many of which are ineffective, and change would be slow (probably slower than would be acceptable to AID, although not necessarily slower than it has been thus far).

3. Give the project more authority over the technical services. This would be very difficult to achieve because it would mean that the department heads of the technical services would be receiving some of their instructions from the project director rather than from their ministries or from the Préfet. This could be justified on two grounds. First, the NDD project director would be acting on behalf of the Préfet. (In this regard, it would help if he were designated Secrétaire Générale de Développement. See Figure A-1.) Second, the NDD productivity project is the major rural development initiative in the department and therefore should be given top priority by the technical services. The technical services would in effect be told that in the Niamey Department the NDD program is their program. Each technical service would then be responsible for taking whatever measures are necessary to carry out NDD activities as described in the Revised Implementation Plan.

Given the relative lack of commitment to the existing project design on the GON side, this third option may be giving the project more clout than it deserves. Conversely, the decision to use the NDD project description as the basic statement of development policy for the rainfed areas of Niamey Department could lead to a much more thorough and meaningful review and approval process than the document has received thus far. Under this approach NDD-financed activities would be designed and initiated primarily by the project. The technical services would therefore continue to view project activities as distinct from their own programs, but at least they would understand their responsibilities for implementing those activities.

2.3 Administrative Processes

This section is divided into two parts. The first deals with the system for monitoring and evaluating project activities, and the second deals with the project's system for financial and resource management.

2.3.1 Monitoring and Evaluation

In 1982, a consultant to the NDD project prepared a planning, monitoring, and evaluation system for the project. The planning and monitoring component of the system had the following elements for each project component:

- End-of-project targets
- Annual targets
- Annual work plans based on the annual targets
- Quarterly workplans
- Quarterly reports
- Annual reports

The project introduced this system in 1983, but it was too time-consuming for the limited staff that was available. The major accomplishments were the restatement of end-of-project targets, the setting of 1983 targets, and the preparation of annual workplans. Quarterly reports were prepared mainly by the monitoring and evaluation adviser but were largely a formality.

The annual plans, however, were generally well conceived and realistic, and the exercise was repeated in 1984. The plans appear to have been a valuable management tool in several respects. First, in 1983 and 1984, their preparation helped the heads of each project component to rethink their priorities, set realistic end-of-year targets, and adopt a feasible schedule of activities that was consistent with the targets. Second, in 1984, the workplan was used for the joint planning of each project component with the concerned technical services; this will be repeated in 1985. Third, for the first time the technical services are evaluating their performance during 1984 in implementing project activities. The workplans will be useful as benchmarks for assessing progress. Finally, in 1985, the workplans will be used for the first time to prepare the annual budget.

Thus far the major weakness in the system has been in monitoring project activities. No quarterly reports have been prepared by the project, and the previous system of monthly reports and meetings with arrondissement staff and the technical services is very sporadic. There are also very few staff meetings. In short, the monitoring of project activities is informal, which seems sufficient to meet the stated needs of senior project management. However, it is the opinion of the evaluation team that project performance suffers from the lack of systematic information flows between different levels of the project--arrondissement staff, project headquarters staff, and project management--as well as between project components. At a minimum, it is recommended that monthly meetings of project staff, arrondissement coordinators, and the brief reports of accomplishments and problems be prepared by arrondissement coordinators and heads of project components for circulation prior to those meetings. Regular staff meetings would also facilitate the sharing of information among headquarters staff.

There seems to be little need on anybody's part for the quarterly reports, probably because they contain very little new information. The need for such reports, not only by the project but also by AID, MDR, and the Ministry of Plan, should be re-examined by the management adviser upon arrival in January. If appropriate, the adviser should design a report format that meets the needs of all concerned and requires minimal staff time.

The impact evaluation component of the monitoring and evaluation system was not implemented until 1984, mainly because the monitoring and evaluation adviser was fully occupied in 1983 with establishing the planning and monitoring system. In late 1983, project management decided that the top priority for 1984 would be to measure the impact of CPT training and that primary responsibility for planning and reporting would be transferred to the heads of the individual components. CPT graduates were interviewed and, for the first time, the project has concrete data on adoption rates for different elements of the technical package.

The next step in this evaluation process should be to determine the impact that the adoption of the improved practices has had on yields, production, and incomes of CPT graduates. It would also be desirable to relate changes in yields and production to the individual components of the technical package. Closely related to the issue of the impact of the NDD extension program is the need to assess the technical package for its impact on productivity and incomes at the farm level. This requires farming system-type studies (i.e., studies of farm budgets, labor requirements, off-farm income, and attitudes) comparing farmers who have adopted the technical package with traditional farmers. Without this basic data on (1) the impact of the extension program and (2) the farm-level feasibility of the technical package, the project cannot evaluate whether the full range of agricultural interventions (extension, applied research, input distribution, and credit) has had or can have its desired impact.

A final evaluation need is to measure the project's impact on the strengthening and self-sufficiency of local organizations. Although the methodology for measuring the impact of extension and the technical package is well established, this is not the case for local organization development. The project will need to determine the most appropriate indicators of progress and the most cost-effective way to gather and analyze pertinent village-level data.

2.3.2 Financial and Resource Management

This section addresses improvements in the project's accounting, budgeting, reporting/monitoring, and financial analysis activities. It also examines progress in the computerization of management information, particularly for the credit and agricultural input components of the projects.

Accounting. General accounting practices at project headquarters have improved as a result of USAID certification requirements, coupled with the installation of basic books of account (encumbrance journal, cash disbursements ledger, and a donor's receivable account) prepared by the resident financial management team of the AID-funded Sahel Regional Financial Management Project (SRFMP). As part of the SRFMP's work, the NDD project accountant (and other USAID project accountants) has a set of simple basic forms and journal pages as a guide. Monthly workshops are held to further assist project accountants in project accounting and in meeting AID requirements.

The financial management team assisted the NDD project accountant in making the original journal entries and has been periodically monitoring the accounting system to ensure that journals are accurate and current. As of the beginning of

December 1984, cash transactions had been recorded through November 15, 1984 and encumbrances through November 30, 1984.

As a result, record keeping is now more systematized and periodic reporting will be ensured, two areas that had been in disarray. Moreover, the accounting improvements are essential to the success of the computerization effort.

The present accounting system could be further improved by installing a perpetual inventory system for agricultural inputs held at the project headquarters level and for expendable (e.g., automotive spare parts) and nonexpendable (e.g., project furniture) project properties. Another area needing improvement is accounting control, specifically the recording and handling of cash transactions and cash. Currently, the project director authorizes the disbursement of funds, and the accountant records the transactions and handles cash. Responsibilities for record keeping and custody of cash should be separated, however, so that there is adequate control on the receipt and disbursement of funds.

At the local (cooperative) level, basic accounting documents for credit and cash sales and inventory control were prepared in French; training of UNCC agents took place in June 1983. Unfortunately, just after their training was completed, UNCC terminated the employment of approximately one-third of their agents, resulting in the near total demoralization of agent-level personnel. Therefore, little or no reporting, using the prepared and distributed documents, was done.

Under the aegis of the credit/input adviser, a new training effort directed at cooperative personnel (officers, warehouse clerks, and managers of cereal banks) started in December 1984 and will continue, in stages, through February 1985. Part of this training effort includes intensive instruction in the necessary basic accounting/reporting procedures. To carry out these procedures, simplified accounting, inventory, and credit information forms, translated into Hausa and Djarma, have been prepared and will be distributed. These will enable the cooperatives to account for and control their activities and report, as necessary, to the project, CNCA field agents, and the arrondissement.

Budgeting. Until now, the project budget has been unusable as an effective tool for management control of project expenditures and as a planning aid. This has been due to the lack of basic books of account, timely information, and a logical system of budgeting control. With the installation of the basic books of account, and as an example of necessary budgetary control, the financial management team recommended that all purchase orders should first go to the project accountant for review, because he has the budget and can determine if there are sufficient funds in the particular line items, and then move on to the project direc-

tor for review and approval, and finally return to the accountant for recording.

The entire budget preparation process, and use of the budget as a management information and decision-making tool, will be greatly enhanced as the computerization effort is implemented. Currently, all 1984 project financial documents are being coded and entered by project and selected USAID personnel into the component by line item. The objectives are to build a computer-based annual budget by activity center expense category and line item, and to train project and USAID personnel in its preparation and use.

2.3.3 Financial Reporting

To date, periodic financial reporting has been largely done only when the project had to request reimbursement from USAID for project expenses incurred or when the project came up for recertification by the USAID controller's office. With computerization of the project's information generation and financial activities, timely internal (and external) financial reporting and monitoring will be possible on weekly, monthly, quarterly, and annual bases, as needed.

Reporting on and monitoring of the expenditure situation for the entire project and for each of its principal activities by broad expense category (vehicles, personnel, training, equipment, construction, operating expenses) will be available, as well as breakdowns of all line item expenses. At the end of each month, the project accountant will have a report on all ordres de virement (obligations) and ordres de paiement (expenditure vouchers), which will permit reconciliation of project account records with the project bank statements of the Treasury. If necessary, the accountant will be able to review the components of an individual ordre de virement/paiement and, through the system of base document coding, rapidly retrieve basic supporting documents. For example, should a question arise regarding an expense incurred outside the project (e.g., a purchase from a supplier), the line item number will tell the accountant that the purchase was for a particular line item, the particular expense category, and the particular project activity. It will also lead to the name of the supplier and all documentation for that payment. Moreover, reporting will be in standardized formats calling for standardized inputs from all project levels (cooperative through arrondissement to NDD headquarters) and across all levels (e.g., all arrondissement, all cooperatives).

Timely, adequate financial reporting, such as that provided by the management information system (MIS), will assist both USAID and the project in monitoring project implementation. It

will also be an integral part of future project planning and budgeting and will help relate the two.

2.3.4 Financial Analysis

Little financial analysis has been possible because of the above-mentioned information system and data availability shortcomings. The design and implementation of the computerized MIS, however, coupled with ongoing training of project and cooperative-level personnel, should permit relevant analysis such as the following:

1. Actual expenditure by line item to date versus programmed expenditure, giving variance (performance indicator).
2. From (1) above, examination of how expenses are programmed, so that a more accurate budget may be prepared for the following year.
3. Examination of amounts unspent by line item at the end of any given month/quarter to do interim planning. Project management will be able to estimate potential expenses for the remainder of the year and predict what financial resources will be left, what cutbacks will be necessary, and what the effects will be on the balance of the project budget.
4. Sensitivity analysis ("what-if studies") will be possible through hypothesizing project-internal or externally caused changes in activity/expense category/line item to see the effect on other budget areas and on the whole budget. This type of analysis coupled with that of (3) above will give project management the ability to know where to channel remaining resources, given existing constraints.

2.3.5 Overall Approach to Resource Management

The approach to resource management in this project is to maintain close daily control over all activities requiring the allocation of project resources. All field trips, uses of vehicles, purchases of fuel, other expenditures, and many other relatively routine activities must be approved by the project director or the Director for Technical Operations (DOT). This is to prevent abuses in the use of project resources, but an important adverse effect is that considerable staff time is spent justifying and obtaining approval for minor routine actions.

Because so many administrative decisions must be made by the project director or the DOT, there is an inevitable bottleneck in the approval process with resulting significant delays and costly rescheduling of activities.

There are two actions that should be taken to address this problem. The first is to redesign the control procedures. The need to prevent abuses and the misuse of project resources is extremely important, but effective monitoring of activities, rather than prior approval of what should be routine activities, is the appropriate way to resolve this.

Second, the position of Director of Administration and Finance (DAF) needs to be filled as soon as possible. The project director and DOT are seriously overburdened with minor administrative tasks that deter them from managing the project and focusing on substantive issues. The DAF must be competent, however, and have the full confidence of the project director. The DAF must be someone to whom the project director will be willing to delegate full authority for the financial and administrative management of the project. If the DAF is not competent or lacks the necessary authority, the position becomes another layer and potential bottleneck in the management system, thereby worsening the situation.

2.4 Conclusions and Recommendations

1. A key to the success of the project was the anticipated active support of the technical services for the implementation of project activities. This has not occurred because the technical services have generally not identified with the project. Project objectives and priorities were different from their own; their general attitude was that the NDD project had its programs and they had theirs. The reasons for this situation are that, on the one hand, the technical services were not fully involved in setting NDD project objectives and therefore felt no particular commitment to them, and, on the other hand, the project had no authority to instruct the technical services to give top priority to its activities.

Recommendation. Because the project has no implementation capacity of its own, urgent steps are needed either to increase the commitment of the technical services to project objectives or, if this is not possible, to obtain the authority to ensure that technical services effectively implement project activities.

2. The annual workplans have proven to be a valuable management tool. They are used to set targets and schedule activities related to those targets, and more recently they have been

used as the basis of joint planning with the technical services and for preparing the annual budgets.

Recommendation. Weak management in the technical services directly affects the performance of the NDD project. In the case of the Agriculture Service it appears that if they had had a well-prepared workplan and had used it to schedule activities and allocate resources, their support of CPT graduates in 1984 might have been stronger. It is therefore recommended that the project encourage the Agriculture Service to prepare a workplan for 1985 and provide assistance if appropriate.

3. Project performance is suffering from the lack of information flows between the different levels of the project and between components. There is no systematic monitoring of project progress or concerted efforts to identify and address critical implementation problems.

Recommendation. To address more efficiently the many implementation problems facing the project, there should be improved information flow to and from senior management and more frequent discussions of problems and accomplishments. At a minimum, the monthly meetings of project staff, arrondissement coordinators, and the technical services should be reinstated.

4. Project management exercises tight control over daily project activities to prevent abuse and misuse of project resources. Consequently, considerable staff time must be spent justifying and obtaining approval for relatively routine activities, and, at times, delays in approval result in costly rescheduling of activities.

Recommendation. The daily management system should be changed from one based on prior approval of all activities requiring project resources to one of close, effective monitoring. This would maintain the necessary control without causing costly delays.

5. The NDD headquarters' accounting practices have been improved by the work of the SRFMP's financial management team in setting up the basic books of account and in training the project accountant in their use. Once the project management information system is operative, budgeting, financial reporting, and financial analysis should improve. For all financial aspects of the project to operate on a sound basis, the following steps should be taken:

Recommendation. To improve daily financial administration of the project, the project accountant and assistant must continue to receive training in the

basics of accounting, with the books of account, and on the MIS.

Recommendation. NDD headquarters needs a perpetual inventory system for all project properties, especially agricultural inputs. For such a system to function properly, the headquarters stock clerk must be trained in the system's operation.

Recommendation. Accounting control for cash must be improved by the separation of the custody of cash from the keeping of records of its receipt and disbursement.

3. LOCAL ORGANIZATIONS WITHIN THE PROJECT

Support for the activities of village organizations within the project zone is provided by component no. 3 (see Section 1.1) of the NDD. As the 1983 Annual Report states, however, "this element is more than a specific arena of project activities: it is an integral part of the project's goals... to help village-level organizations take responsibility for their own future." The annual report adds that "unfortunately, this rather complex component was poorly defined by the funding agreement for the project." To address this situation, two or three villages have been selected within each arrondissement for development activities. This NDD support for local organizations is rather modest in comparison with the much wider scope of NDD programs in other sectors and is oriented toward well-defined, locally feasible objectives.

In addition, since 1981, the UNCC has set up numerous cooperatives in the project zone. Currently there are 120 cooperatives in the department, which comprise 715 village mutual cooperative groups (GMS). These local-level cooperative organizations are now being asked to take over management and distribution tasks formerly handled by UNCC. The remarks that follow provide an overview of NDD activities in support of local organizations.

3.1 The Role of Local Organizations in the Management of Credit and Agricultural Inputs

3.1.1 Establishment of Cooperative Structures and Training of Cooperative Members

After the 1981-1982 period, when the UNCC created most of the cooperatives in the project zone, the NDD began programs to

train cooperative officers to fill their responsibilities. A trial program was held in 1982 at Lossa and demonstrated that a variety of national language accounting forms could be successfully used by cooperative officers if the proper training were provided. During 1983, personnel from UNCC and Animation were trained in accounting methods, enabling them in turn to train cooperative officers. These services worked with the Literacy Service to train all officers having management tasks in the region's cooperatives. By December 1983, four such training programs were underway in the project zone to train and upgrade cooperative officers and managers of cooperative warehouses, stores, and grain banks. Rather than attempt to train all officers in the project zone, the NDD is working only with representatives from cooperatives who have demonstrated a willingness to learn how to better manage their operations. On this basis, officers from about one-fifth of the project zone cooperatives have been trained or are receiving training. These training programs, like those during 1983, were preceded by special training/upgrading programs for the trainers.

The training of cooperative officers is well underway, but the task is large. Without counting the managers of cooperative grain banks, stores, and warehouses, there are 360 cooperative officers and more than 2,000 GM officers. The training approach being used by the National Literacy Service and the UNCC with NDD personnel is sound, active, and practical. It includes collective learning of the roles accompanying cooperative positions, and the development of the tools required for these tasks. The training of all cooperative officers will take several years. In the meantime, support and followup will be necessary for the individuals as they work within the cooperatives and gradually assume greater responsibility for the management of local-level development activities.

Some responsibility for credit management within the project zone had already been shifted to the cooperatives because of a large reduction of UNCC field agents beginning in 1983. Thus, numerous cooperatives already need to complete accounting operations, but few among them are prepared--technically or psychologically--for the transition to self-management. Given these circumstances, it is too early to judge the effectiveness of this transfer of functions. In addition, visits to several cooperatives in the project zone revealed the hesitancy of cooperative members to assume operations that had been carried out by UNCC agents for many years. In the cooperatives visited, the use of all accounting materials, except a few delivery vouchers, seems to have stopped with the departure of UNCC field agents.

In all cases, the cooperative officers seemed to be waiting for advice if not orders from above. The nonreimbursement of a loan discussed in one cooperative demonstrates a situation that is probably widespread in the project zone. The problem faced by

many cooperatives is how the cooperative as a social body can induce members who are behind in loan reimbursements to repay their loans without resorting to higher levels of authority. It must be added that when cooperative nonreimbursement exceeds a certain threshold, the whole cooperative is cut off from further loans. How can the cooperative exercise authority as a cooperative over uncooperative members?

A visit to the Yarimadey cooperative convinced us that the answer is far from clear. There, the father (present during our visit) of a CPT graduate (absent at the time) who is behind in his loan payments said he was unable to influence his son to reimburse his loan. In the meantime, the cooperative has lost access to credit. In this situation, the cooperative seemed to have even less power over its member than did the father over his son. This case also illustrates the weakness of the "social guarantee" (caution sociale; see below) that has been used for more than a decade to ensure loan reimbursement in rural areas of Niger.

While local cooperatives struggle to arrive at an effective solution, the NDD and CNCA have begun to collect on outstanding debts instead of waiting for the debtors to pay. In some cases, wheels have been removed from debtor's ox-carts and impounded until payments are made. According to NDD personnel, this strategy of pursuit and seizure is quite effective: former debtors have repaid their loans.

The impact of this strategy can be significant if the measures are intended primarily to teach a lesson to project zone populations. (The strategy proved necessary because of the results of an ineffective followup policy by UNCC and CNCA in the past.) If, by contrast, this approach becomes even an informal policy of last resort, we must ask ourselves if it represents a step forward toward peasant self-management or a move backward toward an image of an improvident peasantry.

The hesitancy mentioned above is also expressed in the formulation of local-level development projects, to be discussed shortly. The perspective among cooperative members concerning the possibilities for effective actions they can take seems to be very limited.

In summary, the transfer of responsibility for management of credit and input management tasks to local levels, currently being supported by a variety of NDD training programs, must be followed up very carefully by the project and participating technical services. As argued in the section on extension in the NDD (see Section 5), followup is not the same as debt or data collection. It must be much more supportive and capable of actively helping cooperative officials to deal with the tasks they are being trained for and a variety of unanticipated potential prob-

lems. Without this support, an effective transfer of responsibility will be compromised.

3.1.2 The Social Guarantee

The experience to date in Niger with the social guarantee as a means of ensuring reimbursement of farm credit under conditions where there is often nothing else to offer as a form of collateral has been mixed, and the results are inconclusive. Despite this, recent actions of NDD and CNCA after a rigorous examination of project finances and accounting by AID auditors have shown that credit recipients in the project zone are willing to repay. If the reimbursement rates for farm implement loans remained so low before the auditors arrived, this was largely because the debtors poorly understood the system of which they had become a part. Explanation of credit/reimbursement requirements were often not given, and there was a lack of routine efforts by government agents to collect the loan payments. Peasant producers in the project zone are adults and behave as such, but often find themselves involved in development actions that remain, at the local level at least, vague and poorly followed up.

As for the future effectiveness of the social guarantee, there is little ground for optimism, but two hypotheses can be advanced. If an intervention that provides material assistance on credit is judged by peasant producers to be sufficiently valuable, the social guarantee may play an effective role in inducing other cooperative members to pay on time. If, on the other hand, the consensus among members on the use of the credit package is not well-developed, the impact of the social guarantee on poor payers will remain negligible. In other words, without some collective form of "social investment" by cooperative members in the credit program, the social guarantee will have little effect. To a great extent, the presence of this social investment will depend, first, on the perceived potential of the credit benefits to ensure the material continuity of domestic production-consumption units (e.g., households); and second, on its perceived potential to promote the welfare of the community.

In conclusion, it must be noted that the model of social control, which is the basis of the social guarantee, is one of an undifferentiated, highly integrated community. This model is poorly adapted to the socioeconomic structures in the project zone, which, no matter how often they are erroneously referred to as "traditional," are changing in many respects--and often at the expense of social solidarity. The study of local organizations in the project zone scheduled to begin soon should provide valuable details on these issues.

3.2 The Role of Village Organizations in the Establishment of a Development Process

In addition to training programs for officers, upgrading programs have been organized for blacksmiths in the zone. The aim of the program is to train local smiths in methods of repair and manufacture of replacement parts for the kinds of farm implements promoted by NDD. This will enhance their capacity, making it possible for NDD trainees to secure needed repairs and replacement parts without traveling to Niamey. The viability of this activity will ultimately depend on local demand for these improved services. So far demand has been very weak and needed repairs have been few. To publicize the skills of these NDD-trained smiths, the project began a program of demonstrations at the CPTs in 1984.

Beyond these training programs, the project has engaged in a variety of other activities designed to support local organizations. These are described below.

3.2.1 Village-Level Development Activities

During 1983, NDD began efforts in the Kollo and Quallam arrondissements to promote village-level development activities in the form of small-scale, dry-season gardens. Evaluations of the first efforts in three villages revealed that in two cases the villagers did not understand how to do the activities and that in a third the villagers never clearly expressed their needs despite great enthusiasm. Similar efforts were begun in the Filingue arrondissements but did not progress beyond the initial stage of identifying village sites for the programs. The situation of these village-level programs seems to have changed little since.

The third quarter 1984 report for the local organization support unit does not mention these earlier efforts, but it appears that arrondissements-level personnel have continued to identify candidate villages for activities that remain to be specified.

Also during 1983, and within the context of NDD support for dry-season gardening, consultants from the Center for Exchange of Information and Promotion of Handicrafts (CEPAZE) visited the project zone and discussed the possibilities for local-level activities in villages in the Say and Quallam arrondissements. At that time, the contacted villages indicated a need for wells and fencing. CEPAZE also began a study of an ox-driven water-lifting system for garden irrigation, which was to be tested during 1984. These efforts continue, but the results remain to be seen.

3.2.2 Observations on the Transfer of Development Responsibilities to Local Organizations

Cooperatives and GMs in the project zone are not yet ready to accept responsibility for development activities. Although it is risky to generalize from the small number of rapid field visits, we believe that brief comments are appropriate. This is because of the present push to transfer development responsibilities to rural populations, in part the results of the 1982 Zinder conferences on rural development, but also because of current dissatisfaction with large rural development projects in Niger.

The evaluation team visited three cooperatives--Boula, Koni Beri, and Yerimadey. All were recommended by NDD personnel because they were functioning satisfactorily or because members were perceived to understand cooperative principles. Our visits confirmed that reimbursements were satisfactory in some and that knowledge of cooperative principles was satisfactory in others. Once we attempted to move from generalities to specific situations requiring cooperative actions, however, the members seemed uncertain. Several examples must suffice as support for this admittedly qualitative impression.

To evoke different viewpoints, one of the team members proposed a different system of loan reimbursement to the persons we contacted. This entailed the possibility of reimbursing input loans in kind (millet) after the harvest rather than in cash, as is now the practice. He asked them to consider one additional possibility: stocking of the reimbursements in kind until the next cultivation season. The cooperative could then choose to sell the stock with a slight markup to members to cover costs, sell it at local markets to cover costs, or sell it at local markets to maximize the profit margin for the cooperative. The idea behind the suggestion was simply to explore the possibilities for easier loan reimbursements and to provide the cooperative with a profit, to be used as decided by the cooperative. The idea, while simple, was a popular one, and very often seemed to be a real discovery for those who participated in the discussions. It appeared that the idea had never been proposed.

A second situation also illustrates the problem. In each village we visited, cooperative members remarked that they wanted a well to use in dry-season gardening. In some cases they vaguely knew that the next step in securing the well was the preparation of a dossier, but they were not sure where the dossier should be sent. In addition, land tenure issues connected with the choice of location for the well did not seem resolvable at the local level. The villagers looked to higher levels of authority to deal with the issues--as has been the case for a very long time.

Without exaggerating, these cases illustrate two obstacles to be overcome if cooperatives and local populations are to take over (as opposed to being assigned) local-level development initiatives. First, the understanding of instrumental information by cooperative members appears to be very low. They do not have a clear notion of how to move from the analysis of a problem, to expressed needs, and then to action on the problem. Apart from a repetition of well-learned lessons about living better cooperatively, their grasp of cooperative action seems superficial. Second, our interviews suggest that the framework for problem analysis among cooperative members is limited. There is a wider range of options they have not considered. On a reflective note, it is also possible that these options have been considered but that the structural constraints have all but precluded those now being judged as overly limited.

In summary, better preparation of local populations will be necessary if the transition to locally initiated and managed development activities is to succeed. This will require more information, explanations, training, and retraining (rethinking) to enable local groups to approach problem situations and develop workable solutions. Once again, and over the long term, considerable support from the NDD and technical services will be necessary for local-level endeavors.

3.2.3 Training of Rural Development Personnel for More Effective Support of Local Organizations

To complete the picture of NDD support for local organizations, it should also be noted that training programs have been organized to prepare arrondissement-level rural development personnel for more effective work with local organizations.

Beginning in 1983, arrondissements personnel were provided with a correspondence course from the African Institute for Economic and Social Development (INADES). The Pan-African Institute for Development (in Ouagadougou) also participated in short-term training programs for similar purposes.

In 1984 the INADES program was discontinued because it was unsuitable and not advanced enough for project training needs. Thus, the pressing need to train and retrain arrondissements personnel for effective development work remains unfulfilled. We have already suggested that the framework for problem analysis is somewhat limited among rural populations and that considerable development is needed; this is also true of many rural development agents. In both cases, there is a need to change what is a predominantly passive role into one that is more active and imaginative.

To more effectively prepare rural development workers for their tasks, NDD has organized a series of seminars. Most of these aim to promote teamwork, information-sharing, and a more collaborative approach among administrative and service personnel to the implementation of project activities. A third seminar, held in 1984, moved the focus of intervention from the seminar room to the villages in the project zone. Thus, persons directly involved in NDD programs participated as usual, but several cooperatives from the Say and Quallam arrondissements also participated in the exercise. The seminar's objective was more than training; it required participants from the technical services to work closely with representatives from selected cooperatives and to elaborate feasible development projects based on village visits, data analysis, discussion, and so forth. Two aspects of this interesting approach to training for development merit brief comment: the teaching method and the participation of the government workers for whom the program was designed.

1. Teaching method. This is a commendable approach to training that provides a direct association between the usual (and often predominant) in-class aspects of training and concrete application of principles learned.

2. Participation of rural development personnel. It is unfortunate that many of the rural development workers in the project zone did not benefit from this training program. Ninety-two percent of the department-level service agents were absent; one-third of the CPT directors and one-quarter of NDD headquarters staff also missed the program. There were probably good reasons for their absence, but this is a lamentable showing, for these are the individuals who are expected to work with and deliver useful advice to populations in the project zone as contracted technical advisers during the transfer of development responsibility to local levels. The implications of these attendance patterns for ongoing support of local organizations are not promising, and considerable improvement will be required.

3.3 Conclusions and Recommendations

3.3.1 Conclusions

Through a variety of interventions, the NDD is providing support for local organizations.

Preparations for local-level management of credit and inputs are moving along, but the effective transfer of responsibility to local populations will take time. If all goes well, it may be 3 years before the beginnings of self-management by cooperatives in the project zone are evident. It can be hoped that in 4 years,

enough cooperative officers will have been trained, upgraded, and followed up that self-management may become a reality in much of the project zone. This is an optimistic scenario, which depends on the willingness of cooperative members. To ensure their continued interest, members must remain convinced that there is both a social and economic payoff. We stress, however, that the payoff is unlikely to be perceived in terms of a crude model of "profit maximization." Rather, it is likely to be perceived within a context where continuity on domestic structures is more important than maximum returns on investments. In other words, self-management must be perceived by local populations as something of worth. But self-management of what? This is a critical question that must be addressed by all parties in the project: NDD staff, members of the technical services, and the populations in the project zone.

The transition of concern to us involves more than the peasant producers in the zone. Arrondissement-level personnel and traditional authorities must accept the need to reconceptualize development problems and their solutions. The study of local organizations planned for 1984-1985 will clarify the characteristics of project zone social structures and the changes they are undergoing. This information should further help with the readjustment of current thinking about the rural milieu and help to better understand and address the milieu's potential for and obstacles to viable development.

Activities must reflect the desires of rural populations, and this requires that they be carefully developed. Thus, a more critical, analytical attitude--grounded in ongoing contacts with the rural populations--is necessary at all project levels. We are not there yet. Surely the process whereby Niger's rural populations will take their future in their own hands requires that they stop waiting for solutions from above as they have been conditioned to do. They now require useful advice and support, not orders.

3.3.2 Recommendations

1. Continue the preparation of rural populations in the project zone for a more active and critical role in the development process. This will require that technical staff and rural development personnel play a more effective role. The project advisers for cooperative development, credit, and input distribution need to cooperate with the arrondissements coordinators on an approach to this task over the next 2 years.

2. Continue training and upgrading programs for cooperative officers and eventually all cooperative members. To better measure local-level management effectiveness, a verification

system should be established that reviews skills acquired by cooperative officers. Officers would be reviewed by members of the village community as well as project agents. That is, accountability to members of the community is as important as that to persons in positions of power and authority.

3. Continue programs to increase the awareness of technical service staff of different development approaches and pursue programs for training and retraining that oblige participants to apply, test, and verify their knowledge. This feedback link between learning and application should become central to all project-sponsored training programs, ensuring that rural development personnel who go through these programs offer useful advice to project zone populations. If they cannot, the program should insist that they undergo more training. If their performance is still unsatisfactory, personnel must be replaced.

4. CREDIT AND INPUT DISTRIBUTION

The improved technical package being extended by the NDD project is based on the use of animal traction, chemical fertilizers, and improved seeds. The project was to have financed some of these inputs and set up an input distribution system. The project also provides credit to farmers to purchase animal traction equipment. Initially, credit and input distribution were combined under one component, but the problems associated with managing the credit system necessitated a separate component for credit. In this section, credit and input distribution are treated separately, although many of the project interventions and issues (e.g., cooperative training) are common to both components.

4.1 Credit

4.1.1 The Credit Management System

Since October 1982, when USAID/Niger suspended funding to the NDD project credit fund, little cooperative credit has been available. As a result of the Inspector General's Audit Report (February 10, 1983) and actions undertaken by project management and USAID, there have been, however, important improvements in the credit component.

Manpower. USAID/Niger funded and filled a full-time position (agricultural credit management specialist) for 1 year to help the credit/inputs adviser with the project's credit com-

ponent. An important part of the credit specialist's work has been to account for and reconcile the credit fund account, which is now completed. Moreover, the loan portfolio has been largely reconstructed by loan contract. In addition, a Peace Corps Volunteer, working with the credit specialist, has designed and is implementing a computerized management information system, part of which will assist both the project and CNCA/Niamey in performing credit activities.

The Management Information System and Credit. Based on the successful project effort to locate and organize most key credit documents, to obtain loan contracts for many previously delivered inputs, and to remedy the confusion regarding "missing" and comingled (project and nonproject) funds at the CNCA, the MIS should have a salutary effect on the management of the credit component. For the CNCA, the objective of the MIS is to give it a tool so that it can organize all its written documents; once in order, this information can be accessed under specific criteria. With project assistance, the CNCA will be able to take these raw data and turn them into management information. As the CNCA gains experience with the MIS, it will "ask" for information in different ways, according to its needs.

First, the training for CNCA, which is planned for December 1984 to March 1985, will involve the Chef d'Agence and one agent and will later include the remaining three agents. In brief, the objective is for all agents to be able to enter their own data, get their own specific output (by account) and forms, and then go to the field prepared to use the information output/analysis/forms in their normal credit activities.

Second, to assist in current and future training, as well as in computer-user needs, the management information adviser will write a user's manual in French for the credit component, which will cover the following subjects:

1. System care and maintenance
2. Programs
 - A listing with typical output forms
 - All output options
 - How to input data
 - How to arrange files
 - How to get different outputs
 - How to handle errors

The above will be presented tutorially in a step-by-step procedure.

The MIS, as it pertains to the CNCA, is adapted to existing CNCA forms and procedures to build on what is familiar to CNCA personnel. The project also involved CNCA staff in the preparation of the MIS credit component. By December 15, 1984, this component should be ready for presentation to the CNCA. After December 15, 1984, the CNCA will have the opportunity to reach into the system for data that will give its field agents timely and accurate operating information.

An example of the type of change the system will institute is the availability of loan information by individual borrower. At present, agents do not write individual receipts for loan payments. Rather, they write one receipt to the particular cooperative for several individual repayments. With the MIS credit component, information that comes back to the system will link the receipt with the individual borrower. An important benefit of this component is that with more accurate information by borrower, developed over time, the CNCA can take a more rational approach to granting loans and seeking reimbursements.

An additional benefit will be the time-saving offered; that is, many periodic reports and paperwork activities will no longer have to be typed, thereby freeing up personnel for more important activities.

Credit Guidelines, Testing, and Credit Activities and Adequacy of CNCA/Niamey System. The NDD project is developing guidelines for the credit activity in concert with the CNCA so there will be an integrated policy for all levels of the project (i.e., CNCA, NDD headquarters, and cooperatives). The credit guidelines and procedures are part of a package that includes a computerized credit information system (CIS). Once the CIS is fully operational and CNCA personnel are training on it, test checking of NDD headquarters, CNCA/Niamey, and field credit operations will be possible. CNCA personnel will receive hands-on training in data entry, program operation and output, and its use. Verification of loan accounts (in a selected area) with computer-generated data will be possible by January 1985 and will serve to validate the data in the computer. Furthermore, this will be done in the future for all six arrondissements of the Niamey Department.

With the CIS, the CNCA field agent will have a systematic method of collecting money from farmers and cooperatives. Provided that the CNCA is successful in entering the basic loan data by cooperative, village (GM), and individual during January and February 1985, the CIS should be ready by early March for more complete field verification followed by CNCA Department-level

data validation. By fall 1985, CNCA agents should be trained in loan granting and repayment procedures, and the credit information system should be operational.

Credit Fund Agreement. On August 12, 1983, a protocol was signed (superseding that of February 7, 1979) by the NDD project with the CNCA and the UNCC. The parties agreed that the balance of the project account (No. 33302) was to become a revolving credit fund to fulfill cooperative credit needs in the project zone.

It further stated the various sources of funds to replenish the account, and that evaluation and management of credit would be administered by two committees, one at the department level, the other at the arrondissement level. The protocol indicated the makeup of the committees, their credit management responsibilities, and the credit policies they would follow.

The CNCA, under the terms of the protocol, agreed to set aside for each cooperative 2 percentage points from interest earned on loans. The purpose of this money is to allow a cooperative that is completely current on its loan repayments to finance its own desired economic and/or social activities. Four percentage points on the interest earned on loans was to be set aside for a guarantee fund. The first set-aside of 2 percentage points has not yet been possible because no cooperatives are completely current on loan repayment. The second set-aside of 4 percentage points has not yet been possible because of the difficulty in separating loan repayments received into capital and interest payment components. The protocol further outlines the means available to the CNCA to force long overdue loan payments, including cutting off the 2 percentage point set-aside.

The protocol also states that accounting for credit repayment will occur at cooperative, arrondissement, and department levels; that the NDD project will furnish all necessary accounting forms; and that UNCC will continue to help cooperatives manage their inventories and keep current, accurate records until the cooperatives are sufficiently experienced to handle these matters.

Finally, the protocol detailed UNCC and CNCA responsibilities and procedures for accounting and reporting on credit and input supply activities.

Loan Portfolio Management. Various improvements have been made in the past 18 months by NDD, namely reconstruction of the entire loan portfolio, reconciliation of the credit fund account, and the preparation of a credit information system that, with appropriate training and acceptance, will streamline and make

more effective CNCA's credit activities. The following are the principal improvements noted:

- Between March and May 1983, CNCA agents, UNCC agents, and the project credit/input adviser canvassed the project area to determine what commodities were actually under loan by individual borrower and to collect what monies they could on loans. The loan repayment rate climbed from 28 percent to approximately 60 percent at the end of this period. By June 30, 1984, the repayment rate had dropped to approximately 55 percent.
- All of the US\$915,000 provided to the credit fund and unaccounted for in the IG audit (February 10, 1983) has now been accounted for either as under loan contract or by knowledge of the location of the equipment distributed. Today, \$76,871.85, or approximately 27 million CFAF, is not yet under loan contract.
- The credit fund account has been reconciled from its opening to September 30, 1984. All accounting transactions and bank records justifying the operations of the account are available in manual and computer form. One account for the credit fund exists, which is verified monthly by the credit specialist. Since February 1983, there have only been isolated instances of the CNCA incorrectly crediting project cash sales to the project credit account.
- Under the credit information component of the MIS, loan information is available by year granted, principal, and project share of the principal for cofinanced loans (e.g., equipment loan from NDD, animal loan from CNCA). Thus, NDD can justify to CNCA what amount CNCA owes the project.
- CNCA field agents now have proper procedures for accounting for project cash sales through numbered receipt books bearing the project seal and account number. The receipts and receipt books used to record the receipt of cash from cooperatives by agents are base documents, which allow transactions to be traced.
- To clarify the status of loan contracts between CNCA and cooperatives regarding source of materials, a project-wide physical inventory in May 1983 permitted the CNCA to distinguish between agricultural inputs provided on loan from project stocks and UNCC stocks located in project warehouses. The June-August 1984 physical inventory made the distribution between project and UNCC stocks for all warehouses. (The NDD project occasionally uses UNCC warehouses.)

Loan Repayment. In spring 1983, the CNCA/Niamey put into practice a CNCA national directive stating that it would not lend to any cooperative whose repayment rate has fallen below 90 percent. CNCA is largely abiding by its own rule, the only exceptions being (1) individual GMS whose repayment rate exceeds 90 percent, even though the cooperative to which it belongs is experiencing an overall repayment rate of less than 90 percent, and (2) those cooperatives; making a significant effort to repay during the current drought year. In the second case, CNCA will consider these cooperatives' loan requests. The CNCA also has the authority to repossess equipment on which borrowers have been seriously delinquent in their repayments. To date, the CNCA has repossessed equipment only occasionally.

Once the CIS is on-stream and accepted, CNCA should have better control of its loan repayment activities, the ability to increase repayments, and lower loan administrative costs. It is too early to know how much per loan administrative costs will drop because CNCA does not yet have experience with the system.

4.1.2 Transfer of Credit Responsibility to Cooperatives and Village Groups

Within the past year, the GON notified cooperatives that they will have to start assuming more responsibility for their own operations. With the recent demise of the UNCC, cooperatives' assumption of responsibilities will be accelerated.

An important step in an effective transfer of credit responsibility to local levels is the training of CNCA agents, because they will be the prime point of continuing contact with cooperatives and, through the cooperatives, with member GMS. The CNCA field agents need additional training not only in the use of the documents that the CIS will generate for their field activities but also in how credit functions, how to solicit loans, credit fund guidelines, assistance to cooperatives in record keeping, and assistance in cooperative and GM preliminary screening of credit applications. Toward this end, the credit specialist will design individual training programs for the five Niamey Department CNCA agents, according to their individual skill levels. A senior member of the CNCA/Niamey staff received training in 1984 at the University of Pittsburgh (2 months) and in Haiti (1 month).

Training in credit matters on the cooperatives level has already started. A full cycle of training in credit and input supply management began in December 1984 and will continue until February 1985. The cycle is composed of (1) 4 days of literacy training (reading, writing, and arithmetic) concentrating on the particular cooperative activities to be undertaken and (2) a 7-

to 10-day period of hands-on training with the documentation necessary in credit activities (collective request for loans, loan contracts, loan repayments, and delivery of commodities with supporting delivery slip) and inventory management. The documentation is in simplified form and expressed in Hausa and Djerma.

The next training cycle will start in March-April 1985, with a 4-day orientation session for cooperative officers in the principles of cooperative organization and the duties of each officer. This will prepare them for resumption of the training cycle once the 1985 harvest is over.

There is no assurance at this time that the attempt to transfer credit management responsibility to the cooperatives will be successful. What is certain is that this will be a long-term process, requiring sustained efforts by NDD and CNCA. Regular training and close followup will be essential. Given the availability of resources and the magnitude of the task, it is strongly recommended that the project begin with a small number of cooperatives. The two significant factors in selecting these cooperatives are (1) their understanding of cooperative responsibilities, especially loan repayments, and (2) the availability of profitable undertakings that will generate the resources necessary to repay the loans.

4.1.3 Likelihood of Financial Sustainability

There appear to be two alternative choices for establishing credit activities for rainfed agriculture in Niger. The choice depends on whether the goal is to establish a well-functioning, financially self-sustaining credit institution or to seek broad developmental objectives.

A Financially Self-Sustaining Credit Institution. A self-sustaining credit institution, established to lend to small farmers through cooperatives, would follow the same banking procedures as it would with any commercial customer. The customer would have to satisfy lending institution criteria of credit-worthiness, willingness and ability to repay, character, collateral, and financial soundness of the proposed activity.

Such an institution would presumably have low loan administration costs and low default rates, because it would only lend to those clients (individuals, cooperatives) who are excellent credit risks. Furthermore, it would only lend for those activities that were already proven profitable or could demonstrate convincingly that they will be profitable. Animal traction equipment, grinding mills, and wells for village vegetable gardening activities, for example, probably would not qualify for

lending. The activities that such an institution would consider most attractive would not promote development objectives on a widescale basis.

The advantage of such an institution, however, is that it would be financially sound, would run on strict business/banking principles, and would be available to provide credit in the future as economic development proceeded and certain real opportunities arose (e.g., new seed or suitable animal traction equipment). It would know how to manage credit and would tailor loans to farmers in ways that would help ensure repayment.

Broad Developmental Objectives: A Subsidized Credit Institution. If the decision is to try to achieve broad developmental objectives (i.e., to meet a spectrum of farmer needs and to make credit widely available), then a financially self-sustaining institution is unrealistic.

Broad developmental objectives mean acceptance of high loan administration costs and default rates, at least initially. The basic requirement is to develop and implement a strategy that will eventually lower costs and default rates, so that in the long term a credit institution will become financially viable and in the short term farmers will have been helped to increase agricultural production and incomes.

In brief, how does an institution evolve from one with unacceptable default rates and high per loan administrative costs to one with low default rates and costs? How long should this process take? Is AID willing to subsidize what is likely to be a long-term effort? What are the developmental alternatives (in the sense of opportunity cost of capital and desired socioeconomic objectives of the host country) to the establishment and continuing support of such a credit institution?

It is instructive to examine a strategy that an institution such as the CNCA might follow:

1. Acceptance that such an effort would be subsidized for a very long time, knowing that administrative costs will never be as low as those of a commercial bank and that a 10-percent default rate is probably the best that can be expected.

2. For a particular area (e.g., NDD project area), it must determine the potential loan volume, how much interest will be earned on the loan volume, and what an acceptable initial default rate will be. The long-term objective for the credit institution, while clearly identifying the subsidy element (e.g., a guarantee fund to cover the possibility of defaults and a decreasing part of loan administration costs), is to "live" off the interest generated, to minimize the default rate, and to make

sound loans. In other words, the CNCA or bank, even though subsidized, must operate on sound banking principles.

3. The elements necessary to achieve (2) above would be the following:

- In the longer term, reduce the number of loans while increasing the average size of loans made to help reduce per loan administrative costs. To attain this, lending would be only to cooperatives that understand what credit is and what it entails and that have excellent repayment records.
- In the selection of such cooperatives, the most important factor is the attitude of farmers vis-a-vis credit and its attendant responsibilities. Another key factor is the effectiveness of the credit agent in motivating the farmer to obtain credit wisely and in inculcating an attitude of responsibility for loan repayment.
- The credit institution and the government must be serious about loan repayment. Without this approach, farmers will develop the attitude that they ultimately will not have to repay loans.
- The CNCA, in collaboration with a productivity project such as NDD, should start on a pilot basis, selecting those few cooperatives that best meet the attitudinal and financial prerequisites stated above.
- CNCA/NDD must determine the amount and timing of resources (personnel, physical, financial) needed to administer a pilot program.
- The need for training, followup, and supervision at the cooperative level will be paramount in both the pilot and future stages of such a program. Failure to follow up on training and supervision while cooperative officials and operating personnel (e.g., warehouse clerks, cereal bank managers) are learning and gaining experience is likely to result in a lapse of activities (from record keeping to ensuring individual loan repayments) and the possible demise of the pilot effort.

This strategy of using credit as one element of a program to attain broad developmental objectives is long term and is certain to entail much effort in arriving at a viable credit institution. The success rate for small farmer credit programs has been extremely low. The analysis that would go into a decision to proceed on a subsidized basis (i.e., what the initial administrative cost would be, what initial default rates would be, how much loan interest could be charged, and what the opportunity

cost of capital would be) would demonstrate the obvious result of not subsidizing the credit program--potential rapid decapitalization.

4.1.4 Conclusions and Recommendations

The credit area (and input supply) has benefited from a variety of actions taken by the project to correct deficiencies in financial management and to provide for progress. In brief, the contributions that have helped to build the project's financial management capability are the following:

- Reconciliation of the credit fund account and reconstruction of loan records. These actions were essential for any future work.
- Improvements in accounting, budgeting, reporting, and the potential to do financial analysis.
- As part of the project management information system, a credit information system for both the project and CNCA.

The credit information system, if used properly, will offer several important benefits that, although general, do pertain to CNCA and NDD:

- Will help improve the quality of credit management and ensure more comprehensive employee supervision
- Will provide management the means to evaluate chosen courses of action and to make needed changes; will allow adaptation to changing economic circumstances
- Can provide management with an "early warning system," (i.e., methods of identifying credit problems before they actually occur)
- Will impose a rational sequencing of credit activities and will allow for their timely evaluation and course corrections, if necessary
- Is neutral in that it is only a system, which must be adapted to each implementation need and accepted by management, rather than a solution handed down based on what works elsewhere

The CIS, as designed, will increase the amount and the quality of timely information available to NDD and CNCA. The information generated and analyzed will also help in planning and credit policymaking. With several years' experience and refine-

ment of the credit information system, the CNCA should be able to detect and resolve loan problems at the cooperative level before they become serious.

Given, on the one hand, the potential for better financial management and, on the other hand, the demise of UNCC, the success of the credit component will depend on what strategy the NDD project and CNCA adopt. The limited resources of NDD, its experience to date, and the proposed credit strategy of the AID-funded Agricultural Production Support project argue for the following:

1. A credit component extended initially to a small number of receptive, potentially viable cooperatives.
2. An ongoing training and followup program aimed at these selected cooperatives to ensure success.
3. An exploration of the possibilities for barter (e.g., millet for fertilizer) as an intermediate step to bring farmers into the money economy.
4. A stress on the responsibility that cooperative membership entails, including strong emphasis on loan repayment.
5. An understanding on the part of NDD and CNCA that the principal business of CNCA is expanding the credit system and making sound loans. Repossession of goods and other strong measures to obtain loan repayment are last resorts.
6. The establishment of an incentive system for CNCA agents and the Chef d'Agence that will improve their field performance. Such a system should reward good performance amply enough to make it work and should be capable of being altered as the credit situation changes.
7. A requirement for a substantial down payment by borrowers (about one-third of the principal amount). In so doing, borrowers would have a stake in their investment and something to lose should they default. Moreover, installments would be less, making loan repayment easier, and the total amount of project credit available could be extended further.
8. The limiting of credit to those items that are clearly profitable for the farmer (i.e., carts and fertilizer) in the pilot stage of credit extension. Once the credit component at the cooperative level is established, income-generating activities, (e.g., vegetable gardening, cross breeding of desert race sheep with local sheep, and grinding mills) can be explored.

In connection with and prior to Phase III activities, the NDD credit specialist, using the CIS installed at CNCA/Niamey, should help devise a planning and control system that will facilitate the management of the entire loan process for the Niamey agency (and eventually for all of CNCA). He should suggest methods for collecting and analyzing the information needed for sound decisions and for communicating results to top management. The specialist can suggest the kind of data CNCA should use in deciding on loan policy but should not determine the policy itself. It is a well-designed system and its informational components, rather than policy advice, that will help CNCA management become self-sufficient.

4.2 Input Distribution

4.2.1 Adequacy of the Input Distribution System

Project storage and transport capacity is sufficient to handle the volume of agricultural inputs projected to flow through to cooperatives. The project credit/input specialist estimates that, if necessary, the project could store up to 1,000 metric tons of fertilizer under tarpaulins at NDD headquarters alone. NDD headquarters has a 100 square-meter building in which animal traction equipment and pesticides are currently stored and a prefabricated building of approximately 90 square meters that has not yet been erected.

The headquarters storage capacity question is really moot, because the project has enough operating trucks (and a mechanic) to move 70 tons of fertilizer per day to nearby warehouses (approximately 40 kilometers from Niamey) in Kolo, Hamdallaye, and Goube. These warehouses will comfortably hold 550 tons, 75 tons, and 75 tons, respectively. The project to date has never received an annual fertilizer order exceeding 500 tons. For a small fee (approximately 25,000 CFAF), the delivery trucks will drop their cargoes at any of these warehouses, thereby obviating the need for storage at NDD headquarters.

At the cooperative level, the total storage capacity is 4,200 tons (42 cooperatives with warehouses times 100 square meters per warehouse). Usually, a maximum of 75 tons is stored, to allow space in which to move and operate. As mentioned in earlier reports, problems of poor construction, leaking buildings, and so forth, still exist. The main distribution problems are not physical storage and transportation availability, but rather timely receipt of farmer demand estimates by cooperatives and lack of reporting of inventory levels and sales. Timely demand estimates will be the key to the success of programming transportation and delivery of inputs to cooperatives as needed

and in correct quantities, as well as the transfer of inputs between cooperatives and between arrondissements as changes in demand occur during the growing season. Currently, neither yearly demand estimates nor supplemental demand estimates for fertilizer (in the early part of the growing season) are received in timely fashion.

The primary objective of project management has been to determine what equipment and inputs have actually been sold. Incomplete records and the consequent need to reconstruct sales transactions for the past 3 years prevented project management from (1) accurately assessing demand and therefore (2) considering subsidy and credit availability as factors in the assessment.

UNCC agents were trained in Niamey for 4 days in June 1983. Preliminary training of UNCC arrondissement-level agents was done at the beginning of this session. The SRFMP financial management team assisted in the training, which entailed instruction in gathering inventory and sales information and in making out the appropriate reports for NDD to assess demand.

As a pilot operation, agents were to keep track of sales and inventories only in the villages in which their stay coincided with the June-September period of high sales. The agents were to report sales to NDD every 2 weeks during this time, which would have given NDD a limited estimate of demand. The termination of employment of one-third of the UNCC agents at the end of June 1983 and the attendant demoralization of the agent staff effectively stopped this pilot operation.

There are many reporting problems. Cooperative inventory records tend to be kept only in those villages with a resident UNCC agent. Weekly consolidation reports were too lengthy for cooperative officials to complete and have been suspended until cooperatives have the necessary skills. Over the past 4 months, monthly stock reports have sporadically been sent in, and these only by the more conscientious UNCC agents. Delivery (of inputs) receipts flow regularly back to NDD.

The principal effort with record keeping is to instruct cooperative-level personnel in all aspects of inventory management required in their work. As part of this training, cooperatives will work with forms, simplified in design and written in Hausa and Djerma. A perpetual inventory system for stocks physically held at NDD headquarters is in place; however, the records are not current or always correct. In the opinion of the credit/input specialists, the NDD headquarters warehouse clerk could benefit from 3 to 4 days of intensive one-on-one training in completing and maintaining inventory records.

4.2.2 Training of Cooperative Personnel

Training for cooperative-level personnel in inventory management started in November 1983 with the training of the trainers (UNCC agents and Literacy Service trainees from arrondissement and department levels of the Ministry of Education). The second step was a three-stage training package, given between January and March 1984. The training was aimed at warehouse clerks, cereal bank managers, and cooperative store managers. Reportedly, there was no time to train cooperative officials (presidents, secretaries, treasurers). The training package comprised the following:

1. Four days of exposure to the requirements of their jobs
2. Six weeks of intensive literacy training (reading, writing, and arithmetic) to qualify the personnel to carry out their jobs and fill out and maintain the necessary forms/records
3. Seven to ten days of followup using working examples of the forms to train personnel in the actual functions of inventory management

There was no UNCC followup to the cooperatives and very little reporting to NDD headquarters because of a lack of coordination between arrondissements and NDD project management in providing for necessary vehicles and other logistics needs.

In December 1984, a second, similarly structured, training program was started. It is planned to run through February 1985. Its audience differs from the first program: cooperative officers will be instructed but cooperative store managers will not be at this time. Training for cooperative officers is scheduled to occur at four central locations and will address their particular functions, job and reporting/record-keeping requirements, and other cooperative personnel functions.

For the warehouse clerks and cereal bank managers, the objective is to give exposure to and training in all aspects of stock management to permit them to perform their respective duties. To achieve this, the credit/input specialist prepared a trainer's manual with accompanying forms on the various activities of inventory management and control, ranging from ordering stock to maintaining a perpetual inventory with month-end reports. Sales and cash receipts are also covered. The forms/reports are in simplified format and language and will be available to the cooperatives in Hausa and Djerma. Training will be given in two locations for the warehouse clerks and in two other locations for the cereal bank managers.

This training and accompanying manual/forms will provide the basic inventory and sales and receipts information necessary for NDD headquarters to control field inventories and, using the data in the linear programming model (see Section 4.2.3), will enable them to make decisions to move stocks, if necessary, between cooperatives and between arrondissements.

The beginning of the next complete training cycle is tentatively scheduled for March or April 1985; 4-day sessions are planned for new groups of cooperative officers to expose them to the requirements of their positions and to prepare them for the next two parts of their training. The 6-week and 7- to 10-day sessions are planned for after the 1985 harvest.

At this time, the NDD credit/input specialist is uncertain about who will be responsible for followup activities in the cooperatives. He is waiting to determine what support and resources CLUSA (as part of the Agriculture Production Support project) may contribute.

In summary, the training program for cooperative personnel is well designed and is being well implemented. As with credit management training, the impact of this training on input distribution will depend on followup. Even if the trainees return to their villages able to complete the necessary forms, it is unlikely that they will do so without continuous prompting by cooperative officials and NDD staff. In the long run, improved supply management by cooperatives can occur only if villages understand the value of cooperative undertakings and commit themselves to using this approach for village-level development activities.

4.2.3 Inventory Management System

Regarding inventory management and control, the project expects to have an operational computerized inventory management system from the project headquarters level to the cooperative level by June 1, 1985. From the headquarters level, the system will cover all activities in which there are stocks and flows of physical items (e.g., agricultural inputs and automotive spare parts). From the cooperative level, perpetual inventory and distribution records (simplified and in Hausa and Djerma), supported by biannual physical inventories, will be the field level's part of the inventory management system. This system should help project management determine the appropriate levels of buffer stocks to offset the lack of accurate demand estimates.

An additional facet of the inventory management system will be the capability to move agricultural inputs, especially fertilizer, to and between warehouses according to changing levels

of demand. Based on the availability of some historical demand data coupled with agronomic data for various locations (e.g., effectiveness of fertilizer) and transportation costs, the project will use a classical linear programming model to move stocks so that fertilizer is available on a timely basis where it will achieve the best results at the lowest transportation and handling costs.

4.2.4 Conclusions and Recommendations

The principal conclusions to be drawn are (1) that the physical input distribution system is adequate for the timely supply of inputs and (2) that the project has adopted a correct approach to the training of cooperative-level personnel in inventory management and control. The weakness in the distribution system is that it has not run smoothly because it does not receive timely demand estimates from cooperatives and is subject to last-minute notification of additional input requirements during the early part of the growing season.

Recommendation. The project, through its training effort, and the CNCA agents who will be soliciting cooperatives' loan needs for the season, must stress the need for early receipt of accurate demand estimates for inputs (both for credit and for cash). This is critical to the smooth working of the distribution system.

Recommendation. As indicated in the recommendations for the project credit component, training followup and supervision at the cooperative level are critical to the current and future training efforts. For these efforts, NDD should consider hiring the best (reportedly there are four fairly well-qualified agents) of the recently unemployed UNCC agents.

5. CPT-BASED TRAINING AND EXTENSION

5.1 Implementation

5.1.1 Recruitment of Trainees

From the beginning of NDD, the goal of trainee recruitment has been to locate younger villagers in the project zone who are interested in learning improved agricultural production techniques at the project's CPTs. After their CPT training, the

trainees are expected to use the techniques in their own fields and to teach their neighbors how to improve their own production. This is the "oil spot" principle of extension. Experience during the early years revealed, however, that the trainees were often poorly motivated after returning to their villages, having been almost obliged to attend the CPTs. Their impact was therefore minimal.

To improve the quality of persons sent to the CPTs, the project began in 1982 to more carefully specify recruitment criteria and to make these criteria known among the cooperatives in the project zone.

For the same reasons, the NDD began an "open door" program at the CPTs in 1983. These programs were designed to give greater publicity to the CPT programs and to demonstrate the effects of the productivity themes being taught. Relatives and representatives from each trainee-couple's village were invited to the sessions. At the same time, the recruitment criteria were further tightened. Only those cooperatives that were not in default to the CNCA could send trainees to the CPTs. The NDD asked that the trainees be mature individuals, with experience in farming and access to their own fields on which to use the new techniques.

Although it is plausible that these improvements in recruitment have produced a higher quality trainee (a point debated by some CPT directors contacted during the evaluation), more work is needed. By way of example, a study carried out by the project's Monitoring and Evaluation section shows that 98 percent of the trainees recruited in 1984 had access to land in their home villages, but that half (54 percent) are neither household heads nor heads of domestic production units. We are uncertain of the consequences of this situation for the 1984 trainees; this issue deserves some attention during followup. It is possible that, as observed during Phase I of NDD, the trainees' "junior" status in their families will continue to present obstacles to the effective use of their knowledge.

A second difficulty faced by several trainees stems from the policy of selecting single trainee couples from GMs to spread project impact to many villages in the cantons of the project zone. When the trainee couples return to their home villages, they alone cannot constitute an effective extension program, because moral support is lacking for their initiatives in the village. This isolation is particularly pronounced with women CPT graduates from ethnic groups or subgroups where there is little if any social support for women's labor in collective fields (windi koy faryan) during the cultivation season. This is a qualitative, but critical, consideration. To implement innovations of the kind the NDD is promoting, there must be some support from the surrounding milieu.

This situation is complicated by the fact that followup and support needed by trainees who have completed the program are not always provided by the project's followup agents or by arrondissement technical personnel, despite a general improvement in NDD followup efforts. During the 1984 agricultural campaign, 74 percent of former trainees were contacted at least once by an NDD agent. Nonetheless, discussions with people at various levels within the project--CPT directors, women's followup agents, and all department technical service representatives--revealed degrees of dissatisfaction with current followup.

The project has been trying to increase awareness of and interest in NDD among populations in the project zone and to promote more active participation of local cooperatives in trainee selection. Even after these efforts, the question of the project's impact (i.e., increased productivity) remains largely unanswered. After 7 years of promotion in the project zone, several of the NDD's production techniques remain minimally effective (see Section 6).

One element of the technical package that is truly popular with NDD trainees is the two-oxen cart. Given its popularity, if trainees are motivated to attend the CPTs primarily to receive the oxen and cart on credit, what is the purpose of better selection criteria (if not simply to improve the reimbursement situation)? Under these conditions, the link between improved recruitment and improved impact cannot be assumed.

5.1.2 Teachers at the CPTs

The quality of teachers at the project's CPTs (CPT directors and literacy instructors) varies considerably and does not appear to be routinely or sufficiently supervised. This is not to say, however, that we do not find enthusiastic, capable instructors at the CPTs. On the contrary, NDD training personnel can easily identify several. But faced with a training program that demands effective teaching and a mastery of the themes being taught, the number of instructors having these desirable qualities is insufficient.

According to observations by NDD personnel responsible for CPT training and comments by an animal traction expert who visited the project during 1983, the CPT directors tend to incorrectly use the farm implements they are demonstrating to trainees. Occasionally, for example, uplifting blades are used instead of multicultivators to teach soil scarification. According to experience with animal traction in the Zinder region, cultivation using a single ox requires only one person, whereas the CPTs teach that two, if not three, people are needed for the work. A traction method that requires more human labor may seem to repre-

sent an economy of time but may actually lead to a loss of domestic labor and time. This is especially the case with women who are now working more with their husbands in household fields, potentially at the expense of labor time, hence production, in their own fields. The project has been improving the teaching of technical themes since 1984, but weaknesses still persist. These must be addressed, particularly given the present effort to diversify the range of production techniques taught at the CPTs. The greater the variety of techniques taught, the greater the need for followup and quality control.

Similar observations can be made about the literacy and followup agents. There was great variation in the quality and motivation of literacy instructors during 1984. The situation was further complicated by the dismissal of at least one instructor (at Koni Beri) because of poor performance, something that was done without informing the department representative of the Literacy Service. An extreme case (in Chiwil) was mentioned by the department literacy agent who described one CPT instructor as "mentally ill," having alienated most of his students. Other cases could be cited to complete this picture of variation in teaching quality. Efforts have been made to improve the quality of instructors in NDD training programs, but ideal candidates frequently cannot be found.

Concerning ongoing endeavors to improve NDD training, a very constructive link has been formed between the project's training section and the Centre de Formation des Cadres de l'Alphabetisation (CFCA). This has enabled NDD and the Literacy Service to work closely to develop, test, and perfect a more efficient teaching method tailored to the needs of the CPT literacy programs. This "intensive literacy" approach has considerable promise and merits continued support.

To ensure an effective program, CPT teachers must be carefully selected and trained according to the needs of the project. The literacy instructors must, of course, thoroughly understand what they are teaching (not always the case), but they also must be able to establish a rapport with the trainees. As with all aspects of NDD, their activities must be carefully followed up.

The situation of the young women who work as literacy instructors is further complicated by their additional duties as followup agents for all women CPT graduates in the regions surrounding the centers. Their performance is often weak in both areas. Once again, however, the mere presence of followup agents and literacy instructors for women is a major improvement in NDD training and extension programs. The task is now one of increasing their effectiveness.

As for the female CPT graduates, partial information suggests that their use of the CPT extension techniques is limited to their work with their husbands in household fields; their extension efforts in their home communities are minimal. This reinforces the image of women as marginal to project activities that developed in the early years of Phase II efforts to focus more attention on women. (These efforts resulted in the creation of a women's participation component and the subsequent addition of women's followup agents.)

If endeavors to improve the lot of the few women who become literate in national languages are to be effective, structural changes, not just better teaching methods (however important they are), will be needed. More specifically, if the existing rural development structures (cooperatives) in the project zone do not give women CPT graduates the opportunity to use their literacy skills, the impact of their training, no matter how good the instructors, will be negligible and probably quickly lost.

5.1.4 Involvement of Technical Services in the Project's Training Programs

Thanks to monthly coordination meetings of arrondissement-level technical services, service representatives can stay informed about project activities and, thus, plan and participate more effectively. The participation of technical services in training is scheduled for each CPT in a given arrondissement. These schedules, which can be found at each CPT, provide for at least two visits by each service every month. CPT directors also maintain a register of CPT visitors with information on the date, the service involved, and the nature of the visit. Through contacts with CPT directors and an examination of the registers, one can surmise the level of service participation in CPT training programs. On the basis of this impression, it appears that except for the Literacy Service and to a lesser extent Animation, the contribution of technical services to training is very limited. The few visits that do occur tend to be focused on some specific task (delivery, collection of information), and instances of time spent with the trainees are rare. In the meantime, the literacy instructors, who do not always master the content of the technical themes they teach, do what they can to pass on this information to the trainees. The technical services should give greater support to CPT training through a more active involvement in center activities.

5.2 The Impact of CPT Training on Trainees

Since 1980, several studies (internal and external to NDD) have criticized the project's technical package for being too expensive, not very effective in several components, and not well adapted to project zone conditions. Animal traction themes (except, of course, the two-oxen cart) have proven particularly problematic for profitability. More recent information from research done by the project's Followup and Evaluation unit suggests that several features of the package are not or are only partially used by many CPT graduates. If the impact of CPT training on the agronomic practices of trainees is weak, the trainees' impact in their home villages, in turn, is negligible. Hence, the spread effect is minimal.

The project must now disaggregate or "unpack" the technical package according to the possibilities and limitations determined by project zone rainfall and soil variations. More attention must also be given to the socioeconomic context. Since the brief studies of land tenure and social structures in the project zone during 1977-1978, these issues have been ignored (see Section 3). The themes that seem least doubtful and most popular are often those that only slightly change practices used for some time in the area. Data collected by the NDD on the use of extension techniques on fields by CPT graduates from 1979 through 1983 illustrate the situation. Seed treatment was used on 70 percent of the fields, seed sorting was used in 68 percent of the cases, and thinning of plants in 77 percent. By contrast, before the rains, soil scarification was practiced in 32 percent of the cases, while tracing was used in 39 percent and animal traction weeding on 32 percent of the fields. Manual weeding still predominates in the practice of CPT graduates.

To better adapt technical training to local conditions, CPT directors began to demonstrate alternative methods in 1984. Single-ox and donkey traction were shown to trainees along with two-oxen traction. Largely because farm implements now available for alternative approaches are not well adapted, the demonstrations were not very satisfactory or convincing. The donkey hoe, for example, was not well received because the model used at the CPTs does not scarify the soil as deeply as the ox-drawn equipment. To summarize, efforts to propose a wider variety of techniques in the CPT programs are just beginning, but they are beginning and are an important step toward a more effective training program.

Despite the alternatives, almost all CPT trainees selected the ox-drawn equipment at the end of their training programs, however costly and whatever its efficiency. This is because the oxen pair can pull a cart, the "star" of the NDD technical package. The cart (as trainees were quick to point out during CPT

visits and have been saying for years--see the NDD II Project Paper) is seen as a means of earning cash throughout the year. The potential effects of the improved production techniques, however, (if they work) are limited to a short period and totally dependent on rainfall. In short, the cart promises greater diversification of real income, hence a subsistence base.

Aside from the above-mentioned innovations, contacts with CPT personnel and NDD headquarters staff most directly concerned with training reveal that the content of CPT extension has changed very little from previous years.

The most important change in training since 1983 is the opening of village-level centers (also known as revolving CPTs): Guessendoundou in 1983 and Kongougrou, Kolbou, and Boumbounga in 1984. To date, however, the changes seem to consist of form rather than content. Perhaps the clearest example of continuity between the curriculum of CPT and village-level training programs is that of Guessendoundou. The peasant couples trained during 1983 were taught themes appropriate for cultivation of millet on sandy soils, despite the fact that most of the trainees cultivate sorghum on clayey soils. Thus, agricultural training was largely inappropriate for the trainees. In cases like this, the village-level programs simply replicate CPT extension themes on a smaller scale. This certainly does not represent greater flexibility in training.

How can we explain the NDD's slowness in adjusting CPT training content? No doubt there are several reasons, but those most deserving of our attention are the following:

1. The scale and complexity of NDD. There are too many activities to plan, implement, follow up, and evaluate.
2. The newness of the village center approach to training. It is a welcome change to NDD programs but may be an extra burden of followup if the number of village centers increases significantly. From a management standpoint, homogeneity of training content may be more desirable than diversity: followup and evaluation are less complicated with fewer variables to consider.
3. Inadequate followup of training impact linked to a feedback mechanism for easing needed changes in training content.
4. Turnover at NDD headquarters. The heads of all NDD components directly concerned with CPT training have been with the project less than 1 year.

Contacts with NDD personnel reveal a willingness to improve the quality of training programs, which is evident in the organization of seminars and more innovative programs for NDD and arrondissement-level personnel (see Section 3). Now it is the turn of the CPTs. After more than 6 years of operation, production themes are still not satisfactorily developed, and the expected impact of their use remains to be seen. In addition, knowledge within the project of the NDD's operational milieu is limited.

5.3 Recurrent Costs of CPTs and Village-Level Centers

The NDD currently envisions several strategies for reducing operational costs. The first consists of increasing the number of village-level centers in order to spread the impact of NDD without excessive cost increases. Among other things, the trainees at the village centers will live and eat at home, thus there will be no lodging and food costs for the project. Construction and maintenance costs are also much lower at village centers, for only simply built houses are needed for CPT staff.

The second approach to cost cutting entails asking villages that send trainees to the CPTs to absorb a part of the expenses. For example, beginning in 1985, the GMs in the Kourfey canton of the Filingue arrondissement, where the Chiwil CPT is located, will contribute in kind or cash to center operations as follows:

- Each GM will contribute 50 kilograms of millet to the CPT for food.
- Trainee couples will provide their own mats, beds, and mattresses. (This will begin in 1986; the Niger Association of Women has agreed to supply these once during 1985.)
- The GMs will gather straw, millet, sorghum stalks, and cow pea vines for CPT cattle feed.
- If construction is required at the CPT, the GMs will supply materials (mud, thatch) and labor and will pay for a mason if adobe is used.

A third approach that has been suggested involves dividing CPT millet production into three portions. The first will be distributed to trainees at the end of training; the second will be used to cover miscellaneous center expenses; and the third will be used to establish a revolving fund for input purchases.

To evaluate this third strategy, Philip Boyle has analyzed the recurrent costs of an "average" CPT (on the basis of 1983 production figures)--Boula, with 20 peasant couples--and a village center--Guessendoundou, with 10 couples.² On the basis of the value of center production, he examined the possibilities for setting up a revolving fund. For the average CPT in 1983, millet production covered about 25 percent of costs; for the village center, coverage amounted to 10 percent. Boyle concluded that there was no potential for revenue generation sufficient for even partial financing of center operations. From the viewpoint of economic viability, neither type of center appears to offer much. Having concluded this, Boyle emphasizes that training centers of this kind have a very important role in the development of more effective production methods. Finally, he stresses the need to look at the centers as training and extension structures and not as self-sustaining enterprises, whatever the recurrent costs. The issue is development policy rather than a narrowly defined notion of profitability: at some stage, society must incur a social cost in promoting development.

A fourth attempt to promote self-financing for CPTs began in 1983. NDD contracted with several peasants in areas around the CPTs to grow certified seeds. The profits from seed sales were to be used to establish a CPT fund. Unfortunately, this endeavor failed. A total of 2.8 million CFAF was spent on inputs (for 265 producers on 471 hectares of land) of which the project recovered only 1.5 million CFAF.

In summary, NDD has considered, and in some cases attempted to implement, strategies to reduce and cover operational costs at its training centers, but the results to date have not been satisfactory. If recurrent costs are to be met locally, other strategies will be required. It may be unrealistic to expect that too great a burden be absorbed by local populations.

5.4 Conclusions and Recommendations

5.4.1 Conclusions

The foregoing remarks and those contained in the section on the project's technical package reveal several needs. First, it is necessary to better understand the elements of the technical package to use them for more effective training.

²Philip Boyle, L'Autofinancement des CPT au Moyen du Fonds de Roulement (Niamey: USAID, 1984).

Second, as has been repeatedly stated, there is a need to provide better followup and, above all, support for CPT graduates in their efforts to apply what they have learned under conditions of production that they know only too well.

There is some dissatisfaction within NDD over the limited impact of the technical themes after several years of promotion, and there is a manifest willingness to consider different approaches. Within the project's components and at the level of the CPTs, efforts are being made to improve extension content.

The effects of these changes cannot yet be judged, primarily because insufficient time has elapsed. The heightened awareness of the difficulties and endeavors to do something about them date from 1983. More time will be needed if effective collaboration ever develops within NDD. (See below and Sections 2 and 3.) Furthermore, a very poor crop year in 1984 did much to compromise endeavors to evaluate the impact of attempted improvements in extension and training.

Finally, the effectiveness of any strategy requires effective collaboration within the project. In principle, the arrondissement coordinators facilitate this through monthly meetings. In addition, NDD has organized several seminars to promote more effective coordination and planning. These efforts are all positive but alone are insufficient. Collaboration also requires substantial interest from the technical services, but the degree of this interest appears very limited. Thus, complaints about inadequate coordination are frequent, despite meetings and seminars.

Let us suppose that all parties to the NDD could and would cooperate as needed for the successful pursuit of project goals; under these conditions, several recommendations merit consideration.

5.4.2 Recommendations

1. Single out production techniques that work well and teach them as effectively as possible in project training programs. If the use of some techniques is low, this is probably because they are not effective or because the risk-benefit balance is unfavorable for the producers who are being encouraged to use them.
2. Pursue the extension of a range of effective techniques at the village centers to directly link training to local conditions of production and alter the techniques as needed.

3. Continue efforts to ensure better quality teaching staff at the CPTs.
 4. Strengthen the capacity of technical services in the project zone to follow up project activities. Require that service representatives participate in center training programs in a manner that is useful and interesting to the trainees.
 5. Continue efforts to select better trainees but do not confuse the cause-effect relation between better trainee selection and better project impact of production techniques that are only marginally useful.
 6. Ensure that trainees, particularly women, occupying junior positions within their home settings are not constrained from using the production techniques they have learned (if they work).
 7. Either ensure that women can play a more active role (if they so desire) in cooperative structures where they can use their modest literacy skills or stop literacy training for women. The required changes are structural, not simply pedagogical: priority must be given to means of making women's literacy functional. Until this is done, their interest in literacy training will remain low and the results will continue to be poor.
 8. If women's literacy training is to continue in the project, assign adequately trained women to the task and take them seriously. End the present arrangement of double-duty as literacy instructor/followup agent.
 9. Strengthen the followup of trainees during and after CPT programs. Insist on the need for service agents to listen to and work with villagers. Without this painstaking expression of genuine interest in problems of project zone, people and in what CPT graduates do, the credibility and impact of NDD (except as a source of carts) will be limited. This may be the most important recommendation.
 10. Explore ways for local populations to contribute to operational costs of the training centers, but guarantee that they perceive and receive a payoff from their contributions. Discard the idea of self-financing training centers.
 11. Respond to requests from project zone villages for help in improving agricultural production. Consider the establishment of village-level centers in these cases only if there is an unambiguous expression of local interest.
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12. Consider closing several CPTs if the village-level centers prove to be more cost-effective as an extension tool.

6. THE IMPROVED TECHNICAL PACKAGE

6.1 Introduction and Background

Included in the scope of work for the second interim evaluation was the request for the agricultural economist to analyze the progress in adapting the animal traction technical package to the different climatic zones of Niamey Department. The analysis was conducted primarily through (1) review of available documentation and (2) interviews with project, Government of Niger, and other international agency officials. The list of documents reviewed is presented at the end of this report.

Sometime prior to the U.S. Inspector General's audit and the first NDD interim evaluation (November 1982, February 1983), AID/Niamey observed that the adoption of the improved technical package (or components of the package) was not proceeding at the expected rate. Problems in the monitoring of farmers during the 1981 and 1982 seasons had limited the data reliability and conclusions regarding package viability, but it was evident that farmers were not using all of the recommended practices. The first interim evaluation collected much information explaining the slowness of adoption. The primary attraction of the package was the cart that permitted farmers to engage in revenue-generating activities other than crop production. Limited CPT field trials that same year by the NDD agronomist resulted in crop budgets that showed, overall, lower returns for the recommended two-oxen traction package than for the improved manual or donkey-based practices.³

A second study was conducted in 1983 for a small number of farmers using animal traction in the Filingue arrondissement. Although no statistically based conclusions could be drawn because of the small sample, the results suggested that the package was not being adopted and was not profitable for Filingue.⁴

³Mary Abrams, 1983 Annual Report (Niamey: NDD, 1983).

⁴Michael Wybo, Crop Enterprise Budgets for Three Project-Trained and Two Traditional Farmers in the Area Surrounding the Chiwil CPT, 1983.

A report, conducted by F. Lebeau, I. Pattison, and W. Enger of Ronco Corporation on another USAID project also raised serious questions about the profitability of the animal traction package and nitrogen fertilizer.⁵

At about the same time, Ithaca International, Ltd. was contracted to do a thorough study of the agricultural technical packages for Niger for USAID/Niger's Joint Program Assessment.⁶ Their conclusions included, among others, that package success, even if all environment conditions are met, is not assured; that a range of choices or options should be built into most components of the package; and that the package does contain some elements that can increase yields and income under certain conditions. Through the use of hypothetical partial crop budgets they also found that donkey traction gave higher returns than oxen traction at financial (subsidized) prices, whereas almost all forms of animal traction yielded profits inferior to those earned from the traditional system at economic (unsubsidized) prices. These overlapping and complementary studies formed the basis for requesting NDD project management to show greater flexibility in teaching improved agricultural practices and to give higher priority to applied research.

According to the NDD Revised Implementation Plan (March, 1984), NDD was to procure or produce prototype animal traction equipment, tested and modified on farmers' fields, that ultimately would lead to more effective, less subsidized, more profitable packages for dry-land farming. At the same time, the training at the CPTs was to be less rigid and include instruction on adapting the basic technical package to differing agroclimatic conditions.

6.2 Analysis

The basic question addressed in this section of the evaluation is to what extent has the recommended technical package been adapted to the agroclimatic conditions of Niamey Department?

In 1983, the agronomist was unable to conduct any on-farm trials of the type taught at the CPTs because of limited resources and time. Her contract expired in December 1983, and the

⁵Warren Enger et al., Assessment of Agricultural Inputs and Input Delivery, RONCO Consulting Corporation, November 1983.

⁶John Ericson, Bob Clark, Charles Steadman, and Dan Aronson, An Assessment of Improved Agricultural Technologies in Niger, Ithaca International, Ltd. 1984.

project was unable to recruit a replacement for 1984. Second, during the 1983 season, the monitoring and evaluation adviser became so involved in establishing detailed project goals by division and preparing quarterly and annual reports that a followup survey of previous CPT graduates was neglected. Consequently, further monitoring of the adoption or nonadoption of the recommended technical package was not accomplished in 1983.

In 1984, a Niger agronomist, who was to have worked collaboratively with the expatriate technician, had begun to replicate all of his predecessor's 1983 trials and had expanded the trials from 4 sites (1983) to 10 sites (1984) when he was shifted to a new project position as chief of personnel. His replacement found that managing the trials at all 10 sites was difficult because of distance, supervision of enumerators, and data volume. As a result, farm-based trials using the same animal combinations were again left undone.

The monitoring and evaluation adviser was replaced in 1984. His replacement arrived in mid-June with barely enough time to start a survey of the CPT graduates to determine which practices had been adopted. At the time of this evaluation, only very preliminary results of the survey were available.

The preliminary survey data support the previous conclusion that the technical package has not been adopted in its entirety. Concerning actual production, the 1984 drought, one of the worst in history, has greatly diminished the ability of the project to measure yield differences between package-grown grain and traditionally grown grain. The survey results (when they appear in final form) will therefore not be useful in estimating yield impact but may be indicative of adoption rates because all the practices were performed before the August-September drought, except for the application of urea, which was supposed to be made after the rains.

Other progress in adapting the technology package to Niamey Department conditions started in the fourth quarter of 1983, when Niger was visited by one of the foremost West African animal traction experts knowledgeable both in on-farm use and production of the technology packages. He was engaged by NDD to examine the national production system for creating the units and to offer advice on NDD-based traction utilization and blacksmith training. He suggested minor equipment modifications to improve equipment performance, which should have an impact on future project activities. However, the project has not acquired other animal traction equipment for prototype testing, nor has any testing been carried out at the farm level.

Thus, the project was set back by the lack of personnel and was unable to test the package under actual production conditions. Even if on-farm tests had been carried out in 1984, the drought would have greatly compromised the yield results.

Furthermore, because of the turnover of the agronomist and evaluation personnel and the manner in which the surveys and field trials have evolved, the project now finds itself in the position of having performed some elements of farming systems research (FSR) without having really defined the process. That is, the project to date has not established a clear program of adaptive FSR.

FSR comprises six distinct stages:

- I Descriptive: Constraint Identification
- II Identification of Improved Agronomic Practices
- III On-Farm Testing of Potential Improvements
- IV Identification of Unsolved Technical Problems, which are Incorporated Into Stage V
- V Technical Research With Feedback to II, III, IV
- VI Body of Knowledge for Extension

The project had initially assumed that Stage VI was in final form and thus used departmental anthropological and national agricultural data to describe Stage I in the Project Paper. Stage II was performed, de facto, by the introduction of the traction variation experiments at the CPTs; it was essentially a modified Stage III. The animal traction specialist, in his assessment of the animal traction industry, began addressing some of the factors in Stage V (i.e., how to improve equipment quality). Thus the project has advanced in an informal FSR mode while still teaching a recommended technical package (Stage VI). The problem is that there have been no clear procedures or identification of what stage of the FSR process NDD is in.⁷

As a productivity project, NDD's primary aim was to teach a defined package while strengthening support services. When it was discovered that the package needed modification, the only improvements sought involved the traction variations, and no closer examination of the constraints was undertaken. The incomplete 1981, 1982, and 1983 CPT graduate surveys greatly delayed the process.

⁷This statement does not imply that NDD should adopt a full-scale FSR program, but that it should have an explicit awareness of the different stages and where the project's applied research and monitoring/evaluation units should be incorporated.

Thus, although some progress has been made (the 1984 survey of CPT graduates; the CPT traction trials; the animal traction specialist's consultation), no clear organized approach now exists for seeking a better package. One of the tasks that must be clearly defined before the start of the 1985 agricultural season is the outline of an applied research program that uses the already existing information and research efforts of the other national/international institutions located around Niamey. The monitoring and evaluation adviser, the agronomist, and the traction specialist should jointly define the degree of NDD involvement in Stages II and III.

6.3 Potential Improvement in the Technical Package

The current focus of package improvement by the project has been on the utilization of different Niger-produced equipment. During the evaluation, it became apparent that there are more areas of potential improvement than just the choice of equipment. The technical package can be broken down not only by activity (clearing, weeding, and the like) but also by technical area. Any one of these components could be tested. Not only should there be experiments on the various types of equipment, but the quality and design of the equipment needs to be examined (e.g., the livestock purchasing method by and for CPT graduates could be examined). The International Fertilizer Development Institute trials have shown that calcium ammonium nitrate produces higher yields than urea, although it has a higher per unit cost. The point is that the project could and should be experimenting with a larger number of "improved agronomic" practices already developed on research stations rather than limiting itself to various Niger-produced traction equipment.

6.4 Collaboration Between Agencies

The major institutions involved in agricultural-related research centered in or around Niamey include ICRISAT (including the International Fertilizer Development Corporation; INRAN; Tropsoils; AGRHYMET; and donor agencies such as the Food and Agriculture Organization, World Bank, nongovernment organizations, and the German, French, and Chinese governments, among others.

There are two areas in which NDD can or should collaborate. First, NDD could learn from the experience of other integrated development projects (and vice versa) and apply these lessons to project management, CPT operation, farmer extension, the technical package, and other areas. The establishment of the experimental village-based CPTs was the result of learning about CPT operation of the 3M project in Zinder. The transfer of personnel

between projects is an informal way of building on other projects' experiences: the current NDD agronomist had previously been the agronomist for a project located near Tahoua.

The second area of needed collaboration is that of exchanging research, on-farm results, and similar information with organizations that are trying to remove the agronomic/technological constraints of Sahelian or Niger agriculture. The two major institutes for this near Niamey are ICRISAT and INRAN.

NDD formal or informal coordination with ICRISAT and INRAN is not good and is probably not very good with the other institutions either. The principal reason for this is that the two key NDD people for research coordination--the monitoring and evaluation adviser and the head agronomist--left the project within a few months of each other. Both individuals had contacts in the other organizations. The agronomist was not replaced, and the monitoring and evaluation adviser arrived in late June, just in time to implement the 1984 survey of CPT graduates. Most of the previous communication links were thus broken.

The current head of the NDD applied research division initiated an agreement that formally established links with the agronomic division of INRAN. The office for Agro-Economic Studies at INRAN also initiated an agreement with the Monitoring/Evaluation unit of NDD. The agreement defined the material contributions, relationships, and exchanges of results between the two groups. In practice, however, it appears that collaboration has been minimal. INRAN was unaware at the time of the interview that the project's replacement for the agricultural economist (Monitoring/Evaluation) had arrived in June, nor had the new arrival gone to meet them.

The lack of communication seems to have been caused primarily by the change of personnel and the lack of organized informal (or formal) periodic meetings. The onus for organizing meetings should rest with NDD because NDD, looking for the best possible technical package components, will profit from the research done by INRAN and ICRISAT. In turn, NDD could inform the other organizations of the results of applying the innovations. Increased coordination between INRAN and the Monitoring/Evaluation unit would avoid duplicative survey efforts as well.

6.5 Conclusions and Recommendations

6.5.1 Conclusions

The objective of this section was to evaluate the project's progress in improving the adaptability of the animal traction-based technical package to the different climatic zones of Niamey.

First, although some progress has been made in the search for a better package, NDD still lacks a well-defined program for the development of such a package. Given certain adjustments, the NDD is now in a position to assume a leading role in reorienting national and departmental applied agronomic and farming systems research. The CPT-based trials, the continued experimentation with varieties, and the involvement of one of the foremost animal traction experts of West Africa indicate that the project has made an effort to find a better package. Although it did not test any prototype equipment, this would have been difficult to do given the personnel changes and the 1984 drought.

Second, several existing innovations can now be tested at the CPT and farm levels. The project already has the established infrastructure and analysis methodology. Innovations to be tested might include sprayers, pure stand cow peas (as cash crop), and monobovine traction. The forthcoming recommendations from the report written by the animal traction expert on the domestic traction industry will also have an impact on future equipment usage by the farmers.

Third, research and field experience indicate that in the northern half of the Niamey Department, seed treatment and phosphate fertilizer application are being adopted by farmers, whereas in Say and other dryland areas where clay soils are more predominant, seed treatment and urea, although requiring proper application (or replacement), and plowing after the first rain, may also be accepted practices.

Fourth, although collaboration between the different donors or projects exists in the form of written agreements, there appears to be little coordination or effective communication. The institutions involved have annual budgets that total several millions of dollars in Niger alone. One would hope that given these budgets (or annual plans), steps would be outlined to keep the communication channels open and information flowing. The replacement or disappearance of personnel, as was the case here, should not be the sole reason for a failure to do so.

6.5.2 Recommendations

Based on the reviewed documents, interviews, and the consultant's previous experience with NDD, the following recommendations are made for current and future NDD operations regarding the use of the agronomic technical package:

1. The project should recognize that the key to increased farmer production is not the development of more seminars or new teaching methods (village-based CPTs) but an appropriate and affordable technical package, coupled with proper instruction and sufficient followup. If the project's principal goal of increasing cereal production is to remain, the first key issue that must be addressed is the technical package.
2. Niger agricultural research needs to be expanded to include the on-farm search for more productive methods of raising crops. Several potential agronomic and equipment improvements have already been developed. The project needs to define a farming systems research program.
3. The agronomic and agricultural economic research units of the various national and international agencies need to develop better lines of communication among themselves and with the project. Informal monthly meetings should be established for the cadre of the Niger Cereals Project in INRAN, the agronomist and economist of NDD, ICRISAT, Ministry of Plan (Project Evaluation Assistance), and other interested agencies. The informal meetings would also help strengthen the ties between some organizations that now have cooperative memorandums of agreement on paper but not in spirit.

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