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**Niger: Macroeconomic
and
Rural Sector Assessment**

**Volume I OF 2
Report**

Presented to:

USAID/Niger

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Executive Summary

This executive summary contains five sections, one for each of the principal topics of this report. Each section is divided into two sub-sections, one containing conclusions and the other recommendations. The sections are:

- Macroeconomic Perspectives and Issues
- Agricultural Production
- Agricultural Marketing,
- Micro and Small Enterprise Development, and
- Agricultural Credit.

Exhibit ES1 is used to summarize quantitative impacts on Niger's economic growth that could result from key recommendations.

A. Macroeconomic Perspectives and Issues

1. Conclusions

Reviewers of USAID's Proposed Country Strategy Plan, 1995-2002, raised concerns about Niger's ability to achieve sustainable economic growth in excess of its 3.3% rate of population growth. Some reviewers suggested that unless some means can be found to achieve a rate of economic growth in excess of the rate of population growth, USAID might be most effective if its strategy were to concentrate exclusively on USAID's Strategy Objective 1 (SO1). This strategy focuses on family planning, maternal/child health services and child nutrition.

An exclusive focus on SO1 would mean giving up the remaining two components of USAID's proposed strategy, namely:

- SO2, which involves efforts to improve access to markets, especially through use of improved, decentralized financial services, and
- SO3, which seeks sustained, widespread adoption of management practices that improve conservation and productive use of Niger's forests, fields, waters and pastures.

The overall conclusion of this study is that Niger is very likely to achieve an economic growth rate in excess of 3.3% in the intermediate term (two to five years). As summarized in Exhibit ES1, USAID can significantly assist the growth

of rural farm and non-farm activities, and enhance both Niger's overall rate of growth and rural participation in that growth.

For the long term (more than five years), Niger has strong possibilities for realizing a rate of growth in excess of four percent per year. Gold resources alone could add significantly to the GDP growth rate for at least 15 years. Gold's impact on rural incomes could be 1.4% per year. Successful development of phosphate reserves could also contribute substantially to GDP growth. Greater use of pesticides and other agricultural inputs could add two percent per year to GDP. Reference to Exhibit ES1, which summarizes likely impacts or sources of intermediate growth in Niger, indicates that gold production in the Liptako Region could add 17% to GDP per year within five years. Uranium, by contrast, contributed 2.6% of GDP in 1993, down from 13.1% of GDP in 1984. USAID's strategy can help the GON channel its revenues from mining activity into sustainable national growth.

Exhibit ES-1
Development Strategy For USAID/Niger's
Economic Reform and Microenterprise Program*

I. Agronomic Conditions in 1995	Hectares (millions)	Hectares (millions)
- Arable land is 15 million out of 128 million hectares	15.0**	15.0**
- Area cultivated (increasing exponentially with yields constant ¹)	-7.0**	-9.0**
- Arable land seriously eroded	-1.5	-4.5
- Residual arable land	6.5	1.5
- Irrigable land	0.27	
- Currently irrigated land	-0.07	
- *Residual irrigable land	0.2	
II. Proposed Growth Strategy	Sectoral Impact	Impact on GDP Growth
Exploit gold reserves at Liptako	US\$ 185 million/year in 2000	17% increase ²
New, totally private sector activity	US\$ 16 million/year in rural incomes	1.4% increase
Establish a Cowpeas Marketing Agency	Export 30,000 Tons/year to Nigeria, Strengthen Credit & NGO Activity	
Exploit fertilizer reserves at Tahoua USAID technical assistance for: - Phosphate mine development & - Transition to cash input farming	25% increase in Crop Production Reduced crop failure in droughts	6% increase ³
Demonstration effect To encourage use of:	Improved seeds Water harvesting Nitrogen fertilizer (NRMs) Improved animal production	2% increase ⁴
Devaluation stimulus to Niger/Nigerian trade Micro & small enterprises produce unrecorded GDP equal to 50% of GDP in production & services	Rural income effect Stimulation of: - Agro-processing - Non-farm enterprise	3.5% increase ⁵
Redesign macroeconomic trade relations - Develop defenses against non-FCFA zone devaluations	Improve markets for rural traders	
Agricultural marketing - Better storage - Private sector seed production - Better market information	Can increase millet & cowpea production by 10% & 20%, respectively	1.25% (i.e., 5% of crop production) ³
Rural credit - Mobilize \$66 million bank reserves with semi-formal intermediaries and USAID bank training - Credit now available to 2% of rural sector	Complements rural income effects of gold, fertilizer and FCFA devaluation Facilitates business expansion possible from devaluation	
<p>1/ Area cultivated grew at 5.6% p.a. from 1984-94. See Annex F3.</p> <p>2/ Uranium contributed 2.6% of GDP in 1993, down from 13.1% of GDP in 1984 when demand was still strong for the mineral.</p> <p>3/ Crops were 25.7% of GDP in 1993, which is estimated at \$US 1.1 billion</p> <p>4/ Animal husbandry contributed 13.7% to GDP in 1993.</p> <p>5/ This increase due to devaluation of the FCFA equals the loss estimated to result from an almost equivalent appreciation of the FCFA/Naira during 1985-87.</p> <p>* Preliminary results of a Barents/KPMG & DAI sector assessment of Niger's rural sector. Draft date is 10/30/95; file is strtagy4.xls.</p> <p>** High and low estimates inferred from incomplete data.</p>		

The ready market that exists for gold does not exist for agricultural production, however. Widespread use of fertilizer and other agricultural inputs, though physically productive, might not be economically feasible. Lenders view farmers as high risk clients because of the variability of weather, uncertain commodity prices when harvests are bountiful, possibly monopolized commodity pricing and volatile exchange rates with Nigeria. Hence, even if weather and other aspects of production are acceptable, market prices may collapse to such an extent that revenues from good yields are still too meager to repay the financial sector. Such a scenario impacts non-farm enterprises by weakening purchasing power and, consequently, their rural markets.

This places the financial sector at risk. And, weaknesses in the financial sector limit its ability to finance agricultural inputs and add buying power to commodity markets. These weaknesses are largely explained by poor enabling conditions that prevent adequate collateralization of loans. Major barriers to formal sector lending in the semi-formal and informal sectors include a lack of understanding of these markets, excessively high overhead costs and an inability to collateralize loans effectively. Barriers to mobilization of informal sector liquidity, on the other hand, devolve from two unique characteristics of informal loans. These loans are usually or almost invariably (a) made on the basis of personal relationships and (b) structured as an adjunct to another transaction by the two parties involved in the transaction.

In short, formal sector intermediation requires loan sizes and risk protection that are not widely available outside of the formal sector. The informal sector sidesteps these problems by relying on personal relationships and generally structuring loans as an almost nonspecific component of other transactions involving goods and services. It solves collateral problems of lending by subtly converting lending into delayed delivery of buy or sell sides of barter transactions. Hence, the informal sector does not use intermediation because intermediation, by definition, involves third parties.

USAID's credit projects are strategically positioned to participate in a pilot-test to market cowpeas in Nigeria. The pilot-test would be for USAID to assist NGO's to establish a Cowpeas Marketing Agency (CMA) that could establish trading relations with cowpeas importers in Nigeria's formal sector. The new CMA should act as agent rather than principal to protect its capital.¹

¹ The macroeconomic section of the report points out that marketing boards or groups with even the most sophisticated management frequently fail. The foreign shareholders of the two French companies that mine Niger's uranium and negotiate an annual contract price for it provide an example. Niger's contract price for uranium was less than the world price until 1976. Then it doubled between 1975 and 1977, just as the European spot-market price for uranium dropped sharply. Niger's contract price averaged 82.7 percent above the world price from 1980 to 1989. Moreover, in 1989 the contract price was 261.2 percent of the world price. Marketing boards seem to make profits at the expense of farmers, incur losses at the expense of the government or taxpayers, and eventually are forced to close due to excessive losses.

The CMA also offers SO2 a macroeconomic perspective that helps insure cost recovery in agriculture by improving loan collateralization. This, in turn, will help mobilize (a) liquidity in the formal sector and (b) both liquidity and intermediation in the informal sector.

Macroeconomic policy can assist with the growth of intermediation by stimulating effective demand for Niger's agricultural commodities. Effective demand is demand expressed as financial buying power. For example, agricultural production subject to effective demand is production that is sold for cash. In other words, this production is monetized. If the cash realized from these sales is sufficient to repay farm loans for inputs cost recovery occurs and the system is economically viable.

USAID's SO2 focus, exclusively on access to rural credit, does not recognize that agricultural production and marketing weaknesses need to be addressed to insure cost recovery. At a more profound level, the lack of assured cost recovery in agriculture combined with the lack of lender recourse to collateral are inextricably connected with inability to mobilize liquidity in the formal and informal sectors.² SO2 needs a macroeconomic perspective that helps insure cost recovery in agriculture and effective loan collateralization.

Macroeconomic policy can assist with the achievement of SO2 in several additional ways. First, it can help encourage the formal banking system to extend more credit to farmers and the rural sector as a whole. Elimination in October 1993 of the ability of banks to receive high returns by keeping their loanable funds in Central Bank (BCEAO) bonds is an example of such a policy.

Interest rate policy is a second example of a macroeconomic policy that could impact rural lending. Section E argues that interest rate ceilings on loans encourage credit rationing away from women. Market determined interest rates are likely to allocate more credit to women as credit allocation shifts to its most productive uses.

Third, macroeconomic policy can promote free and open markets for agricultural commodities. Poor transportation and storage, inadequate market information, crop loans from informal sector lenders coming due at harvest time, potentially monopolized commodity markets and very volatile exchange rates with Nigeria reduce farmer ability to maximize farm gate prices at harvest.³ SO2 can help

² The importance of collateralization is discussed particularly well in Section E, Agricultural Credit.

³ A study of Maradi, Zinder and the five other important zones where traditional staple crops are grown indicates that millet and sorghum prices normally peak in July, decline during the harvest months of August through November and begin rising in December toward their annual highs in July. These price variations were sufficient in the 1989/90 and 1990/91 seasons for retail grain traders to make estimated gross margins of between 30 and 80 percent. In exceptionally bountiful years, such as 1986 and 1987, the prices of both

with some of these problems, but macroeconomic policy, interpreted broadly, is perhaps the only possible way to address possible monopolization of commodity markets and Nigeria's currency fluctuations.

Finally, the GON might be encouraged to invest some of its foreseeable profits from gold mining, a resource depleting activity, into indigenous development of phosphate fertilizer, a resource restoring activity.⁴

6. Recommendations

- a. USAID could undertake a pilot-test to assist NGO's to establish a Cowpeas Marketing Agency (CMA). The CMA would attempt to establish trading relations with cowpeas importers in Nigeria's formal sector. The CMA would fill a Nigerian demand for an estimated 30,000 tons of cowpeas each year that was formerly met by SONARA, a defunct Nigerien parastatal. The new CMA should act as agent rather than principal to protect its capital.
- b. USAID's credit projects could provide loans to farmers for a portion of the expected value of cowpeas delivered to CMA for marketing. Farmers would be paid the balance of the cowpeas sales price after the CMA sells the cowpeas and repays the farmers' loans. This constraint on the CMA could be an opportunity for USAID's credit projects to mobilize liquidity in both the formal and informal sectors and promulgate the practical use of intermediation in the informal sector. Once the system works effectively for cowpeas, perhaps it could be duplicated for other commodities.
- c. Use the CMA related credit as a point of departure for developing commodity markets and intermediation in the informal sector with recognition that progress will be limited until Niger's legal system is reformed to permit effective collateralization of loans. Also use the CMA to reduce the estimated six months now required for foreign currency conversion within the banking system (See Section .
- d. Promote reform of Niger's legal system so that loans can be collateralized effectively. Then proceed to develop intermediation in the informal sector as fully as possible.

millet and sorghum dropped to a 10 year low of 20 to 25 F CFA/kg in the zones of Maradi, Zinder and Dosso. This price decline occurred during a period of active GON price support policy, which was conducted through OPVN, and is cited as an example of the failure of such policies. The study points out further that large grain buyers use 38 collection networks in Maradi and 10 in Zinder. The managers of the networks set maximum prices that buying agents are allowed to pay for grain each year. See, Characterization of Instability in Niger's Cereal Markets, pp. 38 and 60.

⁴ Soil fertility constraints on plants and phosphate fertilizer development and promotion are discussed in detail in Section B., Agricultural Production Management Through Drought Cycles.

- e. Promote crop diversification, first, toward traditional cash crops, particularly cowpeas, and, second, toward high value export crops. Attempt to expand the success in onions to other cash crops while differentiating between risk involved in crops that are non-perishable (cotton), perishable within several weeks (bananas) and more perishable (truck farm fruits and vegetables).
- f. Promote multiplication and distribution of ICRISAT's new hybrid sorghum seed via small enterprises. A similar opportunity is likely to occur for millet within five years. The enterprises that distribute seeds can also provide extension services to ensure that farmers use the seeds effectively. Initial distribution of hybrid sorghum seed can be expanded into full-scale private sector production and distribution of seeds as is discussed in Section III. C, Agricultural Marketing.
- g. Do not use agricultural credit for water harvesting or other NRMs projects until cost recovery for loan payback is demonstrated.
- h. Create transformation enterprises such as drying and canning for high-value, perishable cash crops for which a strong demand exists regionally or overseas.
- i. Use minimum plot sizes of at least 0.5 ha and give farmers more control over the water allocation process on new irrigation systems. Bankable projects might also include private sector irrigation schemes of 5 to 10 hectares.
- j. Refine and expand crop and market information provided in media reports using information from AGRHYMET, SIM and other sources. Information should be broadcast in several languages.
- k. Efforts are needed to ensure that GON policies and donor projects do not damage the development of sustainable SMEs.
- l. Carefully rationalize the levels of authorized customs fees and road taxes, and continue to eliminate unauthorized informal customs fees, road taxes and tariffs on fertilizer imports.
- m. Selected credit institutions should receive technical assistance for preparing business plans.
- n. USAID could design its monitoring and evaluation methodologies to utilize information that credit institutions collect regularly through their loan monitoring activities. These information sources could help measure women's participation in financial activities. The simulation model presented in Annex D could be used to help train evaluators.

- o. Planning could begin now to use a portion of anticipated mining revenues for rural development. Consideration could be given, for example, to development of local fertilizer deposits, improvement of infrastructure for agricultural marketing at the airport and in the Liptako region and stimulation of transformation industries that focus on irrigated vegetables and meat products.

B. Agricultural Production Management Through Drought Cycles

1. Conclusions

Arable land in Niger is estimated to be 15 million hectares, as noted in Exhibit ES1.⁵ Agricultural land use is growing at an exponential rate, but often at the expense of rangeland for livestock. Very little fertile arable land is unexploited. Most of it has been striped of its fertility due to poor agricultural practices. Grain yields are stagnant or decreasing and conflict between farmers and pastoralists is frequent and often tragic. Agriculture is unquestioningly becoming unsustainable because it involves extensive, low investment farming.

Poor farming practices have caused erosion, which results in primarily crusted land in Niger's Sahelian environment. Crusted surfaces cover between 10 to 30% of arable land. Crusting reduces water absorption into soils. Studies suggest, however, that water harvesting could increase water retention on nearly 16% of agricultural land that is in production and on 18.3% of range land.

Agricultural risk management usually involves low input agriculture and turnover of worn-out land in areas where land is available. This practice has led to abandonment of an estimated one million hectares of land previously used for agriculture. However, where population density is high and unexploited land is not available chemical fertilizers are used on rainfed fields.

Ideally, (a) farmers will practice more intensive agriculture so that soil fertility, yields and overall production will rise, and (b) land use for agriculture will no longer expand uncontrollably onto rangeland for livestock. Conditions that could help achieve these goals include:

- Greater use of inputs, particularly phosphate fertilizer and pesticides, on relatively fertile land,
- Land tenure regulations that control land use among farmers and herders and ensure access to land by those who restore its fertility.

⁵ Cited but not referenced in many reports, estimate is likely to have originated from INRAN, 1979 (Ouattara, 1995).

Without a significant increase in production, improved natural resource management will be limited to project sites and agricultural expansion will continue to degrade the land.

2. Recommendations

- Promote the development of non-governmental organizations (NGOs). These organizations, which have gained the right to operate effectively within the GON's new democratization movement, can perhaps help farmers pool resources for input purchases and marketing.
- Promote intensive agriculture to restore soil fertility and reduce crop risk from drought. Place highest priority on greater use of phosphate fertilizer, which is the greatest agronomic constraint to improved yields in most areas of Niger. Phosphate, more than other fertilizer, promotes plant root growth to reduce the risk of crop failure from drought. Greater use of phosphate is expected to increase farmer confidence in intensive agriculture, boost yields sufficiently to release resources to cash crop production, particularly cowpeas production, and raise effective demand for additional agricultural inputs.
- Promote cash crop production, particularly cowpeas, to raise rural incomes, encourage integration of agricultural and livestock production which, in turn, will stimulate better resource management practices such as use of fallow hay to supplement higher protein cowpeas hay.
- Explore possibilities to develop phosphate rock at Tahoua, Niger for domestic use on grain crops and perhaps for export.
- Retrain in soil and water conservation to eliminate damaging NRM's practices and promote effective ones,
- Improve quality, distribution and authentic packaging of planting seed,
- Integrate pest management, improved markets, and secondary road networks to help farmers increase food security. De-emphasize use of cereal banks for food security,
- Protect livestock migration patterns, which are necessary for livestock to continue to make substantial and largely unmeasured contributions to GDP, by limiting agricultural expansion on range lands,

- Preserve wealth embodied in livestock by promoting animal harvesting technologies that permit better herd management and rapid de-stocking during exceptionally dry seasons.
- Establish financial intermediation in rural areas that can become a substitute for livestock and, consequently, encourage better livestock management.

C. Agricultural Marketing

1. Conclusions

Niger's most prominent, single export market is Nigeria, which receives the bulk of Niger's cattle, hides, skins and cowpeas exports. Niger is also a leading onion producer in West Africa. The violet de Galmi is particularly appreciated in the regional markets of Togo, Ghana, Burkina Faso and the Ivory Coast for its long shelf life and predictable production cycle.

Seed quality is an important constraint on agricultural production. During the 1988 growing season commercial seed production reached only 200 tons. This tonnage addresses only 0.2% of the 92,000 tons of millet, sorghum, niebe and peanut seeds (M3) that the Annual National Plan suggests is needed annually. The effective demand for commercially produced seeds is also very low. Small farmers in the Maradi and Zinder departments, for example, indicated that they do not know where to get improved seeds or how to use them.

Where purchasing power is growing, however, the demand for improved seeds is growing as well. INRAN is barely keeping pace with the demand for onion seeds this year. Their onion seeds sold for 15,000 FCFA/kg in 1994 and 25,000 FCFA/kg in 1995. Seed demand is also strong for non-traditional export crops such as sweet peppers, potatoes, tomatoes and peanuts. Donor projects also have strong demand for seeds. For example, the FAO Project Maradi, Project PASP in Tillabery, and FIDA/PSN in Aguié provide credit to farmers for inputs or sponsor swaps of seed for grain.

Fertilizer is available and at relatively low cost, because Niger's private sector imports subsidized fertilizers, mostly 15-15-15 and urea, from Nigeria. Border prices of fertilizer fluctuate significantly because Nigeria periodically stops this well-established, but illicit fertilizer trade with Niger. Nigeria's interruption of fertilizer exports is likely to end in the near future. A long-term constraint looms within two years when the Nigerian government, submitting to GATT/WTO pressure, ends fertilizer subsidies to its own farmers. This impending event gives new importance to phosphate deposits in Parc W and Akker in the Tahoua Department.

Credit is a major constraint to fertilizer use among small farmers. Many small farmers purchase fertilizer from local businessmen on credit, and repay the loans

with profits from their crops at harvest. In debt with no apparent option but to sell their crops when everyone is selling, the farmers sell at very low prices to pay off loans. Farmers in Zinder and Maradi report they sell niebe as low as 2,500 FCFA/100 kg sac at harvest time to repay loans to creditors. A few months later, the same niebe sells for 4000- 7,500 FCFA/ 100 kg sac.

USAID/Niger's approach to agricultural marketing, for the most part, provides credit programs to rural areas. Credit, after rainfall, can make the most significant contribution to production by providing access to fertilizer, pesticides, storage and other inputs. This one dimensional approach is very focused, allowing the mission to plan, execute and monitor its activities with WOCCU, CLUSA and CARE. However, credit alone may not be enough.

Two major obstacles related to agricultural marketing exist that USAID should consider addressing. They are (a) inadequate input supplies of seeds, fertilizer, pesticides and storage and conservation, and a policy structure for private sector delivery of these inputs, and (b) a lack of output market structure. Efforts to assist with agricultural marketing could build on USAID's well-respected credit projects, especially if the current credit programs can be shaped to become independent of USAID funding in the next five years.

2. Recommendations

a. Input Markets

First, a facilitator is needed to help the GON and donors structure a private/public effort to increase production and use of commercial seeds and to develop a national seed policy. The facilitator might be obtained through the USAID Global Bureau Office of Agriculture's buy-in mechanisms to obtain technical assistance on agricultural marketing.

Institution building aspects of seed production that need to be addressed include: (1) strengthen relations and work plans among INRAN, seed multiplication centers and extension services; (2) re-establish national and regional committees (composed of small farmers, cooperatives at arrondissement and village levels) to include both public and private sector representatives⁶ (3) encourage both public withdrawal from production of M2 and M3 seeds and incentives for cooperatives and private companies to supply seeds on a for-profit basis.

Second, the GON should consider steps to reorganize public seed production activities with actions that include: (1) decentralize current seed research and multiplication systems; (2) cut costs at multiplication centers and INRAN, by (a)

⁶ The regional committees would distribute trial seeds to farmers and record farmer feedback, organize workshops on seed distribution and use, sometimes with the Service d'Agriculture.

pay small farmers multiply M2 and M3 seeds, (b) redefine seed varietal research priorities and (c) strengthen INRAN's capacity to provide seed; (3) initiate quality control systems in seed production and certification; and, (4) maintain a national seed security stock, while encouraging the creation of privately managed seed security stocks.

Third, USAID's SO2 and SO3 committees should convene donors currently active in Niger's fertilizer markets to discuss a common framework for external assistance in the fertilizer market. The fertilizer market experiences both subsidized imports from Nigeria that can have 50-100 percent price fluctuations during a season and inconsistent donor interventions.

Fourth, USAID/Niamey should collaborate with IFDC-Africa, INRAN and ICRISAT in a pilot to encourage private sector exploration and exploitation of phosphate rock in Akker, Tahoua. IFDC and INRAN have worked on this issue since 1982 and, consequently, USAID should not take a lead role. It should perhaps provide technical assistance, market analysis and funding on an as needed basis.

b. Output Markets Recommendations

First, SO2 and SO3 should establish an ad hoc agribusiness advisory group composed of perhaps 15 private/public sector representatives. It would help develop policies for private sector firms and donors in input and output markets. It could also help disseminate to the public information on:

- Conservation and storage facilities and techniques, particularly for onions, cowpeas and maize,
- Market news on radio in at least three or four national languages,
- Market opportunities for the more lucrative commercial crops such as cowpeas, souchet, produce (tomatoes, sweet peppers, other garden vegetables) and onions.

The ad hoc group might become a West Africa Enterprise Network.

Second, the SO2 committee should consider technical assistance for conservation and storage of cereals, legumes and allium. A Resource Services Supply Agreement, already in place with the U.S. Department of Agriculture, could be used to obtain these services within three months of the date requested.

Third, hire an institutional contractor to procure and manage expertise to strengthen subsector markets in five departments. The institutional contractor should have experience in public and private sector collaboration in francophone West Africa and draw on expertise in the U.S. food industry.

Several public and private sector representatives would like widespread donor assistance with fertilizer through creation of donor sponsored, privately run marketing boards. The boards would among other things, set floor prices, trade with small farmers, trade with larger producers and exporters and gain access to formal Nigerian markets.

The potential usefulness of such a scheme is illustrated by the trading situation with cowpeas. Nigerian traders in its formal sector have refused to accept cowpeas from Niger since SONARA, Niger's erstwhile parastatal of cowpeas and peanuts, shut down its operations. SONARA's peanut operations were losing money, but its cowpea operations were profitable. Its cowpea exports averaged 30,000 tons annually, mainly to Nigeria. Now, Nigerian traders find Niger's informal sector unable to supply sufficiently large quantities of cowpeas at acceptable quality.

Onion and garlic marketing need improvement. Four issues, that is, lack of credit, poor storage and poor conservation techniques and marketing are considered to be formidable constraints to improving Niger's market share on West African onion markets. Dutch and German technical assistance have made progress in providing credit and storage technologies to onion farmers in the Tahoua Department. These interventions could be applied in other areas.

Niger's share of the Ivorian and Ghanian, Togolese and Beninois onion markets is between 40 and 60 percent, and 60 to 70 percent of the Burkina market. Additional markets exist in secondary towns in West Africa, but lack of knowledge about ECOWAS export activities, customs and transit regulations limits marketing efforts in these towns. Furthermore, Niger's marketers have little access to formal market operators. Nigerien merchants need information about competing products and have limited capacity to react to competitive moves.

D. Micro and Small Enterprise Development

1. Conclusions

While estimates suggest that MSEs contribute 20% to overall GDP in Niger, the many analytical and statistical difficulties in accurately measuring value added and attributing it to non-agricultural MSE activity leave considerable room for doubt about the reliability of this figure. What is more important, however, is the perception shared by most observers that the MSE sector is the most dynamic sector of the economy and is currently responsible, along with agricultural production and marketing activities, for most of the economic growth that is occurring in Niger.

Strong evidence exists suggests that MSEs do indeed play a particularly important role in contributing to manufacturing and service sector GDP. As shown in section D-5, production in the peanut oil sub-sector alone amounts to over 50 percent of

total formal sector agro-processing production. MSEs in other sub-sectors likely contribute much more to overall value added. Once all these sub-sectors of MSE activity are factored in, it becomes clear that the majority of manufacturing and service activities in Niger are carried out by MSEs.

The seasonality of MSE income is particularly important in contributing to improved food security in rural areas. Since most non-farm MSE income comes at a time when rural households have few other income producing alternatives, it provides needed income just at the times when they are most vulnerable to food shortages--thereby reducing their vulnerability.

It is widely recognized that women in Niger could play a larger economic role than they do currently. This is due mainly to cultural factors which inhibit women's ability to interact in with strangers, differences in educational attainment and the greater difficulties women face in obtaining access to capital. Although these are generalized constraints that affect women in both the formal and informal sectors, there is little doubt that barriers to women's participation in the MSE sector are relatively less constraining than in most other economic areas. According to 1987 figures from the Direction de la Statistique, women owned 29% of the 130,000 microenterprises surveyed.

Two important assumptions that USAID has made in its approach to SO2 are:

- Assumption 1: Accelerating growth in both primary sector agricultural production and the MSE sector, when taken together, will lead to an overall rural sector growth rate superior to the three percent rate of population growth; and
- Assumption 2: MSE sector growth can be accelerated most effectively by expanding access to financial services.

As regards Assumption 1, evidence suggests that MSEs do indeed play an extremely important role in contributing to manufacturing and service sector GDP. Production in the peanut oil sub-sector alone amounts to over 50 percent of total formal sector agro-processing production. Case studies of the Hides and Skins and Fruit Juice and Processed Fruit Products subsectors suggest that aggregation of output from all MSE activity exceeds formal sector production in manufacturing and service activities in Niger. Thus the Mission's strategy of focusing on micro-level enterprises as a key leveraging point for influencing economic growth is thoroughly rational. This is where the bulk of value-added enterprises are found.

Significant growth can be achieved only if there are improvements in the operating environment for a large number of MSEs. This environment can be improved through (a) creation of sustainable financial institutions that can reach large numbers of borrowers, including MSEs, and (b) growth in processed agricultural exports (which are virtually non-existent at present) through development of formal

sector SMEs that are capable of standardizing the production process, enforcing quality standards and negotiating the logistics of international marketing. Though larger markets, particularly export markets for processed goods, offer the greatest growth potential, the policy environment in the formal sector limits access of both SMEs and MSEs to these markets. MSEs tend to remain small and continue to operate in their restricted markets rather than become SMEs. SMEs almost certainly cannot escape participation in the formal sector. Consequently, they invariably endure the tax and administrative burdens of this sector. These burdens include both investment and labor management interference and cumbersome administrative requirements for exporting and importing.

This chapter points out that both SMEs and MSEs respond to market opportunities very efficiently, but it implicitly suggests that such opportunities are usually small and uncertain. This makes growth prospects uncertain. Uncertain growth limits the need for the credit, technology and training that are suggested in the chapter. This uncertainty enhances, however, the Chapter's conclusion that USAID's most effective strategy might be to concentrate on policy constraints. Though perhaps the most important rationale for this strategy is the need to expand market demand for both MSE's and SMEs, reasons cited in the Chapter to concentrate on policy constraints include:

- Other donors are planning or studying interventions which should make significant contributions to addressing firm-level constraints for SMEs, and
- USAID has significant experience and strength in the analysis of policy constraints affecting the private sector.

The Chapter suggests that, given these two factors, the results-package that USAID should be building around SO2 must include actions to address some of the policy constraints identified in section D-5 of the Chapter.

As regards Assumption 2 concerning the Mission's focus on financial constraints on rural MSE growth, they almost certainly pose the most immediately constraints facing most MSEs. Notwithstanding policy constraints, many MSEs have the capacity to expand their operations if they could find reliable and convenient sources of credit. The need for medium-term credit, to allow multi-year term loans to accommodate more expensive and durable pieces of equipment is particularly great.

Credit to SMEs has added importance because women have less access to credit than men, particularly when credit is rationed quantitatively or allocated at subsidized interest rates. USAID's efforts to stimulate credit to SME's is particularly important for women because **women are much more prominent as both entrepreneurs and workers in MSEs than in SMEs**. According to 1987 figures from the Direction de la Statistique, women owned 29 percent of the 130,000

microenterprises surveyed. The peanut oil case study contained in this Chapter shows that certain areas of MSE activity are the exclusive domain of women. Besides peanut oil, women are particularly dominant in such agro-processing activities as shea butter production, onion and tomato drying, dairy product processing, cotton spinning, straw mat weaving, and beverage processing. They are also run most restaurants in Niger and are active in artisanal pottery and furniture making. By contrast, female employment in formal sector SMEs is much less frequent.

The non-financial constraint, improved access to technology, is largely a question of promoting new technology development efforts. These efforts are most easily accomplished in-country by bringing together local and foreign specialists to develop affordable prototypes with local materials. This sort of "technology incubator" already exists in Niger and is supplied by the PROFORMAR/NIGETECH projects. There is little reason for USAID to duplicate these efforts.

In addition to finance and technology, the issue of MSE lack of technical skills is a serious issue. Although many NGOs provide basic business skills training, there are fewer options available to individuals who want to rapidly acquire technical competency in such common MSE productive areas as tailoring, woodworking, metalworking, or equipment repair. Skilled artisans have little incentive to train large numbers of people who would then compete with them in the market. To facilitate the growth of MSEs, therefore, new ways are needed to leverage the technical competence among existing MSEs to train greater numbers of workers. As a complement to its financial sector focus, therefore, USAID could profitably investigate new forms of technical training which will help develop sustainable training modules. These modules should encourage training by altering the incentive structure facing traditional artisans.

2. Recommendations

The following section presents an array of recommendations to USAID to support the Missions SO2 objectives in the area of enterprise development. Recommendations differ somewhat for MSEs and for SMEs.

a. Recommendations for Promoting MSE Development

(1) Finance

USAID should support measures which will permit a rapid expansion of credit to large numbers of MSEs. Specific recommendations and illustrative activities to expand the supply of credit available to MSEs are specified in detail in Section E of this chapter. It is crucial, however, that USAID's strategy for providing financial services include activities to significantly increase the ability of financial institutions to reach large numbers of MSEs. Without attention to this result, it is unlikely that SO2 will contribute to significant MSE sector growth. Unsustainable credit

programs, which neglect the savings element and merely recirculate donor provided funds, are unlikely to provide the quantum increase in loanable funds that would be necessary to make a significant dent in the total credit needs of Nigérien MSEs.

Increase the ability of NGOs to provide medium term credit. Although MSEs require both short- and medium-term financing, the virtual absence of medium term loans makes capital financing a particularly pressing problem. To strengthen NGOs' capacities to deliver medium-term credit, NGO personnel will need to receive training in the assessment of medium-term credit risk and in the management of loan portfolios with average durations of over a year.

Utilize NGO and donor-supported financial institutions to monitor MSE activities. Regularly collected data on the number, amounts and repayment rates of loans made by NGO credit programs to MSEs by sub-sector could provide a very useful data base for assessing the evolution of MSE activity. Unfortunately, most NGOs either lack the capacity to provide such information or they must go through a time-consuming examination of their records each time they want to produce such information. Therefore USAID should consider ways of encouraging NGOs to keep such statistics. This almost certainly would involve NGO staff training in simple statistical and data base operations and provision of adequate software. In addition, after supplying the necessary technical, and possibly financial help USAID may also require regular data reports from the NGOs' credit programs it supports in order to compile its own data-base on MSE activity.

(2) Access to Improved Technology

Leave the development of technology packages to other donors. Current donor efforts in Niger to develop appropriate technology for MSEs, mainly the PROFORMAR and NIGETECH projects, are making significant contributions. Given the experience of the ILO and EDF in supporting these initiatives, and the relative inexperience of USAID in technology development, this should not be a particularly high priority area for USAID assistance.

Increase the ability of NGOs to provide medium term credit. Availability of intermediate credit will facilitate MSE purchase of technology packages that require longer payback periods.

(3) Technical Training

Promote technical training that disseminates skills of existing MSE artisans in a sustainable manner. The need for a more rapid and flexible system for technical training can best be met by exploring new ways of leveraging the technical competencies that already exists in the MSE sector. While this is easily done by paying MSE artisans with donor-supplied funds to give technical training courses, as some donors are currently doing, such efforts are rarely sustainable. These efforts rely on donor financing and do not attempt to link student tuition or

training-fees to the remuneration of the MSE technical trainers. This makes the entire effort dependent on the continuation of donor support. A promising model, which places more emphasis on sustainability than on most donor technical training programs, has been developed by Ecole Moderne de Formation Polytechnique (EMFP) with the support of CARE in Maradi. This experience warrants closer investigation.

(4) Management Training

Continue to encourage the delivery of basic business management training to borrowers in NGO credit programs engaged in MSE start-up activities. For credit programs that are designed to encourage start-up MSEs, it is essential that credit be accompanied by some form of business skills training focusing on cost accounting and sales strategies. The provision of this supplemental training is already a common practice in most donor credit programs and a wide variety of Nigérien NGOs have come into existence to provide such services. In designing its future credit programs, USAID should also require borrowers to make significant cash contributions to the cost of such training programs. This would enhance both the sustainability of such programs and encourage better targeting by making sure that recipients have a real interest in the training. If necessary, the initial contribution could be included in the NGO loan package. These training efforts should place special emphasis on offering business skills training (possibly combined with basic literacy courses) to women, as low literacy and rudimentary educational levels are important limitations on women's ability to operate successful MSEs.

Encourage the development of fee-charging firms offering management consulting and other services to MSEs. The need among more advanced and successful MSEs for management advice going beyond the basic business skills training offered by most NGOs could best be met through growth of specialized consulting firms. USAID could help develop this fledgling business service by:

- Conducting a market feasibility study to estimate the demand and willingness to pay of potential MSE customers for such services as export market identification and brokering; assistance in the development of loan applications; payments and collections services; investment and feasibility analyses; and market analyses.
- Subsidizing training for potential MSE consultants in areas that show particular promise. Such opportunities may prove to be viable alternatives for laid-off civil servants.
- Eventually subsidizing or investing in start-up consulting firms targeting MSEs. It is ironic that, while donors do not hesitate to offer subsidized credit, which many MSEs could pay back at unsubsidized rates, they show little interest in subsidizing MSE service providers.

(5) Donor Coordination

Participate in the GON "Programme Cadre de Promotion du Secteur Privé" (Programme Cadre) initiative, should this develop into an effective forum for donor coordination on issues affecting MSEs. The MDICAT, with the help of the UNDP, is in the process of elaborating the Programme Cadre to promote private sector development and improve the coordination between various projects active in private sector development. Two facets of the Programme Cadre that are of particular relevance to USAID are:

- Coordination of various MSE activities. This component calls for the creation of an MSE Coordination Unit ("Cellule de Concertation pour la Valorisation des Aides pour le Développement des Micro et Petites Entreprises") which would monitor MSE projects and sponsor discussions and research on issues affecting the promotion of MSEs. Possible USAID funding of this unit and use of the unit to allocate USAID-financed technical assistance would give USAID a broad entrée into the definition of MSE policies on a national level. The Unit could improve dialog between USAID and other donors on such issues as the sustainability of MSE interventions.
- Programme Cadre's call for the creation of a Private Sector Coordination Committee ("Comité de Coordination") regrouping the major donors, GON officials and private sector representatives; this body has the potential of being a useful forum for promoting coordination among donors on issues affecting MSEs. USAID participation in this forum could also give it increased leverage in discussions with the GON and other donors over important MSE policy issues.

The Programme Cadre is still only a conception. Other donors, particularly the French, have expressed interest in participating, but its initiatives must be defined. USAID support, at this early stage, could encourage other donors to join and increase the likelihood that eventual interventions would be useful and gather broad support.

b. Recommendations for Promoting SME Development

(1) Finance and Management Training

Encourage other donors to focus SME credit and management training on businesses with strong links to the rural sector. To support its efforts to stimulate rural sector growth, USAID should encourage other donors active in promoting SMEs through credit and management training and focus a significant share of project resources on MSEs in such areas as agro-processing.

(2) Policy environment for SME development

USAID possesses two strong tools for influencing the policy environment for SME development:

- Non-Project Assistance (NPA) for budgetary support to the GON to encourage specific policy changes in favor of SMEs, and
- Economic policy research capacity, primarily provided by the PASPE project, to create a greater awareness of the costs of policy constraints on SMEs.

Both of these tools should be mobilized to promote policy reforms which address the policy constraints highlighted above.

E. Agricultural and Rural Enterprise Credit

1. Conclusions

The financial sector in Niger has formal, semi-formal and informal components. Popular confidence in financial institutions is very low. Since the end of 1992 savers have lost 28.2 billion FCFA from deposits in four failed banks. This partly explains the considerable surplus savings in the economy while bank deposit rates are low. Much of the rapid growth of the credit unions in the semi-formal sector may be attributed to pent up demand for savings institutions due to lack of confidence in the banking system.

The informal sector is functionally less capable of intermediation than the formal and semi-formal sectors even though it possesses the bulk of potentially loanable assets in Niger. Most of its liquidity is hidden in household coffers or invested in livestock or other assets. Asset immobility is attributable to a lack of confidence in the few existing financial institutions and their remoteness from rural areas. Moreover, intermediation is not a distinct, third-party activity in the informal sector as noted in Section 1, Macroeconomic Issues. Instead, credit is combined with other transactions of goods and services among well-known acquaintances. This practice probably evolved to help protect creditors against default in an environment which does not provide legal recourse to collateral. Consequently, intermediation is not a stand-alone business activity in the informal sector.

Less than five percent of Niger's population is considered to have access to formal or semi-formal savings facilities, while less than two percent have access to loans. Positive growth in real per capita income would require either a ten fold increase in

donor funds for semi-formal lending to rural and MSE activities⁷ or a significant mobilization of formal and informal sector liquidity for productive activities. It is unlikely that the former will occur, so regardless of the obstacles, mobilization of formal and informal assets for rural use is the only viable strategy.

Mobilizing liquidity in the formal and informal sectors and long-term demonstrations of intermediation in the informal sector are two ways that USAID's credit projects can promote this strategy. Achievement of this objective will require:

- Transformation of the intermediaries themselves into efficient, well-run and sustainable organizations,
- Use the USAID projects to mobilize the \$0.66 bl. in excess liquidity in formal sector banks for loans in the semi and informal sectors,
- Improvement in enabling conditions, particularly labor and trade laws, commercial codes and enforcement of lender rights, and
- Use of these intermediaries to establish the concept of useful intermediation in the informal sector in order to begin mobilization of its estimated \$1.1 bl. in liquid assets.

Self-sufficiency is an essential goal of USAID's three intermediation projects. They are designed to be catalysts for change, and consequently short-term losses can be expected - just as they occur in any start-up venture. But all three projects need and currently do not have business plans that specify loan volumes and spreads necessary to breakeven or marketing plans to be used to become sustainable.

Women are the principal victims of highly subsidized non-sustainable financial services. There is a growing body of evidence in Niger and elsewhere which suggests that women's economic activities are profitable, and that they are able to pay the full costs of obtaining financial services. Women are more likely to have access to funds priced at full cost than where significant subsidies are involved.

Credit necessary to support a four percent increase in GDP will necessitate greater levels of capital than donors are able to provide. This implies institutional growth based on mobilized indigenous capital. If development is the mobilization of indigenous resources for productive use, existing financial service projects should evolve into intermediaries capable of mobilizing local capital. Profitability, however, is a prerequisite for this evolution. There is no mention in the Proposed

⁷ A tenfold increase in clients of formal and semi-formal financial institutions is an arbitrarily selected figure. A tenfold increase would mean that 50% of the population would have access to savings services and 20% of the population access to credit. Assuming that the majority of this increase would take place in the most productive regions of the country, this expansion is likely to sustain growth.

Country Strategy Plan 1995-2002 that the USAID funded programs will need to increase their profitability in order to achieve the projected magnitude of outreach.

The projected increase in loan demand in the Proposed Country Strategy Plan 1995-2002, is insufficient to support the level of growth needed to have a positive impact on GDP. To have ten percent annual growth in the rural sector, increased investments of 50 percent need to be made if return on equity is 20 percent. If return on equity is 10 percent, investments must increase at 100 percent per year to achieve 10 percent growth in GDP.

For growth to have a reasonable equity distribution financial services need to be available to at least 10% of the population of Niger. It is proposed that targets be expanded to increase the level of financial services to 4.0 billion FCFA or \$8 ml. by 1999, with 350,000 clients by the same time increasing to 8 billion FCFA in 2002 with 500,000 clients. Such growth will only be feasible if existing semi-formal financial institutions earn enough profit to attract these levels of capital. No new injections of capital should be needed.

USAID/Niger can do much to strengthen the enabling environment conducive to financial sector growth, support the existing institutional capacity to meet this challenge and coordinate with donors to best respond to real demands for savings and loans. In addition, it can support training of collective groups that can function as retailers of financial services, strengthen the capacity of its three projects to achieve operational self-sufficiency and ultimately profitability, and encourage commercial banks (a) to on-lend through semi-formal intermediaries and (b) to help pressure for reforms in the enabling environment.

In Niger and elsewhere women have greater access to financial services when the interest rate are high enough to eliminate incentives to ration credit on considerations other than price. When markets rather than political power ration credit women get more of it. The repayment rates of loans to women's groups managing individual loans suggest that the returns to investment in training more groups in the financial management skills needed to be effective retailers of financial services is worth the cost.

While indicators of women's access to credit need to include numbers or percentages of total borrowers, particularly for Congress, an important lending principle should not be forgotten. That is, although it is easier to target women as beneficiaries of activities than it is to alleviate the constraints on women's access to loans, elimination of constraints is the only sustainable approach. Once the constraints to women's access to financial resources are alleviated, women will access these services when it is profitable for them to do so.

2. Recommendations

a. Semi-formal Financial Institutions

The faltering CARE/BRK project illustrates the need for USAID to take a more active role in monitoring and evaluating its financial service projects. While an earlier report was heralding the BRK as a likely success, the institution itself was foundering. If the USAID funded financial service projects, particularly BRK and CLUSA, are to achieve significant outreach, efficiency and sustainability, they will need more guidance and direction.

CLUSA/SICR has been operating for two years with little idea of interest rates needed for it to become profitable. WOCCU has fared better because it operates on the basis of an established methodology and MIS. These two features have enabled it to monitor itself more effectively than either CLUSA or CARE.

CLUSA/SICR is considering becoming a member owned *établissement financier*. BRK is headed toward becoming a mutual savings and lending institution under the upcoming revised banking law. When these institutions transform themselves, and no longer receive USAID subsidies, USAID will no longer help control their objectives.

USAID should actively help its financial service projects to become profitable and sustainable. Support should not include capitalization. Technical assistance and training funds, however, could be used to:

- Identify financial objectives that can be measured in terms of outreach, returns to equity and capital, loan volume and IRR;
- Set a fee or interest rate structure that will enable NGOs to become profitable;
- Design and implement management information systems (MIS) appropriate to each institution and its objectives,
- Train management and staff to grow and respond to market demand, and
- Establish clear operating procedures, particularly with regard to employee performance, compensation and debt recovery.
- Establish regular internal and external audits.

b. Enabling Environment

No major growth in financial services for enterprise finance is possible without alleviating the enabling environment constraints. Producers need to be free to

export their products without obtaining special permission. The powers of the Inspection de Travail need to be greatly curtailed. Licensing of enterprises including operating permits, needs to be *de facto* and not just *de-jure* simplified. This will generate demand for loans. The procedures to seize and liquidate the assets of defaulted borrowers must favor the lender and not the borrower. This will increase supply of loanable funds.

A summary of specific actions that USAID could help generate to improve the enabling environment are:

- Curtail powers of the Service de Main d'Oeuvre and its Inspection de Travail (as has already happened in Senegal and Mali);
- Liberalize border trade with Nigeria, including elimination of export licenses;
- Eliminate the need for permits to own and operate generators and water storage facilities.

Rewrite credit contract law to allow for seizure and liquidation of borrower assets without court approval requirements;

- Allow any asset usufruct or fee-simple asset to be used as collateral;
- Specify shorter delays between repossession and sale of seized assets;
- Reduce delays in litigation over credit contracts due to inefficiency and corruption;
- Specify in the upcoming revised banking law that non-mutual financial service organizations may mobilize borrower savings without obtaining special authorization.

c. Lending Capacity of the Formal Sector

Action that USAID can take to strengthen the commercial banking sector's capacity to extend financial services to rural and MSE clients includes:

- Support part or all of the costs of employing, equipping and training a rural, micro and small enterprise lending person who will work for one or more of the commercial banks. These costs would include training, salaries, a computer, a printer, and a budget for field follow-up of clients. USAID would support these costs for a period of two years. After two years the

income generated from the rural and MSE loan portfolio should cover all of its associated costs and USAID should be able to withdraw its support.⁸

- Conditionalities should be tied to USAID support of commercial bank staff. Participating banks must agree:
 - To reduce loan guarantee requirements from current levels of 100 percent or more to 75 to 80 percent now and 50 percent in two years provided borrowers or on-lenders have an established repayment rate equal or superior to 95 over the prior three years.
 - Access guarantee funds only after all collection efforts have been made and after borrower collateral is liquidated.

d. New Financial Services Activity

- If CLUSA/SICR is unable or unwilling to continue to on-lend funds of formal sector banks, USAID should support the creation of a new institution whose function would be to broker loans between commercial banks operating as credit wholesalers, and associative groups who would receive training and manage a bank loan parsed out to its members. These small groups would function as credit retailers.

e. Training in literacy and numeracy.

- Identify key transformation activities and train potential borrowers to prepare business plans and loan applications.

Annex D

Annex D summarizes a simulation model that was developed as an ancillary activity to the work of this study team. The model is intended to estimate the production and economic impact of gradual implementation of a variety of natural resource management activities. These activities include, for example, application of water harvesting, organic and chemical fertilizer, managed fallow, animal traction and field trees.

This model, like other simulation models, is a tautology. That is, it assumes a series of explicit conditions needed to achieve a goal, and then it traces the rate at which these conditions achieve the intended goal. Generically, simulation models generate suspicion because they are "black boxes" which can only be understood

⁸ The BOA representatives contacted during this study indicated that a two billion CFA rural and SME loan portfolio would provide cash flow sufficient to justify dedication of a staff person to this portfolio. The total loan portfolio of the BOA in August 1995 was only 2 billion F CFA.

and evaluated through careful study. As a consequence, the models are not very helpful when seeking consensus on policy issues. They can, however, be very useful instruments for teaching relationships between variables embodied in various subsystems. As a consequence, this model is suggested as a means to develop and implement monitoring and evaluation methodologies.

Finally, all of these recommendations apply to the short and intermediate term, that is, perhaps the next ten years. Within this ten-year time period, program activities related to SO1, particularly family planning, must reduce population growth. Otherwise the gains likely to be achieved during the next ten years will be eroded by the demands of a population that is not likely to be supportable by available resources.

Annex E

This annex contains a spread-sheet system to analyze the viability, dependency of internal rate of return on a range of exogenous costs and timing of expenditures and payments of a rural and or microenterprise lending project. While it was originally designed for the NCBA/CLUSA credit project which operates as a broker service, it can be used with only minor modifications for any rural or MSE credit project. This annex includes a set of worksheets and a diskette. The diskette enables the user to change any of the *a priori* conditions. The model requires that the user have access to Lotus 123 version 4 or Microsoft Excel version 4 or higher. Model parameters can be changed to respond to particular needs. Worksheet B is the input sheet; worksheet A is the data sheet; worksheet C holds hidden formulas for calculations used in the model. Users should make a copy of the model before using it. It is also helpful to change only one variable at a time to isolate the impact of individual change.

The strength of the worksheet is that it models all financial flows over a sufficiently long period of time for an institution to become sustainable (15 years). It calculates institutional sensitivity to performance, growth, expenditures, and inflows. The principal weakness of this annex is that it lacks the accounting perspective. The model would be stronger if the tables were presented in the form of consolidated financial statements, separating income statement and balance sheet information, and providing separate cash flow analysis.

Preface

The field work for this study was conducted in Niger during the period August 10 through September 9, 1995. The core team included Dr. Allen LeBel (KPMG), Joe Tabor (KPMG), Jerry Brown (USAID), Tom Lenaghan (DAI), and Olaf Kula (DAI). They were assisted by local consultants Maina Boukar (Maina Boukar Consulting Services) and Dagra Mamadou. Dr. Kjell Christophersen (IRG) worked particularly closely with Joe Tabor (University of Arizona) to prepare a simulation model that describes possible scenarios of agricultural production in Niger. This simulation is contained in Annex D of this report. It was also submitted as a stand-alone report by the International Resources Group, Ltd.

Comments on the first draft of this report are included as Annex L. The comments are extensive, thoughtful and much appreciated. Sources of comments are:

- Consensus summary,
- Comments by AFR/SD/PSGE,
- REDSO social scientist,
- Strategic Objective 2 (SO2), i.e., Improve access to markets especially through use of improved, decentralized financial services,
- International Resources Group,
- USAID/Niger/NRMA,
- Expanded strategic objectives team, and
- Kokari, (the banking intermediary for cooperatives managed by CLUSA).

The comments were critical and constructive. They emphasized the need for a rigorously edited draft of the report that stresses openness to international trade, the need for policy reform related to each section of the report, the use of NGO's and other organizations in the informal sector to help pressure for policy reform and a multi-dimensional approach to increased agricultural production rather than the report's perceived over-emphasis on fertilizer development.

List of Acronyms

AFCEN	Association de Femmes Commerçantes et Entrepreneurs du Niger
AFVP	Association Française des Volontaires de Progrès, Niamey
APOR	Action pour la Promotion des Organisations Rurales
ASDG (SDSA)	Agricultural Sector Development Grant (USAID/Niger)
CCAIAN	Chambre de Commerce, de l'Agriculture, de l'Industrie, de l'Artisanat de Niger
CLUSA	Cooperative League of the USA
CNCE	Centre Nigérien de Commerce Extérieur
CNPF	Centre Nigérien de Perfectionnement en Gestion
CNUT	Conseil Nigérien des Utilisateurs de Transports
DANIDA	Coopérative Danoise
DPA	Direction de la Promotion de l'Artisanat (MDICAT)
DPM	Disaster Preparedness and Mitigation Project, USAID
EDF	European Development Fund
EMFP	Ecole Moderne de Formation Polytechnique
FAO	Food and Agriculture Organization of the United Nations
FCFA	Franc Communauté Financière Africaine
FIDA	International Fund for Agricultural Development (IFAD)
GIS	Geographic information system
GON	Government of the Republic of Niger
GPS	Global Positioning System
GTZ	Gesellschaft für Technische Zusammenarbeit
ICRISAT	International Crop Research Institute for the Semi-Arid Tropics
IFAD	International Fund for Agricultural Development, Rome (FIDA)
IFPRI	International Food Policy Research Institute
ILO	International Labor Organization

IIMI	International Irrigation Management Institute (Institut International de Management de l'Irrigation)
ILO	International Labor Organization
IUCN	The World Conservation Union (UICN)
MDICAT	Ministère du Développement Industriel, de Commerce, de l'Artisanat et du Tourisme
MH/E	Ministère de l'Hydraulique et de l'Environnement
MSE	Micro and Small Enterprise
NGO	Non-governmental organization
NPA	Non Project Assistance
NRM	(improved) natural resource management
ONAHA	Office National des Aménagements Hydro-agricoles
ONERSOL	Office National de l'Energie Solaire
OPVN	Offices des Produits Vivriers du Niger
ORSTOM	L'Institut Français de Recherche Scientifique pour le Développement en Coopération
PASPE	Projet d'Analyse et de Suivi de la Politique Economique (USAID)
PNGRN	Programme National de Gestion des Ressources Naturelles (World Bank)
PNUD	(UNDP)
PROFORMAR	Projet de Formation Modulaire de l'Artisanat Rural (ILO/EDF)
SDSA	(ASDG)
SIM	Système d'Information sur les Marchés, OPVN
SME	Small and Medium Enterprise
SMO	Service de la Main d'Oeuvre
SNCP	Société Nationale des Cuir et Peaux
SNV	
SOMEA	Società per la matematica e l'economia applicate, Rome
UICN	Union mondiale pour la nature (IUCN)
UNDP	United Nations Development Program (PNUD)

UNIDO	United Nations Industrial Organization
USAID	United States Agency for International Development

I. Introduction

The members of the team were:

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II. Methodology

The study involved a literature review and briefings in Washington, D.C. and field work in Niger during the period August 10-September 9, 1995. The field work required extensive interviews, compilation of primary data collected in country from GON and NGO organizations. Use of topic guides for small surveys and other methodological techniques used by selected team members are referenced in relevant sections of the report.

III. Findings

A. Macroeconomic Issues of Rural Growth

1. Importance of rural areas in production and job generation

Agriculture is Niger's most important economic activity, with a twofold contribution to prosperity: first, agriculture enhances the national wealth; second, it provides a vehicle for job creation.

When viewed within the context of gross domestic product, rural production has remained extremely important despite intermittent declines occurring under the country's various economic regimes. As of 1993, rural production was approximately 44 percent of GDP.

The rural sector also supports a wide variety of other activities and services which employ the majority of the rural population, in particular its poorer segments. According to the results of a national study of the informal sector and microenterprises conducted in June 1987 and March 1988, "informal" activities are carried out in the rural areas by approximately 50 percent of the heads of households not directly involved in the agricultural sector (see Tables A-1 and A-2).

Table A-1
Rural production with respect to the GDP between 1987 and 1993

	1987	1988	1989	1990	1991	1992	1993
GDP (current prices)	532,966	546,016	546,697	554,807	558,264	557,668	554,872
Rural Production	207,844	220,440	214,042	232,217	241,638	244,325	244,242
Percent of GDP	39.0	40.4	39.2	42.0	43.3	43.8	44.0
GDP % - Agriculture	22.6	25.0	22.8	24.6	26.1	26.2	25.7
GDP % - Livestock%	12.4	11.4	12.0	12.9	12.7	13.1	13.7
GDP % - Fishing and Forestry	4.0	4.0	4.4	4.5	4.5	4.5	4.6

Source: Economic results of Nations. Initial results, 1992 and 1993.

**Table A-2
Employment in Niger**

	1985	1988	1990	1992	1995 (h)	1995 (b)
Population (000's)	6.5	7.2	7.9	8.4	8.9	8.9
Economically Active Population* (000's)	2.9	3.2	3.5	3.8	4.2	4.2
Civil Service employees (all)	35,400	39,100	41,300	42,100	42,000	41,000
Public enterprises employees **	14,500	15,000	13,000	12,500	8,000	9,500
Modern private sector employees **	14,000	18,000	15,000	11,500	25,000	20,000
Unemployed ***	45,000	53,500	58,800	63,700	39,000	68,000
Urban informal active population	324,390	356,539	395,792	433,128	523,012	418,409
Rural informal active population	2,505,209	2,747,580	3,025,907	3,282,355	3,528,098	3,629,400

* The activity rate is increased by 40% as compared to the census, to compensate for the women's activity rate which is too low

** These estimates correct upwards the data given by the employers (Employment Directorate) and downwards the data given by the workers (census).

*** Estimates based upon the 1988 census, which include people seeking their first job and registered unemployed workers

Sources: Statistics Department, Employment Department, Ministry of Finance

As shown in Table A-2, the rural sector provides the most work opportunities, employing on average about 85 percent of the work force. In the area of food security, the rural sector remains the chief provider of goods, in particular grain products. In 1992, rural production in cereal comprised over 95 percent of the total grain reserves of the country. Furthermore, following the mining sector (uranium), agro-pastoral activities are the main avenues of export. In 1993, they were 23 percent of the country's total exports (Tables A-3, A-4).

**Table A-3
Main exports between 1987 and 1993 (in tons)**

		1987	1988	1989	1990	1991	1992	1993
Total Exports		31,757	61,881	86,224	147,567	152,004	141,707	114,236
Uranium	Amount	2,908	6,587	6,553	7,034	2,963	2,963	2,969
	Percent	9.1	10.6	7.6	4.8	1.9	2.1	2.6
Rural Production	Amount	21,157	45,973	68,132	128,746	135,125	114,629	93,913
	Percent	66.6	74.3	79.0	87.2	88.9	80.9	82.2
Livestock and Fisheries Products	Amount	1,808	16,371	15,644	33,956	76,618	59,391	57,632
	Percent	5.7	2.6	18.1	23.0	50.4	41.9	50.4
Agricultural Products	Amount	19,349	29,602	52,488	94,790	58,507	55,238	36,281
	Percent	60.9	71.7	60.9	64.2	38.5	39.0	31.8

Source: Foreign Commerce, Final Figures, 1987-1989-1990-1991-1992-1993. Statistics and National Accounts Department

Table A-4
Principal Exports 1987-1993
(millions of FCFA)

		1987	1988	1989	1990	1991	1992	1993
Total Exports		93,863	85,941	77,710	76,939	78,348	71,742	62,535
Uranium	Amount	85,343	74,928	65,324	63,706	56,251	50,328	45,865
	Percent	91.0	87.2	84.0	82.8	71.8	70.1	73.3
Rural Production	Amount	3,961	5,784	7,157	7,118	17,460	14,832	15,203
	Percent	4.2	6.7	9.2	9.2	22.2	20.7	22.7
Livestock and fishery Products	Amount	649	37,70	3,466	3,265	15,081	12,746	12,460
	Percent	0.7	4.4	4.4	4.2	19.2	17.8	19.9
Agricultural Products	Amount	3,312	2,014	3,691	3,853	2,378	2,086	1,743
	Percent	3.5	2.3	4.8	5.0	3.0	2.9	2.8

Sources: Commerce extérieur: résultats définitifs 1987-1988-1989-1990-1991-1992 et 1993

There is tremendous potential for future growth of the agricultural sector - including product diversification - which would translate into additional exports. Numerous studies, including the World Bank's "Niger: Agricultural Growth Strategy," have demonstrated that exports of several agricultural products, such as the "niebe" and onions, have increased in recent years. Niebe production has grown from 115,000 tons in 1985 to 400,000 tons in 1993; onion production, from 44,000 tons to 170,000 tons over the same period.

Another potential source of exports, cattle, remains largely unexploited. Meat, animal skins, and leather production are export areas which could be given greater emphasis. Moreover, the rural sector holds many other opportunities for product diversification. Of particular interest are the exports of souchet and "henne" (currently exported to Algeria and Libya), gum arabic, other vegetable products, garlic, and the poivron, which is very popular in the eastern parts of the country.

2. Agricultural markets

Various reforms initiated since the mid-1980s have facilitated private sector participation in the marketing of agricultural products. These include the lifting of regulations governing prices of agricultural goods, the suppression of monopolies, and the incremental elimination of government subsidies to rural areas.

These reforms have stimulated competition in cereal markets and have promoted the emergence of new players. In general, however, the reforms are having an impact only in the larger food markets. Smaller areas continue to depend on the initiative of villages (small shops, group purchases) and the involvement of small suppliers, who continue to play an important role.

a. The internal market

The internal market for agricultural products encompasses primarily the buying and selling of millet, sorghum, rice, and corn. These products, bought from producers in rural areas and in part imported from Nigeria, are sold in the main urban centers.

The growth potential for such markets is limited. This is due not only to the relatively small size of the market but also to a decrease in purchasing power as the result of currency devaluation (prices have consequently risen and wages, in real terms, have decreased).

b. Regional markets

Most of the markets for agro-pastoral products have evolved transnationally, with little relation to national borders. Principal areas include northern Nigeria as the result of frontier areas of Diffa, Gaya, Konni, Maradi and Ziner, as well as the following countries: Benin, Ghana, Chad, Mali, Burkina Faso, the Ivory Coast and Algeria. These markets together received exports of 34,000 tons of "niebe" and 23,000 tons of onions, comprising about 10 and 13 percent of the 1992 production, respectively.

Historically, in terms of volume, Nigeria has been Niger's primary trading partner in the region. Nigeria alone imported, in 1993, 21.74% of Niger's total exports; 13.15% of all imports came from Nigeria, a figure just slightly surpassed by France and Japan.

Trends in the popularity of certain goods in Nigeria are consequently responsible for the types of products exported by Niger. The export of peanuts, for example, has been replaced by "niebe" and "souchet," which are both products in great demand in Nigeria.

In other agro-pastoral areas, Nigeria is extremely important for the exports of cattle and of "niebe." Nigeria absorbs at present over 80% of all cattle exports, and 90% of exported "niebe," leather, and animal skins.

After Nigeria, other African countries also represent important export markets for Niger's agro-pastoral products. This is particularly true of onions, which constitute 55% of exports to the Ivory Coast, 20% of exports to Ghana and 15% to Benin; the remainder is shipped to Togo and Nigeria.

c. International markets

The only pertinent market outside the region is France, which receives exports of string beans.

3. The impact on the rural sector of the potential growth related to Nigeria and the CFA zone

a. Potential for the rural sector

As mentioned above, rural products such as the "niebe," onions, and animal products (meat, skins, leather), are prized in various African countries, in particular Nigeria and other West African nations. It is obvious that all changes with respect to trade with these nations, such as the devaluation of the CFA and the increase in the Naira will have positive effects on the competitiveness of agricultural products emanating from Niger. These should translate into an increase in products sold and, consequently, in total revenues.

b. Potential for the urban sector

Since the devaluation of the CFA franc, food products costs have risen and now represent, in urban areas, over 50% of the average expenditures of a typical family. According to a study evaluating budgets and total family expenditures from 1989 to 1993 in Niger, food represented 50% of total family expenditures in Niamey, 64.8% in Tahoua, 52.9% in Tillabieri and 58.8% in Ziner. This has had a positive impact on local agricultural producers. Local products such as millet and sorghum have recently seen relatively low price increases of 10 and 30 percent, respectively, while imported cereals such as rice and corn have increased 40 and 70 percent over the same period. The lower-priced local products are consequently in greater demand.

It is important to note that this phenomenon is relative. Local producers of cereals whose earnings come almost entirely from the sale of their products also ultimately suffer from the price difference in imported goods; their purchasing power is diminished as the price of all types of imports continues to rise.

Most imports have increased in price by over 70 percent and most products necessary to everyday life (gasoline, soap, batteries) have nearly doubled on average. The price of oil for lamps has even increased fourfold in recent months.

c. The impact of the industrial sector

Although the relationship between the rural and the industrial sector is far from fully developed, it should be noted that several industries linked to the processing of agricultural products have benefited from the devaluation. This is the case for "Riz du Niger," a rice-processing company. Its sales have increased exponentially as its product has become very cost-competitive in comparison to imported rice. The same can be said of Sahelio, a company which processes fruits to make syrup, jams, and fruit juices.

Both of these industries are supplied locally; producers along the river provide rice and others in Maradi supply fruit. Increases in sales, along with some increase in prices for each company's products, has translated into larger purchases of agricultural goods for processing.

The positive impact of the devaluation on these industries motivates a greater volume of production and encourages more efficient use of the factories (Sahelio is currently only producing 20 percent of its full capacity).

d. Tourism

Despite recent setbacks stemming from the economic crisis which has plagued Niger since 1981, as well as security problems in the North (an otherwise wonderful tourist area for foreigners, Europeans in particular), the tourist industry has tremendous potential (Chart 5).

Table A-5
Number of Tourists Per Year, 1989-1994

Year	Number of Tourists
1988-1989	2997
1989-1990	2791
1990-1991	2050
1992-1993	250
1993-1994	540

Source: Ahmed Sandy, BABA paper, 1994.

In 1991, a generally strong year, the sector saw the emergence of 620 new "permanent" jobs as well as 111 seasonal positions. It is easy to extrapolate from this that an increase in tourism would have positive effects on job creation in the rural areas which host most of the tourists. It is in these areas that local guides are recruited. Furthermore, the development of the tourist industry can benefit the informal sector, particularly artisans who produce art objects that are highly prized by foreign visitors.

To maximize the great potential of the tourism industry however, it is necessary and urgent to find a solution to the problem of transport, especially air transport which is prohibitively expensive due to the airline monopoly held by Air France and Air Afrique.

e. Mining

Although USAID does not expect to provide assistance to Niger's mining sector, an overview of the country's economy focusing on potential for GDP growth should not neglect it. Successful exploitation of gold reserves, under liberalized concessions, might add as much as 15% annually to GDP.

Niger has long depended upon uranium exports as its chief source of foreign exchange. In recent years, however, uranium earnings have declined. Exploration for gold has been underway for 30 years, and the existence of significant reserves - discovered under UN auspices - has been known since the early 1980s. These are located in Niger's western region, bordering Burkina Faso.

Most important to current economic growth was the discovery of gold in the Liptako area in 1985. The area is said to have attracted 20,000 artisanal miners who have succeeded in small gold panning operations.

Initially, the GON turned the Liptako deposit over to one of its parastatals (ONAREM) for exploitation. ONAREM made very little progress until it formed a joint venture with the Canadian mining company, Etruscan Enterprise, Ltd. on September 16, 1994. On January 10, 1995 the GON granted this joint venture team a permit to explore and subsequently mine a fully specified area.

Now, the GON has adapted a policy of implementing mining development exclusively through for-profit corporations. It has divided nearly all the Liptako region into 10 blocks of approximately 150 - 200 square kilometers and plans to grant separate mining concessions for each block. Many internationally prominent mining companies are preparing bids. By the end of October 1995 the GON was expected to have granted concessions to companies for these 10 blocks.

By February, 1996, the GON is reported to have granted concessions to additional mining companies that include:

- Barrick (North America's largest gold producer⁹ and the most profitable gold producer in the world)¹⁰,
- Imperial Metals,
- Afro-Geo Hausa, and
- Capricornius¹¹.

⁹/ Barrick Gold Corporation, 1994 Annual Report, p. 4.

¹⁰/ Randall Oliphant, CFO Barrick, Speech, February 1996, p.1.

¹¹/ Richard Gordon, of Etruscan Enterprises LTD.'s finance department stated that these four gold mining companies, and perhaps others whose names he did not know, have obtained concessions in Niger since September, 1995.

The impact on Niger's economy is expected to be significant. Very conservative forecasts suggest the strong likelihood that at least one medium-sized mine will be developed on each of the 10 sites. Once developed, each mine might easily produce, on average, 150,000 ounces of gold per year.

The economic impact of the mine exploration and development process (that is, the pre-production phase) is likely to last about two years for each mine. During the first year, the exploration period, each company is likely to spend up to \$1.8 million. Exhibit 2, Mining Sector Analysis, indicates that this translates into rural income of \$235,600 per mine. During the second year, the construction phase, each company is likely to spend \$2 million in local markets and generate over \$1 million in rural income.

Once running, each mine will contribute approximately \$37 million to GDP annually. Five mines, each producing 150,000 ounces of gold per year, would add \$185 million per year to GDP. This would raise the 1993 GDP estimate contained in Table A-1 from 555 billion FCFA to 647 billion FCFA, an increase of 16.6%.¹² All five mines would add perhaps \$0.5 million to rural income in 1995, \$2.5 million in 1996, \$5 million in 1997 and continued growth in subsequent years to a plateau of perhaps \$16 million per year.

Each operational mine is likely to use reserves on less than one percent of each block of land and each mine is likely to last for 10-15 for years. Mining companies usually try to find more reserves than they mine each year. Hence, probabilities are high that new mines on each of the 10 sites will be developed during the lives of the initial mines.

Table A-4 indicates that uranium, the current major export commodity from Niger, is estimated to have contributed \$91.7 million to GDP in 1993 (45.9 billion FCFA). Hence, the \$185 million expected from five gold mines in perhaps five years would be twice uranium's 1993 contribution to foreign exchange. Moreover, it will slightly exceed uranium's contribution to GDP of \$170 million (85.343 billion FCFA) in 1987, the last of the highly profitable years for the mineral.

^{12/} The 50 percent devaluation of the F CFA that took place on January 12, 1994 is likely to increase the rate of growth of GDP, at least for the next few years. If GDP without gold production is five percent higher in 1995 than in 1993, gold's contribution would be 15.8 percent rather than 16.6 percent.

f. Impact of Exchange Rate Changes on Industry and Other Sectors

Despite substantial investment efforts in the 1970's, Niger's industrial base is small. Other than uranium mining, formal sector industries are textiles, food processing, chemicals, metal works, and paper products. These form part of the secondary sector which, not including mining, accounted for 10.7% of GDP in 1993.¹³

Industrial exports other than uranium are minimal. As Table A-4 above indicates, uranium and rural production accounted for 73.3 and 22.7%, respectively, of export earnings in 1993. This leaves just four percent of exports attributable to non-rural activity. Customs data indicates that this four percent is comprised mainly of cigarettes, textiles, sandals, used clothing and insecticides. Insecticides are normally classified as in-transit for re-export.

Several factors suggest that naira devaluations have had a significantly negative impact on Niger's industrial growth. Data on Niger's foreign trade are very uncertain due to mainly to its porous southern border with Nigeria. Nigeriens export livestock and cowpeas in exchange for small manufactured goods, gasoline and other consumer goods. Illegal trade and unrecorded trade in livestock and cowpeas is estimated at FCFA 29.4 billion for 1987. This amount is 28% of overall official exports and 225% of livestock and cowpea exports.¹⁴

Nigeria's impact on economic activity in Niger is due to its proximity, size and very volatile currency. Its population and economy are approximately 15 times those of Niger. As a consequence, domestic market prices for Niger's non-uranium exports are largely determined by Nigerian prices. Moreover, Nigeria's currency (the naira) fluctuates widely in relation to Niger's FCFA, largely due to Nigerian monetary policy. Yet Niger's membership in the UMOA precludes exchange rate devaluation as an adjustment policy.

Despite a fixed nominal exchange rate, Niger's real exchange rate fluctuated significantly in the 1980s. For example, it depreciated 15.2% in terms of Niger's major European trading partners during the period 1981-84. Then it appreciated 37.7% against the Nigerian naira between 1985-88¹⁵. Higher priced European goods were non-competitive with domestically produced goods in Niger, and consequently domestic production in Niger was not stimulated. On the other hand, the devaluation of the FCFA against the naira is estimated to have resulted in a direct loss of FCFA \$13 billion per year in export revenues, the equivalent of 3.5%

¹³/ IMF, Niger - Statistical Annex, February 10, 1995, p. iii.

¹⁴/ Paul Dorosh, Niger: Economic Fallout from a Uranium Boom, in *Adjusting to Policy Failure in African Economies*, ed. David E. Sahn, Cornell University Press, Ithaca, NY, 1994, p.170.C

¹⁵/ Dorosh, Niger: Economic Fallout, p.178.

of rural incomes in 1987.¹⁶ This loss was mainly from reduced sales of livestock and cowpeas.

Longitudinal studies of FCFA countries suggest a need for Niger to develop trade policies to offset Nigerian currency devaluations and yet remain within the UMOA. Comparing GDP growth rates of FCFA and non-FCFA countries, Devarajan and de Melo found that from 1960 to 1982, FCFA countries grew faster than their non-member trading partners. They found that the reverse was true in the 1980s. On average, the real exchange rate in the non-FCFA countries depreciated by about 30% in the 1980s, and their average annual export growth equaled 2.6% per year. During the same period, UMOA countries experienced almost no change in real exchange rates and annual export growth of only 1.5% per year.¹⁷

Niger did use import and export tariffs extensively until tariff rates were lowered on a large number of imported items in May 1987, reportedly as an effort to reduce tax fraud.¹⁸ Tariffs are not a viable option for Niger now for a number of reasons. Not only does its SAP agreement with the IMF precludes tariffs, but it lacks the administrative capability to establish and rigorously enforce them.

4. Policy Requirements for Growth

a. Financial Sector Requirements for Rural Growth (SO2)

USAID's Strategic Objective 2 is to "increase rural access to markets primarily through use of improved, decentralized financial services." USAID's three financial sector projects and other donor projects include necessary elements for helping to build a semi-formal credit facility.¹⁹ In order to succeed, this facility must mobilize an estimated \$66 m of liquidity in the formal sector for on-lending in the semi-formal and informal sectors. It could succeed even more dramatically if it could mobilize some portion of the estimated \$1.1 billion of available liquidity in the informal sector.

Substantial barriers that prevent semi-formal mobilization of formal and informal liquidity are discussed in Section E, Agricultural Credit. Semi-formal mobilization of at least some of these funds, however, is essential for economic growth. Loanable funds in the semi-formal sector now are mainly donor contributions and these contributions are too small to have a significant impact on economic growth.

¹⁶/ Doroch, p. 178.

¹⁷/ Dorch, p.181.

¹⁸/ Dorosh, p. 178

¹⁹/ This interpretation is expanded in Section E. Agricultural Credit.

Major barriers to formal sector lending in the semi-formal and informal sectors is a lack of understanding of these markets, excessively high overhead costs and an inability to collateralize loans effectively. Barriers to mobilization of informal sector liquidity, on the other hand, devolve from two unique characteristics of informal loans. These loans are usually or almost invariably (a) made on the basis of personal relationships and (b) structured as an adjunct to another transaction by the two parties involved in the transaction.

In short, formal sector intermediation requires loan sizes and risk protection that are not widely available outside the formal sector. The informal sector sidesteps these problems by relying on personal relationships and generally structuring loans as an almost nonspecific component of other transactions involving goods and services. It solves collateral problems of lending by subtly converting lending into delayed delivery of buy or sell sides of barter transactions. Hence, the informal sector does not use intermediation because intermediation, by definition, involves third parties.

The lack of use of intermediation in the informal sector can also be inferred from rural savings practices which include cattle, money keepers and tontines. None of these systems involve third party movement of savings to borrowers. Even tontines can be viewed as a two party system. By contrast, USAID's credit union project, WOCCU, is operationalizing the concept of intermediation because the credit union acts as a third party for savers and borrowers.

Macroeconomic policy can assist with the growth of intermediation by stimulating effective demand for Niger's agricultural commodities. Effective demand is demand expressed as financial buying power. For example, agricultural production subject to effective demand is production that is sold for cash. In other words, this production is monetized.

Effective demand is to be contrasted with overall demand which includes subsistence needs and other wants and desires that cannot be met with available financial resources. Macroeconomic policy needs to focus USAID's strategy on agricultural growth that can be directed toward effective demand. A strategy focusing on subsistence demand is not sustainable because agricultural inputs have a cost that must be recovered through output sales. Otherwise the activity is not sustainable.

Though later sections of this report identify possibilities to dramatically improve agricultural production, such possibilities will not be sustainable unless marketing achieves cost recovery. For example, development of domestic phosphate deposits, greater use of pesticides, improved seeds, storage and conservation practices require cost recovery to be sustainable.

Cost recovery, in turn, is possible only if markets are improved. Niger is disadvantaged by volatile exchange rates with Nigeria, and evidence indicates that Niger's domestic markets for subsistence commodities may be dominated by monopsonistic buyers. Section C, Agricultural Marketing notes that farmers need protection from being forced to sell their crops at the seasonally low prices occurring at harvest time.

USAID's SO2 focus on access to rural credit needs to recognize that agricultural production and marketing weaknesses need to be addressed to ensure cost recovery. At a more profound level, the lack of assured cost recovery in agriculture combined with the lack of lender recourse to collateral are inextricably connected with inability to mobilize liquidity in the formal and informal sectors.²⁰ SO2 needs a macroeconomic perspective that helps ensure cost recovery in agriculture and effective loan collateralization.

Suggested components of this macroeconomic perspective are:

- Establish a marketing framework to replace SONARA's erstwhile role as a marketer of cowpeas in Nigeria. Cowpeas, as noted above, is one of Niger's few important exports to Nigeria. Section B, Agricultural Production points out that cowpeas are conveniently grown between rows of millet, and that production can be significantly expanded through greater use of phosphate fertilizer and pesticide.
- Section C, Agricultural Marketing, points out that SONARA's cowpeas activities were profitable, but outweighed by losses from peanuts, which led to its closure. This section points out further that Nigeria still has an unmet demand for 30,000 tons of cowpeas per year and does not meet this need through Niger's informal sector.
- USAID could perhaps assist NGO's to establish a Cowpeas Marketing Agency (CMA) that would be acceptable to cowpeas importers in Nigeria's formal sector. The practical constraint that the new CMA act as agent rather than principal could be an opportunity for USAID's credit projects to mobilize liquidity in both the formal and informal sectors and promulgate the practical use of intermediation in the informal sector. Once the system works effectively for cowpeas, perhaps it could be duplicated for other commodities.
- The role for USAID's credit projects would be expand in year two of the project. In year one, credit projects could finance loans to farmers selling cowpeas to the CMA. The loans would be collateralized by the

²⁰/ The importance of collateralization is discussed particularly well in Section E, Agricultural Credit.

farmers' commodity that the CMA holds in storage. Moreover, the loans would be for only a fraction, perhaps 30 percent, of the estimated value of the farmers' cowpeas. The actual value of the cowpeas would depend on market prices that CMA eventually receives for the cowpeas. This payment would provide the farmer with cash for living expenses while the cowpeas are marketed. The CMA would settle outstanding obligations to farmers and credit institutions after the cowpeas are sold in Nigeria.

- The CMA would promote use of intermediation in two ways. First, farmers in the informal sector would gain exposure to credit institutions through accounts established in their names in these credit institutions. Second, the CMA's brokering role for cowpeas would reduce the market power of the reported monopsonistic buyers in the informal sector. Third, CMA and lender activity might be the first practical demonstration to farmers of intermediation, that is, third party involvement in a commodity transaction. This demonstration would help establish the concept of lending as a stand-alone activity in the informal sector.
- In the second year, credit institutions could extend credit for selected inputs to farmers for exclusively cowpeas production. Credit would not include other crops because they are presumed to be subsistence crops until effective demand can be demonstrated for their output. For cowpeas, effective demand is demonstrated in year one when the CMA sells them in Nigeria. The sale represents monetization of production sold.
- Cowpeas are a strategic crop for monetization for several reasons. First, they are interspersed with millet throughout the informal sector. Hence, the income effects could be widely disbursed over time as more farmers participate in the program. Second, farmers are already familiar with agronomic characteristics of the crop. This familiarity might help them adjust to changes in horticultural practices needed to improve quality and sales prospects for their cowpeas. Third, phosphate fertilizer use for cowpeas in year 2, which could be purchased on credit extended by USAID's intermediaries, would have beneficial effects on its intercropped counterpart, millet. Fourth, marketing success with cowpeas would create an effective demand for cowpeas inputs in the subsequent year.
- Consider a marketing organization similar to the CMA to identify agricultural market outlets in large cities and in the Liptako region as gold exploration and mining develop.

- Use findings from the CMA experiment could suggest ways for other third parties (perhaps NGOs) to specialize in marketing certain crops or certain domestic or external markets. Incentives could be created for third parties to do this work, with the stipulation that they act only as brokers. They should never act as principals. That is, they should never be allowed to purchase commodities for their own account or to hold commodity inventory. Holding inventory involves the form of speculation that invariably seems to destroy commodity boards.

Success with the CMA will be stepwise rather than continual. Establishment of a CMA can serve as a point of departure for developing commodity markets and intermediation in the informal sector, but progress will be limited until Niger's legal system is reformed to permit effective collateralization of loans. For example, without collateralization, loans to farmers for inputs are jeopardized by the possibility that "crop pirates" will buy a farmer's crop prior to its sale to repay the input loans. The informal sector has its own system to deal with this problem, such as personalized lending and extension of credit as part of commodity transactions. Newly functioning intermediaries can utilize personalized lending, but they will not have the credit protection gained from combining credit with commodity transactions. Hence, intermediaries can survive and grow modestly by carefully selecting borrowers, but collateralization will be necessary for intermediation to grow significantly. These reforms are discussed in detail in the recommendations section of Section E, Agricultural Credit. The reforms are needed to protect the growth of intermediation in the informal sector.

Macroeconomic policy can assist with the achievement of SO2 in several additional ways. First, it can help encourage the formal banking system to extend more credit to farmers and to the rural sector as a whole. Elimination in October 1993 of the ability of banks to receive high returns by keeping their loanable funds in Central Bank (BCEAO) bonds is an example of such a policy. Now formal sector financial institutions have excess loanable funds earning little or no interest. They are likely to decide soon to downsize or to lend these funds in new markets. The rural sector is an important applicant for these funds, and so macroeconomic policies need to be devised that will encourage bank intermediation to meet rural savings and credit needs.

Interest rate policy is one example of a macroeconomic policy that could impact rural lending. Section E argues that interest rate ceilings on loans encourage credit rationing away from women. Market determined interest rates are likely to allocate more credit to women as credit allocation shifts to its most productive uses.

Second, macroeconomic policy needs to promote free and open markets for agricultural commodities. Poor transportation and storage, inadequate market information, crop loans from informal sector lenders coming due at harvest time, potentially monopolized commodity markets and very volatile exchange rates with

Nigeria reduce farmer ability to maximize farm gate prices at harvest.²¹ SO2 can help with some of these problems, but macroeconomic policy, interpreted broadly, is perhaps the only possible way to address possible monopolization of commodity markets and Nigeria's currency fluctuations.

Finally, the GON might be encouraged to invest some of its foreseeable profits from gold mining, a resource depleting activity, into indigenous development of phosphate fertilizer, a resource restoring activity.²² One major finding discussed in detail in Section B, Agricultural Production, is that phosphate deposits at Tahoua, Niger should be fully explored and exploited to rapidly develop agriculture. This phosphate resource is particularly important because lack of phosphate is the most critical constraint on plant growth where rainfall is 250 mm or more a year, and that is the case for much of Niger. Possible roles in the development of Tahoua phosphate would be:

- USAID could fund an initial management study that would identify exploration, reserve definition and other tasks required to bring the Tahoua reserves into production under private sector control. The study would also develop a time schedule for each task.
- UNDP could finance exploration and overview measurement of reserves in sufficient detail to elicit private sector bids for permits to define reserves fully and to mine the reserves within a specified time period, provided minimum quantities of reserves are found.
- The GON could set aside funds for loans to small firms to distribute fertilizer and provide minimal extension services to farmers who buy the fertilizer. Funds are also needed to study the most appropriate way to package the fertilizer for farmer use. Farmers complain about wastage during application. Tahoua phosphate is applied as a powder that frequently appears to be blown offsite by the wind.

²¹ / A study of Maradi, Zinder and the five other important zones where traditional staple crops are grown indicates that millet and sorghum prices normally peak in July, decline during the harvest months of August through November and begin rising in December toward their annual highs in July. These price variations were sufficient in the 1989/90 and 1990/91 seasons for retail grain traders to make estimated gross margins of between 30 and 80 percent. In exceptionally bountiful years, such as 1986 and 1987, the prices of both millet and sorghum dropped to a 10 year low of 20 to 25 F CFA/kg in the zones of Maradi, Zinder and Dosso. This price decline occurred during a period of active GON price support policy, which was conducted through OPVN, and is cited as an example of the failure of such policies. The study points out further that large grain buyers use 38 collection networks in Maradi and 10 in Zinder. The managers of the networks set maximum prices that buying agents are allowed to pay for grain each year. See, Characterization of Instability in Niger's Cereal Markets, pp. 38 and 60.

²²/ Soil fertility constraints on plants and phosphate fertilizer development and promotion are discussed in detail in Section B., Agricultural Production Management Through Drought Cycles.

- USAID could provide training to the entrepreneurs who successfully compete to distribute the fertilizer, and to the trainers who teach the small firms extension techniques.

b. Illustrative Activities/Sectoral Adjustments for SO2

(1) Rainfed Agriculture

Macroeconomic policy may provide a partial solution to improvements in commodity markets, but farmers must be encouraged to diversify away from the traditional staple crops, millet and sorghum, as fertilizer and other management practices improve productivity. The traditional cash crops of cowpeas and peanuts should be analyzed further for potential economic viability. Earlier discussion suggests that cowpeas be used to pilot-test a CMA that would focus on cowpeas exports to Nigeria.

Cowpeas have a comparative advantage in zones of moderate rainfall such as Tanout. In zones of heavier rainfall, such as Magaria, they suffer extensive insect and disease damage. Niger's cowpea yields could increase substantially with use of improved seed and fertilizer as well as careful pest and disease control. Currently, farmers customarily use last year's harvest as seed and have no other inputs. The domestic, regional and external market for cowpeas is discussed in Section III.C., Agricultural Marketing.

Peanuts are also important as a cash crop and as a source of oil and meal for both human and animal consumption. Strong demand exists for peanuts and their derivatives in Nigeria as well as Niger. Opportunities for small enterprises to agro-process peanuts are discussed in detail in Section III.D., Small and Microenterprise Development.

Hybrid sorghum research conducted at ICRISAT is now sufficiently complete to provide small enterprise opportunities for seed multiplication and distribution. A similar opportunity is likely to occur for millet within five years. The enterprises that distribute seeds can also provide extension services to ensure that farmers use the seeds effectively. Private sector production and distribution of seeds is discussed in Section III. C, Agricultural Marketing.

Research suggests that water harvesting is likely to increase yields on currently used land and help reclaim crusted soils that are no longer considered arable.²³ Annex D contains a model that derives potential benefits from widespread use of water harvesting, by itself and in combination with other natural resource management activities. Farmers in Tarodi, a village within 60 km of Niamey, are

²³/ Joseph A. Tabor, Improving Crop Yields in the Sahel by Means of Water-Harvesting, *Journal of Arid Environments* (1995) 30: 83-106.

rapidly adopting water-harvesting practices. The practices are particularly appealing due to their low cost and durability. Only labor is needed, for example, to construct U shaped dams 30 mm high on gently sloping fields. Yet the dams, once constructed, are serviceable for many years, provided that they receive periodic low levels of maintenance.

Strategic ways to promote water-harvesting include:

- Multiplication and distribution of hybrid seed and fertilizer by private sector companies,
- Training programs conducted by the GON extension service, the Peace Corps and NGOs on the ground and over radio and TV.

Agricultural credit does not have economic justification for water harvesting or other NRM projects until its cost recovery is demonstrated. To date this has not been done. Moreover, cash loans do not appear necessary for water-harvesting since it requires only labor inputs, and the inputs can be delivered during labor surplus periods of the year.

(2) Irrigated Agriculture

Though yields are declining on rainfed land as farmers avoid use of cash outlays for inputs, both yield and input use are increasing on irrigated land.²⁴ This is partly due to GON and donor subsidies of inputs for irrigated agriculture and partly due to reduced crop risk that results from management of water supplies. These conditions reflect the lower danger of crop loss from drought as compared to irrigated agricultural land. Hence, the financial sector might find input loans for irrigated lands profitable, provided strong markets exist for crop production.

Irrigated land is used predominantly to grow rice during the dry season. Rice remains the only crop that is still marketed by a GON parastatal. This practice both complicates assessments of profitability and reduces the impact of market prices of alternative crops on farmers' planting decisions.

After the rice is harvested in May and June, farmers use the drained paddies for manioc. Manioc is an easy-to-store, low-value cash crop that requires virtually no attention after it is planted. Hence, farmers can plant it and shift their labor to millet, sorghum and other crops on their rainfed lands in June. Manioc depletes the soil of nutrients, but it does well on the fertilizer residuals in the irrigated areas.

²⁴/ Fertilizer use on irrigated land has increased substantially between 1982 and 1992. Moreover, use of hybrid seed has increased.

Onions are the major dry season, irrigated, high-value, cash crop. They are grown predominantly in one locality but are considered to be extremely successful due to strong demand in Niger and other regional countries. Potatoes, garlic, lettuce and tomatoes are also grown on irrigated land during the dry season, but their market is very limited.

The pursuit of financially sound projects for irrigated land should include analysis of ways to:

- Expand the success in onions to other cash crops while differentiating between risk involved in crops that are non-perishable (cotton), perishable within several weeks (bananas) and more perishable (truck farm fruits and vegetables). Urban markets and new markets, such as those likely to be created by mining activity, will strengthen the demand for these commodities. USAID has already completed feasibility studies for more promising fruits and vegetables. Importers in other countries should provide seeds and cold storage to farmers, supervise grading and pay at least half of CIF charges for transportation. These practices will reduce misunderstandings between farmers and external buyers and justifiably remove a portion of the marketing risk from farmers.
- Create transformation enterprises such as drying and canning for high-value, perishable cash crops for which a strong demand exists regionally or overseas.
- Expand irrigation systems. Current systems are difficult to manage partly due to the small size of farm plots. The allocation of 0.2 to 0.3 hectares on the earlier schemes has been raised to 0.5 hectare per farmer. Water management problems persist, but perhaps they could be reduced if individual farmer groups had more control over the water allocation process. Nevertheless, bankable projects may include private sector irrigation schemes of 5 to 10 hectares.

Other benefits of irrigated agriculture include:

- Regular and substantial use of fertilizer will strengthen the likelihood of small enterprise success with fertilizer production and distribution.
- Likely willingness of farmers to purchase carefully developed seeds will contribute to private sector success with seed multiplication and distribution.

(3) Livestock

Livestock production, but not agriculture, can become more productive in the north and generally in areas where rainfall is less than 400 mm year. Recommendations include:

- Establish official rangelands (terroirs detache) and passageways through agricultural lands
- Establish open wells (not boreholes) which self-regulate herd size
- Improve meat processing and marketing facilities to permit farmers to market their herds quickly during severe draughts
- Experiment with and adopt new or recently introduced technologies such as meat drying

(4) Institutional Strengthening

(a) Financial Institutions

Both farmers and herders should be given access to modern and safe means to store wealth in the formal sector and encouraged to do so. Reliable savings systems could have the dual purpose of helping farmers and herders recover from droughts more quickly and mobilizing savings for lending to farm and non-farm rural enterprises.

(b) Media Information

Rain and commodity price forecasts are needed so that farmers can develop their crop plans prior to planting season. Farmers also need information on seed, fertilizer and other input availability during planting season. Radio or TV broadcasts of practical information, such as the benefits and distributors of ICRISAT's new hybrid sorghum seeds, could help both farmers and private seed companies.

Continued broadcasts of price trends throughout the year could help farmers and cooperatives plan crop marketing strategies. Price information is needed by regional and international markets as well as major domestic urban areas.

Some broadcasting is done now, particularly on crop prices in various markets. The information in broadcasts should be expanded to cover weather forecasts, credit and input availability, credit sources, commodity collection and transport systems, and sundry tips on farm management. Moreover, the broadcast must be multilingual. No such public information system currently exists, but data that may be sufficiently reliable is regularly collected. AGRHYMET receives daily weather data from Niger's weather stations and produces a monthly publication that discusses:

- Meteorological forecasts
- Recent rainfall by meteorological zone

- Impacts of rain, insects and disease on crop conditions throughout the nation
- Water levels in Niger's principal water basins

The System of Information on the Cereal Market of Niger (SIM) regularly collects price information on millet, sorghum, maize, rice and cowpeas. This price information reflects:

- Prices per kilo that producers receive at local markets
- Consumer prices per kilo at local markets
- Quasi-wholesale prices per 75-90 kg sack of each commodity at each market

The information from AGRHYMET and SIM can serve as a data base for an expansion of current media reports. Steps to produce these reports include:

- Review the quality and comprehensiveness of the data
- Develop a system to rapidly synthesize the data into relevant packets for broadcast
- Secure media time and sponsors such as seed and fertilizer distribution companies
- Secure announcers to broadcast the crop and price information in the required local languages

(c) Market Distortions

Numerous examples can be found of non-market interventions by donors into private-sector markets that are not sustainable and which damage or destroy sustainable enterprises. NGO's are, for example, provide grants for cooperatives to develop peanut oil production. This production will compete with unsubsidized systems that are currently delivering peanut oil to this market. The unsubsidized production employs many women who contract to have peanuts crushed and then process the oil and meal cake that results from the crushing operation.

Donors are also providing fertilizer to farmers in the Niamey area at no cost other than the price of transport. This practice could limit the marketability of locally produced fertilizer. As noted above, the proposed plan is to encourage small-scale enterprises to exploit the fertilizer deposits at Tahoua and distribute fertilizer to farmers through the private sector.

Numerous studies of the cotton subsector report significant wastage of seed, fertilizer and water - all of which are heavily subsidized.²⁵ Members of the study team report, by contrast, that onion farmers in the Maradi area have difficulty obtaining fertilizer, receive no subsidies for it, and use it very judiciously.

Efforts are needed to ensure that GON policies and donor projects do not damage the development of sustainable SMEs. Pursuit of dramatic short-term gains through subsidized input policies is not sustainable activity. This situation is particularly important to address because donors do not have sufficient loanable funds to impact sectoral growth.²⁶ Currently, virtually all financial institutions that are funded through donor projects are not earning sufficient profit to pay their operational costs. Hence, they are providing credit at unsustainably low rates of interest.

(d) Taxation of the Informal Sector

The informal sector is subject to at least one indirect tax, a transport tax. In addition, farmers are subject to weak product markets that significantly redistribute profits away from farmers toward the commercial sector.

Annex H lists customs fees and road taxes that a truck must pay as it travels from the boarder town of Jibiye, Nigeria to Niamey, Niger, a distance of 709 km. The analysis indicates that these charges amount to 20 percent of the total transportation cost of the trip.

Weak market prices at harvest, which are documented by SIM and discussed earlier in this section, are an annual event. Commodity prices for millet and sorghum peak in July and decline during the subsequent harvest period, which begins in August.

Policies that could be considered to reduce the disincentives to production under these two conditions include:

- Eliminate informal customs fees and road taxes
- Eliminate tariffs on fertilizer imports
- Carefully rationalize the levels of authorized customs fees and road taxes

²⁵/See three summaries of cotton studies prepared as part of yet to be published PASPE research on several commodity subsectors. These summaries are: Laouali Ibrahim and Jacques Vayssie, A Study of The Cotton Subsector, April 1990; Georges Conde, Study of the Costs and Benefits of Insecticides on Cotton Production, 1990; and French Company for the Development of Textile Fibers, 1990.

²⁶/ See Section E, Agricultural Credit.

(e) Strengthen Project Appraisal Capability

USAID should provide selected credit institutions with technical assistance for preparing business plans. Use of the financial sector to on-lend funds for agricultural and other rural SME activities implies a need for lenders to guide and evaluate private sector formulation of business plans. Annex G contains an illustrative summary of a business plan for exportation of irrigated green beans. Entrepreneurs need to develop their own plans with contents similar to those contained in Annex G. Unless they develop the plans themselves they may not understand the business.

Financial institutions, however, should assist with development of business plans by guiding their development and by performing their usual critical review of completed plans. USAID technical assistance could help lenders understand their role in business plan development and in loan monitoring activities.

(f) Monitoring and Evaluation

USAID could design its monitoring and evaluation methodologies to utilize information that credit institutions collect regularly through their loan monitoring activities. These information sources could, for example, help measure women's participation in financial activities. The simulation model presented in Annex D could be used to help train evaluators.

The simulation model contained in Annex D forecasts the impact on agricultural production of increased use of fertilizer and other natural resource management proposals. This model, like all simulation models, is a tautology. It assumes productivity change through its choice of parameters and then describes the assumed change. Constraints noted in the presentation that are not taken into account within the model, but which are expected to be resolved gradually over time, include (1) land tenure, (2) access to credit, (3) physical access to chemical fertilizer (phosphates and urea) on a timely basis, (4) access to markets, and (5) access to extension services.

Simulation models invariably arouse suspicion not only because they assume away major development issues such as credit and access to markets, but because they contain many complex algorithms that are not easily understood without significant study. As a result simulation models are viewed as "black boxes." That is, they are considered to express mathematical processing that may either (1) not model real world conditions well enough to be useful, or (2) contain invalid (logically incorrect) mathematical processes.

In addition, simulation models used for policy applications usually convey authoritative prescriptions that are to be accepted based on a "black box" rather than common sense understanding. Until common understanding based on

something other than the black box is reached, targeted audiences are not likely to be convinced of the model's prescriptions.

The solution is to use the models as a teaching or training device. They can help monitoring and evaluation staff to understand subsystems in the real world that correspond to selected components within the models. The staff can then convert this learning experience into specification of appropriate and useful monitoring and evaluation frameworks. With these frameworks, these staff members can effectively participate in monitoring and evaluation activity.

Logical problems that appear to exist in the NRMs model in Annex D include: (1) assumed joint rather than sequential need for various fertilizers, while Niger has a need for phosphate fertilizer prior to application of other types of fertilizer, (2) algorithms in Annex D, Table 4.1 accumulate only half of the acreage assumed to be improved with water harvesting, (3) unspecified units of chemical fertilizer have six times the impact on yield as water harvesting (Table 3.6), but cost almost 102 times as much (Table 4.4, row 10, North; 24384/240), (4) no volatility in output is expressed on Table 4.5 to reflect climatic variation, (5) the sensitivity analysis in Table 4.6 considers changes only in prices of commodities produced and costs of inputs and not changes in technical variables such as the timeliness or lack of availability of fertilizer or certain inputs, and (6) in Table 4.6, a 25 percent change in prices in the North reduces the base case of 24,142 a magnitude of 7.78 times to 3100, or raises it 1.87 times to 45,184. One would expect roughly the same price impact in both directions as is the case in the same exhibit for the South.

Simulation models are very difficult to construct quickly, as this one was. Moreover, they must be fully tested, preferably by a third-party, before confidence is warranted in their estimates.

(g) Conditionalities

The discussion of mining in Section III.A.2.e. above suggests that gold mining will add perhaps \$0.5 million to rural income in 1995, \$2.5 million in 1996, \$5 million in 1997 and continued growth in subsequent years to a plateau of perhaps \$16 million per year. Moreover, the gold mining sector could add 16.6% to GDP in three to five years.

Planning could begin now to use some of these revenues for rural development. Consideration could be given, for example, to:

- Efforts to stimulate production, distribution and use of fertilizer,
- Improvement of cash crop infrastructure such as cold storage and grading rooms at the airport for green beans and other high-value exportable commodities,

- Policies to stimulate transformation industries that focus on irrigated vegetables and meat products, and
- Analysis of infrastructure needs in the Liptako region to accommodate the increased demand for agricultural products likely to result from development of the gold mining concessions. Roads and cold storage facilities similar to those needed at the airport for exports may be needed in the Liptako region to supply the growing expatriate and domestic population.

The immediate or more obvious basis for all of the initiatives proposed above to improve rural incomes is technical. For example, fertilizer can increase yields where rainfall is 250 mm or more. But a successful strategy for rural development depends critically on two more subtle conditions.

First, a rural development strategy can only succeed if markets are cleared during good years at prices sufficiently high to cover input costs. Commodity markets must be strengthened to prevent sharp price declines during harvest seasons, especially during good seasons when farmers and herders have an opportunity to build cash and commodity reserves for the leaner years that will inevitably follow. Otherwise the financial sector cannot extend loans for inputs, and agricultural systems will not be sustainable.

Second, the proposed technical and financial strategies can function effectively only if the land tenure system is improved. Those that use the land must be given an "identity of interest" in the land. That is, farmers who apply phosphate fertilizer to the land, for example, must have reasonable assurance that they will have use of the land for at least a portion of the next several seasons in order to derive the continuing benefits of even a one-time investment in fertilizer.

The point of departure for a new land tenure system is the current effort to create a "Rural Code." Development of the Rural Code began with the recent creation of two land tenure commissions that operate at the district level. Each district is to have one. They are assigned to define land property rights as well as its use and management. Specification and implementation of the Rural Code could easily take a decade.²⁷ This may, however, not work due to overlapping mandates of the land tenure commissions and the district councils. In addition, the political power structure favors decisions that tend to assist farmers at the expense of herders.²⁸

²⁷ Staff Appraisal Report, Republic of Niger, Natural Resource Management Project, World Bank, June, 1994, p. 7.

²⁸ C. Lund, Land Use and Development of the Rural Code in Niger.

A summary of the above discussion of constraints and proposed activities to improve rural sector performance is provided in Exhibit 1 of Annex A.

c. Niger's Bretton Woods Agreements

Niger's coup of January 20, 1996 abrogated its structural adjustment program and relationship with donors. U.S. State Department spokeswoman Alison Shorter condemned the overthrow of President Muhamane Ousmane, the dissolution of the National Assembly and the suspension of the Niger Constitution. She said the United States is required by law to suspend all assistance to any country whose leadership has violently come to power at the expense of a democratically-elected government. Colonel Ibrahim Barre Mainassara, Niger's Army Chief of Staff staged the coup and is head of Niger's new 12 member Council of National Salvation. He suspended the constitution, dissolved the government and banned all political parties.

Before the coup, Niger's shortfall of total expenditure and net lending in excess of total revenue had remained at roughly ten percent of GDP from 1989 through 1993, the last year for which information is available. Its consumer price index has remained relatively stable over this time period, averaging an annual price decline of 1.36%. The country remains in a stand-by arrangement with the IMF. The plan is to replace the stand-by arrangement with an enhanced structural adjustment facility (ESAF) when the government meets certain preliminary conditions. Perhaps the most important conditions involve government employment and salary increases.

Even taking into account the recently introduced tax measures, the public-sector wage bill is likely to absorb 80% of revenue in 1995. The average real wage rate of public-sector employees has risen 60% from 1984 to 1993. Other fiscal indicators, by comparison, have generally declined during this period. The current account balance, for example, has declined from break-even in 1984 to minus five percent in 1993, and tax revenue as a percentage of GDP has declined from about ten percent of GDP to about seven and a half percent of GDP, and effective customs duty has remained at 15 to 17 percent during this same period. At the same time, Niger's most important export, uranium, experienced steady declines in both export price and average cost of production. Uranium costs of production have declined faster than Niger's export price, and the two are expected to be equal in 1994. During the period 1984 to 1993, the broad money supply rose slightly from 100 billion FCFA to about 120 billion FCFA.

The continued and dramatic rise in public-sector wages suggests that the public sector is becoming continually more detached from the rest of the Nigerien economy. The continued rise in public-sector wages is a principal contributor to the government's budget deficit. The pressure of the budget deficit will continue to encourage the government to press the private sector, including MSEs and SMEs, for tax revenues. Overall, the chronic government deficits suggest that the

informal sector is best served by insulating itself as much as possible from formal sector regulation.

The potential impact of the 50 percent devaluation in the FCFA in late 1993 is extremely significant. This devaluation in terms of naira is roughly equivalent to the appreciation of the FCFA in terms of naira that occurred between 1985 and 1987. Hence, Niger could experience a positive impact on exports roughly equivalent to the negative impact on trade that it experienced in the earlier period. Dorosh and Nssah estimate that the 37.7% appreciation of the FCFA relative to the naira on the parallel market between 1985 and 1988 resulted in a direct loss of FCFA 13 billion per year in export revenues.²⁹ This equaled 3.5% of rural income in 1987.

d. Potential Impact of Nigerian Economic and Monetary Policies

Nigerian economic and monetary policies may have the greatest impact on Niger through currency devaluation or tariff adjustments. The previous section pointed out that the devaluation of the naira during the period 1985 to 1987 cost Niger FCFA 13 billion per year in export revenues, or roughly 3.5% of rural income. Niger's recent devaluation brings the real exchange rate back to a level that is only slightly higher than the Naira/CFA ratio in 1985. Niger's real exchange rate varied considerably in the 1980s and could do so again, depending on Nigerian policies which cannot be predicted. What is known, however, is that the loss of 3.5% of rural income due to the devaluation of the naira during the period 1985-1987 suggests that the recent devaluation of the FCFA gives the Nigerien rural sector at least a short-term opportunity to regain this 3.5% loss.

The chronic volatility of the naira and its historic decline in value in relation to the FCFA suggests that Nigerien policy makers should study ways to protect themselves from currency fluctuations. Tariff policies, as noted above, appear to be the most effective instrument to provide such protection.

²⁹ /Paul Dorosh, p. 178.

B. Agricultural Production Management Through Drought Cycles

1. Overview

Niger is a country of contrasts. While it has significant quantities of geological resources such as uranium, gold, oil, ground water, and phosphate its soils are seriously depleted and eroded from poor agricultural practices. Used wisely, however, nonrenewable resources, coupled with other enabling conditions such as improved commodity markets and rural access to credit, can help provide sustainable agricultural production.

This section discusses Niger's constraints and possibilities related to climate, soils, and biological production systems. **A major recommendation is to use various strategies to support phosphate fertilization for grain crops.**

This discussion can not comprehensively cover Niger's diverse cultures, climate, soils, and vegetation. As a result Niger is viewed as having three agroecological zones: pastoral, agro-pastoral, and agricultural zones.

a. Climate and Production

The word *sahel*, Arabic for shore, implies a dynamic environment. Climatic variability resonates throughout the annual cycles of biological and human systems in Niger. Rainfall gets the major blame for the variability of Niger's agricultural production. Figure 1 shows grain production since 1953. These time series data are characterized by wide fluctuations in annual production³⁰ and a general increase in production over time. Accommodating these wide fluctuations in production is a major management problem for producers, processors, consumers, and government agencies.

Rainfall variability is dramatically regional in Niger. For example, 29% of Niger receives 250-600 mm of annual rainfall, while only 9% of the country receives above 600 mm (World Bank, 1994a). Unfortunately, a high proportion of the 600 mm and above rainfall occurs on relatively less soils in the Dosso and Tillabéry Departments. Table B-1 shows temporal rainfall variability statistics for major towns in Niger. The minimums, maximums, and coefficients of variation³¹ are more important than the means for developing management strategies.

³⁰ Production may be more dependent on early rains (more fields planted) than total amount of rain during a year. Figure 7 of Section 2 shows how millet yields do not vary with rainfall amounts unless soil fertility is high.

³¹ Coefficient of variation (CV) is a measure of relative variation, defined as: standard deviation divided by the mean. It is often presented as a percent.

Temporal and spatial rainfall variability require different coping mechanisms. Farmers have adapted to temporal variability through storage and savings. They exploit spatial variability by planting widely spaced fields (McCorkle *et al.*, 1988, pp. 52). Donors have provided Niger with grain to cover shortages (Table B-2), but this type of aid distorts grain prices, hurts producers who have a surplus, and reduces incentives to invest in agriculture.

Table B-1
Rainfall statistics of major towns in Niger for the period 1931-1990
(Sivakumar *et al.*, 1993).

Station	Maximum (mm)	Mean (mm)	Minimum (mm)	Coefficient of variation (%)
Agadez	216	115	40	35
Filingué	609	348	135	32
Tahoua	582	369	206	27
Tillabéry	698	393	197	31
Zinder	659	404	220	26
Birni N'Konni	642	477	289	21
Maradi	730	491	283	29
Niamey	813	545	319	22
Dosso	710	549	230	24
Gaya	1041	797	476	17

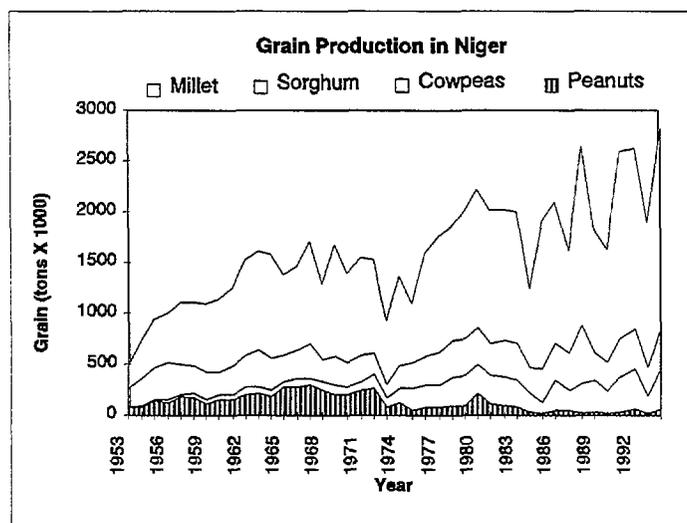


Figure 1.
Aggregated grain production produced in Niger, 1953-1994
(Annex F).

Table B-2
Food Aid for Niger

Year	Food (tons)
1990	30,258
1991	65,060
1992	9,678
1993	31,198

Source: Système d'alerte précoce et de gestion des catastrophes.

b. Management of Soil Resources

Arable land in Niger is estimated to be 15 million hectares.³² Table B-3 attempts to organize many cited values of land-use areas. The cited values frequently contradict each other due to double counting (e.g., pasture lands can also be arable lands). To make the numbers add-up, "Desert"³³ is often treated as a residual.

Table B-4 shows cultivated area in Niger by bio-climatic zone. It suggests that approximately 7.2 million ha are cultivated and one million ha are abandoned. This leaves 45% of remaining arable land in fallow, pasture, and shrubs., Most of this land is marginal, lying in the dryer, more risky fringes of rainfed agricultural land.

Table B-3
Estimated Area By Land-Use Class In Niger

Arable					Shrublands & Forests	Pasture- lands	Desert wasteland
Rainfed			Irrigable				
Cultivated	Fallow/ wooded	Degraded	Managed	Unex- ploited			
7.1 m ha ³	6.6 m ha?	1 m Ha? ⁶	0.07 m ha ⁴	0.20 m ha ⁴			
14.7 m ha			0.27 m ha ⁴		14 m ha ⁵	38 m ha ²	68 m ha?
15 m ha ¹							
127.6 m ha ¹							

¹ INRAN, 1979; ² World Bank, 1994a; ³ MAG/EL, 1995; ⁴ MH/E, 1993; ⁵ UTA, 1995; ⁶ Estimate based on interviews, field observations, and d'Herbès & Valentin (in press).

³² Cited but not referenced in many reports, estimate is likely to have originated from INRAN, 1979 (Ouattara, 1995).

³³ Desert is not a useful term in land-use inventories but it is frequently used. Three quarters of Niger is described as desert which contains pasture lands, riparian forests, shrub lands, and arable lands.

Table B-4
Cultivated area and population distribution by bio-climatic zone¹.

Zone	Total area (ha)	Area (%)	Population (%)	Area cultivated (ha)	Area cultivated (%)	% cultivated (%)
Saharan	97,300,000	77	7	234,000	5	0
Sahelian	15,100,000	12	25	1,574,000	31	10
Sahelo-Sudanese	14,300,000	11	68	3,226,000	64	23
Total	126,700,000	100	100	5,033,000	100	4

¹ World Bank, 1994a (cited from World Bank, Agricultural sector strategy paper Niger, 1989)

Farmers are increasing area cultivated at an exponential rate in an attempt to meet the demand for food (Figure 2). Production is increasing primarily through reduced fallow periods and expansion of fields onto grazing land (especially in the Sahelian zone), not by increased yield per unit area (Figure 3). In some of the more productive areas, such as the southern half of the Maradi and Zinder Departments fallow periods no longer exist.

Erosion has degraded much of the arable land. Hard crust forms when the sandy surface of Nigerian soils are eroded. This crusting greatly reduces rainfall that infiltrates into soils (Figure 4), essentially turning the area into a desert. Crusted agricultural, pasture, or shrub lands (*gangani* in Zarma) are unproductive unless someone applies labor-intensive water conservation techniques. Farmers in Torodi, for example, joyfully describe "killing the *gangani* with *demi-lunes*" (water harvesting structures).

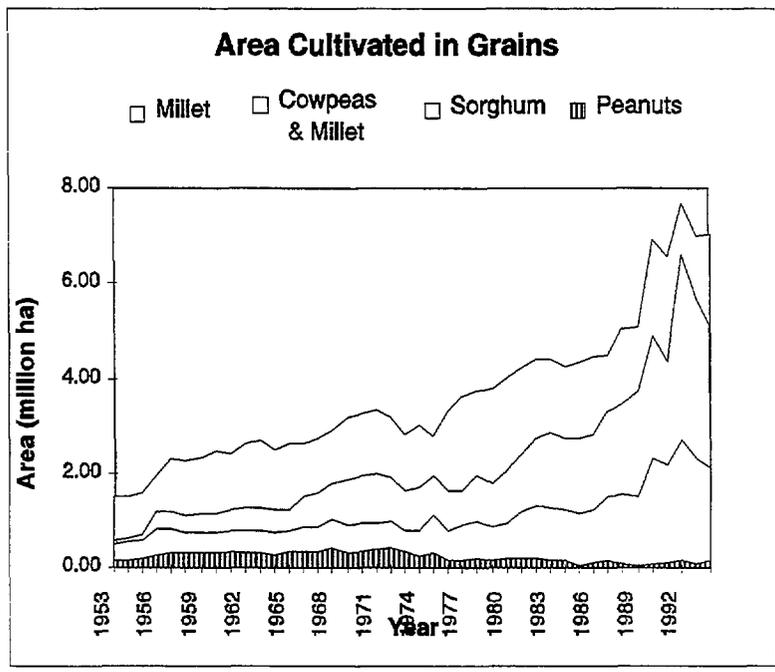


Figure 2
 Aggregated area cultivated for grain in Niger, 1953-1994
 (Annex F)

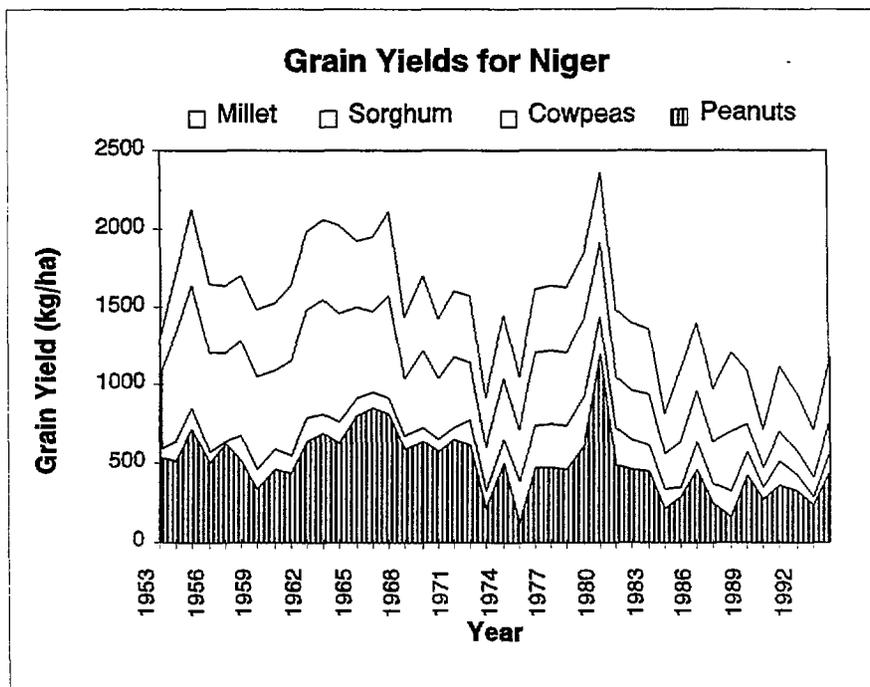


Figure 3
 Aggregated grain yields in Niger, 1953-1994
 (Annex F)

Table B-5
Crop yields in Niger between 1980 and 1994.¹

Crop	Average Yield (kg/ha)	Compound Growth (%)	Coefficient of Variation (%)
Millet ²	387	0.00	16
Sorghu m ²	246	-0.04	32
Maize ³	584	0.02	42
Rice ⁴	2097	0.00	44
Cowpea s ²	127	-0.03	32
Peanuts ₂	344	0.00	31

¹ Data source: MAG/EL, 1993, 1994, & 1995; ² 1982-1994; ³ 1982-1992, missing 1981 data; ⁴ 1980-1991, 1992 data was discarded.

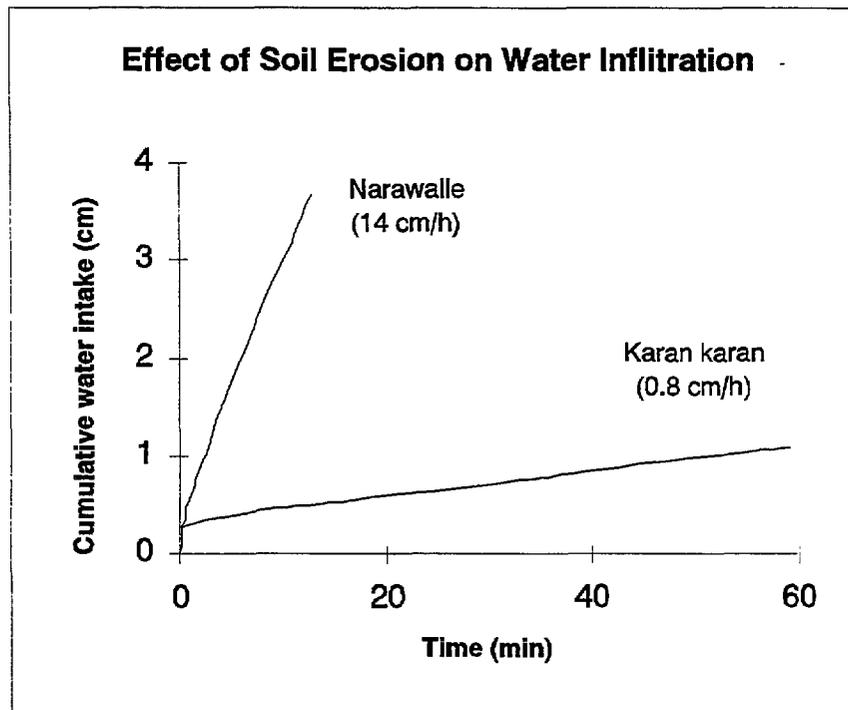


Figure 4
Cumulative infiltration of water into an eroded, crusty soil (*karan karan*) and a neighboring non-eroded soil (*narawalle*)

Infiltration rates referenced in Figure 4 (slope of the curves) are presented in parentheses. Rainfall during the Sahel's short, intense storms greatly exceeds the absorptive capacity of crusty soils (Tabor, 1995).

Land-use and soils inventory studies do not provide a comprehensive summary of crusty soil areas of Niger. D'Herbès and Valentin (in press) measured the amount of crusty soils in a large area near Niamey as part of the HAPLEX-Sahel study. Some of their findings are listed in Table B-6. They show that 34.2% of the study area is severely degraded. Water harvesting for agricultural production would be useful for nearly 15.9% of the total area used for agricultural production and for 18.3% of land used for range and shrub-land. This study also shows that all arable land in the study area is being managed for agriculture, with 32% of it cultivated, 57% in fallow, and 11% abandoned.

Table B-6
 Land-use Classes and Percent Composition from the 10,000 km² HAPLEX-Sahel
 Site near Niamey Niger
 (d'Herbès and Valentin, in press).

Land-use	Class	Rainfall Runoff Ratios	Area	Water Harvesting
		%	%	Potential
Shrub-land & Pasture	Plateau: dense vegetation	6	5.2	
	Plateau: bare soil	82	15.1	Range & forestry
	Plateau: sparse vegetation	27	7.9	
	Hill-slope ironpan	81	3.2	Range & forestry
Agriculture & Pasture	Degraded hill-slope	87	7.7	Agriculture, range & forestry
	Old dense shrub fallow	35	1.3	
	Old mid-dense shrub fallow	29	15.9	
	Old sparse shrub fallow	23	2.8	
	Mid-old high grass fallow	27	12.4	
	Mid-old low grass fallow	55	5.2	Agriculture
	Recent fallow	33	1.1	
	Hill-slope high density field	32	8.9	
	Hill-slope low density field	39	3.9	
	Valley bottom high density field	27	6.0	
Valley bottom low density field	60	3.0	Agriculture	
Wetlands	Superficial waters		0.5	

c. Institutional and Infrastructural Constraints

Risk haunts nearly every management decision of a Nigerien. Some of its sources are:

- highly variable rainfall;
- High infant mortality rates;
- Insecure land tenure and usufruct;
- Insecure forms of saving;
- Weak markets and high unemployment.

Risk reduction usually means low investment in agriculture, expansion onto pasture lands and reduced fallow periods. It usually precludes use of technologies that could increase yields, but require higher cost inputs and increase plant vulnerability to draught. Continued good rains may induce farmers to expand further into the agro-pastoral zones as they did north of Zinder during the first half of this century when rainfall was good (Delehanty, 1985).

Farmers do, however, invest to improve their land for agricultural production in areas of high population density. On the Mossi Plateau of Burkina Faso, for example, agricultural land is severely limited, so increased production occurs through more intense land use (i.e., "necessity" may also be "the mother of *adoption*"). Such investment is also occurring in selected Nigerien areas. In Maradi, for example, virtually all arable land is under cultivation and farmers are adding chemical fertilizer to rainfed crops.

Land use conflicts are increasing as population increases. Conflicts between farmers and pastoralists are usually decided in favor of farmer (Lund, 1993). Development project staff working with Rural Code issues notice that farmers resolve tenure issues selectively. They resolve resource tenure conflicts with other farmers in fully settled areas (i.e., in regions composed of just farmers). They often do not resolve similar conflicts in agro-pastoral regions where they frequently expand their fields onto herding pasture (Moestrup, 1995; Wild, 1995).

Other factors that can help reduce agricultural risk through development of input and output markets are:

- Democratization movements have involved development of non-governmental organizations (NGOs). These organizations, including production-based cooperatives, can help farmers pool resources to compete more effectively in domestic and foreign markets for agricultural products,

- Niger's excellent network of primary paved roads, if coupled with needed improvements in secondary and feeder roads, will provide important access to input and commodity markets, and
- Continuation of efforts to eliminate bribes demanded from truck drivers by police, gendarmes, and custom agents will reduce transportation costs (see Annex H).

2. Management to Increase Production and Reduce Variability

a. Overview

The major goal of farmers and pastoralists is to cope with production and marketing risks for crops and livestock, especially during the low production extremes (Watts, 1988). Soil fertilization and conservation are the most important actions that can raise agricultural productivity and reduce weather risk. Soil fertility, particularly the low levels of phosphate, is a greater constraint on yields than rainfall. Improving soil fertility can also reduce the risk of crop failure from drought. Phosphate fertilizer is most effective in reducing risk, however, if it is combined with conservation practices that harvest rainfall, protect the soil from erosion, and prevent the loss of applied fertilizer.

Irrigation can also reduce crop risk dramatically, but in small concentrated areas. The dry season is a period of low agricultural production and high unemployment. Dry season irrigation is becoming popular and helps use available workers. Niger has approximately 270,000 ha of irrigable land and farmers irrigate only 70,000 ha (22%) (World Bank, 1994c).

The rapid growth of dry season gardening is a direct result of the 1984 drought. Farmers now irrigate approximately 60,000 ha of dry season gardens. Irrigated perimeter development has also increased through government and donor support, from 2000 ha in 1983, to 10,000 ha in 1993 (MH/E, 1993). Rainy season irrigation will become more popular as markets develop for high value crops.

As yields increase and drought risk declines, farmers will gain confidence in the effectiveness of intensive agriculture. This confidence will encourage use of additional natural resource management techniques such as field trees and organic fertilizers. These improvements, which lead to increased physical productivity of agriculture, need to be accompanied by improved marketing infrastructure. This infrastructure includes:

- Timely access to credit and inputs during the crucial planting period between the end of May and end of July (*Reddy et al.*, 1990), and
- Improved storage,

- Expanded processing or transformation of agricultural products,
- Better access to marketing, savings and credit organizations, partly through better land tenure laws, and
- Early warning and famine mitigation to prevent producers from being forced to liquidate their productive assets and migrate to urban centers.

Efforts of USAID and other donors to improve some of these conditions are summarized below. Table B-7 lists donor activities related to natural resource management. Subsequent discussion summarizes scientific information concerning the importance and relative priority of specific actions that could improve agronomic conditions for dryland and rainfed agriculture and for livestock.

b. USAID

The US is supporting economic growth in Niger through USAID's Agriculture Sector Development Grant II Project (ASDG II), the Disaster Preparedness and Mitigation Program (DPM), the Africa wide, Washington funded Famine Early Warning Systems Project (FEWS), funding of AGRHYMET (regional data collection and research center for agricultural hydrology and meteorology) and support of US and Niger based non-governmental organizations (NGO).

ASDG II has focused on policy reforms that affect natural resource management. Initially forestry issues received most of the project's resources, but a greater emphasis is now being placed on agriculture and range management (Winterbottom, 1995), including the Rural Code development through activities of the Land Tenure Center.

DPM is providing support to the GON's *Système d'Alerte Précoce* which is developing its relationship with the numerous ministries and agencies. Since the DPM began, Niger has received generally good rainfall so the project has not had a chance to test its systems.

FEWS, a USAID/Washington based project, provides useful information to the mission and the GON. Its objectives and timely reporting schedules follow the needs of this Africa wide project. Complete integration with other projects in Niger may not be possible.

USAID's support of AGRHYMET helps provide valuable information for researchers such as data for climate prediction models. It also includes GIS based data that is used to design sociological and natural resource management surveys.

USAID's support of NGOs (e.g., Care, CLUSA, Africare, ASDG II's and DPM's grants program) directly improves the lives of Nigeriens. It also provides field level

monitoring of economic growth, natural resource management, and changes that are affected by national policy.

c. Other donor activities

Table B-7 lists donor activities related to natural resource management. The World Bank's proposed Natural Resources Management Project (PNGRN) will certainly affect agricultural policy and economic growth in Niger. During its first five-year phase it will work in 380 communities in five districts and affect about 270,000 people. It will address many of the constraints on agricultural production and economic growth.

DANIDA's support of a pilot-test of two Tenure Commissions (*Commission Fonciers*) has raised important issues. On the one hand, establishment of pastoralist territories (*terroir d'attaches*) through relatively inexpensive and simple GPS and GIS technologies will help conserve pasture lands. On the other hand, the election of Commission representatives and development of *texts d'application* will be a long complicated process, especially if the elected representatives are not dynamic. Moreover, farmer participation may be difficult to achieve. USAID is not likely to consider support for Tenure Commissions unless they provide faster results than now seem possible.

Table B-7
Natural Resource Management Activities of Donors
(SDSA II, 1995)

Activity	Direct Donor Involvement
Agricultural extension	World Bank, IFAD (FIDA); Netherlands.
Agriculture	FED.
Agriculture markets	Canada; Norway; Netherlands.
Animal husbandry	FAC; FED.
Apiculture	France (AFVP).
Cereal banks	Norway; PAM.
Cotton	Norway.
Decentralization	FED.
Environmental education	Netherlands.
Fisheries	FED; GTZ.
Forest management	FAO; GTZ; UNDP (PNUD).
Forestry	SOS Sahel; Norway.
Fuel-wood conservation	World Bank; DANIDA.
Integrated pest management	GTZ.
Irrigation management	World Bank (in preparation); FAC; FED; BAD.
Natural resource management	World Bank (in preparation); Switzerland.
Peppers	Canada.
Rural Code	DANIDA.
Rural development	Italy.
Rural infrastructure	PAM.
Soil and water conservation	IFAD(FIDA); FED; GTZ.
Village territory management	FAC; SNV.
Water management	SNV; UNDP (PNUD); Switzerland.
Well management	France (AFVP); DANIDA; FED; GTZ; Japan.
Wildlife management	FED.
Women in development	Norway.

d. Agriculture

(1) Fertilizer

Nigerien farmers use very little fertilizer. They use an average of 23,000 tons of fertilizer annually (van der Linde et al., 1994) or only 3.2 kg/ha on cultivated land. Western European farmers use around 300 kg/ha on crops and pastures, and American farmers use around 95 kg/ha on crops.

Fertilizer use in Niger is not evenly distributed throughout the country. High consumption areas for fertilizer are in the higher rainfall areas of southern Maradi and Zinder Departments, which are close to Nigeria, and in the irrigated perimeters, and dry season, irrigated gardens in Diffa, Dosso and Tahoua Departments (van der Linde, et al., 1994). Fertilizer is preferentially applied to:

- High value crops with low risk of drought such as irrigated crops, and
- Areas where fertilizer costs are lowest - such as near the Nigerian border where transportation distances and costs are minimal.

Several studies evaluated the profitability of applying chemical fertilizers but they were conducted before the 1994 devaluation of the CFA franc (Eid, 1989; SOMEA, 1992). They conclude that the value of grain must be at least twice the cost of fertilizer inputs before farmers will use fertilizer³⁴. With devaluation in 1994, the value of additional grain produced from fertilization and the cost of Tahoua rock phosphate compared to imported fertilizer shifted in favor of Nigerien farmers.

The FAO fertilizer trial data (Eid, 1989) show that Niger should expect a 30% increase in millet yields (Figure 5) by applying 100 kg of triple super phosphate per hectare (20 kg of phosphorus/ha or 241 kg of simple superphosphate per ha³⁵) if annual rainfall³⁶ is greater than 250 mm (Figure 6). The high variability of the data (19-152% yield increase) shows that there are significant factors other than phosphate fertility levels that also impact yield. ICRISAT data (Figure 7) also confirms these results. These field results are believed to be the best indicators of potential yield in Niger. Estimates of potential yield for the nation as a whole are

³⁴ Profit realized by the farmer depends on two ratios: the ratio of the value of the additional grain produced to the cost of the fertilizer inputs necessary to achieve this yield (value:cost ratio) and the ratio of the costs of a kilogram of fertilizer to the value of a kilogram of millet (price ratio) (Bationo et al., 1992).

³⁵ Conversions based on Bationo *et al.* (1990) and are presented to give a general idea of amounts needed. Phosphate equivalency between materials and yield responsiveness are much more complicated than presented in this report.

³⁶ Annual rainfall is a crude but convenient method to represent water stress on crops.

not possible, however, due to (a) a lack of comprehensive and detailed soil surveys and (b) agronomic data for only a small portion of the crops grown in Niger.

Phosphate fertilizer has a residual effect of up to 5 years in Nigerien soils (Bationo *et al.*, 1990). Because of this long

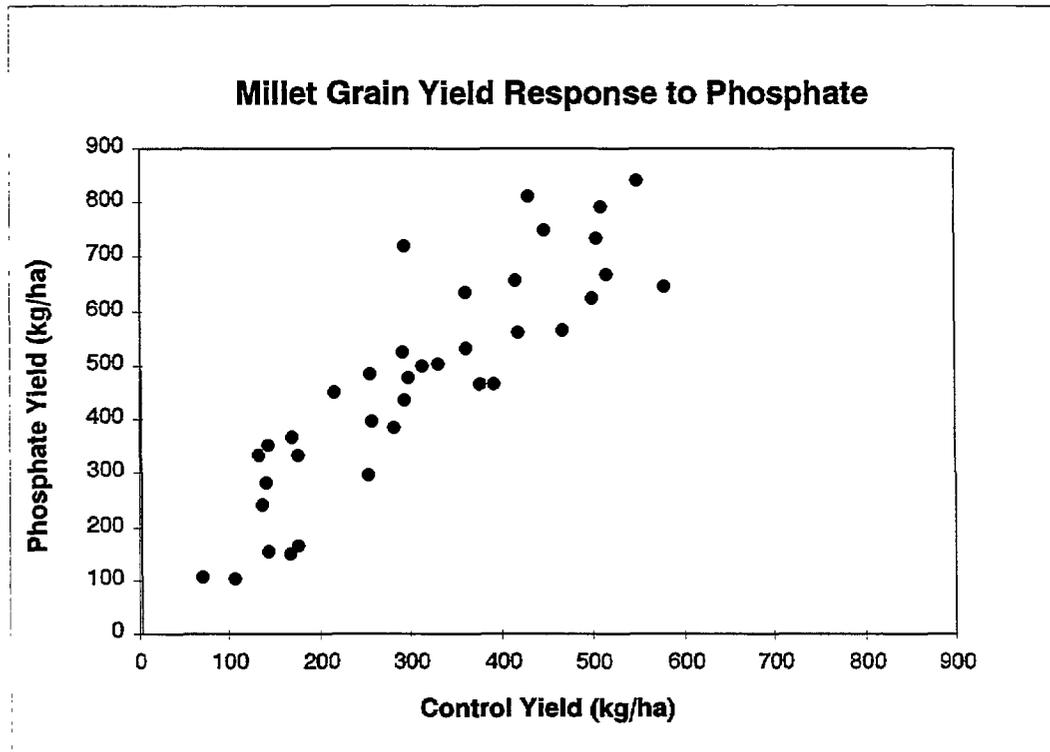


Figure 5

Millet grain yields with phosphate fertilizer compared to the controls from 12 sites over 5 years in the Maradi and Zinder Departments (data from Eid, 1989 in Annex F).

residual effect, subsequent maintenance fertilization will require smaller amounts to achieve similar yields. Also, phosphate fertilizer is not physically damaging to farmers, creates no risk of 'burning' the crop, and stimulates root growth to help crops resist drought.

Rainfall had a slightly negative impact on yields of the control in Figure 7. This demonstrates that fertility, not rainfall, is the major constraint on Nigerien agriculture. Low soil fertility causes a plant (crop, forage plant, or tree) to use water inefficiently. Fertilizer significantly increases yields without increasing plant risk to drought if the proper amounts of nutrients (primarily nitrogen, phosphorus, and potassium) are applied (Payne, 1995). Increased disease and insect damage probably explain the insignificant yield decrease of the control as rainfall increased.

Bationo *et al.* (1990) discovered that finely ground rock phosphate from Tahoua gives the same yield response as Nigerian single superphosphate (comparison by unit weight of material) when both were applied to an acid soil (Chien, 1995). In Niger, most soils used for millet cultivation are acidic. In spite of good yield response to Tahoua phosphate (Figure 8 and Table B-8), its use is insignificant as compared to other phosphate fertilizers (Annex F). Reasons include farmer complains that the powdered rock is more difficult to apply than imported granulated forms of fertilizer and that Tahoua phosphate is not readily available in their markets.

Studies of the feasibility of exploiting Tahoua rock phosphate reserves and the range in the quality of phosphate nodules in Tahoua's reserves do not exist. The Tahoua samples that were studied have high content of iron and aluminum that prevents the usual increase in phosphate availability for plants that acidulation³⁷ offers.

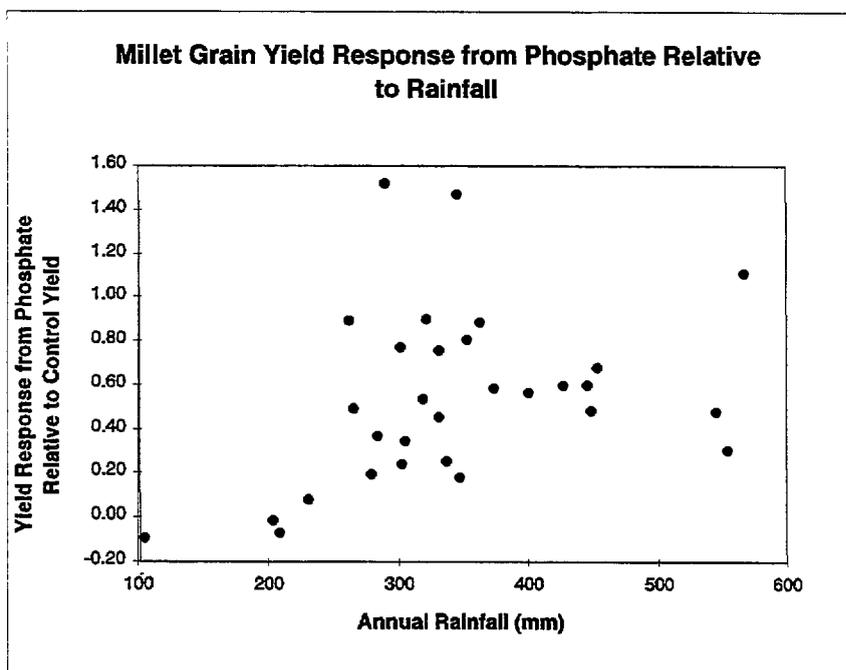


Figure 6

Grain yield response of millet from phosphate fertilizer relative to rainfall. Data was collected from 12 sites over 5 years in the Maradi and Zinder Departments (data from Eid, 1989 in Annex F).

³⁷ Phosphate rock is treated with acid, usually sulfuric acid, which usually make the phosphorus more available to the plant. This simple process is a potential Nigerien industry.

Soil surveys by Gavaud, 1965 through 1975, and other scientists at ORSTOM show that the Tahoua region has a wide distribution of soils that are high in phosphate. This suggests that further prospecting in the area is needed. Also the present price of Tahoua phosphate (25 FCFA/kg) is set by *Centrale d'Approvisionnement* and may not reflect phosphate prices that a functioning mine would realize. In addition, Nigerian subsidies are scheduled to be removed within two years, and consequently phosphate prices are likely to rise (see Section D, Marketing of this report).

The phosphate reserves in Park W near Tapoa do not provide as large a crop response as the Tahoua rock phosphate unless acidulated (Bationo *et al.*, 1990). In addition, a soon to be signed international program for wildlife habitat conservation will discourage exploitation of the Park W phosphate reserves (Price, 1995).

(2) Management Practices

Research shows that sustained millet grain yields of 2-3 tons per hectare are possible through improved management practices. More important practices include crop rotations and post-phosphate applications of fertilizer such as animal manure, urea (nitrogen fertilizer) and potassium (Payne, 1995). However, much improvement will be needed in infrastructure and institutions before such investments are profitable.³⁸

As crop yields and profitability increase, the benefits of improved natural resource management techniques are likely to become apparent and more economical. However, many of the improved techniques can inflame resource tenure and usufruct insecurity. Layers of conflicting traditional, Islamic, colonial, and post-colonial laws complicate a technically straight-forward solution. Adoption of many of these techniques are constrained by the lack of a Rural Code. Moreover, an operational Rural Code could take 10 years or more to develop.

³⁸ These yields will never be achieved nationally. Rate of return on investments is likely to be better for cash crops which would receive the majority of inputs. Nigerien farmers are trapped into investing most of their labor into sub-subsistence production of grain which limits opportunities for cash crop production. This in turn inhibits development of fertilizer and pesticide markets which prevents farmers from increasing grain yields. Once this constraint is broken then infrastructure, markets, population increase, cost of labor and land will determine the investments required to achieve subsistence grain yields.

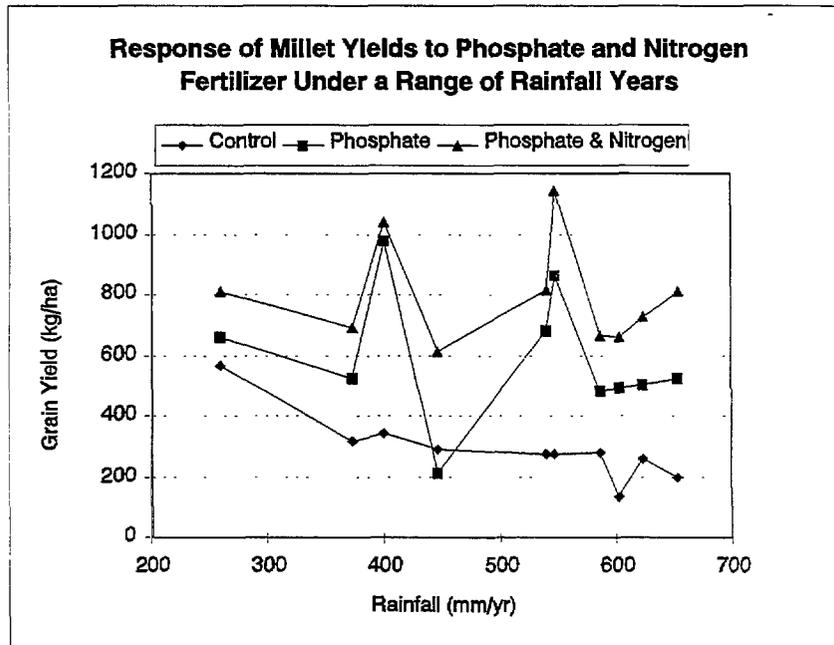


Figure 7
 Grain yields of millet relative to rainfall with the addition of phosphate, phosphate + nitrogen, and no fertilizer treatment over the past 10 years at the ICRISAT Center in Sadore Niger (Bationo, 1995).

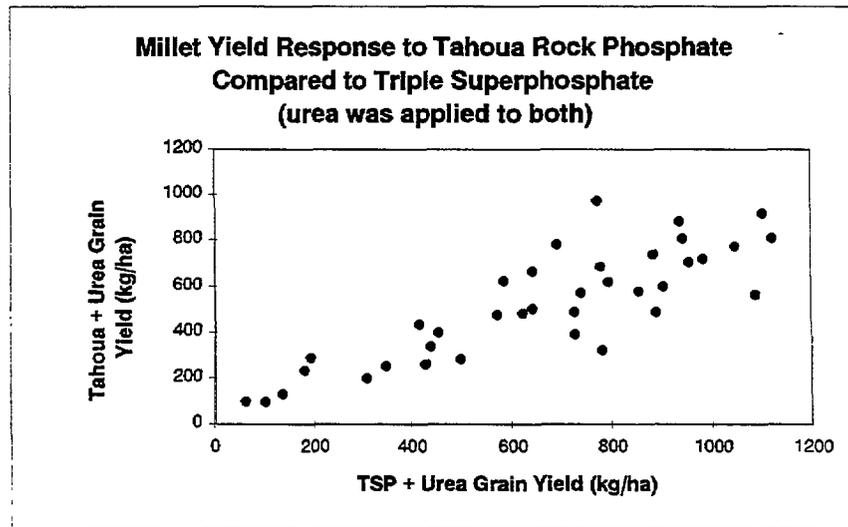


Figure 8

Millet yields from Tahoua rock phosphate + urea compared to triple superphosphate + urea. Tahoua phosphate was applied at a rate of 19 kg of P/ha, triple superphosphate at a rate of 20 kg of P/ha, and urea at a rate of 46 kg of nitrogen/ha
(data from Eid, 1989, Annex F)

Table B-8

Comparisons of phosphate fertilizers based on the weight of material

Fertilizer	% P ¹	Relative Yield Response fertilizer/TRP ¹	Relative 1995 Prices fertilizer/TRP ²
Tahoua rock phosphate (TRP)	12.1	1	1
Single superphosphate	8.3	1.02	2.2
Triple superphosphate	21.1	1.84	3

¹ Bationo *et al.*, 1990, Chien, 1995; ² Centrale d'Approvisionnement.

Higher yields can help achieve subsistence needs with less land and labor resources, and thus release resources for cash crop cultivation. Greater cash crop production, in turn, can increase transactions in commodity markets as well as rural incomes and demand for intermediation.

The peak demands for labor are currently (a) periods of two days after rainfall events during planting season for millet and (b) in August and September during weeding. It will be difficult to improve upon the "divot every two steps" method of sowing millet that these sandy soils allow. Reducing the area needed for planting through fertilization and improved varieties are the most likely labor saving interventions for sowing. If time permits, a field receives two weedings using conventional methods. Additional weeding may be needed if fertilizers are applied. The additional weeding is likely to be justified by higher yields. Greater use of companion techniques such as, denser plant spacing and animal traction are needed to help farmers reduce labor demands when using fertilizers.

The dry season, with its reduced labor requirements, offers an important opportunity to invest in soil and water conservation structures and irrigation. Soil and water conservation are a prerequisite to increasing soil fertility. Most nutrients, especially phosphate, are concentrated near the soil surface, the soil strata that is most vulnerable to erosion. Numerous types of conservation techniques have been proven effective in Niger -- however many technicians have designed various structures such as earthen works that do more harm than good. Training or retraining of technicians and engineers is needed before any large scale extension program is started. As mentioned above, adoption of these techniques may be limited by progress in developing the Rural Code.

The system of seed production set up by the GON is expensive and not very effective (van der Linde *et al.*, 1994). Improvements in hybrid sorghum have created an opportunity for privatizing seed multiplication and distribution. A high yielding hybrid millet may be ready for marketing by the year 2000 (Sivakumar, 1995). Privatization will need support of the government, especially in creating and enforcing laws that assure seed quality.

Storage losses of grain due to pests can be substantial. These losses threaten food supplies and encourage farmers to allocate more acreage to subsistence crops. Integrated pest management, improved markets, and secondary road networks will help farmers increase food security more than cereal banks. Community cereal banks do not have a history of success in Niger (Rietsch, 1993).

(3) Rainfed Agriculture

Rainfed production in Niger is diverse, partly to reduce risk in a low input-based system. Production includes, for example:

- Subsistence/cash crops such as millet, sorghum, cowpeas, peanuts, bambara groundnut (*souchet*), manioc, maize, okra, sesame, hay from cowpeas, peanuts, millet stalks, and construction material from millet stalks;
- Cash crops such as pole wood, fruit trees, and henna; and
- Natural vegetation and agroforestry plants for medicines, gum arabic, construction material, dyes, honey, firewood, forage and fodder.

Of Niger's two traditional cash crops, cowpeas appears to have greater economic potential than groundnuts. National and regional cowpeas markets are developed. Van der Linde, *et al.* (1994) reported that, of the 400,000 tons of cowpeas produced, 34,000 tons were exported. Once subsistence levels of cereal production are assured, through phosphate fertilization, farmers can allocate more resources to cash crops. If commodity markets can absorb a significant increase in cowpea production, then cowpeas are likely to be the favorite cash crop.

Groundnuts have more constraints on their production and marketing than cowpeas. First, they require very sandy soils for grain development and harvesting. Second, they are also considered a woman's crop unless profits are high enough to encourage male participation. Third, Niger's groundnut exports are disadvantaged by high levels of fungal aflatoxins. These toxins result from poor storage and virtually eliminate groundnut exportability. Finally, low income levels in Niger discourage use of peanut oil in favor of its cheaper and inferior substitute, palm oil.

Figure 2 shows the highly variable production of cowpeas since 1953. The variability is caused mainly by insect damage, especially thrips. Table B-9 shows that cowpea yields were increased 27 times over current yields in a three year experiment at Berni N'Konni.³⁹ This increase was accomplished through use of intensive agricultural practices that include use of:

- Phosphate and pesticides,
- Improved seed and crop rotation practices, and
- Animal traction cultivation.

³⁹ This study's average yield is 4 times greater than the average national yield of cowpeas.

Millet yield increases were more modest -- only 13%. They do, however, support the fertilization results described earlier.

Table B-9
Traditional and improved management yields of millet and cowpea with an average annual rainfall of 412 mm^a (Klajj et al., 1994)

Crop	Continuous intercropping		Improved management (sole crops) ^b	
	Grain	Fodder	Grain	Fodder
Millet	0.67 t/ha	1.52 t/ha	1.51 t/ha	2.70 t/ha
Cowpeas	0.02 t/ha	1.44 t/ha	1.08 t/ha	2.37 t/ha

^a Experiment was conducted over a 3 year period in Birni N’Konni, Niger.

^b Crop rotation using sole crops with improved varieties, animal traction and inputs of phosphate fertilizer (13 kg P/ha) and a pesticide for cowpeas. The per hectare yields of sole crops must be halved to make an annualized, per hectare comparison with continuous intercropping.

While phosphate fertilizer, by itself, will increase cereal production, a significant increase in cowpea production requires an expansion of integrated pest management supplies and management techniques. Greater production of cowpea fodder will be an incentive for farmers to further integrate livestock production with crop production. It will also encourage associated natural resource management practices (e.g., improved fallow hay to supplement the high protein cowpea hay).

(4) Irrigated Agriculture

Important irrigated crops in Niger include cereals (rice, wheat), vegetables (onions, green beans, peppers, tomatoes, garlic), fiber (cotton), fruit trees (dates, guava, papaya, citrus) and sugarcane. Irrigation’s main advantages are that it:

- Controls production variability better than rainfed systems,
- Is focused on high-value cash crops,
- Permits agricultural production throughout the year, and
- Provides employment during the dry season when unemployment is high.

The major disadvantage of irrigated systems is that they require a large investment in small land areas in equipment, materials, labor, and training as compared to rainfed and recessional agriculture systems.

Irrigation expansion through World Bank assistance is part of Niger's long term growth strategy (World Bank, 1994c). but it is unlikely to add significantly to Niger's GDP in the near term. Niger's most emphasized irrigated crops are onions, green beans and cotton. Onion production is well-established. In 1992, 170,000 tons of onions were produced and 23,000 tons exported (van der Linde *et al.*, 1994). Continuing success with onions is encouraging development of other crops and markets such as garlic, potatoes. Green bean production has potential of developing in the Niamey area because of timely access to the international airport (see Annex G). *Projet CAT* in Tillabéry attempted to develop a green bean market, but had problems with quality control and price disputes with the buyer in Paris. The project often sold green beans at a loss (van der Linde, et al., 1994).

Cotton has the potential to make a larger contribution to the Nigerien economy as a result of the devaluation of the CFA franc and new contracting methods with farmers (CADEG, 1995). Niger has the climate, soil, water, and irrigated perimeters to produce high value irrigated long staple cotton.

e. Livestock

Livestock provides Niger with significant economic benefit that exceeds its calculated proportion of GDP⁴⁰. As a result, its relative importance in Niger's economy may be underestimated (World Bank, 1994). The livestock population estimate for 1994 was 3.1 million Tropical Livestock Units with a 10% margin of error. This estimate assumes 2 million heads of cattle, 3.75 million sheep, 6 million goats, 375,000 camels, 500,000 horses and donkeys. World Bank (1994) suggests that exploitation of the rangelands in the northern pastoral zone is suboptimal due to reductions in herd migrating patterns. Reduced herd mobility has:

- Resulted from a gradual change of ownership of the herds from pastoralists to investors or traders and from security problems in the north,
- Caused overstocking and the disappearance of valuable forage species such as cram cram and *Cenchrus biflorus* (Maidaji, 1995) in the pastoral zone over the past 10 years.

⁴⁰/ Livestock includes cattle, sheep, goats, donkeys, horses, camels, chickens, guinea fowl, ducks, rabbits, and swine. Its benefits include food, skins & hides, savings instrument, traction, and social status.

Rangelands may have the potential to sustain much higher livestock population if the composition of plant species is improved (World Bank, 1994a) and if other actions are taken to reduce drought risk on livestock. For example, technologies that permit rapid de-stocking, such as meat drying and salt curing, are needed. These capabilities will help reduce overstocking during dry seasons without repeating the disastrous losses of livestock and the wealth it embodies that have occurred in previous droughts. Pastoralists and farmers also need alternatives to livestock as instruments of savings to encourage them to de-stock, especially after poor rainfall years.

Pastoralists have an important role in Niger's economy, but farmers continue to expand onto rangeland and restrict livestock migration. Approximately 10 to 20% of the Nigerien cattle⁴¹ is still owned by nomadic pastoral communities of the Fulani and Tuareg ethnic groups who spend the entire year in the pastoral and agro-pastoral zones. Low quality of forage from March to July necessitates their migration to Nigeria and southern pastures during the cropping season. Yet, farmers are almost encouraged to expand onto traditional range lands and block migration. In some areas farmers cultivate "trap fields"⁴² to reap a portion of heavy fines levied against pastoralists by local authorities (Maidaji, 1995).

Agricultural expansion must not compromise production systems of pastoralists. Otherwise, Niger risks losing much of the value of the pastoral zone.

3. Evaluation of Selected Management Practices

a. North

The "north" zone of this analysis is the agro-pastoral zone that occurs the Sahelian bio-climatic zone. Annual rainfall ranges between 250 and 400 mm on average and is highly variable (coefficients of variations around 30%). Agricultural expansion is most rapid in this zone and it is cutting off pastoralists from traditional grazing lands. This is the zone with high potential of integrating agriculture and livestock, but is also a zone with the greatest conflict between farmers and pastoralists. It lies between the pastoral zone to the north and agricultural zone to the south.

⁴¹/ No reliable data exists (World Bank, 1994a).

⁴²/ Farmers cultivate small, isolated fields in traditional rangelands in the hope of catching pastoralist's livestock damaging the crop.

b. South

The "south" zone of this analysis is an agricultural zone that occurs in the Sahelo-Sudanese bio-climatic zone. Annual rainfall ranges between 400 and 900 mm on average and is moderately variable (coefficients of variation around 20%). Agricultural expansion is nearly impossible because most arable land is already cultivated. Here, intensification is occurring through use of fertilizers and pesticides, but fallow periods are declining. The opposing impact of these changing practices on yields, or poor data collection practices may explain why production statistics at the Arrondissement level do not yet reflect yield increases. "Cut and carry" (hay and fodder) type of livestock production has potential in this zone if land is released for managed fallows.

c. Water Harvesting

Water harvesting structures are a labor intensive intervention that requires some supervision by extension agents. Farmers with access to sufficient land are unlikely to reallocate labor and capital from traditional agriculture to more intensive water harvesting unless either (a) crop risk declines for subsistence crops or (b) expected profits from cash crops are significant. Phosphate fertilizer is needed to achieve either of these conditions.

Water harvesting is attractive to land poor farmers for subsistence crops in areas where strong competition exists for agriculture land. Even these farmers adopt water harvesting practices hesitantly and on a limited basis due to insecure land tenure rights.

d. Organic and Chemical Fertilizer

Phosphate is the most limiting nutrient for Nigerien agriculture. Research results, described above, show that on average a 6500 FCFA/ha investment of phosphate fertilizer⁴³ will increase millet yields 30%. Once this occurs, additional investment in animal manure and urea will have larger returns. A 7,000 FCFA investment in urea, for example, will increase yields 40 percent or 1.2 times the yields possible without prior phosphate inputs.

⁴³ Calculated from 1995 fertilizer prices quoted by the *Centrale d'Approvisionnement* in Niamey. Transportation and handling costs will increase the price farmers must pay.

e. Animal Traction

Animal traction will become more attractive as fertilizer inputs are increased and weeding becomes more important. For example, with increased soil fertility and production, more hay is likely to be available from increased peanut and cowpea production. Hay from these sources will reduce the cost of maintaining an animal.

f. Managed Fallow

Managed fallow for grass and legume hay production would be possible if production goals could be met with less than 100 percent capacity utilization of land. For this to happen, yields would have to increase through, for example, improved crop management, greater use of fertilizers and pesticides or widespread availability of improved seed.

g. Field Trees

Natural regeneration and planting of trees in fields (approximately 50 trees per hectare) will help protect the soil from erosive winds, reduce time spent by women collecting firewood and raise yields slightly. The erosion protection offered by windbreaks is well documented, but recent studies on windbreaks in the Maggia Valley of Niger provide the first documented indications that windbreaks may raise yields slightly. These yield increases may be due to an improved micro-environment and the additional accumulation of manure from livestock that are attracted by the shade during the hot season. These yield increases, however, are not yet confirmed by other studies. As a consequence, this analysis considers field trees as a soil conservation measure that does not affect crop yields but provides wood and fodder.

h. Crop Yield Responses

Crop yields show 0% compound growth since 1980, except for sorghum which has experienced a 3 percent decrease in yields since 1980. See agricultural data in Annex F.

4. Policy Requirements

a. Fertilizer and Pesticide

The simplest and fastest way to increase agricultural production and rural income is to apply phosphate fertilizer to rainfed cereal crops. It is reasonable to expect an immediate 30% increase in yields. Benefits in subsequent years to one-time applications are substantial, but less predictable.

Other Sahelian countries are realizing the unique importance of fertilizer as means to restore depleted soils. Senegal has, for example, discouraged local use of its phosphate reserves for years in favor of selling them for foreign exchange. In 1995, however, changed its laws to encourage local use of its phosphate reserves. It has also directed its agricultural research institute, ISRA, to study appropriate application of its Matam phosphate reserves⁴⁴ and follow-up fertility maintenance with organic fertilizer. This strategy is based on realization that NRM projects perform more effectively after phosphate constraints to soil fertility are reduced.

The agriculture investment second in priority to phosphate fertilizer is pesticide. Pesticides can dramatically increase cash crop production. For example, proper dosage and application of pesticides can raise cowpeas yields four times in the season in which they are applied. Fertilizer and pesticides use should be stimulated so as to help, not hinder, the private sector markets for these inputs. Extension advice should guide application of these investments.

These two interventions, implemented over a relatively short time and with a reasonable transition to a free market, are essential for delivering the yield increases needed to support the activities that USAID/Niger has developed in SO2 and SO3. Without a significant increase in production, markets will be slow to develop and demand for credit will be low. Without a significant increase in production, improved natural resource management will be limited to project sites and agricultural expansion will continue to degrade the land.

Tahoua rock phosphate has potential for meeting Niger's phosphorus needs, and it can be produced locally. Employment and foreign exchange savings possible from its local production should easily outweigh disadvantages associated with its bulkiness as compared with other fertilizers. Moreover, the simple grinding process needed to prepare the fertilizer for distribution is likely to be feasible in Niger.

For rock phosphate in the Tahoua region, the GON, donors, agricultural research and extension organization should:

- Determine the extent, quality and feasibility of commercially developing the rock phosphate reserve,
- Develop application techniques of the rock material that are more acceptable to farmers than the currently used hand distribution of phosphate powder, and

⁴⁴/ Personal communication with P. Anamosa at the Consortium for International Development, Dakar, 1995.

- Develop simple methods to distinguish between acid soils that respond well to rock phosphate and other soils that require more soluble simple or triple superphosphate.

b. Land Tenure

Tenure and usufruct insecurity may be more important issues than equity when developing the Rural Code. Insecurity is an issue more easily resolved than ownership rights. Moreover, usufruct security will allow Niger to progress more quickly toward sustainable agricultural production. Its quick resolution can also reduce environmental degradation.

After usufruct rights are assured then free market forces can react with investments and rents to balance the benefits of tenure resolution among Nigerien society. Donor concerns about remaining problems of inequity can be addressed in other programs. Overall, many benefits will result from GON assurance that laws and incentives encourage sustainable land management and express policies that emphasize the economic importance of both livestock and agriculture.

USAID's SO3 is dependent on rapid development of a Rural Code that encourages investing in improved natural resource management practices, an unlikely event in the short or intermediate term (next five years). Land owners are likely to invest in improved NRM practices only if both (a) productivity and profitability significantly increase and (b) secure tenure exists. The productivity and profitability conditions will create the affordability to invest in NRMs projects. The land tenure condition will create the assurance that NRMs investors will have use of their completed NRMs projects long enough to receive the benefits of their investments.

5. Validity of USAID/Niger's Vision

SO2 and SO3 will not be achieved unless there is a substantial increase in agricultural production. Such an increase in agricultural production will require a major increase in phosphate fertilizer usage for all crops. With respect to increased fertility of depleted soil in the Sahel, Sanchez states,

"It's got to come from a bag."⁴⁵

Pesticide usage can provide dramatic secondary assistance for production of certain crops such as cowpeas.

Improvement in resource tenure will be a slow process and will continue to be a serious constraint on adoption of improved NRM practices predicated for achieving SO3. Tenure insecurity discourages investments that are required for production

⁴⁵/ P. Sanchez, 1994. Personal communication via ICRAF, Nairobi.

oriented agriculture on which donors have funded much research. Moreover, it will contribute to continued environmental degradation and human conflicts.

SO3 focuses on conservation, not production, as reflected in the emphasis on NRM technologies that primarily affect degraded lands (e.g., soil and water conservation techniques, agroforestry). SO3 has two unsurmountable weaknesses. First, NRM interventions mentioned in the Proposed Strategy Plan are not likely to be adopted without land tenure reform and such reform is unlikely in the foreseeable future. Second, SO3 deployment of NRMs practices is based on conceptually perceived needs for conservation rather than on their profitability. Agricultural profitable will be greater on non-degraded land rather than on the degraded land that is targeted for NRMs projects.

The language of SO3 refers to forestry 3 to 1 over agriculture. By contrast that is in sharp contrast to the titles of USAID's activities (7 references to agriculture and 1 to forestry). Range and livestock are hardly mentioned at all in USAID's activities. The shrub lands of Niger are important, especially for fuel and fodder, but they will not drive Niger's economy. For this reason SO2 and SO3 are weakly linked and depend on other donor activities to assure their success.

SO2 desire to reduce the amount of bribes paid by truck drivers to government agents is well placed for reducing the costs of transportation, improving road safety, and reducing the cost of road maintenance (i.e., damage caused by overweight trucks).

USAID is leading the way among donors with its emphasis on early warning and disaster mitigation. Mitigation is essential for economic growth in Niger and it supports the goals of SO2 and SO3. Considering the series of good agricultural production years, DPM's activities may need to be slightly broadened to include proactive activities that reduce risk in those areas with the worst history of famine. Activities could include, for example, credit, food storage, food processing, and phosphate fertilization (Adelski et al., 1994).

C. Agricultural Marketing

This section has two purposes. First, it identifies strategies to address infrastructural, systemic and administrative constraints that preclude optimal performance of targeted crops on local and regional markets.

Second, this section attempts to determine strategies for Nigerien agricultural commodities and services to compete more effectively on local and regional markets. Improved sales on these markets will enhance the contribution of rural enterprises to Niger's agricultural productivity and economic growth.

1. Methodology

Three processes were used determine the observations and findings in this section. They are:

(a) Questionnaire/interviews. Two questionnaires, one for producers and other for entrepreneurs were developed and administered. These questionnaires were used extensively in Maradi and Zinder Departments. The interviews provided practical information about agricultural marketing constraints as well as the role of the Government of Niger in private sector development.

(b) Literature search. Niger is very rich in studies and concept papers about constraints and impact of its agricultural marketing system. The majority of the studies reviewed are of excellent quality and were often authored by host country nationals.

(c) A commodity systems/subsector approach. This approach permitted direct use of existing commodity studies which usually focus on individual commodity sectors ("filieres").

2. Niger's Input Markets: Constraints and Opportunities

Niger's agriculture input markets operate in the context of rapid population growth, declining soil fertility and severe cyclical drought conditions. These conditions emphasize the importance of increasing agricultural productivity for Niger's food security.

While natural forces and donor action drove input markets in the 1970s and 80s, only natural forces appear to drive Niger's input markets in the 1990s.

The current status of Niger's input market includes: (1) no national seed policy; (2) no national fertilizer policy; (3) well intentioned, but poorly coordinated donor and project financed input schemes; (4) little to absolutely no assessment or definition

of the needs of small farmers and (4) no private sector participation in seed and farm tools markets.

a. Seed market

(1) Seed Production Projects

In 1975, the GON through USAID began the Projet Cerealier National (PCN), designed to improve the infrastructure for seed production, market information and an improved and drought resistant seeds for Niger. The project design called for a seed farm in Lossa for cereals and legumes and five seed multiplication centers located in Hamdallaye (Tillabery), Guecheme (Dosso), Doukou- Doukou (Tahoua), Douromkossaou (Maradi) and Angoual Gamgi (Zinder).

This \$50 million project was coordinated by the Institut National des Recherches Agricole du Niger (INRAN). The Lossa farm was charged with producing improved seeds. The multiplication centers were to multiply and adapt the seeds to local specifications. The farmers were to purchase the seeds directly from the centers. No private companies were included in the original seed subsector infrastructure. Very few, if any, operate now.

Ending in 1989, PCN had little success in its efforts to get improved seed in the hands of farmers. Even though the seed farm and multiplication centers still exist, high production costs, meager government financial support to the centers, insufficient technology transfer and the absence of a GON seed subsector policy left this activity in disarray. Notwithstanding these problems, a World Bank technical paper reported 1994 that improved seed would increase millet and cowpeas production by 10 percent and 20 percent respectively.⁴⁶

In 1989, a follow-on project referred to as the Projet Developpement des Activities Semenciers du Niger (PDASN) was designed. It started in 1991, but was terminated in 1991 due to a lack of funds. During its short existence, it was managed by the Ministry of Agriculture and Livestock and was intended (a) to increase private-sector participation in seed production and commercialization and (b) to establish a national seed policy.

(2) Seed production capacity

Production of cereals and legume seed is difficult to determine because no production, price, or trade data has been collected since 1989. According to a March 1994 Ministry of Agriculture and the World Bank study, however, the five multiplication centers have the capacity to produce 180 tons of M2 on 300 hectares. During the five year PCN project, the multiplication centers produced

⁴⁶/ World Bank, Assessment of the Demand for and Supply of Agricultural Inputs, March 1994.

about 150 tons annually. An estimated 92,000 tons of millet, sorghum cow peas and groundnuts seed are required annually by Niger's cereal and legume farmers.

(3) Supply: Millet, Sorghum, Cow Peas and Rice

An estimated 80 percent of farmers produce their own cereals seeds. Normally they attempt to set aside one tenth of each crop as seeds, according to INRAN Maradi. The sometimes operational multiplication centers sell limited quantities of millet, sorghum and cowpeas seed for 1,800 - 2,300 FCFA/kilo. These prices exceed costs of production at the centers, but the 1994 devaluation of the FCFA raised the seed centers' input costs for pesticides, fertilizers and energy.

INRAN Maradi, which services Maradi, Diffa and Zinder Departments, produces and sells modest amounts of M1 and M2 of millet, sorghum, onion and cowpeas seeds to farmers as they become available. In discussing the role of INRAN Maradi, the Director and his deputy made it clear that the station's primary research responsibility is to produce improved M0 millet and cowpeas seed for the Lossa seed farm. Secondly, through IFAD and the World Bank projects, it helps strengthen the agricultural extension service to improve seed yields. Both the Service d'Agriculture and INRAN provide joint technical assistance through joint work plans to agricultural stations and agents at the arrondissement level. However, in recent years, the demand for improved seed (drought resistant and high yielding) has increased so greatly, that INRAN Maradi produced approximately 55 tons of seeds last year. The INRAN Maradi director reported that research station directors in Burkina Faso, Benin and Nigeria approach INRAN seeking supplies of seed.

INRAN Maradi says it has the additional capacity to produce 60-65 tons per year, but must have a firm contract to supply seed prior to its production. The station sells millet and sorghum seed at 250 FCFA/kilo, cowpeas seed at 300 FCFA/kilo and onion seed at 25,000 FCFA/kilo. These seed prices have remained constant for the last four years (except onion seed). Peanut seeds also sell for 300 kilograms.

The market for INRAN seeds is mainly farmers close to the Nigerian border. In Maradi, Zinder and Niamey, garden vegetable seeds from France are sold in retail shops. The Tarka Valley Basin Project (Tahoua Department) imports high quality wheat seeds from Saudi Arabia.

The Office National des Amenagement Hydro-Agricole (ONAHA) produces improved seed in sufficient quantities to achieve the GON's rice production objectives. M1 seed is multiplied on its seed farm in Saadia, and M2 and M3 are produced on irrigated lands.

b. Demand for Seeds

Recent data from Ministry of Agriculture in 1989 indicate that seed production during the 1988 growing season reached 200 tons. This tonnage addresses only 0.2 percent of the 92,000 tons of millet, sorghum, cowpeas and peanut seeds (M3) that Nigerian farmers need annually according to the Annual National Plan.

The effective demand for commercially produced seeds, at 0.2 percent of planned requirements is very low. Small farmers in the Maradi and Zinder departments indicated that they do not know where to get improved seeds or how to use them. Where purchasing power is growing, however, the demand for improved seeds is growing as well.

For example, INRAN is barely keeping pace with the demand for onion seeds this year. Their onion seeds sold for 15,000 FCFA/kg in 1994 and 25,000 FCFA/kg in 1995. Seed demand is also strong for non-traditional export crops such as sweet peppers, potatoes, tomatoes and peanuts. Donor projects also have strong demand for seeds. For example, the FAO Project Maradi, Project PASP in Tillabery, and FIDA/PSN in Aguié provide credit to farmers for inputs or sponsor swaps of seed for grain.

c. Fertilizers

(1) Market Participants, Prices and Operational Characteristics

The fertilizer market is 90 percent dominated by the private sector, with government intervention through the Centrale d'Approvisionnement (CA), the government agency charged with fertilizer distribution. Fertilizer is available and at relatively low cost, because Niger's private sector imports subsidized fertilizers, mostly 15-15-15 and urea, from Nigeria.

Northern Nigerian businesses are allotted quotas of fertilizer annually to supply farmers in their regions. Nigerian exporters include Niger fertilizer demand in their request to the Nigerian government. Nigeria's official fertilizer price is 150 naira/25kg sac. Niger's dealers buy fertilizer in Nigeria at prices ranging from 300 to 600 naira/25kg sac. It, (15-15-15 or NKP) is sold on local markets in Niger for between 2,500 and 5,000 FCFA/50kg sacs.

Border prices of fertilizer fluctuate significantly because Nigeria periodically stops this well-established, but illicit fertilizer trade with Niger. During the last three weeks of August 1995, for example, Nigerian customs virtually shut down fertilizer shipments to Niger and have levied heavy fines on the "smugglers". This interruption of supply has caused fertilizer prices in Niger to reach 6,000 FCFA/50kg sac. Recent fertilizer prices are summarized in Table C-1.

Table C-1
FERTILIZER PRICE DATA

CROPS	15-15-15	15-15-15	UREA
	JUNE	AUGUST	JUNE
Cowpeas	2000 FCFA/50 kg	6000 CFA/50 kg	2000 CFA/50 kg
Onion	3000 CFA/50 kg	5000 CFA/50 kg	2000 CFA/50 kg
Souchet	2500 CFA/50 kg	4000 CFA/50 kg	2200 CFA/50 kg

Source: Interview with farmers and fertilizer importers in Zinder and Maradi (8/95)

Nigeria's interruption of fertilizer exports is likely to end in the near future. A long-term constraint looms within two years when the Nigerian government, submitting to GATT/WTO pressure, ends fertilizer subsidies to its own farmers. This impending event gives new importance to phosphate deposits in Parc W and Akker in the Tahoua Department.

(2) Feasibility of Use of Niger's Phosphate Fertilizer

Technology and private and public investments issues must still be addressed before Niger's phosphate deposits can be determined to be economically viable. The International Fertilizer Development Corporation (IFDC), the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and INRAN collaborate on research to determine crops yields, adaptability and diffusion issues of phosphate rock in Niger.

On farm trials of phosphate in Gobery recorded increased yields of millet by an average of 250 percent in the plots to which the phosphate fertilizers had been applied, according to IFDC Report, June, 1995. Led by IFDC's Senior Soil Scientist, Dr. Andre Bationo, the research findings indicate that fertilizer consumption increased in Gobery from less than two metric tons of single superphosphate (SSP) in 1982 to more than 115 mt of SSP, urea and compound NKP fertilizers in 1988. In 1994, 98 percent of the farms in Gobery were fertilized.

The Netherlands is probably the largest international donor to invest in fertilizer research in West Africa. In April, 1995, the Netherlands Government signed a four year extension of IFDC-Africa's market development project. This is phase III of IFDC's activities in Africa. While phase I and II addressed fertilizer marketing transparency, privatization, country specific studies/research, and the use of phosphate rock. One particularly significant activity was the establishment of an African Fertilizer Information Database. This data base contains national fertilizer

supply and demand statistics, national fertilizer prices, fertilizer trade information and participants in the sub-Saharan fertilizer market.

Phase III will be particularly important for Niger. Its objectives are to:

- Restore the productive base of degraded soils in areas with agronomic potential for crop production,
- Develop sustainable agricultural production systems, and
- Support national governments in West Africa as they privatize fertilizer production and marketing.

INRAN's soils laboratory in Niamey is headed by U.S. trained, formerly USAID funded, host country soil scientists. In search of a practical source of affordable, yield enhancing fertilizer, INRAN submitted a proposal to USAID in 1993 to field test Niger's phosphate. This proposal remains available for donor support.

INRAN is researching the possibility of mixing phosphate with compost. Two primary issues are addressed in this research. First, farmers complain that phosphate fertilizer in powder form is partly carried away by the wind during application. When mixed with compost, however, its application is easily controlled. Second, the research is expected to determine if a phosphate/compost mixture increases yields more than phosphate by itself.

(2) Current Fertilizer Marketing Constraints

Credit is a major constraint to fertilizer use among small farmers. Many small farmers purchase fertilizer from local businessmen on credit, and repay the loans with profits from their crops at harvest. In debt with no apparent option but to sell their crops when everyone is selling, the farmers sell at very low prices to pay off loans. Farmers in Zinder and Maradi report they sell cowpeas as low as 2,500 FCFA/100 kg sack at harvest time to repay loans to creditors. A few months later, the same cowpeas sells for 4000- 7,500 FCFA/ 100 kg sack.

Donor interventions in Niger's fertilizer marketing receive mixed reviews from farmers and private operators. Cooperatives and individual farmers, in some cases, benefit from donor supported credit schemes to purchase fertilizers. Credit is made available at the beginning of the growing season, usually at market interest rates. In some cases, the donors underwrite the value of a loan for a consolidated fertilizer order from several villages. The farmers reimburse the loan once they have sold their crops.

Several public and private sector representatives would like widespread donor assistance with fertilizer through creation of donor sponsored, privately run marketing boards. The boards would among other things, set floor prices, trade

with small farmers, trade with larger producers and exporters and gain access to formal Nigerian markets.

The potential usefulness of such a scheme is illustrated by the trading situation with cowpeas. Nigerian traders in its formal sector have refused to accept cowpeas from Niger since SONARA, Niger's erstwhile parastatal of cowpeas and peanuts, shut down its marketing operations. Nigerian traders find Niger's informal sector unable to supply sufficiently large quantities of cowpeas at acceptable quality.

3. Output marketing

Several studies by USAID/Niamey, French Cooperation, FAO and the World Bank exist for cow peas, onions, souchet, rice, peppers and peanuts. While green beans offer excellent market opportunities in France and Germany, very little production data or local market information is available in Niamey.

a. Onions and Garlic

Onion exports to West African markets offer the greatest return to farmers of any other Nigerien commercial crop. Estimated sales revenue at 2.17 billion FCFA in 1993 are up from 1.37 billion CFA in 1992. Onion and garlic marketing in Niger is run by the private sector. Three onion varieties dominate 85 percent of sales, they are:

- Violet de Galmi,
- Blanc de Galmi, and
- Blanc de Soumarana.

These onions place Niger as the premier onion producer in West Africa. The violet de Galmi is particularly appreciated in the regional markets of Togo, Ghana, Burkina Faso and Abidjan (Cote d'Ivoire) for its long shelf life and predictable production cycle.

Three issues, lack of credit, poor storage and poor conservation techniques are said to be formidable constraints to improving Niger's market share on West African onion markets. Dutch and German technical assistance have made progress in providing credit and storage technologies to onion farmers in the Tahoua Department. However, these interventions could be applied in other areas. The Galmi Cooperative in Table C-1 summarizes market constraints to farmers.

(1) Market Share and Distribution

According to a USAID/Niamey funded study, "Action Plan for the Development of Onion and Garlic Crops in Niger," Niger's share of the Ivorian and Ghanaian, Togolese and Beninois onion markets is between 40 and 60 percent, and 60 to 70 percent of the Burkinabe market. Even though onion and garlic marketing is entirely a private sector domain and market share growth potential exists in secondary towns in West Africa, lack of knowledge about ECOWAS export activities, customs and transit regulations pose serious obstacles to increased market penetration. Furthermore, Niger's marketers have little access to formal market operators. Nigerien merchants lack information about the marketing mixes of competing products and have limited capacity to react to competitive moves.

Market imperfections include central dispatcher practices in Niger of limiting foreign buyers to certain buying stations in their markets. Some merchants bar access to certain markets and withhold market information from foreign buyers. Central dispatchers collaborate with local officials to restrict parking areas for foreign trucks desiring to pick up onion shipments. Truckers collude with dispatchers to withhold market price information from producers.

Table C-1
Onion Export Constraints

Galmi Onion Cooperative	Onion and Garlic Market Constraints:
<p>Function: Export of Onions to Regional Markets; organize committee to set onion floor price.</p> <p>Location: Galmi, Tahoua</p> <p>Number of coop members: 854</p> <p>Average size of plot: .25 to 2.5 hectares</p> <p>Irrigation type: Water pumped by ONAHA</p> <p>Markets: Togo, Ghana, Cote d'Ivoire</p> <p>Price: Varies from 2,000 cfa on local market to 30,000 cfa 5 months after harvest.</p> <p>Market constraints: Lack of credit, poor conservation and storage, no market information.</p>	<ol style="list-style-type: none"> 1. Poor rural roads leading to production areas. 2. Lack of credit to purchase fertilizer and to pay for household needs during "soudure" or planting season. 3. Lack of formal credit forces farmers to sell at harvest at unfavorable prices. 4. Storage capacity and conservation techniques are very limited. 5. Collusive relations between buyers and commission purchase agents, thus depressing producer prices. 6. Market information barred from producers. 7. Central dispatcher works to limit buyers to certain buying points.

Table C-2
Onion Prices in Selected Export Countries, 1995

Quantity	Destination	Price high/low
120kg/sack	Cote de'Ivoire	4,500 FCFA (low) 25-30,000 caf (high)
130kg/sack	Ghana	5,000 FCFA (low) 30,000 FCFA (high)
140kg/sack	Togo	5,500 FCFA (low) 30,000 FCFA (high)
100kg/sack	Local market	2,000 FCFA (low) 20,000 FCFA (high)

Source: Galmi Onion Cooperative

* Sacks provided by buyers

b. Cowpeas

Cowpeas is the leading rainfed, cash crop cultivated in Niger, replacing peanuts. The severe climatic droughts in the 1970s and early 1980s and an end to French subsidization of peanuts forced small farmers to shift from peanut to cowpea production. Intercropped with millet and sorghum, cowpeas require no fertilizer and little rainfall. Moreover, this crop restores nitrogen to the soil.

(1) External market conditions

Cowpeas are produced near Nigeria's border, mainly in Dosso, Zinder and Maradi. Farmers and exporters have experienced a 3 percent annual growth in cowpea exports and an insatiable informal sector in Niger. Advantages and disadvantages of the Nigerian market are:

- Nigeria's strategy is to develop cow peas production domestically, and consequently it passed laws in 1991 to prohibit the import of cow peas, sorghum and other grains.
- Cameroon and Chad export directly to the major southern cowpea consumption regions of Nigeria, eliminating the Northern Nigerian middlemen and enjoying a greater profit margin than Nigerian exporters.

- No replacement has stepped forward to supply Nigeria's formal sector (OSCUDA and NAMCO) cowpea market. Since SONARA's liquidation, this multimillion CFA market remains untapped.
- Nigeria has very rigid, detailed administrative procedures on the import of foodstuffs. Nigerien exporters, ignorant of the procedures, are forced to pay bribes to enter their product onto Nigeria's markets.

(2) Internal Market Conditions

Local buyers negotiate price and quantity with farmers prior to harvest. These local buyers or "commissionaires" are employed, more often than not, by large exporters or wholesalers. Prior to 1990, SONARA, a public owned marketing firm, bought and sold peanuts and cowpeas. Endowed with a bloated bureaucracy, elaborate capital investments (silos, building, warehouses, private lodging), and ever recurring droughts, SONARA was closed as part of structural adjustment programs.

SONARA's peanut operations were losing money, but its cowpea operations were profitable. Its cowpea exports averaged 30,000 tons annually, mainly to Nigeria and, as noted above, its former Nigerian importers have refused to do business with small-scale Nigerien exporters.

Interviews with farmers and exporters in Zinder and Maradi Department suggest that the economics of cowpea production and marketing, for the small farmer, is dismal.

Internal market constraints identified during interviews were:

- Small farmers lack access to credit to cover basic expenses.
- Insecticides are provided free of charge by the Ministry of Agriculture to small farmers, but only at 60-70 percent of requirements. Residual parasites significantly reduce cowpea storage life.
- Improper storage techniques, independent of insecticide treatment, cause of 30-60 percent post-harvest crop loss.
- Cowpea prices are especially low at harvest time when many farmers sell to repay loans, but barely recuperate enough profit to cover production costs.
- Neither farmers nor cooperatives have influence over cowpea prices.

Table C-3
Net Marketing Costs: Cowpeas

Average yield/hectare: 125 kg/hectare
Harvest: labor 300 - 700 FCFA/day
Farm gate prices: 60 FCFA/kg (harvest season) 125 FCFA/kg (rainy season) 200 FCFA/kg (planting season)
Storage: insecticides (free from Ministry of Agriculture.) 30 -60 percent loss
Bagging: (labor) 300 -700 FCFA/day Sacks/bags: 12 bags @ 3,500 FCFA String: 1 cord/sack 50 FCFA Sewing sack: 50 FCFA/sack Loading bags on cart or truck: 50 FCFA/bag
Transportation (examples) 50 kg or 100 kg Zinder to Kano 500 FCFA 50 kg or 100 kg Zinder Mirriah (30km) 200 FCFA 50 kg or 100 kg Maradi to Sai Sabon 33 km 300 FCFA

c. Fresh Produce

(1) Market Participants, Prices and Operational Characteristics

Produce production in Niger is scattered over several departments, but major production areas are Tillakaina, Niamey (along the river) and Maradi (along the Goulby River). Production data is difficult to obtain because the Ministry of Agriculture does not survey fresh vegetable production.

Produce marketing, especially to Europe, primarily France, began around 1967. SONIPRIM and JIC were exporters until 1985. In 1982, Niger was one of the largest produce (pineapples, green beans, mangos, chili peppers) exporter to France, shipping 12,000 tons.

Tillakaina's cooperative is the only cooperative that exports fresh vegetables. It exported approximately 850 tons of green beans in 1990. The cooperative has 62 hectares under irrigation. Part of its success is attributable to its ownership of a cold storage and pack house and its proximity to an airfreight terminal located at Niamey, a distance of 150 km on a well maintained road.

Green bean exports to France take place from November to March. Constraints, internal and external include:

- The best organized production and marketing company of produce for export in Niger, SONIPRIM, closed operations in 1983,
- Flights from Niamey to Europe declined substantially when UTA terminated service and when Air France reduced the number of flights through Niamey,
- Combination passenger/cargo planes have replaced 40 percent of air cargo service to Niamey making cargo/freight bookings subject to passenger displacement on all flights,
- Downturn in the national economy does not permit producers to invest in export crops. These crops are perceived as secondary to staple crops, millet, sorghum and maize,
- Lack of a commercial strategy for produce at the Ministry of Agriculture or the National Center for External Commerce, and
- Lack of formal sector produce operators who can finance phytosanitary certification that French and Ivorian importer/wholesalers require.

Interviews and studies confirm that demand for Niger's produce still exists on external and regional markets. Indications of demand include:

(1) External markets

- SICA Avignonnaise imports vegetables from Burkina.
- Fruimacop currently imports green beans from Tillakaina Cooperative.
- SICA AMCA, a French cooperative currently imports from Egypt.
- COLEACP and la Goele have expressed interest in importing green beans from Niger to the Rungis market.

(2) Regional market

- Abidjan is well penetrated by Niger's onions, but unexploited for other crops such as green beans, garlic and potatoes. INDEX and SOVIFRAIS are two major wholesalers seeking suppliers in Niger.

4. Niger Trade Relations

Nigeria is Niger's most important regional trading partner. Sharing a 1500 kilometers border, cultural and ethnic similarities with Northern Nigeria, commercial exchanges existed before the two countries became modern countries.

Niger's primary exports to Nigeria are cattle, hides, skins and cowpeas. The sole source of trade data to determine volume and value of Niger's exports to Nigeria is the customs service. As most agricultural trade between Niger and Nigeria is informal, this data provides incomplete estimates of trade. Nevertheless, Niger's Ministry of Agriculture and Livestock periodically estimates the annual volume of trade of primary exports to Nigeria.

a. Livestock Trade

Goats, sheep and cattle represented 95 percent of livestock exported to Nigeria, according to the Niger/Nigeria Mixte Commission. Principal exporting provinces, Dosso, Maradi, Zinder and Tahoua, exported livestock valued at 7.7 billion FCFA in 1993 and 6.3 billion in 1992.

b. Hides and Skins

Niger exported 254,635 hides and skins in 1992, of which 90 percent went to Nigeria. Total hides and skins trade was 147 million FCFA in 1992 and 169 million FCFA in 1993. Niamey, Maradi and Zinder Departments were principle areas of production and origin of exports of hides and skins to Nigeria. (Source: Niger-Nigeria Mixte Commission)

c. Cowpeas

Cowpeas shipped to Nigeria in 1992 and 1993 are estimated at 404,808 tons and 424,824 tons, respectively. Cultivated primarily in the Dosso, Zinder, Maradi and Tahoua Departments, over 80 percent of Niger's cowpeas are shipped to Nigeria. A small quantity is consumed locally where it is an important source of protein among the rural poor.

Niger Export Trade Summary (Millions of Franc FCFA) to Nigeria

Export Item	1992	1993
Livestock	6,305	7,739
Cowpeas	12,569	9,118
Hides and Skins	147	169

Source: Projet d'Analyse et de Suivi de la Politique Economique (PASPE)
March 1995

Nigerian largest exports to Niger are petroleum, electricity, sugar and grains (millet, maize and sorghum). While wheat flour, processed foods and cigarettes are big ticket items for Nigerian exporters, grains remains among the "big three" in Nigerian exports to Niger.

Four issues continually strain trade relations between Nigeria and Niger.

- (1) Foreign Exchange procedures are extremely cumbersome and time consuming. Nigeriens exporting goods to Nigeria may wait six months before their accounts are credited for products delivered. Steps involved in naira conversion include:
 - Receipts are deposited in a local Nigerian bank.
 - Nigerian bank transfers deposit to Nigeria's Central Bank.
 - Central bank sends naira to a clearing house.
 - Naira must then be transferred to the "Chambre de des compensations" as naira are not recognized in the zone franc.
 - The "chamber" send the FCFA to Niger's central bank.
 - Niger's central bank forwards the deposit to the entrepreneur's local bank.

Most large entrepreneurs in Maradi and Zinder underlined this process as one of the main reasons, they bypass the commercial banking system for foreign exchange.

- (2) Distrust between Niger's entrepreneurs and Nigeria's administrative enforcement system. Bribery is a standard practice for any and all services whether Nigerien exporters have all the required documents or not.

- (3) Nigeria has an elaborate administrative apparatus, with many complicated, complex regulations that are not fully understood by Nigerien exporters and public servants. Consequently, The complexity helps explain why Niger's private sector representatives are frequently out of compliance with these administrative procedures.
- (4) Currently eighty five percent of the fertilizer consumed in Niger, comes from Nigeria, largely due to Nigeria's subsidized fertilizer prices. GATT agreements call for Nigeria to end its fertilizer subsidy in two years, as noted earlier.

4. **Constraints Analysis.** This section was addressed in sections 2 and 3.

5. **Analysis of Donor and GON Intervention in Agricultural Marketing**

a. **Donors**

Donor funded agricultural marketing projects in Niger are numerous and uncoordinated. In the Maradi Department, for example, every Arrondissement has a donor driven agricultural marketing project. The Ministry of Plan publishes a 150 page directory of donor involvement in agriculture input and output marketing.

Table C-3 identifies major donor agricultural marketing projects for cash and export crops.

**Table C-3
Donor Assistance for Cash and Export Crops**

<u>Products</u>	<u>Donor</u>	<u>Type of intervention</u>
Onions	GTZ/Tahoua	Motor pumps, storage technology, marketing advice, support to cooperatives and fertilizer
Onions	Dutch	Credit, motor pumps, fertilizer
Produce	French	Microloans, market support to cooperatives, market studies
Cowpeas, millet	IFAD	Fertilizer, credit, post harvest technologies, training
Onions/Garlic	Danish	Market advice and assistance to cooperatives
Various crops	USAID	Credit programs through CARE, WOCCU and CLUSA; market studies
Various crops	CIDA	Market studies, training, fertilizer primarily in Diffa Department
Various crops	Japanese	Fertilizer
Various crops	World Bank, IMF	Credit
Cowpeas, millet	ILO	Credit, training

b. GON Interventions

The Government has many de jure, but virtually no de facto means to assist farmers and exporters to market agricultural products. Though the chronic excuse of lack of funding is used to explain the lack of GON assistance to exporters, exporters cite several government agencies for exemplary assistance. Agencies and services provided are summarized in Table C-5.

Table C-5
GON Export Promotion

Agency	Function
Centre National du Commerce Extérieur	Identifies markets, market constraints, organizes visits to trade shows, provides certificates to export.
Chamber of Commerce	Provides a meeting place, acts as outpost for CNCE.
INRAN (Maradi)	Sells onion, cowpea and millet seeds
UNRC (at Arrondissement)	Sells fertilizer, organizes marketing function only

6. Validity of Mission Vision: Agricultural Marketing

USAID/Niger's approach to agricultural marketing, for the most part, provides credit programs to rural areas. Credit, after rainfall, is can make the most significant contribution to production by providing access to fertilizer, pesticides, storage and other inputs. This one dimensional approach is very focused, allowing the mission to plan, execute and monitor its activities with WOCCU, CLUSA and CARE. However, credit alone may not be enough.

Two major obstacles related to agricultural marketing exist that USAID should consider addressing. They are: (1) lack of output market structure and (2) input markets lack reliable seed and fertilizer sources. Efforts to assist with agricultural marketing could build on USAID's well-respected credit projects, especially if the current credit programs can be shaped to become independent of USAID funding in the next five years.

7. Recommendations

a. Input Markets

(1) Short term actions

First, the GON should consider steps to reorganize public seed production activities with actions that include: (1) decentralize current seed research and multiplication systems; (2) cut costs at multiplication centers and INRAN, by (a) pay small farmers multiply M2 and M3 seeds, (b) redefine seed varietal research priorities and (c) strengthen INRAN's capacity to provide seed; (3) initiate quality control systems in seed production and certification; and, (4) maintain a national seed security stock, while encouraging the creation of privately managed seed security stocks.

Donor and project coordination is required to disseminate information about the benefits of commercially produced seeds. For example, improved millet and cowpeas seed might increase production by 10 percent and 20 percent, respectively. At present, donors and projects use improved seeds, while small farmers continue to use traditional seed production and storage. Information dissemination should be coordinated with the growth in seed supply to avoid creating short-term, unrealistic demand for seeds.

The seed farm at Lossa and INRAN Maradi should contract directly with small farmers to multiply millet, sorghum and cowpea seed at M2 and M3 levels. Farmers will require some training. At present, they produce their own seed stock at lower cost, but at much lower quality than multiplication centers' seed. Lossa and INRAN Maradi could be responsible for quality control, grading, standards and inspection on a fee for service basis. The quality control services would be written into the contract between the seed farm (Lossa), INRAN and the small farmers.

NOTE: This recommendation will only succeed with clear public/private sector partnership. An outside facilitator may be needed to help public and private stakeholders to create a self-sustaining seed industry.

Second, use the USAID Global Bureau Office of Agriculture's buy-in mechanisms to obtain technical assistance on agricultural marketing. Mississippi State University, for example, has worked on developing private seed industries for USAID missions in Burundi, Swaziland and Lesotho.

- Short term recommendation: SO2 and SO3 teams should establish an ad hoc agribusiness advisory group to discuss market constraints and solicit advice about input and output markets. The fifteen or sixteen advisory group

members should include public sector representatives of input (CA, ONAHA, INRAN) and output (OPVN) markets.

Rationale: Through working relationships, SO2 strategy meetings, advisory group meetings and collaboration on projects, business operators might begin to undertake joint donor - private sector activities.

In Niger, where the government is trying to withdraw from addressing constraints to input and output market activities, donors are valid potential short term partners. Therefore, setting up an agribusiness advisory group would be a valuable, long term economic development lesson.

The ad hoc group could serve as a first step in setting up a West Africa Enterprise Network activity in Niger. In other West African countries, this network is an independent, self-financed mechanism for policy dialogue and reform. The network informs and educates the private sector about national and regional economic issues. It also implements some of its directives with financial assistance of the network's members.

Third, short term fertilizer action: SO2 and SO3 committees should convene donors currently active in Niger's fertilizer markets to discuss a common framework for intervening in the fertilizer market.

Rationale: (1) Inconsistency in donor fertilizer programs sends confusing messages to stewards of natural resource management and to current and to potential private sector operators in the fertilizer market. For example, Japan donates thousands of tons of fertilizer annually to the GON with no framework about its use. Sometimes the fertilizer is re-sold to cooperatives. Other times it is given away, or stored for later distribution. But the cooperative or farmers pay transportation costs.

USAID does not provide fertilizers, but finances credit schemes that permits the purchase of fertilizer through WOCCU, CLUSA AND CARE International. ACDI/Canada has a similar scheme in Diffa. By contrast the French and GON distributes fertilizers and all other input free of cost for the cotton production project in Tahoua. The fertilizer market experiences both subsidized imports (Nigerian) with 50-100 percent price fluctuations and inconsistent donor interventions. Though no immediate action can be taken to stabilize imported fertilizer prices, better input market understanding and a common framework of action would focus attention on creation of a fertilizer policy as Nigeria's fertilizer subsidies end.

Fourth, USAID/Niamey should collaborate with IFDC-Africa, INRAN and ICRISAT in a pilot to encourage private sector exploration of phosphate rock in Akker, Tahoua. IFDC and INRAN have worked on this issue since 1982 and, consequently, USAID should not take a lead role. It should perhaps provide technical assistance, market analysis and funding on an as needed basis.

Rationale: IFDC-Africa, in collaboration with INRAN have established phosphate rock trials as a research priority. Research is needed, to develop phosphate pellets, phosphate compost mixtures, or some mechanism to decrease the labor intensiveness of applying phosphate in soil. Donor funding is required for a feasibility study of phosphate production and to attract the private sector into fertilizer production and distribution.

IFDC has extensive experience in West Africa and Asia in fertilizer research, and in facilitation of private section production and marketing of fertilizer. USAID has collaborated with IFDC in establishing fertilizer markets in developing countries. This partnership could be used to develop fertilizer subsectors throughout the West Africa region.

(2) Medium and long term actions:

First, implement selected recommendations in the *Projet de Developpement des Activities Semencieres* recommendations of 1992, that is, **Initiate the process to establish a National Seed Policy to restructure and reform the seed subsector.** This restructuring should include: (1) Strengthening relations and work plans among INRAN, seed multiplication centers and extension services; (2) re-establish national and regional committees (representing groupements, small farmers, cooperatives at arrondissement and village levels) to include both public and private sector representatives.⁴⁷ (3) public withdrawal progressively from production of M2 and M3 seeds while providing incentives to invite cooperatives and private companies to fill the seed production void.

Rationale: First, the lack of a national seed policy is the primary obstacle to a functioning agricultural input market in Niger. The GON's inertia regarding its roles and responsibility in the seed subsector, precludes private sector entry and investment. The GON, itself, lacks financial and infrastructural resources to maintain the cereals seed farm in Lossa or the five seed multiplication centers in the departments. Current seed production and marketing stagnates around failed seed

⁴⁷ The regional committees would distribute trial seeds to farmers and record farmer feedback, organize workshops on seed distribution and use, sometimes with the Service d'Agriculture.

projects of the 1970s and 80s. They do not work and should, therefore, be substituted for new projects.

Second, SO2 and SO3 committees should collaborate to develop cowpeas, souchet, produce (tomatoes, sweet peppers, other garden vegetables) and onion commodity subsectors in order to increase agricultural productivity in very lucrative commercial crops without sacrificing the country's natural resource base.

Niger's informal sector is the backbone of the country's agriculture, small and microenterprise sectors. Constraints that need to be addressed include:

- **National seed policy.** One is needed: (1) to get the public sector out of the private sector's domain of producing and marketing high quality, high yielding seed for commercial crops; and, (2) to begin commercial seed multiplication and to create off-farm employment by generating commercial agricultural services (transportation, packaging, marketing) in rural areas.
- **Framework to produce and market fertilizers in Niger, once imported fertilizer from Nigeria is no longer subsidized.** The assumption is that phosphorous may become an option to replace imported NPK (15-15-15). Such a framework should also include discussion with donors concerning their projects' impact on supply and demand for fertilizers.
- **Conservation and storage facilities and techniques.** Improved storage in onion and cowpeas, alone, might double farmer income in Maradi, Zinder and parts of Tahoua.
- **Market news and information reporting on radio in at least three or four national languages.** Farmers in Galmi reportedly sold 100 kg sacks of onions for 2,000 -2,500 FCFA during harvest time on the local market while 130 kg and 140 kg sacks of onions sold for 4,500 - 5,000 FCFA on the Togo and Ghana markets. Informed about price and market conditions, they might reconsider their options.

b. Output Markets Recommendations

First, SO2 should offer technical expertise and other resources to improve storage and conservation practices of cowpeas, onion and maize. Storage and conservation remain obstacles to marketing good quality products. On the one hand, farmers lose 30-60 percent of their cowpea from insufficient or incorrect use of insecticides and poor storage conditions. Post harvest loss for onion harvest is reported to be 30 to 50 percent after one month of storage. On the other hand, prices are seasonal. For example, prices for onions in Galmi's local markets range from F FCFA 2,000 per 100kg sacks in October to FCFA 25,000 - 30,000 five months later.

The SO2 committee should consider various technical assistance options that can provide low cost, experienced expertise in the conservation and storage of cereals, legumes and allium. The U.S. Department of Agriculture's Office of Small Agriculture, the Cooperative State Extension Service and Agriculture Research Service have experience in conservation and storage of food crops in tropical climates in the U.S. and abroad. A Resource Services Supply Agreement, already in place with the U.S. Department of Agriculture could be the vehicle to obtain storage and conservation technical assistance in the next two to three months.

Should the committee wish to use USDA's expertise to provide technical backup to African national agriculture research systems and commodity networks, USDA's FAS/International Organizational Affairs office could identify assistance sources already on the continent such as the Center of International Tropical Agriculture (CIAT) or the International Institute for Tropical Agriculture (IITA),

In addition, the Post Harvest Institute for Perishables (PIPS) is an excellent resource for literature and human expertise in the storage and conservation of crops in both tropical and temperate zones. Housed in Moscow, Idaho, this resource can be tapped by the Global Bureaus' Office of Agriculture. The Center of International Tropical Agriculture and International Institute for Tropical Agriculture have long experience in East Africa, where, especially in Tanzania and Uganda, they transfer appropriate technologies in onion conservation and storage construction.

Second, hire an institutional contractor to procure and manage necessary expertise and services to assist in strengthening specific subsectors in five departments. The institutional contractor should have experience in francophone West Africa in the areas of public and private sector collaboration in commodity subsector development. Of equal importance, the institutional contractor should have the capability to draw on expertise from the U.S. food industry, specifically commodity and trade associations.

The institutional contractor would develop working relationships among the association of wholesale and retail traders, cooperatives (Union sobs-regional des cooperatives), transporters, financial services representatives, chambers of commerce representatives, donors and appropriate government agencies (OPVN, ONAHA, CA, INRAN, among others). The institutional contractor will, based on the recommendations of the economic assessment team, focus on specific national policy issues that include:

- A national seed policy that permits private investment, management and dissemination of improved seeds for commercial crops. Public sector agricultural research institutions, crucial to technology development and industry regulatory issues, should also help develop this policy initiative with industry and the general public.

- A fertilizer action plan to develop a fertilizer industry marketing framework between donor projects and the private sector. Such a framework will eliminate market distortions created by well meaning agriculture/rural development projects.

The principal responsibilities of the institutional contractor in these two policies areas will be:

- To synthesize the economic, political and social interests of concerned parties, in order to articulate the importance of the policy question in clear, simple terms.
- To build consensus among the various interest groups.
- To organize study tours and learning opportunities for participants in the policy development process.
- To hire expertise to address a strategic "thinking" process, that is, the inter-relationship between finances, human resources, time and the end product.
- To access mediation and facilitation expertise to insure good communication among participants.
- To put into place information management resources to permit participants to make informed decisions.
- To bring closure to the process.

D. Micro and Small Enterprise Development

1. Overview

Micro and Small Enterprises (MSEs) play a fundamental role in the rural economy of Niger. This section examines their contribution to economic growth and the constraints that impede their development. Terminology used that relates to formal and informal sectors and type of enterprise includes:

MSEs in the "informal sector" are enterprises that operate outside of official business regulations, do not practice formal bookkeeping, operate without formal employment contracts and usually engage fewer than ten people. This group of business largely coincides with what is often called the "informal sector." However, it should be noted that some of the larger informal sector firms, (primarily the larger trading firms run by the class of traders known as the "alhazai") are among the largest private sector economic establishments in terms of assets and gross revenues and may employ dozens of individuals. Despite the fact that this group of enterprises operate largely in the informal sector, they are by no means "MSEs." Thus, although our use of the term MSE throughout this report does imply membership in the "informal sector" it does not imply that all informal sector firms are MSEs. This definition of **MSEs** includes smaller informal sector enterprises such as the vast majority of MSE manufacturers and repair services, on and off-farm rural enterprises, tailors, food processors and sellers, millers, traders (both small and medium-scale) and rural equipment rental enterprises.⁴⁸

Small- and Medium Enterprises (SMEs) and the "formal sector." Although USAID's primary emphasis in Strategic Objective 2 is on informal sector/MSEs, the development of formal sector firms with strong links to the rural sector can also contribute to accelerated economic growth in rural areas. Therefore, this section examines constraints facing **SMEs** that operate in the formal sector. These enterprises are subject to the formal sector regulations governing labor policies, business taxes, export-import procedures and business registration. Of particular relevance to the rural sector are agro-processing SMEs that are engaged in industrial transformation of agricultural products. In general, these enterprises have more visible fixed assets, keep regular accounts, and appear in the official records (the *registre de commerce*). SMEs may actually be smaller in terms

⁴⁸ We are excluding primary agricultural production and marketing from this definition of MSE activity. These activities are treated explicitly above in Section C.

of gross revenues than some of the larger informal sector firms, but because of their visibility, they are unable to operate in the informal sector.

a. The Role of MSEs in the Nigérien Economy

Recent growth in informal sector activity can be largely attributed to the new market opportunities resulting from the retreat of formal sector firms--itself due in large part to the decline of many parastatals. In addition, positive signs for MSE development include the January 1994 FCFA devaluation, which has increased the scope for import-substitution activities and increasingly frequent statements by GON officials indicating that the GON is ready to address serious policy obstacles to the development of private sector enterprises in general.

The key role of MSE's in Niger is apparent on three different levels:

(1) Role of MSEs in macroeconomic growth.

The most widely cited figures detailing the scope of MSE activity in Niger are from a 1987 survey conducted by the Ministry of Plan, which estimates a total of 135,000 MSEs in the country. In reality, these figures are probably gross underestimates, since they exclude the majority of the population engaged in agricultural production--most of whom engage in occasional microenterprise activities in agricultural processing, trade or services during the dry season lull in agricultural activity. Surveys conducted by Michigan State University in the Maradi and Dosso Départements in 1989 show a much greater density of MSEs than reported in the Ministry of Plan's survey. In fact, the Michigan State results show MSE densities in rural areas of 5 to 6 times those reported by the Ministry of Plan. In urban areas the densities seem to be 2 to 3 times greater. This provides some indication that current numbers of MSEs in operation may be significantly higher than what is implied by the 1987 figures, due to both the underestimations in the 1987 data and to widely recognized recent growth in the sector.

Estimates of MSE employment are also subject to wide variation. Employment estimates from the Direction de la Promotion de l'Artisanat (DPA) show a total of 337,000 people engaged in non-agricultural MSE activities in 1993.⁴⁹ A recent literature review on the informal sector cites a 1990 estimate of non-agricultural MSE employment of 389,557 workers. This same report attributes 80% of non-agricultural employment to MSEs.⁵⁰ In any case, between 7 and 10 percent of the active population is likely to rely on non-agricultural MSE activities for its primary source of income. If the definition of MSEs is broadened to include the activities of farmers who are occasional off-season MSE entrepreneurs, the

⁴⁹ Republic of Niger, Draft Report for the "Programme-cadre de Promotion du Secteur Privé." n.d.

⁵⁰ Kaboure Alassane, et. al...

numbers of people engaged in MSE activity is more likely to represent something close to 80 percent of the active population.

While the DPA estimates that MSEs contribute 20% to overall GDP, the many analytical and statistical difficulties in accurately measuring value added and attributing it to non-agricultural MSE activity leave considerable room for doubt about the reliability of this figure. What is more important, however, is the perception shared by most observers that the MSE sector is the most dynamic sector of the economy and is currently responsible, along with agricultural production and marketing activities, for most of the economic growth that is occurring in Niger.

(2) Equity and food security

MSE activities contribute significantly to income levels of poorer Nigériens. In rural areas, where incomes are substantially lower than in urban zones (World Bank estimates place average rural incomes at around 60,000 FCFA, while urban incomes are estimated to be over 93,000 FCFA), MSE income is particularly critical. Data from the International Food Policy Research Institute surveys collected in two rural locations show that income from non-farm MSE activities comprise an important part of rural incomes. As shown in Table D-1, MSE activities contribute at least 15% of total income across all income tranches. MSE derived income shares also tend to increase with total income. Although the chain of causality is far from clear, given the difficulties in access to capital among rural households, it is reasonable to assume that as cropping incomes increase, households are increasingly able to invest in MSE trade and service activities. Efforts to raise rural incomes thus should include measures designed to promote non-farm MSE activity in tandem with crop production, since increases in MSE activity, which occur largely in the off-season, can leverage incremental increases in crop income earned during the harvest season.

Table D-1
Non-Farm MSE Income as Percentage of Total Rural Household Income

Area of Non-Farm MSE Activity	Lower Income Tercile	Middle Income Tercile	Upper Income Tercile
Commerce	2%	7%	10%
Services	5%	6%	7%
Transport	0%	0%	1%
Construction	0%	1%	1%
Food Preparation	3%	4%	6%
Gathering	3%	2%	3%
Artisanal Handicrafts	4%	4%	3%
Total Non-Farm MSE income	17%	24%	31%

Source: Hopkins, Scherr and Gruhn; "Food Security and the Commons: Evidence from Niger," November 1994, Table 7.

The seasonality of MSE income is particularly important in contributing to improved food security in rural areas. Since most non-farm MSE income comes at a time when rural households have few other income producing alternatives, it provides needed income just at the times when such households are most vulnerable to food shortages--thereby reducing their vulnerability.

(3) MSEs and gender considerations

It is widely recognized that women in Niger could play a larger economic role than they currently do. This is due mainly to cultural factors which inhibit women's ability to interact with strangers, differences in educational attainment and the greater difficulties women face in obtaining access to capital. Although these are generalized constraints that affect women in both the formal and informal sectors, there is little doubt that barriers to women's participation in the MSE sector are relatively less constraining than in most other economic areas. A Chambre de Commerce, de l'Agriculture, d'Industrie et de l'Artisanat de Niger (CCAIAN) survey of businesses from 1993 shows that whereas women owned only 4.3 percent of

incorporated businesses⁵¹ (largely corresponding to formal sector SME enterprises), they owned 6.2 percent of registered, unincorporated businesses (roughly corresponding to the larger MSEs).\⁵²

These figures probably grossly understate the importance of women-owned MSEs, since they are based on surveys directed primarily at enterprises having permanent public store-fronts. Once the field of MSEs is expanded to include those without a public store-front, as in figures from the 1987 census, the number of women-owned MSEs increases to 29 percent. Although no figures specific to the rural sector are available, women likely comprise an even higher percentage of rural MSEs--given their predominance in such major agro-processing activities as dairy production, peanut oil processing, butter processing, and tomato and onion drying. Efforts to promote MSEs development, particularly in sub-sectors that are dominated by women, are therefore a key element of any strategy which seeks to make better use of women's potential to contribute to economic growth in Niger.

2. Methodology

This analysis is based on three different sources of information:

- a **literature review** of major works on the informal sector and on microenterprises;
- **interviews** with donor, NGO, GON, project, and private sector actors in both Niamey and Maradi; and
- a **rapid assessment** of the peanut-oil processing sub-sector conducted during two days of research in the region of Maradi and supplemented with interviews of NGO and project staff in Niamey. The peanut oil sub-sector was selected for particular attention since, according to many observers of the rural economy--particularly NGO credit agents--it has been one of the most profitable areas of recent MSE activity.

Given the short term of the field mission's assignment and the breadth of its focus on MSE issues, which included assessments of constraints on MSEs in multiple sub-sectors and an analysis of the impact of donor and NGO interventions, the results presented here should be considered cautiously. In particular, although the team was able to collect scattered anecdotal evidence on such important MSE questions as the distribution of returns to various forms of MSE activity and the potential of new technology packages to increase MSE productivity, much work remains to be done before definitive judgments on these issues can be asserted.

⁵¹ This comprises businesses registered as having a "personalité morale."

⁵² This group is comprised of enterprises registered as having only a "personalité physique."

3. Linkages Between Microenterprises and Other Sectors of the Economy

a. Nigeria-Niger linkages

Extensive economic integration between Niger and Nigeria is a key aspect of the Nigérien informal sector. Whereas larger formal sector enterprises, if they export their production or make use of imported inputs, tend to be linked to other Francophone countries (Primarily Benin, Côte d'Ivoire and Burkina Faso), MSEs operating in the informal sector, particularly traders, are strongly oriented towards Nigeria. The section below assesses the importance of these links for MSEs in Niger. The role of Nigerian markets in absorbing MSE production is treated first, followed by an analysis of the role played by imports from Nigeria.

(1) MSE exports to Nigeria

Although the Nigerian market has an enormous potential to absorb primary sector agricultural production, it has not been a particularly large consumer of processed products from Nigérien MSEs. A detailed survey of 236 traders and 1,500 households conducted by the USAID PASPE project in 1993 has produced data, shown below in Table D-2, which indicate that 73 percent of 1993 export values to Nigeria consisted of cowpeas and livestock. Although these are important products for the Nigérien rural sector, they do not present particularly promising avenues for developing increased MSE value added.

Table D-2
Exports to Nigeria, 1993

Product	Estimated Value of Exports (FCFA million)
Livestock	11.7
Cowpeas	6.2
Hides and Skins	1.6
Peppers	1.6
Other	3.3
Total	24.2

Source: S. Georges and B. Oumarou, "Estimation des Echanges Commerciaux Niger-Nigeria," PASPE, March 1995.

The relative scarcity of value-added exports to Nigeria from Nigérien MSEs reflects two factors:

- Heavy concentration of MSE activities in such services as restaurants, construction, mechanical and electrical repair, and tailoring--which are essentially non-tradeables; and
- Strong competition from Nigerian informal and formal sector firms in metal-working, wood-working, and other areas of MSE manufacturing activity that limits the potential for Nigerian exports of these products.

Virtually the only industry branch where MSEs do play a role in adding value to Nigerian bound exports is in the hides and skins trade, where raw hides from butchers are dried, sorted and sometimes treated by collectors before being assembled in large batches and exported. This sector is described in more detail below in Section D-4.

(2) MSE imports from Nigeria

Importing products from Nigeria is a widespread and profitable form of commercial activity which is engaged in both by the larger alhazai and small MSE traders. Informal sector traders are particularly active in sales of petroleum products, sugar, cement and electrical appliances, which are among the top imports from Nigeria, as shown in Table D-3. In contrast, foodstuffs (mainly cereals) and cloth are largely imported by individual households for their own consumption. Much of this cross-border trade is conducted beyond the reach of official customs regulations and statistics. In fact, survey data and estimations from the PASPE study show that official customs declarations of import values underestimate real levels by 50 percent.

Table D-3
Imports from Nigeria, 1993

Product	Estimated Value of Imports (FCFA million)
Cereals	15.6
Petrol/Oil	3.0
Food Condiments	2.6
Cement	2.4
Sugar	2.4
Cloth	2.2
Cosmetics/Detergents/soap	2.1
Electrical Appliances	1.0
Other	17.6
TOTAL	49.0

Source: S. Georges and B. Oumarou, "Estimation des Echanges Commerciaux Niger-Nigeria," PASPE, March 1995.

In addition to the commercial value of import trade for MSEs, imports from Nigeria are vital inputs into the production processes of many MSEs. Interviews with peanut-oil processors presented below and with project officials active in the provision of technology to Nigérien MSEs indicate that the bulk of capital equipment used by MSE artisans—including peanut and grain mills, soldering equipment, sewing machines, animal traction cart axles, and many other key pieces of equipment—are imported from Nigeria. Although many of these essential inputs are available from dealers in Niger, MSEs generally import this equipment from Nigeria. The competitive success of Nigerian firms in capital goods markets may be due to the poor enabling environment for Nigérien firms in the formal sector (Specific elements of the enabling environment are discussed below in section D-5.).

b. Formal-Informal Sector Relationships

In contrast to the formal sector's stagnation, the Nigérien informal sector's share of GDP has grown steadily over the past decade. In 1993, for example, it contributed 74 percent of total GDP, up two percentage points from 1990 and four percentage points from 1983. In the context of Niger's stagnant or negative real GDP growth over the period 1990 to 1993, growth in the informal sector

translates into a marked decrease in formal sector activity. Thus, to a large extent, the retreat of formal sector enterprises has opened new avenues of activity for MSEs operating in the informal sector. One example is the growth in MSE peanut oil production following the closure of Niger's industrial cooking oil refinery in 1989. This MSE activity is dealt with in detail in section D-4.

Although the retreat of the formal sector has created new opportunities for informal sector operators in certain output markets, it is important to note that the informal/formal dichotomy is not characterized by a zero-sum relationship. Formal sector enterprises, particularly in such areas as agro-processing, create strong demand for informal sector inputs - primarily raw materials - and can spur the creation of whole new areas of informal sector activity. For instance, Sahelio, a producer of processed fruit juices and other products, has sought to overcome its difficulties in obtaining stable packaging supplies by purchasing used bottles and containers. This demand for used containers is being met by informal sector activity. Sahelio also provides a stable market for informal sector fruit producers near its Maradi headquarters.

Wage payments made by formal sector enterprises also play an important role in stimulating demand for goods and services from both the formal and informal sectors. Much informal sector consumption relies on the payment of formal sector (largely public) salaries. Delays in the payment of public salaries, for instance, have a noticeable depressive impact on urban-based informal sector activity. Managers of Sahelio report that demand for fruit juices jumps significantly after payment of public salaries.

For these reasons, the development of formal sector mining enterprises in such areas as the Liptako-Gourma region can be expected to have an important multiplier effect on informal sector incomes. Analysis presented in Section A, above, suggests that rural incomes will rise by over 7.5 million FCFA over three years because of the implementation of significant formal sector mining activities. Most of this increase in incomes will be fueled by increases in demand for such MSE-provided services as construction, transport and food preparation, as well as increased consumption of basic foodstuffs and livestock.

c. Impact of Private Sector Institutions

In general, Niger does not have a strong tradition of private sector business associations or business service organizations. The dominant private sector institution, the Chambre de Commerce, de l'Agriculture, de l'Industrie et de l'Artisanat du Niger (CCAIAN) is actually in a transitional phase in which it is seeking to become a private business association funded through member fees after a long history as a publicly-funded and largely state-directed organization. The other major type of private sector institution in Niger is embodied in the various sectoral business associations or guilds, which vary in their level of effectiveness. In addition to these formal private sector institutions, the recent

explosion of women's associations has played a key role in promoting greater entrepreneurial activity among Nigérien women. The roles and impact of each of these types of institution are briefly detailed below.

The **CCAIAN** lacks financial and personnel resources, and is inexperienced in actually developing and providing a program of activities that private sector operators are willing to pay for. Currently, it is funded through member fees and through a 0.25 percent duty on imports. Despite the fact that membership with the CCAIAN is mandatory for all businesses, very few enterprises--particularly in the informal sector--actually pay their fees. There is widespread skepticism over the CCAIAN's ability to intervene effectively in favor of the private sector.

The CCAIAN's efforts to develop a program of activities to support private sector development include:

- **Representing its members to the government with propositions that favor private sector development.** The CCAIAN regularly organizes round tables, seminars and conferences around key issues in an effort to encourage public and private sector cooperation on issues affecting the business sector. An example is the 1992 series of seminars in Maradi and Niamey, which brought together many participants in the hides and skins sector together with public regulatory officials, to examine the problems of this sub-sector in the wake of the cessation of activity of the parastatal tanning and hide marketing firms.
- **Establishing the Centre National de Commerce Extérieure (CNCE) to organize export promotion activities.** The CNCE serves as a clearing-house for linking potential exporters with buyers, seeks to promote Nigérien exports in various markets, and organizes Nigérien delegations to various trade fairs in Europe and Africa. Given the lack of private sector export marketing consulting firms or export agents in Niger, the CNCE performs a vital marketing role. It promotes exports primarily among small and microenterprises that lack the experience and contacts necessary to develop a foreign clientele. Unfortunately, the Center has neither the personnel with the requisite combination of product and target market knowledge nor the financial resources to offer sustained promotional services. In addition, as a service organization with a broad mandate, it is under pressure to spread its efforts among different sectors and different businesses. Concentration on businesses most likely to benefit from promotional

assistance might have greater impact.⁵³ For these reasons, the impact of the center is limited.

- **Creation of a one-stop window ("guichet unique") to expedite international trade formalities.** The CCAIAN has set up this window for issuing the regulatory documentation required for all international trade transactions. Unfortunately, the paperwork and fees associated with this process probably do more to discourage trade than they do to promote it. This system "facilitates" trade only in the sense that a pure public bureaucracy would probably do the job even more poorly. In reality, there is little reason for the existence of such procedures at all. The fact that the CCAIAN is seen as an appropriate home for this function is indicative of its incomplete transition from being an organ of state intervention to being a true service providing institution with a private sector clientele. (The *guichet unique* system is described in greater detail below in section D-5.)
- **Sponsoring business training courses.** The CCAIAN is also home to a number of associated training institutions which have historically trained technical and managerial personnel for the state-owned enterprise sector, but are now increasingly training individuals who go into private sector activities. The Centre Nigérien de Perfectionnement à la Gestion (CNPG) offers training courses and continuing education in management and accounting for formal sector employees. The CCAIAN also sponsors a regional transport school that offers management and technical training to transport workers.

Overall, the CCAIAN is progressing to become an effective agent for the promotion of the private sector. With the notable exception of the *guichet unique*, all the above activities are potentially worthwhile, though not of great importance. To increase the reach of current activities and develop others, the CCAIAN needs to further target its services to larger formal sector firms or small- and microenterprises, and design specific services to meet client needs. Unfortunately, the CCAIAN is funded primarily through mandatory fees on all businesses, and has little motivation to engage in such strategic targeting.

Sectoral business associations. Although there is a plethora of sectoral business associations in Niger, their cohesiveness and viability vary considerably. One of the more effective business associations is the Nigérien Transporters Union (USTN). It has, for instance, successfully helped the numerous small independent freight and passenger haulers. In addition to supporting initiatives undertaken by

⁵³ The CNCE, for instance, funds the participation of a different entrepreneur each time it organizes a trade delegation. Although this does spread the benefits of participation among the widest possible audience, it is not an effective way of developing export acumen, since repeated visits are necessary for entrepreneurs to assess market possibilities and devise effective export strategies.

USAID and the driver's union to monitor illicit road taxes, the Transporters Union organized a 1992 strike that had a key role in persuading the government to carry through on its commitments to reduce illegal road taxes. USTN has also successfully influenced the government to enact regulations maintaining a strict system of allocating freight and passenger traffic among potential haulers according to the time they have spent waiting in public truck parks. Despite the negative impact of this latter measure on market efficiency (the most serious of which is the disincentives it creates for offering differentiated levels of service), the Transporters Union has effectively blocked opposition and even enforces compliance by maintaining a system of road barriers where it inspects commercial haulers for required papers.

In contrast, cooperative associations in the hides and skins sub-sector are virtually non-existent. This situation persists despite the recognized need to establish and enforce quality standards in this sector. This issue of standards has been signaled as a priority by the CCAIAN and by several studies of this sub-sector.

Women's Groups and Associations. Women have responded dramatically to the provisions in the 1992 constitution that strengthened the people's basic right to freedom of association. A wave of formation of women's groups in villages together with the creation of NGOs run by women and such national organizations as the Association des Femmes Commerçantes et Entrepreneurs du Niger (AFCEN) have given women new opportunities to engage in entrepreneurial activities. In villages, women's groups have superior loan repayment rates and have worked very successfully with NGOs to invest in MSE activity and organize literacy and business training opportunities.

The impact of recent efforts to organize women is potentially enormous in rural areas since it is creating direct solutions to two of the major constraints on women's ability to engage in MSE entrepreneurial activity--their lack of access to finance and their lower levels of educational attainment. On a national level, women's associations such as AFCEN and other groups are becoming advocates of women entrepreneurs who are building a new awareness of the importance of women to the Nigérien economy, thereby helping to reduce social barriers to women's full economic participation. These women's organizations constitute an important ally in efforts to ensure that women's productive capacities are fully utilized.

4. Sub-Sector Case Studies

Given the broad scope of MSE activity, this analysis of constraints to MSE development is focused specifically on those areas that have strong linkages to the rural sector--primarily through processing agricultural products and in supplying needed inputs to agriculture. The approach is to concentrate on the peanut oil sub-sector in detail and to analyze other sub-sectors in less detail. Interviews with participants in the peanut oil processing sub-sector were conducted during two

days of research in Maradi and in the neighboring village of Dan Issa. In Maradi, a total of five women producers of peanut oil were interviewed, along with two peanut millers, one cooking oil wholesaler and a representative from an industrial peanut oil refinery. Interviews in Dan Issa were with the manager of the women's peanut oil cooperative and two cooperative members. In addition, this account relies heavily on information supplied by the Vice President of the Women's Traders Association in Maradi. This Vice President served as the interpreter for interviews conducted in Dan-Issa and Maradi and is active in the peanut oil trade. Because of the small number of participants interviewed, as well as the unsystematic nature of the sample, the results presented here are not meant to be taken as a systematic sub-sector profile--but rather as a rapid "snapshot."

a. Case Study on Peanut Processing

(1) Introduction

Cooking oil consumed in Niger comes from mainly two sources: industrially refined palm oil from the Côte d'Ivoire sold under the brand name "Dinor," and MSE peanut oil that is produced almost exclusively by women in both urban and rural areas. The MSE peanut oil sector has experienced a boom in recent years due to the closure of Niger's only industrial cooking oil refinery, SICONIGER, in 1989 and the devaluation of the FCFA franc which has added to the transport costs of importing Dinor.

Indications of the magnitude of the boom in MSE peanut oil production is evident from a comparison of estimates of production in 1987 and 1994. A 1987 survey of MSEs conducted by the Direction de la Statistique lists the total value added for MSE oil production at 601 million FCFA while estimates for 1994 show a value added from peanut oil production at 802 million FCFA. Figures on imports and estimated market demand given in Table D-4 for the last few years also show a gain in market share for MSE oil producers relative to imports of Dinor. If anything, Table D-4 probably understates the MSE sector's share of the market, since the high levels of imports relative to total market demand in 1991 and 1992 may indicate that the market demand estimates are too low. This would mean that the gap between imports and total consumption, which is filled by MSE production, is likely to be considerably larger than shown in Table D-4.

Table D-4
Cooking Oil Demand and Imports, Tons

Year	Total Market Demand	Imports		Estimated MSE Oil Production	MSE as % of Total Demand
		Peanut Oil	Palm and other oils (Dinor)		
1994	17,624	29	10,075	7,520	43%
1993	17,060	77	12,536	4,447	26%
1992	16,516	N/A	17,568 1/	(?)	
1991	15,982	N/A	18,358 1/	(?)	

Source: CADEG, Etude Filière Cultures Pluviales, Ministère de l'Agriculture et de l'Elevage, Mai 1995.

1/ Figures are for all vegetable and animal oil imports, the majority of which is comprised of Dinor.

Despite the current boom, the medium term prospects for MSE peanut production are uncertain. This is because SICONIGER has recently come under new management and is in the process of gearing up to begin large-scale production of industrial peanut oil after the 1995 harvest season. SICONIGER has already begun buying peanuts and producing test batches of oil for market trials on a modest scale. When it begins full production during the 1995/96 season, SICONIGER plans on purchasing 25,000 tons of unshelled peanuts during the year. This represents 37 percent of 1994-95 national production and 59 percent of the production in the Maradi Département. In terms of peanut oil, this level of activity would translate into 10,351 tons of refined peanut oil--or roughly 57 percent of the total market demand.⁵⁴ Furthermore, if it can operate at full capacity (an estimated 18,500 tons per year), SICONIGER will have the potential to meet almost the total demand for cooking oil. Although it is not yet clear how successful the new SICONIGER will be, it will almost certainly put increased pressure on margins in the MSE peanut oil sub-sector.

(2) Participants in the MSE peanut oil sub-sector

The major participants in the peanut oil sub-sector include the producers themselves, millers and traders. The roles of each of these groups are:

⁵⁴ Percentage based on SICONIGER's oil extraction rate, which they report to be 41% and on a straight line extrapolation of the demand estimates in table D-X for 1995 which gives a figure of 18,207 tons.

Producers. The peanut oil producers are located in both rural and urban areas in the major peanut producing regions. In all interviews conducted with women in Maradi and Dan Issa, it was clear that MSE peanut oil production is organized along family lines with a senior woman managing the operation and supervising a number of junior female family members. The number of women engaged in such units varies from around 4 to 10. The larger MSEs are able to process about two 50 kilogram sacks of peanuts per day, yielding from 22 to 26 liters of oil. The team encountered no cases of men engaged in producing peanut oil.

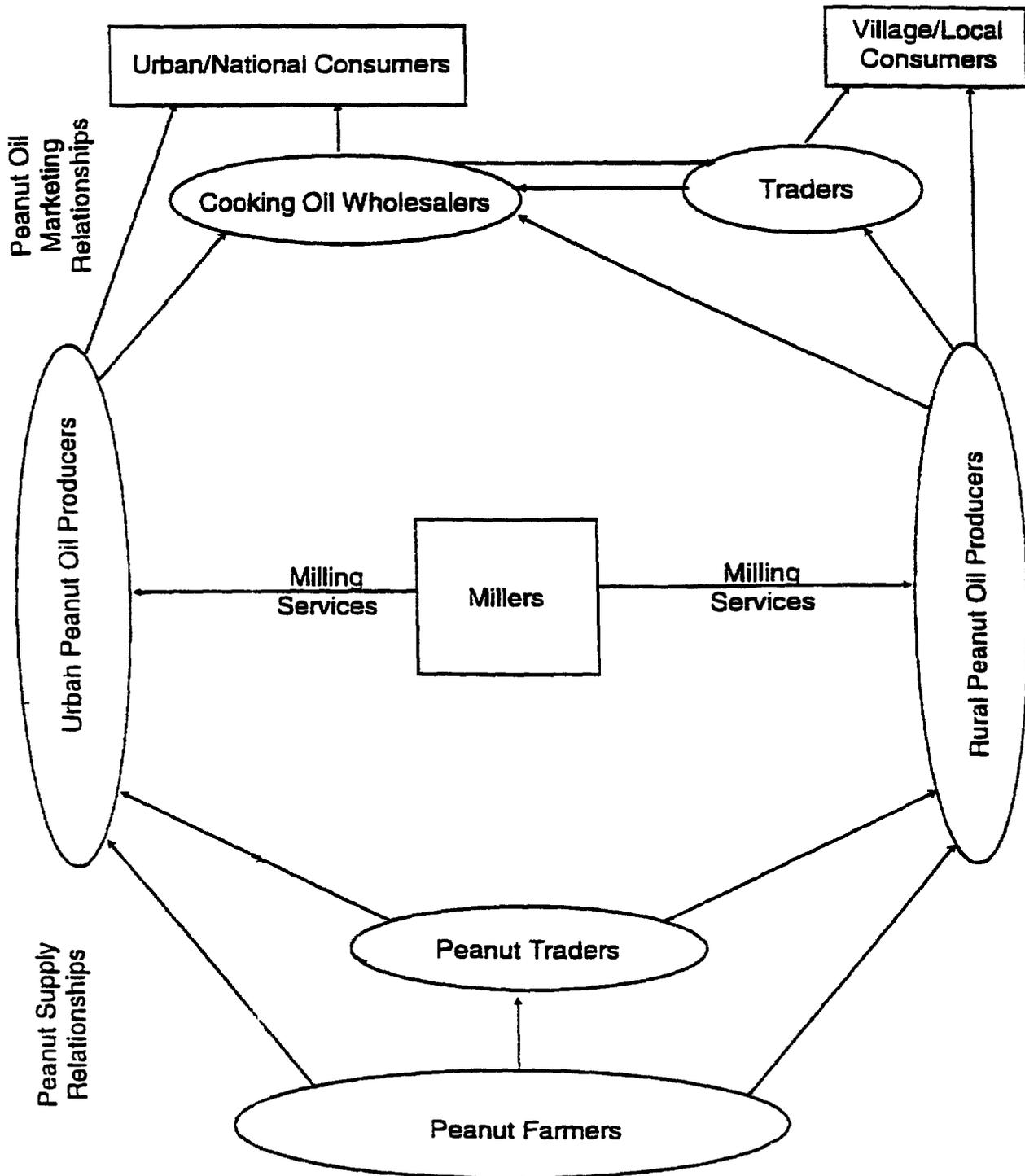
The urban women interviewed in Maradi usually send family members to surrounding weekly village markets to buy peanuts or they purchase them directly from wholesalers in the Maradi market. Many women in rural areas purchase peanuts in rural markets during the harvest season, and buy peanuts in Maradi as supplies drop and prices rise in rural areas. Maradi women have also started to purchase peanuts from farmers seeking to sell directly to SICONIGER. In rural areas, women use either their own household production, peanuts from other local producers, or supplies from neighboring markets.

Once cooking oil is produced, urban women usually send their daughters to sell it to traders in markets that are held twice a week in Maradi. Occasionally they will try to sell as retailers to final consumers at a price that may be 25 FCFA above wholesale prices, but most often they sell to the larger traders who aggregate oil into empty Dinor 200-liter drums. The principal by-product of peanut oil is meal. It is made into peanut cakes which are usually sold to women retailers, or to consumers via public markets.

Millers. Besides the women producers, millers are another category of key players in the peanut oil sub-sector. These are men (although there is one female miller in Maradi) who operate one or two diesel mills that grind shelled peanuts for 250 FCFA per sack. According to the interviews there are currently 32 millers in operation in Maradi. The commonly used mill, which most millers purchase in Nigeria, has a capacity of milling about 1 ton of unshelled peanuts per day and costs approximately one million FCFA. Millers rarely specialize in peanut milling, but also mill other products such as millet and maize.

Cooking Oil Traders. A final group of participants in this sub-sector are the cooking oil traders. In Maradi, this group is comprised of six wholesalers who trade peanut oil from both large scale and MSE producers. During the team's visit in August 1995, the Maradi traders were selling relatively small quantities of MSE oil to retailers in the Maradi market and significantly larger volumes to other traders in Niamey and Tahaoua. A schematic representation of the peanut oil sub-sector is given in Figure 4-1.

Figure 4
The Peanut Oil Subsector



(3) Returns to Peanut Oil Processing and Milling

Returns to peanut oil production are presented below in Table D-5. Data presented in this table are representative of an average large-scale producer in Maradi at the time of the team's mission.

**Table D-5
Returns to Peanut Oil Processing**

Maradi Based Producer	Time Input (minutes)	Monetary Cost Input (FCFA)
INPUTS:		
Peanut purchase (50Kg sack, unshelled)		7,500
fuelwood purchase		200
shelling	45	25
sorting	20	
grilling	40	
milling 1/	20	250
extraction	120	
cake fabrication	120	
market tax (5 sacks/week, CFA 200)		40
TOTAL	6 hours, 5 minutes	8,015
REVENUES:		
Price per Liter		575
Oil revenues (@ 13 liters/sack)		7,475
Oil revenues (@ 11 liters/sack)		6,325
Cake Revenues (10 "tai", @ CFA 155/tail)		1,550
MONETARY PROFIT/LOSS PER SACK OF PEANUTS		
@ 13 liters/sack		1,010
@ 11 liters/sack		-140
TOTAL MONTHLY NET INCOME ESTIMATES		
@ 5 sacks per week, 13 liter yield		20,200
@10 sacks per week, 13 liter yield		40,400
NET INCOME PER HOUR OF WORK (13 liter yield)		166

Source: Interviews

1/Milling time represents only operational time for processing 1 sack. Real time spent can be longer if there is a queue.

A key factor in the profitability of peanut oil production is the yield obtained per sack of peanuts. All the women interviewed indicated that they could get 13 liters of oil out of a 50 kilogram sack of good quality peanuts, but that if the peanuts were of poor quality or too old, the yield would drop to 11 to 12 liters. Given current market prices in Maradi, as shown in Table D-5, production at this lower

yield is not profitable. If women suspect that peanuts are of poor quality or that a sack is "light" they will negotiate the price down by as much as 1,000 francs in order to turn a profit.

Although the returns to peanut oil production are not spectacular on a per-sack basis (around 13 percent), the ability of the women in Maradi to rotate their stock is quite high. With two weekly markets and resident wholesalers who will buy oil on off-market days (albeit at a slight discount) the Maradi women have the opportunity to sell their stock several times a week. Thus, despite relatively small margins, the women in Maradi could, because of their high rotation rates, obtain reasonable income levels. Women in rural areas, by contrast, have more difficulty rotating their stock and often must travel to sell their production.

The general opinion of women interviewed is that profit margins are much lower than they were in 1994, largely because the number of producers has increased dramatically. Data collected by CLUSA support this view. They indicate, for example, that margins of one woman from the village of Babban Tapki fluctuated from 15 to 40 percent, with an average margin of 25 percent from August 1993 to January 1994.

Peanut milling also appears to offer a modest profit making potential, although the returns presented below are very sensitive to assumptions about the finance costs of the mill. Given the lack of information about the cost of capital among informal sector grain millers, it is difficult to present firm judgements about the returns to milling. As shown in Table D-6 at an interest rate of 18 percent, milling offers a monthly income roughly equal to one of the larger peanut millers. With a cost of capital twice that, however, returns are negative.

Table D-6
Returns to Peanut Milling

Monthly Revenue at Full Capacity		
(400 sacks per month @ 250 FCFA/sack)		100,000
Monthly Expenses:		
Diesel fuel		30,000
Maintenance		4,167
Patentee Tax		2,667
Sub-Total Cash Expenses		36,834
Amortization of mill (10 year life, 1 million FCFA cost)		
@18% p.a.		17,752
@36% p.a.		29,990
Net Monthly Income		
@18% p.a.		45,414
@36% p.a.		(29,990)

(4) Constraints to Improved Peanut Processing Activities

(a) Financial Constraints

Peanut oil producers uniformly expressed the desire for more working capital. Although they have little to offer in the way of collateral, the returns to peanut oil processing clearly indicate that producers have the ability to pay back short-term revolving credit loans at interest rates applied by such financial institutions as the BRK and CLUSA/SICR--and indeed even at much higher rates. Table D-7 demonstrates the impact of a hypothetical monthly loan on the net income of a peanut oil producer drawn from the Maradi interviews. This example shows that, with a line of credit at 18 percent per year, a producer can take out a loan for one month to double their working capital in order to buy more peanuts, pay back the principal and interest at the end of the month, and still significantly increase net income. Should a producer wish to repeat the transaction in subsequent months,

this type of loan could easily be converted into a line of credit that would permit a permanent expansion of the producer's working capital. In fact, interest rates would have to climb to well over 100 percent per year before loans would become unattractive to the borrowers for peanut oil production.

Table D-8
Illustrative Working Capital Loan to Peanut Oil Officer

	20 sacks/month without loan	40 sacks/month with loan	Net Impact of Loan
Example of Producer from Maradi			
Input Costs			
Self-financed inputs	160,300	160,300	
Principal pay-back		160,300	
Interest cost @ 18% p.a., 1 month		2,404	
Total Costs	160,300	323,004	162,701
Revenues	180,500	361,000	180,500
Net Income	20,200	37,996	17,796

Despite the profitability of loans for peanut oil production, even at high interest rates, sub-sector participants interviewed knew of only one woman who had received a loan from an NGO credit program (in this case it was the BRK). Given this existing weak penetration, extending access to credit in the peanut oil sub-sector should be a high priority.

Besides peanut producers, millers are also potentially attractive borrowers who currently operate outside the realm of current NGO credit schemes. In part this may be due to the financial characteristics of their operations, which because of the significant cost of mills (1 million FCFA) and their long lives, would be ideally

financed with medium-term multi-year loans. Unfortunately, few NGOs are eager to make such loans. Despite these drawbacks, the presence of the mill itself as tangible collateral, if accompanied by a substantial required down payment, should offer enough potential security to attract financing from potential lenders, at least for millers with demonstrated profitability. Lowering capital costs and facilitating millers' access to financial services has the potential to leverage the performance of the entire sub-sector by encouraging greater investment in mills.⁵⁵

(b) Technological Constraints

The technology used in traditional peanut oil extraction is quite simple and effective and the quality of the final product is considered superior to industrially refined oils. However, the extremely time consuming and labor intensive nature of the peanut oil extraction process does create a need for labor saving technology. None of the women interviewed had the capacity to process more than 10 sacks a week--mainly because they could not mobilize enough labor among their female relatives to handle any volumes greater than this.

The ILO/EDF Projet de Formation Modulaire pour l'Artisanat Rural (PROFORMAR) has developed a low-cost mechanical peanut oil press that may be a useful tool for increasing output per unit of labor. The women's peanut oil Cooperative in Dan Issa has been using the press with reportedly favorable results. According to the Cooperative manager, the press reduces the time required to extract oil from a sack of peanut paste from 2 hours to 20 minutes while also increasing the oil yield by about 9 percent. The prototype has not been tested widely, so any judgements about the final utility of this press would be premature, but should these figures prove to be correct, it does appear to have the potential to remove labor bottlenecks in what is the most labor-intensive part of oil processing. At an estimated price of 50,000 FCFA this press is likely to be a popular innovation.

To facilitate greater use of new technologies, however, the question of access to these technologies needs to be more coherently linked to systems for financing them. Inexpensive packages such as the Dan Issa peanut press are affordable to most successful women peanut producers. These women will not hesitate to buy technology if it yields positive returns. With increased credit availability, such packages could be easily provided through the private sector. More expensive pieces of technology, such as peanut mills, are probably beyond the reach of most producers-- who probably do not have the technical and management skills necessary to run commercial milling operations anyway. However, with improved

⁵⁵ During interviews, some women in Maradi indicated that, particularly during the harvest season, they could lose significant amounts of production time in queues at the neighborhood peanut mills--indicating that there may be peak-load problems that could be resolved with more investments in mills. Similarly, in Dan Issa, women complained about the poor condition of the village mill, to which they attributed their generally low oil extraction rates. The team was unable to ascertain whether or not this is a widespread problem.

medium term credit availability, traders and other business people could enter this market much more easily.

(c) Management Constraints

Although women engaged in peanut oil processing have, in general, had little formal education, the women interviewed in Maradi had no difficulty discussing different components of their cost structures and know their production costs. This contrasts starkly with the often expressed opinion that producers in the MSE sector "do not know" when they are selling at a loss. They also were quite knowledgeable about different supply and marketing options available to them and, in general, seemed to be quite competent managers. In contrast, the women interviewed in Dan Issa, who lacked long experience, did not seem to have the same grasp either of their costs or of marketing strategies. A useful distinction may be made, at least based on this narrow sample, between experienced and "start-up" MSE peanut oil producers. Clearly, the Dan Issa women needed the training they had received from CARE, while there is little need for such training among the more experienced women of Maradi.

However, with the start-up of SICONIGER, even the women in Maradi possess the management skills necessary to respond effectively. In particular, peanut oil producers and traders will need assistance in competing for new markets and in exploring promising avenues for capitalizing on MSE produced oil's reputation for quality in order to protect their market share from erosion by SICONIGER. Currently, for instance, there is little thought to product differentiation among MSE producers as the product of any number of different producers is mixed and sold in empty Dinor drums. As significant volumes of SICONIGER oil come on the market, some producers may find it worthwhile to try differentiated marketing strategies-- such as working with traders to develop marked brands or new distribution strategies. However, to react in this manner, both traders and the producers will need to be provided with strategic and practical guidance.

b. Case Study of Skins and Hides

(1) Overview of Sub-sector

Skins and hides are another strategic sub-sector for Nigérien MSEs. This sub-sector is particularly important since it is a major area of export activity and could provide a vehicle for encouraging greater MSE penetration of foreign markets. Unfortunately, the sector has been in decline since the late 1980s, as exports of Nigérien hides to the most attractive markets have been falling and observers agree that hide quality is declining.

Three major markets exist for Nigérien skins and hides: the European, Nigerian, and national market. Highest quality skins have traditionally gone to the European market. Although as late as the early 1980s, Niger exported significant numbers

of skins to Europe, studies of the sub-sector universally report a fall-off in exports to Europe. This decline is attributed to the 1989 privatization and subsequent demise of both the hide marketing/processing parastatal (the SNCP) and the parastatal tannery (SONITAN).

Three factors seem to explain the decline in exports to the European market. One is the decline in quality of hides, which is attributed to the disintegration of the mechanisms for collection, quality control and industrial treatment of raw hides. These problems have occurred since the liquidation of the SNCP. Without the marketing channels and treatment provided by the SNCP, few Nigérien hides meet the strict quality standards of the European market. The second factor is simply the lack of available financial resources to assemble enough hides to make shipping to Europe an attractive alternative. The last, and possibly most important reason for the decline in hide exports to Europe is that the liquidation of SONITAN has left Niger without an industrial tannery capable of producing the partially tanned (wet-blue) hides that European buyers prefer.

With the decline in exports to Europe, much of the slack in the market for skins and hides has been taken up by exports to Nigeria. In fact, Nigerian tanneries and buyers appear to have flooded the Nigérien market since the demise of the SNCP and SONITAN and now purchase most of the skins and hides produced in Niger. Most of the hides exported to Nigeria are tanned in one of the industrial tanneries in Kano or Sokoto, and then exported to Europe. In this way, the value added from tanning, which used to be captured by SONITAN and exported directly to Europe, has now migrated across the border to Nigeria.

The smallest market for Nigérien skins and hides is the national market. A 1990 study by Abt Associates estimates that only about 25 percent of Niger's skins and hide production is for domestic consumption. Most of the domestic market for hides is from MSE tanners who produce leather of varying quality for leather craftsman who make sandals, bags and saddles. Most of these finished goods are for Nigérien consumption, although a small fraction is exported or sold in the tourist market.

(2) Sub-Sector Participants

The skins and hides sub-sector consists of a number of complicated steps with a variety of participants. The section below briefly describes the roles of various actors in the marketing chain.

Butchers/Slaughterhouses. There are two basic sources of raw skins in Niger. One is the skins that are by-products of supervised slaughter of livestock in one of the 4 refrigerated slaughterhouses in Niger (Niamey, Zinder, Maradi and Tahaoua) or from one of the official supervised village slaughter slabs. The other source of hides is the unsupervised slaughter of livestock which occurs widely. In the past, slaughter at the supervised sites was overseen by SNCP representatives who

collected skins and threw out damaged or inferior hides. Although livestock technicians still supervise these sites, ensuring hide quality is not their primary task. Butchers who buy animals for slaughter are responsible for flaying and preservation of skins for resale to collectors or sub-collectors working for private export traders.

Sub-Collectors and Collectors. Sub-Collectors and Collectors are intermediaries who generally work for skins and hides traders. After receiving advances from traders they purchase and assemble hides from butchers. Sub-Collectors generally circulate among the smaller butchers and the non-supervised slaughterhouses. They are engaged, for the most part, by larger collectors to whom they deliver their hides. Collectors, especially the larger ones, generally have regular client butchers who may receive advances or retainers for the purchase of animals. In the larger supervised slaughterhouses, there are usually several collectors, each linked to a different trader who purchase hides after slaughter.

Besides the simple assembly function, collectors perform the key tasks of providing initial quality control (often checking to see that butchers have not rubbed sand or sugar into hides to increase their weight and price) and in drying or treating the hides with chemical preservatives. Collectors work for both Nigérien and Nigerian wholesale traders and, as reported in the GEMINI study on Rural Financial Institutions, some also specialize in facilitating cross-border shipment of hides to Nigeria. Collectors in Maradi also report that Nigerian collectors have established a presence in the Maradi slaughterhouses and often outbid Nigérien collectors.

Wholesale Traders and Exporters. Two types of wholesale traders buy Nigérien skins and hides. First, large Nigérien wholesalers ship large quantities of hides to the tanneries in Kano. The second type is composed of wholesalers who arrange their own shipments to European markets.

(3) Major Constraints

(a) Financial constraints

Virtually all studies on the skins and hides sub-sector mention the problems posed by the lack of finance in the sub-sector. Larger traders and collectors generally agree that they could obtain skins that do not now enter any market channels if they had access to more working capital. Indeed the shortage of working capital appears to be the single most critical constraint on expansion of skins and hides production.

The decline of exports to Europe and their replacement by exports to Nigeria is, to a certain extent, also a financial phenomenon. The significant flow of skins to the Nigerian tanneries reflects their ability to supply large amounts of working capital which flows to their own collectors in Nigérien markets, to Nigérien wholesalers, and then all the way up the marketing chain. Since the demise of SONITAN,

which provided financing for the purchase of skins and then exported them to Europe, there is no longer any comparable source of financing located in Niger to fund the purchase of raw skins for export to Europe. The few Nigériens active in the export trade to Europe have ongoing relationships with clients from whom they receive letters of credit or loans. This system, which is based on personal market contacts, is not able to produce anything close to the volume of working capital which was previously provided by SONITAN. Furthermore, all the payment delays and financial charges involved in transferring funds between Europe (particularly countries other than France) and Niger create further incentives for exporters to favor the Nigerian market.

Another important factor which limits efficient use of working capital in the skins and hides sub-sector is the slow rotation of working capital imposed by the weekly market cycle. Because agents and collectors circulate among specific markets on specific days, it usually takes them a complete week to make a full cycle and exchange their hides collected for a new supply of funds to make the next week's purchases.

(b) Quality control for hides

Traders and collectors also decry the demise of the SNCP's role in supervising butchers during slaughter in order to ensure good skin quality. This service was financed through a direct tax on hides that went to the SNCP inspector. As this system is no longer in place, there is no authority that can prevent butchers from adding impurities to hides to increase their weight or that can throw out damaged hides. Not surprisingly, quality has suffered greatly. One trader interviewed by the GEMINI Rural Financial Institutions Team estimated that ten percent of the hides he receives are of unacceptable quality. Similarly, Nigerian tanneries report that they are paying less for Nigérien hides because of increasing quality problems. Exporters to Europe are sometimes required by their clients to pay for inspection of shipments by the Société Générale de Surveillance at the port of embarkation to control for quality. The cost of this inspection are often split between the exporter and the client.

The quality control problem was cited as a major difficulty during the 1992 Maradi seminar on skins and hides, and remedies are under consideration. Traders, collectors and butchers do not agree on an appropriate solution, however. Implementation of some sort of quality control system at slaughtering could be facilitated by the existence of an effective business association among skin and hides traders and collectors. Unfortunately, the cooperative for skins and hides is non-functional and no other alternatives exist.⁵⁶

⁵⁶ In contrast, the butchers cooperative seems to be an effective organization, as reported in the 1992 Deloitte and Touche study of the sub-sector. One wonders whether the lack of progress on the institution of a system for quality control may not reflect the superior organization of the butchers vis-a-vis the hide traders and collectors.

(c) Enabling Environment Policy Constraints

Two main policy constraints affect the sub-sector. These are:

Cumbersome official trade procedures. Although the export licenses which took up to six months to acquire are no longer required, skins and hides exporters are still required to register with authorities in the CCAIAN responsible for the *Guichet Unique*. This registration process requires fees for statistical forms, proof that membership fees are paid for the CCAIAN and for the Conseil Nigérien de Utilisateurs de Transports (CNUT) and payment of the *patente* as an export or import/export firm. Exporters must also present proof of having fulfilled all these requirements to be able to access payments through the banking system. While exporters to Nigeria can easily bypass these regulations, those seeking to export to Europe cannot (at least if they plan to use the Nigérien banking system). Therefore, this system continues to discourage exports to Europe and is a particularly important barrier to entry for smaller exporters.

Inflexible labor regulations and an invasive regulatory climate. During interviews with team members, officers of a Nigerian tannery suggested that an industrial tannery in Niger would make economic sense were it not for oppressive government regulation. They feared being forced to involve government officials in a myriad of business decisions that they considered to be exclusively theirs, such as putting in a reserve electrical generator or a water tank. This view was echoed by one of the larger Nigérien exporters of hides to Europe who was interviewed by the GEMINI Rural Financial Institutions Team. This trader recounted that he used to employ a large staff of agents and sorters, but that when the downturn in exports in the late 1980s forced him to downsize, he became embroiled in expensive and time consuming arbitration with the labor authorities. Since that experience, he keeps only a minimal staff and makes the fullest possible use of family members as workers.

c. Case Study of Fruit Juices and Processed Fruit Products

The collection of fruit from wild and cultivated trees is an important activity in rural areas. Like the processing of peanut oil, it tends to be a mainly female activity. Seasonal fruit produced in Niger includes guava, mango, oranges and lemons. Important non-seasonal fruits are from the tamarind and bissap trees. In areas with sufficient water resources to sustain fruit trees (primarily seasonal river valleys), fruit trees are cultivated widely and their production is sold either in raw form or as processed juices in local markets. Traditionally, with a wide dispersion of producing areas, low consumption in urban areas and high transport costs, fruit remains a very low-value crop with minimal long-distance trade.

A capital-intensive effort to improve the economic returns of fruit cultivation failed in the late 1980's. For this effort, which took place in the Gaya region, the FAO

made significant investments in irrigation pumps, refrigerated trucks and improved varieties of fruit. The project appears to have demonstrated that lower-cost producers operating nearer to Niamey have a competitive advantage over remote, capital intensive projects. The Gaya example shows that the feasibility of intensive investment in improved fruit cultivation technology is not economically feasible without secure market outlets.

Development of the sub-sector is contingent on identification of new markets, either for raw product consumption or for processed-products. Though not a direct effort to expand markets for fruit, a promising initiative towards fruit production that is based on low input costs is Sahelio, an enterprise with 12 employees in Maradi. It produces fruit jam, concentrated syrups, and fruit juices. Sahelio purchases its fresh fruit exclusively in nearby markets and from Nigerian sources. It buys late in the season at well publicized "floor" prices which are below peak seasonal levels. In general, Sahelio has on-going informal contracts with suppliers from villages around Maradi who usually supply fruit in several shipments and take payment at the end of the season. In addition, Sahelio makes substantial purchases of fruit (especially mangos) in Nigeria.

With a recent injection of capital from new investors and a 10 million FCFA loan from the EDF AFELEN Project, Sahelio is currently operating with total capital of around 50 million FCFA and monthly revenues of roughly 3 million FCFA. Although this figure is fairly small for a modern-sector enterprise, Sahelio easily sells all its production and its president estimates that it could expand its sales with more investment in plant and labor.

Drawing on the experience of Sahelio, specific constraints to developing more high value-added fruit processing activities in Niger include:

A shortage of medium-term finance. Modern sector small and medium enterprises such as Sahelio find it difficult to access credit from the banking system. Sahelio's only source of medium term loanable funds is AFELEN, a donor-subsidized project. Sahelio recently endured an enforced seven month slow-down due to its inability to find financing for syrup bottles. To overcome this financing gap, Sahelio owners and managers were required to spend much time canvassing private investors to generate privately supplied funds to fill their needs. Such a situation, which turns managers into investment salesmen is not indicative of a smoothly functioning financial system. Any other start-up enterprises will likely find medium-term credit even scarcer than has Sahelio.

A lack of packaging materials. Without a regular supplier of bottles and plastic packaging in Niger, Sahelio is forced to import to fill its packaging requirements. Supply sources in Nigeria and Burkina Faso are unreliable and subject to wide fluctuations. Sahelio has been unable to develop any sort of stable contract with Nigerian bottle manufacturers, whose prices have risen from 1,000 FCFA per case of syrup bottles in January to over 3,000 FCFA in August 1995.

Restrictive business policy environment. Sahelio managers mention the restrictions placed on their freedom to maintain an independent personnel policy as being a significant constraint on their capacity to expand. Sahelio has recently made use of unpaid internships as a way of testing potential personnel. It sought to hire three of its interns only to be turned down by the *service de la main d'oeuvre* (SMO), which sought to impose its own candidates, despite the fact that the interns had been duly registered with the SMO.

Fruit quality. The quality of fresh fruit delivered to Sahelio varies. The quality of oranges, in particular, is poor. To resolve this problem, Sahelio has experimented at different times with developing its own fruit tree nurseries to supply its growers with improved tree stock. Unfortunately, the technical complexity of managing these nurseries proved to be beyond the capabilities of a 12 man firm with no real fruit tree specialists. So Sahelio's ambitions in this area have been significantly scaled-back.

5. Enterprise Development Constraints and Donor Activities

a. Overview

Constraints that are truly binding on individual enterprises vary by size of enterprise and by the degree to which enterprises operate outside the scope of government regulators (informal sector) or comply with official business regulations (formal sector). Accordingly, separate analyses of constraints are needed for MSEs and SMEs. The boundaries between these categories are not always clear cut, however. Some MSEs, which operate outside of most aspects of business regulation, may well be registered and possess all the paperwork required of formal sector firms, particularly if they aim to do business with donor projects and/or NGOs which require such procedures. Nevertheless, the distinction between SMEs and MSEs is important, since SMEs face a far more invasive regulatory environment.

The fact that MSEs and SMEs function in vastly different regulatory environments has important consequences for USAID programs under Strategic Objective 2 (SO2). Specifically, for MSEs, constraints related to the policy environment facing private enterprises are less of a concern than are firm-level operational constraints. Consequently, USAID program responses under SO2 that are directed at MSEs, need to focus squarely on firm-level constraints. For SMEs, however, the most binding constraints are to be found at the policy-level. Therefore a focus which places greater emphasis on policy reform is more appropriate for SMEs.

The whole array of enterprise development constraints facing both MSEs and SMEs, as well as the activities of donors besides USAID to address them, are presented in Figure 1, below. The first two columns are discussed in this section. Recommendations and illustrative activities are developed in Section D-7.

Figure 1
Enterprise Development Constraints and Recommendations

Constraints	Other Donor Activities To Address Constraints	Recommendations for USAID	Illustrative Activities
A. Micro and Small enterprise level (informal sector)			
1. Lack of financing for MSE activities	Multiple donor/NGO credit programs with weak coverage of MSEs	-Develop new models of finance capable of reaching wide range of MSE (See Section E)	
-Short-term working capital -Medium-term loans		-Increase NGO ability to offer medium term loans -Monitor MSE activity through lenders/intermediaries	
2. Access to Improved Technology	-ILO/EDF PROFORMAR and NIGETECH project offering technology development -Little donor NGO/medium term financing for technology acquisition	-Leave appropriate technology development to ILO/EDF -Increase NGO ability to offer medium term loans	

Constraints	Other Donor Activities To Address Constraints	Recommendations for USAID	Illustrative Activities
<p>-lack of low-cost, appropriate labor enhancing technology</p> <p>-lack of credit for technology acquisition</p>			
<p>3. Lack of Technically Skilled Labor</p>	<p>Multiple donor technical training projects with poor records of sustainability</p>	<p>-Develop new models of sustainable technical training which utilize existing MSE competencies</p>	<p>Evaluate CARE/Maradi EMFP experience for possible extension</p>
<p>4. Lack of Management/ Business Skills</p>			
<p>-Unfamiliarity of start-up MSEs with fundamentals of business management</p> <p>-Lack of understanding among experienced MSE entrepreneurs of more advanced business management principals (particularly marketing, financial management and export market development)</p>	<p>-Abundant supply of NGO business training initiatives</p> <p>-Scattering of donor projects offering advanced training or marketing services to small numbers of MSEs</p>	<p>-Continue to support association of NGO business training with credit to start-up MSE borrowers</p> <p>-Encourage the development of fee-charging firms/MGOs offering management consulting and marketing services to MSEs</p>	

Constraints	Other Donor Activities To Address Constraints	Recommendations for USAID	Illustrative Activities
5. Lack of Donor Coordination		Participate fully in GON "Programme Cadre" should this initiative show promise of becoming a forum for effective donor coordination	<p>-Consider allocation of Technical Assistance to MSE Coordination Unit planned under Programme Cadre</p> <p>-Use Private Sector Coordination Committee under Programme Cadre to encourage other donors to: (i) include sustainability in objectives for their credit activities; (ii) sell technology to MSEs rather than giving away and; (iii) to target MSE assistance towards individuals and existing MSEs as well as collective groups and start-up MSE entrepreneurs.</p>

Constraints	Other Donor Activities To Address Constraints	Recommendations for USAID	Illustrative Activities
<p>-Conflicts between various donor-supported credit projects</p> <p>-Disincentives for MSEs resulting from highly-subsidized and ill-targeted donor MSE assistance efforts</p>			
<p>B. Small-Medium Enterprise Level (formal sector)</p>			
<p>1. Lack of medium-term financing</p>	<p>Other donors planning additional mechanisms targeting SME financial needs with "Programme Cadre"</p>	<p>Encourage other donors to focus credit on businesses with strong links to rural sector (mainly agro-processing firms)</p>	
<p>2. Lack of managerial talent</p>	<p>Other donors committed to provide SME-focussed management training and services under "Programme Cadre"</p>	<p>Encourage other donors to focus SME assistance on businesses with strong links to rural sector (mainly agro-processing firms)</p>	

Constraints	Other Donor Activities To Address Constraints	Recommendations for USAID	Illustrative Activities
3. Policy environment	World Bank taking lead on defining policy reform agenda	-Use Non-Project Assistance (NPA) to encourage reforms with a particular impact on SME business climate	-Attach NPA to reforms in: *Labor regulations *business licenses for foreign firms *the "Guichet Unique" for international trade
-Labor policies -Business Regulation - Unsure land tenure -International trade procedures		-Make greater effort to disseminate economic policy research and encourage its utilization within the civil society	-Allocate an additional expatriate technical assistant to PASPE to provide follow-up for completed studies, produce syntheses for wider consumption and to work with potential stakeholders in the civil society

b. Constraints Facing MSEs

USAID's approach to SO2 places heavy emphasis on the promotion of microenterprises. This focus on MSEs and the informal sector is appropriate for several reasons:

Value Added and Production in MSE Peanut Oil Processing

Input Costs (FCFA/liter)		
Peanuts		577
fuel wood	15	
Total Inputs	592	
Revenues (FCFA/liter)		
peanut oil	575	
peanut cakes	119	
Total Revenues	694	
Value Added per liter	102	
Total 1994 estimated MSE production (tons)	7,250	
Total 1994 estimated production (liters @ 922 grams/liter)	7,863,340	
Total 1994 estimated MSE value added (million FCFA)	802	
Total 1994 estimated MSE production (million FCFA)	5,357	
Total 1992 Modern Sector Agro-processing production (million FCFA) 1/	8,700	
MSE peanut oil production as percentage of modern agro-processing production		62%

1/ From "programme cadre du Secteur Privé" Report, June 23, 1995.

MSEs have the potential to make significant contributions to economic growth. Estimates of the share of MSE non-agricultural GDP are around 20%. Although no firm figures are available that permit a comparison of this figure with formal sector SME enterprise GDP across the same areas of activity, some appreciation of the overall importance of MSEs can be inferred from the peanut oil example. In this one sub-sector alone, MSE production amounts to approximately 62 percent of the total formal sector agro-processing production. It is important to note that this estimate concerns only one MSE sub-sector. MSEs in other sub-sectors likely contribute more value added than do those engaged in peanut oil processing. Although no recent estimates of value added in other sub-sectors were obtained during the team's mission, data from 1987 Direction de la Statistique survey show value added in several other MSE sub-sectors well above the 802 million FCFA value added figure for the peanut oil sub-sector presented in the box above. These earlier figures show value added for MSE butchereries at 5.9 billion FCFA, for textiles

at 5.8 billion FCFA, for carpentry at 2.3 billion FCFA and for restaurants at an impressive 6.9 billion FCFA. Given the scale of activities in these other MSE sectors, it is likely that the contribution of MSEs to value added in both the service and manufacturing sectors greatly exceeds the contribution of formal sector service enterprises.

Facilitating MSE growth will help reduce poverty in rural areas. As shown above, IFPRI figures show the percentage of income in rural areas derived from MSE non-farm activities varies from between 17 and 30 percent. In addition to these results, figures from a 1991/92 survey of participants in public works programs specifically targeting the rural poor confirm that income from trade, hostelry, craft work and other small business activity provided from between 15 and 20 percent of total income.⁵⁷ These numbers demonstrate the important role that MSEs play in providing income to the rural poor. Furthermore, the timing of this MSE income is often important to the poor because it comes during the off-season when households are relatively cash-poor. Increasing MSE activity levels in rural areas thus has an important role to play in reducing rural poverty.

The relative importance of women as both entrepreneurs and workers is much higher in the MSE sector than among SMEs. Women play a very major role in Nigérien MSEs. According to 1987 figures from the Direction de la Statistique, women owned 29 percent of the 130,000 microenterprises surveyed. As shown in the peanut oil case study, certain areas of MSE activity are the exclusive domain of women. Besides peanut oil, women are particularly dominant in such agro-processing activities as shea butter production, onion and tomato drying, dairy product processing, cotton spinning, straw mat weaving, and beverage processing. They are also run most restaurants in Niger and are active in artisanal pottery and furniture making. By contrast, female employment in formal sector SMEs is much less common.

In order to harness the growth and equity enhancing potential of the MSE sector, however, the donors and the GON need to address several important constraints inhibiting the growth of MSEs. These are detailed below.

(1) Financial Constraints.

The lack of financing is a very real constraint for most MSEs. Although virtually all MSEs have schemes for overcoming the lack of credit, usually through systems of delayed payments to suppliers or advances from customers, these mechanisms impose hidden costs by restricting the range of market options open to MSE entrepreneurs. Freeing MSEs to expand the range of their commercial possibilities by separating supply and marketing decisions from financing considerations will help them improve their management efficiency and overall profitability while also

⁵⁷ Cited in World Bank, "Food Security Strategy," June 29, 1994.

permitting an expansion of the scale of their activities. Furthermore, the ability to offer financing to their own customers can also be a powerful marketing tool in a credit constrained environment.

In general, financing needs of MSEs are:

- **Short-term working capital financing (less than a year)**, which would allow MSEs to increase the scale of their current activities; and
- **Medium-term financing (one to three years)** for costlier pieces of equipment and new technology to allow MSEs to develop new areas of activity.

Short-term working capital credit is a critical need of many MSEs. Besides the peanut oil processing example given above, the returns to many areas of MSE activity show returns that could support credit at rates of interest in excess of the rates charged by most NGO and donor credit programs. Activities such as the rental of agricultural equipment (see box below), food preparation and selling, metalworking, carpentry, tailoring, agricultural implement manufacturing, jewelry fabrication, leather working, automobile repair and weaving all exhibit various degrees of profitability that could justify higher use of credit. Although levels of profitability vary between these activities, and all may not be as remunerative as the peanut oil example, the spurt in informal sector/MSE activity over the past few years confirms the basic viability of many of these enterprises. This general picture is further supported by the high loan repayment rates obtained by the CLUSA/SICR for MSE activities such as peanut oil processing, livestock fattening and petty trade.

Yet, despite the evidence of profitable MSE projects, a scattered experience of high repayment rates from several NGO projects and the proliferation of numerous rural and urban micro-credit projects,⁵⁸ the reach of donor and NGO credit projects is very limited. The GEMINI study on rural financial institutions found that very few individuals or MSE firms engaged in agribusiness activities had ever benefitted from NGO or donor-sponsored credit projects. Similarly, during the field work for this report, the peanut oil producers in Maradi only knew of one woman who had benefitted from a NGO credit program. This reflects the very real difficulties of setting up efficient delivery mechanisms to analyze MSE risk and handle credit transactions as well as the insufficient supply of loanable funds for

⁵⁸ In addition to the USAID WOCCU, CARE/BRK and CLUSA/SICR Projects, other major donor initiatives offering short-term micro-enterprise credit include: the ILO/EDF PROFORMAR project, the soon to be operational "Fonds Décentralisés" project from the Caisse Française de Développement, and numerous rural development projects of other donors which include credit components for village enterprise initiatives. Among the major initiatives in this area include the "micro-réalisations" projects of SNV and GTZ, the joint German/French "Gestion de Terroirs Project, and FAO rural development projects in Keita and N'Guigmi. In addition to these major donor programs, many Nigerien and foreign NGOs offer limited credit facilities that are supported through donor grants.

the MSE sector relative to potential demand. Thus, despite the proliferation of donor-supported credit programs targeting MSE activity, there is still a significant need for increased access to credit among MSEs. Progress is being made, but it is still insufficient compared to the needs of Nigérien MSEs.

Rural Equipment Rental Enterprises Development

In recent years a number of new rural enterprises have emerged which specialize in the rental of pieces of equipment that are too costly or require larger capacities than individual households or even villages can amass. The PROFORMAR Project has recently financed three motorized grain mills ("batteuses motorisées") in the Madoua region which individual entrepreneurs have mounted on donkeys to service various rural locations. At 1.8 Million FCFA per mill (\$3,600), these represent expensive investment items that are currently being repaid on a three year schedule. In addition to these three project-supported initiatives, MSE entrepreneurs in Niamey have also reportedly begun to purchase the same mobile mills, without any project credit, to reach areas around the capital. Besides these new mills, well established rural enterprises exist to rent equipment and/or provide services such as welding for repair of farm implements and cooking utensils, carts rental to haul crops, fertilizer and water, and animal traction and motorized tractor plowing.

Without access to financing for equipment, the development of rental enterprises is limited by the capacity of individual entrepreneurs to access family funds or self-finance their investments, as even informal sector sources of medium-term credit are quite rare. Increasing the access of MSE entrepreneurs access to medium-term financing has the potential to greatly facilitate the development of these key service-providing SMEs in rural areas.

Medium-term financing for the MSE sector is virtually non-existent under current donor projects, yet the lack of medium-term financing is also an important obstacle. Only the ILO/EDF PROFORMAR project currently disburses loans on a multi-year basis to MSEs,⁵⁹ although the BRK also plans to offer multi-year financing. The need for longer-term financing is a critical factor preventing the development of MSEs utilizing costlier technologies which must be amortized over several years. As shown in the above boxed section, the development of technology-driven rural enterprises presents a particularly promising potential avenue for MSE development. However, most of these require investments in expensive pieces of equipment which few can afford and for which little financing is available through donor/NGO projects. The reluctance of NGOs and donor projects to offer longer-term financing is understandable, since few have the capacity to effectively assess and manage the added risks of longer term MSE loans. Thus developing sustainable mechanisms for financing medium-term equipment loans and strengthening the capacity of NGOs to assess longer-term risks needs to be a high priority for donor micro-credit programs.

⁵⁹ PROFORMAR's geographic reach is also limited to the Niamey, Tillabéri, Tahoua and Madoua regions. Important areas such as Zinder and Agadez are not covered.

(2) Technological Constraints

Greater access to technology has the potential to spur MSE development in two important ways:

It can contribute to higher labor productivity, particularly in the processing of agricultural products. Most MSE agricultural processing activities utilize extremely low levels of technology and rely primarily on intensive labor inputs. Leveraging these labor inputs through marginal improvements in processing technology to achieve higher productivity can help raise the returns to labor in the MSE sector. Several examples of potentially promising technology packages were encountered during the Team's mission. The mobile mills described above appear to offer useful labor saving services to rural women. In addition, the recent introduction of a new prototype mechanical peanut oil press developed under the PROFORMAR Project that is used by the women's cooperative in Dan-Issa may have the potential to yield superior oil yields and reduce the time needed for the oil extraction process.⁶⁰ Efficiency gains from improving on traditional agro-processing technologies will also have a particularly large impact on the earning power of women who constitute the core of the agro-processing MSE entrepreneurs and workers. Although an inventory and analysis of the potential of specific labor-enhancing technological packages was beyond the scope of work of this assignment, such a study is needed to identify technological bottlenecks and determine credit needs among potential technology purchasers.

It can alleviate specific bottlenecks in strategic areas of MSE activity. Current technological "bottlenecks" include problems with solar dryers that are preventing the widespread diffusion of improved food drying techniques and problems in the preparation of rock-phosphate based fertilizers using locally available deposits. The potential for the use of improved solar drying techniques in Niger is enormous. Experiments with the production of dried meat ("Kilichi") using solar dryers have yielded promising results because drying conditions can be managed to ensure the rigorous hygienic standards and quality control that are required in European and North American markets. However, the possibility for widespread diffusion of these techniques are poor at best, since the solar dryers used, those developed by the Office National d'Energie Solaire (ONERSOL), were produced at too high a cost and are too fragile (because of their use of large glass plates) to be attractive to most urban or rural entrepreneurs. Introducing improved drying technology could not only help spur the exports of kilichi, but would also help Nigérien MSEs develop dried fruit and vegetable exports.

⁶⁰ Potential problems with the press include a reported lower quality of peanut cakes that reduces its suitability for human consumption. Although the women interviewed from the Dan-Issa peanut oil cooperative reported no difference in selling prices between peanut cakes produced with traditional methods and those produced with the mechanical press.

As for rock phosphates, prior efforts at developing local deposits near Tahoua have floundered as farmers have found that, because of its light powdery nature, local phosphate fertilizer blows away too easily from the fields after application. Introducing techniques to granulate the phosphate, by mixing it with agglomerating substances such as animal fat or by-products from livestock slaughtering could solve this problem and encourage MSE investment in phosphate mining and distribution.

However, despite the benefits of improved technology, its use among Nigérien MSEs is very sparing. Explanations for the low levels of technology rest on two major factors: (1) its availability, suitability and price and (2) the presence of appropriate financing mechanisms. Constraints on each of these levels are discussed below.

It is important not to overstate problems related to the availability of appropriate technology in Niger. In fact, what is striking in much of the agro-processing sector is how well certain common pieces of equipment work and how much people are prepared to invest in them when the basic viability of the investment is clear. In the peanut oil sub-sector, for instance, there has been a rapid growth in the use of peanut grinding mills used to prepare peanuts for final oil extraction. In Maradi, according to interviews, the number of mills operating in the city increased from 24 in 1994 to 32 in 1995, most of which appear to have been purchased by individuals and MSEs from suppliers in Nigeria. The diesel mills in use are versatile, relatively low-technology pieces of equipment that can grind different types of grains and run on fuels of variable quality with good results. More specialized mills with stringent fuel quality requirements are likely to be more costly to operate and less reliable. Although this is but one example, it is transferable to many other sectors of activity where possibilities exist to increase rural enterprise activity by increasing access of rural people to such common technologies as animal traction, plows and tractors, animal drawn carts, welding equipment and sewing machines.

Encouraging the adoption of these technologies requires credit, not invention. The technology of tractors and animal drawn carts is well-known. Much of the supposed lack of "technology" in Niger is really a financial sector issue, rather than a question of technology as such.

Where targeted technology development and adaption programs are required in Niger, the PROFORMAR project has had some success. It develops low cost durable technologies by bringing in expatriate engineers and technicians to work side by side with Nigerian artisans to develop experimental prototypes for use by

rural artisans. At present, the technology development efforts of PROFORMAR seem to be producing encouraging results.⁶¹

(3) Technical Training

Many studies have identified the lack of technically trained skilled workers as an important constraint to the development of MSEs in Niger.⁶² Unfortunately, existing sources of technical training provide neither rapid or relevant training. Particularly for the more technically demanding trades such as mechanical equipment and car repair, tailoring, electrical work and metalworking, existing apprenticeship training methods require extremely long periods of service before any real skills are transferred to the apprentice. An apprentice tailor may work three years for a master before touching a sewing machine. Similarly long periods of service are required in car repair and metal working MSEs. On the other hand, technical training dispensed by the public technical high school ("lycée technique") is overly theoretical and trains students to use equipment rarely used in the private sector.

Donor projects and NGOs have made inroads in responding to these needs. Besides the previously cited PROFORMAR Project, donor sponsored initiatives currently offering technical training include: a Lux Développement project to support the Wadata Artisanal village (Niamey), the CARE supported Ecole Moderne de Formation Polytechnique in Maradi and the GTZ sponsored projects targeting different categories of artisans.⁶³ Finally, the EDF funded NIGETECH project, which has not yet commenced operations, will function similarly to PROFORMAR, only with a greater emphasis on applied technology in urban areas.

A major reason for the lack of training initiatives is the peculiar incentive structure in MSEs in the informal sector. In this environment, businesses do not add more than perhaps six skilled workers for fear of attracting unwanted attention from government authorities. Recognition by formal sector authorities means that MSEs would have to make *patente* payments, pay mandatory dues to the CCAIAN and conform to labor and commercial codes. Once MSE entrepreneurs have a work

⁶¹ The biggest success of the PROFORMAR technology development efforts so far has been the development of a locally produced parabolic antenna, which have sprung up all over Niamey since the first prototype was developed. PROFORMAR Staff report that, at last count, there were over 40 different MSEs making and selling parabolic antennas (some albeit of dubious quality) in Niamey. The PROFORMAR developed mechanical peanut press mentioned above also reviewed to above that is in use in Dan-Issa also appears to offer the potential to increase returns to labor.

⁶² See for instance, A. Kaboré, et al., p. 48 and Ben Fadhl, P. 32.

⁶³ GTZ actually is currently supporting three projects that offer technical training: the Projet d'Appui à l'Artsianat which offers technical and literacy training to broad categories of artisans; the Formation d'Apprentis selon le Système Duel Project which trains automobile mechanics; and the Projet Micro-Réalisation which offers technical training for small-scale artisans.

force of six workers, they tend to add skilled workers only in response to normal attrition. Training more people at a faster rate only adds to the universe of potential competitors. Therefore, traditional apprenticeship periods are long, slow and combine irrelevant unskilled labor tasks with a gradual acquisition of technical skills. Although perhaps acceptable for existing enterprises, this training system does not increase the supply of skilled workers for an expansion of MSE start-up ventures.

(4) Management/Business Training

The need for basic management training seems to exist mainly among people being organized and trained by NGOs to engage in start-up microenterprise activities. For this type of audience, the standard courses offered by most Nigérien NGOs, with their heavy emphasis on the calculation of break-even prices ("prix de revient") and cost calculations, are quite appropriate, since neophytes usually have little grasp of these concepts. To fill this need, an array of NGOs have sprung up, many of which employ effective trainers and methods.

Beyond the need for business fundamentals, there is little doubt that a small subset of the more dynamic MSEs could benefit from more advanced business training, primarily focusing on more strategic questions involving financial, marketing and production strategies. Crafts-oriented MSEs also need training on export market development. Few leather workers or woodworkers understand the steps involved or have the knowledge of foreign markets to develop a regular clientele of foreign buyers.

While many NGOs can help with product cost calculations and basic accounting, there are fewer sources to which MSEs can turn for advice on these more complicated issues of business strategy. Similarly, while there are a handful of donor projects, such as the Lux Development Project at the Wadata Artisanal Village that help craftsmen with export marketing, there are no functioning consulting firms or specialists in the export of arts and crafts. These organizations could help Nigérien craftsmen to access foreign markets and identify foreign buyers. This lack of advanced management training capacity reflects the basic shortage of skilled business managers in Niger. Without a body of people to draw upon who have these competencies, it is unlikely that these services will develop in the short-run, even if there is a potential market among the more dynamic MSEs.

(5) Donor Coordination

One of the most common refrains of studies looking at rural and private sector development in Niger is that there is a need for more donor coordination. While all donor programs could benefit from increased coordination, this is of particular importance to USAID because its three microenterprise finance projects have integrated more concerns about sustainability into their operations than have most other donor projects. The progress made to date by these projects towards

achieving a degree of sustainability can, however, be easily undermined by other donor projects offering higher credit subsidies. USAID, therefore, has a particular interest in pursuing effective donor coordination on issues affecting MSEs.

In addition to financial programs, donor coordination is needed for technology provision and targeted firm-level training. Currently, conflicts between donor projects arise from inconsistent targeting strategies and/or different approaches to sustainability. Although donors have begun to address sustainability in financial sector programs, they have not done so for technology transfer and microenterprise development.

Unfortunately, the majority of donor and NGO microenterprise development efforts result in unsustainable projects that often undermine the market share of existing MSEs which lack access to donor subsidies. Many NGO rural enterprise promotion projects, for instance, offer subsidies to groups that they have organized to aid start-up MSE ventures. All too often donors shower training, technology and finance on these beneficiaries with the hope that MSEs will be created. An example of this type of approach, based on the experience of CARE in the village of Dan Issa, near Maradi is shown in the box below.

A Poor Example of MSE Development: The Women's Peanut Oil Cooperative in Dan Issa

Since 1993, CARE has been sponsoring the development of peanut oil extraction in the village of Dan Issa near Maradi. CARE has trained over 100 village women in peanut oil production, organized a Cooperative comprising 50 of the women receiving training, stationed a full time cooperative administrator in the village, and supplied a free mechanical peanut oil press. In 1994, its first full year of operation, the women's cooperative produced 13,600 liters of oil--roughly the same volume as one of the larger women producers in Maradi. At the time of the Team's visit to Dan Issa in August 1995, the Cooperative was not producing oil since the price of peanuts had risen too high relative to the price of oil for production to be profitable. The Dan Issa women anticipated resuming production with the next peanut harvest in November.

Despite the limited scale of the Dan Issa Cooperative's operations and its off-and-on production cycle, CARE has put in a proposal to the African Development Foundation to finance investments in equipment and storage facilities totaling over \$35,000 the scale of which dwarfs anything available to the non-subsidized peanut oil producing women 38 kilometers distant in Maradi. If funded, this would give the Cooperative 2 peanut hullers, 2 mills and 2 motorized presses in addition to a \$15,000 storage facility. By contrast, among the many peanut oil producing women in Maradi, only one possessed a peanut mill (although there are private millers who will mill for a fee, as in Dan Issa) and there are no motorized presses operating at all. Nor do the women have access to any storage facilities.

Although the economics of the proposed investments in Dan Issa are highly questionable, since there is little evidence that the Cooperative is prepared to operate on the scale that would be necessary to yield positive rates of return on the planned investments, the importance of this illustration is not the specifics of this case, but what it shows about the underlying approach of many micro-enterprise development efforts in Niger, of which it is fairly typical. Specifically:

MSE development efforts are poorly targeted. All too often beneficiary groups for MSE development efforts are selected arbitrarily with superficial analysis of the underlying profitability of the proposed project or of how it will effect existing producers. In the Dan Issa case, although there is certainly value in training women who were not previously familiar with peanut oil production techniques how to extract oil, it is hard to see why a relatively small cooperative should be favored with large-scale subsidized investments, beyond anything yet existing in the region, over other MSE operators who have more solid track records (and possibly more favorable underlying cost structures).

Technology is often provided as a gift which does not require socially efficient use by recipients for it to yield positive private returns. All too often, key pieces of technology are given away to Cooperatives (although much more rarely to individuals) with little or no monetary contribution on the part of the recipients. This contributes to the inefficient use of the equipment since the beneficiary has no investment cost to recoup and cannot make a loss on it. It is significant that the Dan Issa cooperative was given the only mechanical peanut oil press in the Maradi area which was gathering cobwebs at the time of the Team's visit since the Cooperative had stopped producing until the next harvest. Even when producing, however, the press was used far under its capacity, since the Cooperative members could not produce at large enough volumes for it to operate at capacity and would not rent it to non-members for fear that it would be damaged.^{a/}

There is a clear preference for assisting collectivities, rather than individual MSE entrepreneurs. There is little reason to think that collectivities are efficient managers of MSE operations. Yet, many NGO MSE initiatives exhibit clear preferences to working with collective organizations vis-a-vis individual MSE operators. In Dan Issa, for instance, although there is already a mill operating as a village MSE that is used by most women, the CARE proposal to the African Development Foundation calls for 2 mills to be given to the Cooperative. When asked why there was a need for more mills, the women cited complaints about the quality of the available mill which was reducing their oil yields. Yet, rather than working with the miller to see whether obtaining credit to purchase a new mill might be a low-cost and sustainable solution, CARE sought funds to grant outright to the Cooperative two mills that would have to be operated on a large-scale commercial basis by an organization that has shown an unwillingness to explore the commercial potential of a much lower capacity peanut press. Significantly, the only existing source of management competence for this type of enterprise in the village (the miller) may be driven out of business if the proposal is funded.

^{a/} This concern on the part of the Dan Issa women is understandable. Since the press was provided as a one time only gift from an NGO, rather than through private sector channels with the help of an NGO credit program, no sustainable system for supplying replacements or replacement parts has been created.

The fundamental problem with this approach is that it creates distortions in the competitive environment. These distortions often help reallocate existing MSE activity--instead of spurring real growth in the MSE sector. Besides the problem of the peanut mill in Dan Issa described above, the village level cereals marketing activities financed by some donors with grants and subsidized loans tend to encourage farmers to take over marketing functions previously fulfilled by private traders without any donor support. Although such interventions may contribute to

enhanced market efficiency and higher output they force farmers to assume greater marketing risks-- a point which is often neglected.

To foster greater coherence and efficiency in efforts to develop the MSE sector, USAID should enter into dialogue with the GON and other donors. In particular, two main points need to be stressed:

Donors should be encouraged to sell technology to MSE beneficiaries at something approaching its market price. Also, MSE training initiatives should require real cost contributions from beneficiaries. Selling both technology transfer and training assistance has a number of important beneficial effects. It:

- Encourages more efficient use of technology and training by basing level of effort on marginal utility as perceived by recipients rather than on the peculiar administrative procedures or philosophy of the donor/NGO responsible for delivering them;
- Increases the motivation of recipients to see that the assistance received is used effectively thereby increasing the likelihood that the assistance will yield positive economic returns;
- Helps reduce distortions in the competitive environment between donor supported MSEs and those not receiving any assistance; and
- Can help leverage available funds to reach a larger number of beneficiaries.

Where income constraints prevent potential beneficiaries from making required contributions, the necessity for efficient credit delivery mechanisms is very important. Given the variety of donor objectives, it is unrealistic to expect all donors and NGOs to adopt identical guidelines on beneficiary contributions for microenterprise development activities. However, there is definitely a need for greater attention to this issue, and USAID should be developing it jointly with other donors.

MSE promotion efforts must focus on the needs of individual MSE entrepreneurs as well as collectively organized formations. The collective ethos of many NGOs leaves individual non-mutualist MSEs outside of their field of vision. Although there are programs which offer assistance to individual MSEs (notably PROFORMAR) individual MSE entrepreneurs have relatively fewer options for finding credit, training or technological assistance than cooperatives or other groups. Donors and NGOs need to take more care to address the constraints of existing individually owned MSEs, which are often among the leading and most dynamic operators (as shown by the women peanut oil producers in Maradi) as well as those of the collectivities that many of them have helped to organize. Perhaps by selling their services, NGOs and donors can be more assured that their assistance will have a positive impact regardless of whether its beneficiaries are

individuals or mutualist groups. In the current environment, where few donors sell MSE assistance to beneficiaries, targeting of assistance often depends more on the philosophy of the donor or NGO than the capacity of the beneficiary to utilize the assistance effectively.

c. SME CONSTRAINTS

Although USAID's strategy for enterprise development under SO2 focusses primarily on informal sector MSEs, the development of SMEs can be assisted in two ways:

Supply and demand linkages are needed to create new market opportunities for MSEs. There is real potential for SMEs, particularly in the agro-processing sector, to foster new demand that can be supplied by MSEs.

Firms need to be encouraged to "graduate" from MSE to SME status. The benefits of informality also come with real costs for MSEs, as noted above. For instance, MSEs do not capture economies of scale that would permit them to justify investments in more sophisticated technology that might eventually lead to lower unit costs. They are unable to use telephone lines and faxes to remain in touch with market developments beyond their local areas. They are not seen as serious candidates for credit from formal sector banks. Their market options are often limited by the availability of trusted (often family) personal relations networks. This seriously inhibits their ability to expand and penetrate new markets where they may not have the necessary personal links.

The section below briefly describes the financial and managerial constraints to SME development and goes into more depth on policy level constraints. The treatment is brief because other donors and programs are already engaged or are planning on making significant interventions. In addition, whereas USAID has considerable experience in microenterprise and financial issues in Niger, it has not been particularly active in the realm of formal sector enterprise development, in which other donors, particularly the French, have a much longer experience record. On the other hand, USAID has played an important role in policy dialogue on issues affecting the private sector and can still play an important role in creating momentum on key policy issues.

(1) Financial Constraints

The conservative lending policies of commercial banks in Niger severely restricts the supply of credit to SMEs--particularly for medium-term financing and investment in equipment. The lack of a functioning capital market also severely restricts the supply of equity capital, which is almost always provided through private investors and family sources.

Given the reduced role of the commercial banks in financing almost anything besides trade credit, the major player in SME finance in Niger is the EDF supported AFELEN project which is actively lending to SMEs, although it, too, has adopted a relatively conservative policy and tends to lend more to well established SMEs than to riskier start-up ventures.

Several donor projects are currently in preparation that should help increase the supply of financing available to SMEs. In particular, the World Bank is considering opening an "APEX" line of credit to Niger to support investments in SMEs at highly concessionary terms. This instrument could provide banks with an attractive refinancing facility to support increased lending to SMEs. In addition, the EDF is also studying the possibility of setting up a new guarantee fund for AFELEN to give it the capacity to increase the scale of its operations.

(2) Management Constraints

The lack of skilled business managers is an important constraint for Nigérien SMEs. Team member interviews with bankers, NGO and project personnel, revealed a predominant opinion that Niger lacks both a core of businessmen trained in modern management techniques and a supply of national entrepreneurs who are ready to invest in formal sector business ventures.

In addition, although Niger has a number of management consulting firms to service the SME sector, most of these have a limited capacity to provide services that extend beyond accounting and financial audits. The CCAIAN, likewise, does not have the expertise or resources to provide help to SMEs in need of managerial assistance. This leaves Nigérien SMEs with few sources of advice on options for financing or new market development.

To address this lack of managerial expertise, the Ministère du Développement Industriel, de Commerce de l'Artisanat et du Tourisme (MDICAT), under its "Programme Cadre de Promotion du Secteur Privé" initiative (hereafter referred to as the "Programme Cadre") is planning for the creation of an SME Assistance Unit which will operate independently of the Ministry as a service providing the Unit with expatriate and national technical assistants to:

- Support management consulting firms working with SMEs;
- Direct management consulting services to SMEs;
- Provide information on foreign markets; and
- Link SMEs with sources of finance and with help on the preparation of specific business plans.

Although no donors have yet agreed to finance this unit, the French are likely to provide funding and expatriate technical assistance. It is highly unlikely, however, that this initiative alone will be sufficient to resolve all the management expertise constraints faced by SMEs.

(3) Constraints in the Enabling SME Policy Environment

The major barriers to SME development lie in the very constraining policy environment in which formal sector enterprises operate in Niger. These are briefly outlined below.

Labor Market Regulation

The biggest single policy constraint to the development of SMEs in Niger is almost certainly the persistence of an extremely onerous set of labor market regulations which discourage employment and introduce rigidities into the labor market that constrain formal sector enterprises' ability to rationally manage their personnel.

Virtually every diagnostic study looking at the enabling environment over the past five years has signalled the need for radical changes in Nigérien labor market regulations.⁶⁴ Moreover, most observers agree on the facets of legislation and regulation governing the Nigerien labor market that slow SME development. These are briefly summarized below:

The monopoly of the *Service de la Main d'Oeuvre (SMO)* on the recruitment of all private sector employees. Currently, all private sector firms must hire only personnel who are registered with and selected by the SMO. All employers are required to seek prior approval or at least notify the SMO of all job announcements. Job applications received by private firms are also required to be transferred to the SMO, who alone has the right to decide on the suitability of individual candidates for the proposed post. To match people with jobs, the SMO is supposed to attribute available posts to the qualified candidate who has been registered the longest with the Service--essentially preventing private sector firms from executing their own hiring decisions.

Private employers report varying levels of rigor in the application of these procedures depending on geographical location. In Niamey, some employers report that they can communicate with the SMO and, as long as the employees they wish to hire are registered correctly, they are usually able to hire them. In Maradi, however, one SME employer expressed great displeasure that the local SMO was

⁶⁴ A short sampling of studies which have underlined the need for a reform of labor market regulations include: the J.E. Austin MAPPS Phase II Private Sector Description, June 1991; the final report from the UNDP/UNIDO sponsored "Table Round sur Le Secteur Privé," June 1993; and Abdou Djibo and Barhouni Maliki, "politiques et mesures de promotion du secteur privé, bilan et perspectives," UNDP/UNIDO, February 1993.

preventing him from hiring needed staff by trying to impose personnel whom he regarded as unqualified. Employers also complain of frequent abuses and subversion of the process. These abuses are attributed to the SMO's considerable discretionary power to impose candidates on enterprises. Efforts to promote investment and graduation of SMEs to the formal sector are unlikely to meet with much success as long as SMO has veto power over individual firm hiring decisions.

Rules governing the dismissal of workers for economic reasons. Employers must apply for permission to separate workers by application to the *Inspection du Travail*. The application summarizes the financial situation of the enterprise for the last three years, lists all employees broken down into foreigners and Nigériens, lists those employees subject to job cuts and includes an opinion on the need for the job cuts from a representative of the employees. Foreign workers are required to be cut first. The *Inspection du Travail* is charged with ruling on the application which is then approved or disapproved by the Minister of Labor. No mandatory time period exists for this process. Delays and forced cut-backs in essential staff impose operational risk and costs on employers.

Overtime labor must be approved by the *Inspection du Travail*. To schedule overtime hours, employers must request authorization from the *Inspection du Travail*. The *Inspection du Travail* is required to consult the labor unions active in the relevant labor category which must issue a judgement on the request within eight days. If the unions fail to issue a judgment or respond favorably, the application is supposed to be approved by the *Inspection*. Authorizations are only valid for a period of six months and cannot exceed eight hours per week of overtime per worker.

Invasive workplace regulations. Personnel of the *Inspection du Travail* are authorized to enter the workplace at any time without prior notification to check for violation of health, safety and labor codes. All enterprises must be inspected at least three times per year. This is a common feature of labor market regulation in developed countries, but in Niger, where the illiteracy rate is over 70 percent and where the texts governing working conditions are complicated and not well publicized, the potential for corruption is quite strong. Furthermore, health or safety code inspections are often used as excuses to look for unauthorized employees not hired through the official system. Rather than fight these continual battles, many enterprises simply prefer to remain in the informal sector.

Restrictions on Foreign Investors and Employees

Businesses whose equity shares are more than 50 percent held by foreigners are required to obtain a business license (*autorisation d'exercice*) before they are allowed to set up operations. Applications are made to the Minister of Commerce for firms operating in Niamey or to the Regional *Préfets* for firms outside of the capital. The first license is valid for a period of five years, after which another

application must be submitted. After the first renewal, licenses are renewed every 10 years.

The paperwork required for these licenses, while lengthy, is not a major problem for foreign businesses. Most of the paperwork is designed to make sure that the businesses are current in all their tax payments and are in conformity with Niger's social security system. However, the very existence of this licensing system, where no foreign company can be sure whether or not it will be permitted to operate in five or ten years is a powerful disincentive to foreign investment. Although current regulations ensure that applications for renewal are automatically accepted if no response is given by the administration within 45 days, the possibility of a refusal is still present.

The long delays and unclear decision-making process involved in the attribution of the initial license is probably even more dissuasive. In the case of Sahelio and DHL, licenses took over one year to obtain. A need exists for a more transparent system that gives investors greater assurance that administrative delays will be minimal and decisions will be fair.

In addition to the business licensing requirement, Niger's attractiveness to foreign investors is seriously weakened by strict rules on the employment of foreign personnel. To legally employ a foreign worker, an employer must first obtain a work visa. This requires an application to the SMO which examines the dossier and transfers it to the Direction du Travail in the Ministry of Labor. A second consideration of the request is made before final transmission of the case to the Minister of Labor, who makes the final decision and sends the dossier back to the SMO, which, in turn informs the employer. This whole process is often extremely time consuming.

The SMO often either rejects requests for the employment of foreigners by suggesting a replacement candidate who is Nigérien, or stipulates that the foreigner be hired on a temporary contract and be replaced with a Nigérien after a specified period. Given the general shortage of skilled manpower in Niger, this process is a significant obstacle both to foreign investors and to domestic SMEs.

Unsure Rural Land Tenure

Conflicts between the various traditional and modern conceptions of collective and individual property and land use rights is a well-recognized obstacle to investment in rural areas. Recent GON initiative to create rural Property Commissions (*Commissions Foncières*) composed of local administrative authorities, traditional chiefs, and technical experts from the office of the Rural Code, to adjudicate land disputes and actually allocate written formal titles to individuals represents an ambitious attempt to resolve this problem.

However, it is important to recognize that the process being set in motion at this moment is unlikely to produce tangible results in the near future. The extremely complex and politically sensitive dossiers that the Property Commissions will be charged with resolving will likely take years to resolve. The initial experiences of the most advanced Commissions in Mirriah and Mainé-Soroa which have been financed with help from the Danish aid agency show mixed results. The Commission in Mainé managed to inscribe very few cases on its rolls, while the Commission in Mirriah had somewhat more success. In any case the Commissions face serious obstacles such as:

- Lack of clear legal precedents and directions to serve as guidelines;
- Commission composition too heavily weighted towards administrative authorities with the attendant risk of appearing non-legitimate;
- Serious lack of trained personnel and material to carry out the relatively complex administrative tasks associated with adjudicating scores of complicated dossiers; and
- Incomplete rural land surveys and technical analyses of land-use potential.

Thus, while the will of the GON to resolve this long standing issue is certainly present, there continues to be a serious need for support for the process of rural land dispute resolution.

Burdensome International Trade Procedures

Although export and import licenses were officially abolished in 1986, procedures set up to replace them still impose heavy costs on enterprises engaged in international trade. In particular, the "One-Stop Window" or *Guichet Unique* set up within the CCAIAN to streamline export and import procedures and centralize trade statistics probably does more harm than good.

The *Guichet* requires all firms engaged in foreign trade to go through a complicated two-step procedure and pay fees which, as pointed out by the MAPS Phase II study, total more than the payments required to obtain the licenses that were required before the abolition of export taxes. To be eligible to import or export any merchandise, including raw agricultural products, a firm must first apply to the *Guichet* office in Niamey, or to one of the regional CCAIAN offices for an identification number which serves to open its file and is valid for one year to be renewed annually. To get a number, firms must present each year:

- Proof that they are inscribed on the rolls of the *Registre de Commerce* as export, import, or export-import trading firms;

- Proof of having paid the *patente* for the current year as a registered export, import or export-import trading firm (minimum payment of 435,000 FCFA);
- Proof that they have paid their current year dues to the CCAIAN (minimum payment of 75,000 FCFA); and
- Proof that they have paid the required annual fees to the Conseil Nigérien des Utilisateurs des Transports (CNUT) (minimum payment 30,000 FCFA).

Completion of this process results in the firm being issued an identification number. To actually import and export merchandise, it then embarks on a second round of administrative procedures by applying to the *Guichet* for statistical registration forms (*fiche d'enregistrement statistique*) on which its actual exports and imports will be recorded. Fees associated with these operations include: 2,000 FCFA for purchasing the forms, one of which is required per product traded; and fiscal stamps totaling 6,000 FCFA for trade operations within the Franc Zone and 9,000 FCFA for operations with countries outside the Zone. Thus total costs at this stage amount to 8,000 to 11,000 per product traded. The statistical registration forms are valid for three or six months if the operations they sanction are settled in cash or bank credit, respectively. Three month extensions are granted for 1,000 FCFA. Once the statistical registration forms have been issued, the firm presents them for verification at the customs posts when the goods cross the border.

The financial and administrative costs of these international trade requirements are considerable. The minimum total cost for legal trading in only one type of product, once the obligatory *patente*, CCAIAN and CNUT fees are added, in is 548,000 FCFA. Even this total would not be sufficient for a whole year and would require multiple trips to the *Guichet* to apply for extensions and new *fiches statistiques*.

While no firms are exempt from the *patente* and CCAIAN membership fees, many enterprises manage to avoid these fees or pay the *patente* in categories with a lower minimum rate than the 435,000 FCFA minimum for export-import trading firms. Thus, in reality the marginal cost of complying with these regulations is quite high for most firms--particularly smaller ones or occasional exporters or importers. In addition, the requirement that firms present the *fiche statistique* at banks to clear foreign exchange transactions effectively excludes the many MSEs that have not paid the appropriate *patente* tax or their CCAIAN membership fees from using modern banking instruments to facilitate international payments. As of June 1995 a total of only 166 firms were registered with the *Guichet* as legal exporters or importers.

Of course, only a fraction of Niger's international trade passes through the *Guichet Unique's* system. The only possible reason for the *Guichet's* existence is to collect statistics on trade, although it is also supposed to promote exports, and indeed it does publish a quarterly bulletin of trade statistics. However, the value of these statistics, which fail to capture any informal cross border trade, is extremely

dubious and duplicates statistics collected by the Customs Service (Direction Générale des Douanes). Thus, there is little justification for the *Guichet* as a means of collecting trade data.

Business Taxation

Though Niger's tax system is subject to numerous conflicting criticisms, most observers agree that the country suffers from too narrow a tax base that is concentrated in a depressed formal sector. Many believe that the tax burden stifles the growth of formal sector enterprises. Businesses also complain that the variety of taxes imposes extra costs and requires inordinate management attention.

Though figures on tax payments from the informal sector are, by definition, hard to acquire, there is general agreement that the way to widen the tax base is to increase collections from the informal sector. This view amounts to an implicit recognition that the number of MSE enterprises paying the major informal sector tax--the *patente*-- is smaller than what it should be. Indeed, there is some evidence to support this view. A recent survey of individually owned non-incorporated businesses completed by the CCAIAN with the assistance of the USAID Projet d'Analyse et de Suivie de la Politique Economique (PASPE), shows that only 582 out of the 955 business who agreed to provide information on their *patente* payments reported that they actually paid the *patente*. Still, before firm judgements can be made about the scope for increasing taxation on informal sector businesses there is a serious need for better data on the incidence of taxation on various categories of businesses--within both the formal and informal sectors.

6. Validation of Mission Strategy

Two important assumptions are implicit if the approach that USAID has taken in SO2 is to lead to significant growth in the rural sector:

- Accelerating growth in both primary sector agricultural production and the MSE sector, when taken together, will lead to an overall rural sector growth rate superior to the three percent rate of population growth; and
- MSE sector growth can be accelerated most effectively by expanding access to financial services.

Each of these assumptions can be questioned. The following section examines each assumption on the basis of evidence already presented. Question 1 and 2 examine these assumptions.

Question 1: Do MSEs really have the potential to make a significant contribution to economic growth?

On the surface, there is no immediate reason to suspect that the MSE sector has an important role to play in overall economic growth. Policy barriers stand in the way of the graduation of MSEs into larger-scale enterprises. Moreover, many MSE operate on a part-time basis when other demands for labor (mainly crop production) are low--suggesting that MSEs are a residual activity to be engaged in when no alternatives are available.

However, despite the lack of opportunities for the graduation of MSEs and their often part-time nature, strong evidence exists which suggests that MSEs do indeed play an extremely important role in contributing to manufacturing and service sector GDP. As shown in section D-5, production in the peanut oil sub-sector alone amounts to over 50 percent of total formal sector agro-processing production. MSEs in other sub-sectors likely contribute much more to overall value added. Once all these sub-sectors of MSE activity are factored in, it becomes clear that the majority of manufacturing and service activities in Niger are carried out by MSEs. Thus the Mission's strategy of focusing on micro-level enterprises as a key leveraging point for influencing economic growth is thoroughly rational. This is where the bulk of value-added enterprises are found.

One important caveat is needed here. To leverage the potential of MSEs to grow, **interventions are needed to remove MSE constraints.** Because the contribution of any individual or even small group of MSEs is quite small, significant growth can be achieved only if there are improvements in the operating environment for a large number of MSEs. This has important implications for the design of financial sector interventions under SO2. In particular, it confirms the usefulness of measures such as those depicted below in Section E, that seek significant increases in the outreach of financial services to MSEs by creating sustainable financial institutions that can mobilize savings and "close the loop" to create true integrated financial systems capable of reaching large numbers of borrowers, many of which will be MSEs. In contrast, marginal increases in funding for non-sustainable financial institutions are unlikely to expand credit availability for large numbers of MSEs. Therefore, continued donor support of non-sustainable financial institutions is not likely to promote significant economic growth.

Another concern is that, although SO2's focus is squarely on MSEs, the constraints operating on SMEs must also be addressed. In fact, the potential for growth in such areas as processed agricultural exports (which are virtually non-existent at present) will hinge on the development of formal sector SMEs that are capable of standardizing the production process, enforcing quality standards and negotiating the logistics of international marketing.

Of the financial, management and enabling environment constraints affecting SME that are mentioned in above in **Section 5. Enterprise Development Constraints and Donor Activities**, USAID's most effective strategy might be to concentrate on policy constraints. Reasons for this include:

- Other donors are planning or studying interventions which should make significant contributions to addressing firm-level constraints for SMEs.
- Although USAID has amassed considerable expertise in the area of firm-level MSE promotion, it has little corresponding experience in Niger dealing with firm level development among formal sector SMEs; in contrast, USAID has significant experience and strength in the analysis of policy constraints affecting the private sector.

Given these two factors, a key part of the results-package that USAID, therefore, should be building around SO2, must include actions to address some of the policy constraints identified in section D-5.

Conclusion: The focus of the Mission on microenterprise development as a key component of SO2 is justified. Accelerated growth in the MSE sector can make a significant contribution to economic growth given the importance of MSE production in overall GDP--particularly in the manufacturing and service sectors. Mission activities targeted at larger SMEs should concentrate mainly on improving the enabling policy environment, as major firm-level interventions in this sector are planned by other donors.

Question 2: is the Mission SO2 Strategy focussed too narrowly on the financial sector, while neglecting other areas of constraints on rural MSE growth?

While financial constraints are not the only ones facing MSEs, they almost certainly pose the most immediately binding set of constraints facing most MSEs. Many MSEs have the capacity to expand their operations if they could find reliable and convenient sources of credit. In the 1990 Michigan State study of the informal sector, surveyed MSEs listed the lack of finance as their second most severe problem after the general lack of demand they were witnessing in the market at the time of the study--well ahead of problems related to technology and the policy environment.

This is not to say that addressing other problems could not also improve the growth prospects of MSEs. As discussed in the previous section, there is great scope for increasing the efficiency of MSEs through facilitating their access to technology. Furthermore, there is room for the creation of new MSEs specializing in the provision of such technology through rental agreements. However, in a context where much of the technology that could be put to use is well known (mills, tractors, animal drawn-carts, water pumps), the main obstacle to its dissemination is the lack of appropriate financial mechanisms for delivering credit. The need for medium-term credit, to allow multi-year term loans to accommodate more expensive and durable pieces of equipment is particularly great.

The non-financial constraints on improving access to technology are largely a question of promoting new technology development efforts--which are best done in-country by bringing together local and foreign specialists to develop affordable prototypes with local materials. This sort of "technology incubator" already exists in Niger and is supplied by the PROFORMAR/NIGETECH projects. There is little reason for USAID to duplicate these efforts.

In addition to finance and technology, the issue of MSE lack of technical skills is a serious issue. Although many NGOs provide basic business skills training, there are fewer options available to individuals who want to rapidly acquire technical competency in such common MSE productive areas as tailoring, woodworking, metalworking, or equipment repair. Skilled artisans have little incentive to train large numbers of people who would then compete with them in the market. To facilitate the growth of MSEs, therefore, new ways are needed to leverage the technical competence among existing MSEs to train greater numbers of workers. As a complement to its financial sector focus, therefore, USAID could profitably investigate new forms of technical training which will help develop sustainable training modules. These modules should encourage training by altering the incentive structure facing traditional artisans.

Conclusion: SO2's primary focus on the financial sector is justified. Although there is a need to facilitate MSE access to technology, constraints on the availability of technology to MSEs are, themselves, largely financial. The development and adaptation of technology for Nigérien MSEs is being adequately handled by other donors. One important non-financial constraint that should be addressed by USAID, however, is the lack of technical training models capable of rapidly responding to growth in the demand for skilled technical labor in the MSE sector.

7. Recommendations

The following section presents an array of recommendations to USAID to support the Missions SO2 objectives in the area of enterprise development. As with the constraint analysis above, this section has separate components for MSEs and for SMEs.

a. Recommendations for Promoting MSE Development

(1) Finance

Support measures which will permit a rapid expansion of credit to large numbers of MSEs. Specific recommendations and illustrative activities to expand the supply of credit available to MSEs are specified in detail in Section E of this chapter. It is crucial, however, that USAID's strategy for providing financial services include activities to significantly increase the ability of financial institutions to reach large

numbers of MSEs. Without attention to this result, it is unlikely that SO2 will contribute to significant MSE sector growth. Unsustainable credit programs, which neglect the savings element and merely recirculate donor provided funds, are unlikely to provide the quantum increase in loanable funds that would be necessary to make a significant dent in the total credit needs of Nigérien MSEs.

Increase the ability of NGOs to provide medium term credit. Although MSEs require both short- and medium-term financing, the virtual absence of medium term loans makes capital financing a particularly pressing problem. To strengthen NGOs capacities to deliver medium-term credit, NGO personnel will need to receive training in the assessment of medium-term credit risk and in the management of loan portfolios with average durations of over a year.

Utilize NGO and donor-supported financial institutions to monitor MSE activities. Regularly collected data on the number, amounts and repayment rates of loans made by NGO credit programs to MSEs by sub-sector could provide a very useful data base for assessing the evolution of MSE activity. Unfortunately, most NGOs either lack the capacity to provide such information or they must go through a time-consuming examination of their records each time they want to come up with the information. Therefore USAID should consider ways of encouraging NGOs to keep such statistics. This almost certainly would involve NGO staff training in simple statistical and data base operations and provision of adequate software. In addition, after supplying the necessary technical, and possibly financial help USAID may also require regular data reports from the NGOs credit programs it supports in order to compile its own data-base on MSE activity.

(2) Access to Improved Technology

Leave the development of technology packages to other donors. Current donor efforts in Niger to develop appropriate technology for MSEs, mainly the PROFORMAR and NIGETECH projects, are making significant contributions. Given the experience of the ILO and EDF in supporting these initiatives, and the relative inexperience of USAID in technology development, this is not a particularly high priority area for USAID assistance.

Increase the ability of NGOs to provide medium term credit. Availability of intermediate credit will facilitate MSE purchase of technology packages that require longer payback periods.

(3) Technical Training

Promote technical training that disseminates skills of existing MSE artisans in a sustainable manner. The need for a more rapid and flexible system for technical training can best be met by exploring new ways of leveraging the technical competencies that already exists in the MSE sector. While this is easily done by paying MSE artisans with donor-supplied funds to give technical training courses,

as some donors are currently doing, such efforts are rarely sustainable. These efforts rely on donor financing and do not attempt to link student tuition or training-fees to the remuneration of the MSE technical trainers. This makes the entire effort dependent on the continuation of donor support. A promising model, which places more emphasis on sustainability than most donor technical training programs, has been developed by Ecole Moderne de Formation Polytechnique (EMFP) with the support of CARE in Maradi. This experience warrants a closer investigation to see whether it can be replicated in other areas.

**Illustrative Activity: Evaluation and
Possible Extension of the CARE/EMFP Training Model**

The Ecole Moderne de Formation Polytechnique (EMFP), set up by CARE in Maradi, offers what appears to be a workable model for accelerated technical training that is notable for two reasons:

- it shows more potential for sustainability than most donor technical training efforts;
- it mobilizes practicing MSE artisans to provide more concentrated and accelerated instruction than is available in traditional MSE apprenticeship arrangements.

In the EMFP model, which has evolved over the past several years, artisans from the MSE sector are recruited as trainers by the school, which then supplies them with the technical equipment, facilities and pedagogical materials to give technical training modules lasting from three to eight months. Although other donor programs recruit MSE artisans for training purposes, the innovative feature of the EMFP system is that the remuneration of the artisans is based not on donor funding, but on fees collected from the students which are split with 60% going to the artisan/teacher and 40% to the school to support its overhead expenditures. Fees are also set at relatively high levels. For the 1995/96 school year, for instance, the maximum fee level has been increased to 70,000 FCFA. In general, courses have been nearly fully subscribed. According to EMFP management, the fees received in the 1994/95 school year covered about 50% of the school's costs.

The particular advantage of this model is that it offers incentives to MSE artisans to devote significant time to training, outside of their own private business interests, without relying directly on donor subsidies. Although the operating expenses and materials of the school are still subsidized and the school is far from capable of sustaining itself based only on its own revenues, its ability to weld the expertise of MSE artisans with NGO management and pedagogical expertise, while making headway towards sustainability indicate that it is a model worth a closer look that may warrant duplication.

Specific actions which USAID should consider include:

- an evaluation of the EMFP to: assess its potential for achieving financial sustainability; follow-up on the activities of its former students; and assess its impact on the MSE sector in the Maradi region; and
 - pending the results of this evaluation, the extension of the EMFP model to other areas in Niger. In particular, Zinder and Agadez may be promising candidates, since both regions do not benefit from the technical training modules available through the PROFORMAR project.
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Management Training

Continue to encourage the delivery of basic business management training to borrowers in NGO credit programs engaged in MSE start-up activities. For credit programs that are designed to encourage start-up MSEs, it is essential that credit be accompanied by some form of business skills training focusing on cost accounting and sales strategies. The provision of this supplemental training is already a common practice in most donor credit programs and a wide variety of Nigérien NGOs have come into existence to provide such services. In designing its future credit programs, USAID should also require that borrowers make significant cash contributions to the cost of such training programs. This would enhance both the sustainability of such programs and encourage better targeting by making sure that recipients have a real interest in the training. If necessary, the initial contribution could be included in the NGO loan package. These training efforts should place special emphasis on offering business skills training (possibly combined with basic literacy courses) to women, as low literacy and rudimentary educational levels are important limitations on women's ability to operate successful MSEs.

Encourage the development of fee-charging firms offering management consulting and other services to MSEs. The need among more advanced and successful MSEs for management advice going beyond the basic business skills training offered by most NGOs could best be met through growth of specialized consulting firms. USAID could help develop this fledgling business service by:

- Conducting a market feasibility study to estimate the demand and willingness to pay among potential MSE customers for such services as: export market identification and brokering; assistance in the development of loan applications; payments and collections services; investment and feasibility analyses; and market analyses.
- Subsidizing training for potential MSE consultants in areas that show particular promise. Such opportunities may prove to be viable alternatives for laid-off civil servants.
- Eventually subsidizing or investing in start-up consulting firms targeting MSEs. It is ironic that, while donors do not hesitate to offer subsidized credit, which many MSEs could pay back at unsubsidized rates, they show little interest in subsidizing MSE service providers.

(4) Donor Coordination

Participate in the GON "Programme Cadre de Promotion du Secteur Privé" (Programme Cadre) initiative, should this develop into an effective forum for donor coordination on issues affecting MSEs. The MDICAT, with the help of the UNDP, is in the process of elaborating the Programme Cadre to promote private sector

development and improve the coordination between various projects active in private sector development. Two facets of the Programme Cadre that are of particular relevance to USAID are:

- Coordination of various MSE activities. This component calls for the creation of an MSE Coordination Unit ("Cellule de Concertation pour la Valorisation des Aides pour le Développement des Micro et Petites Entreprises") which would monitor MSE projects and sponsor discussions and research on issues affecting the promotion of MSEs. Possible USAID funding of this unit and the location of USAID-financed technical assistance in it would give USAID a broad entrée into the definition of MSE policies on a national level, as well as fostering coordination between USAID and other donors which will create opportunities for USAID to emphasize its point of view on such issues as the sustainability of MSE interventions.

- Programme Cadre's call for the creation of a Private Sector Coordination Committee ("Comité de Coordination") regrouping the major donors, GON officials and private sector representatives; this body has at least the potential to be a useful forum for promoting coordination among donors on issues affecting MSEs. USAID participation in this forum could also give it increased leverage in discussions with the GON and other donors over important MSE policy issues.

It should also be emphasized that, at present, the Programme Cadre exists only on paper. Other donors, particularly the French, have expressed interest in participating, but it has yet to be seen whether or not the two initiatives described above, much less the rest of the Programme Cadre, will actually materialize as envisioned. USAID support, at this early stage of development, could provide a useful impetus that would encourage other donors to join and increase the likelihood that the interventions planned would actually evolve into useful activities. This may, of course, not happen due to innumerable political and bureaucratic obstacles. Should this be the case, then USAID should look to other means to foster increased donor coordination on MSE sector issues.

Possible formulas for USAID participation in both the MSE Support Unit and the Private Sector Coordination Committee are described in more detail in the illustrative activity box below.

Illustrative Activities Under the Programme Cadre

The MSE Coordination Unit

USAID should consider placing technical assistance within the MSE Coordination Unit planned under the Programme Cadre for which the GON is currently seeking funding. As currently envisioned, this unit would fulfill a number of functions. Specifically it would:

- coordinate and monitor the MSE activities of different donors, NGOs and the GON;
- intervene with individual projects and donors to mobilize resources to support MSE development;
- conduct research on various approaches to micro-enterprise development in Niger; and
- organize conferences and workshops on issues of relevance to MSE promotion.

As presented in the Programme Cadre, the MSE Coordination Unit is envisioned as an independent donor-financed project with the MDICAT as the counterpart agency. Current plans call for the unit to be headed by an expatriate technical assistant with three national experts. The total estimated budget for the unit is estimated to be 393 million FCFA, with 70 million to be provided by the MDICAT and 321 from donors.

The advantage of placing technical assistance under this unit is that its mandate is broader than that of the typical donor project. This will give the technical assistants the freedom to enter into dialogue with their counterparts in other MSE projects all over Niger. In this way, they and USAID will be better able to keep track of broad trends in the MSE sector while remaining abreast of all donor activities. In addition as the primary monitoring and research body for MSE policy issues in Niger, this unit will play a key role in defining appropriate MSE policies and in publicizing specific issues with private sector participants, donors and the GON. By financing a large part of such a unit, USAID would also be "buying itself a place at the table" as a major donor in the MSE sector and even, perhaps, as the intellectual leader in the sector given the Coordination Unit's role as the lead MSE research body in Niger.

The Private Sector Coordination Committee

Particularly if USAID decides to fund the MSE Coordination Unit, together with active participation in the planned Private Sector Coordination Committee. This forum would present an ideal forum in which USAID, building on the research results of the Coordination Unit, could press other donors on such issues as:

- the sustainability of credit activities;
 - the advisability of selling technology rather than giving it away; and
 - the advisability of targeting MSE assistance towards individually owned MSEs in addition to collective ventures and towards existing MSEs, as well as start-up ventures.
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b. Recommendations for Promoting SME Development

(1) Finance and Management Training

Encourage other donors to focus SME credit and management training on businesses with strong links to the rural sector. To support its efforts to stimulate rural sector growth, USAID should encourage other donors active in promoting SMEs through credit and management training and focus a significant share of project resources on MSEs in such areas as agro-processing.

(2) Policy environment for SME development

USAID possesses two strong tools for influencing the policy environment for SME development:

- Non-Project Assistance (NPA) with which it can provide budgetary support to the GON to encourage specific policy changes in favor of SMEs; and

- Economic policy research capacity, primarily provided by the PASPE project, which can be used to furnish analysis and disseminate relevant research findings to create a greater awareness of the costs of policy constraints on SMEs.

Both of these tools should be mobilized to promote policy reforms which address the policy constraints highlighted above.

Illustrative Activity to Promote an Improved SME Policy Environment: Non-Project Assistance

Not all the policy issues highlighted in the section on SME policy constraints are appropriate candidates for NPA conditionality. Issues such as tax and land tenure reform involve complicated trade-offs between competing objectives. Furthermore, much of the information needed to select an appropriate policy course is lacking. For these issues, it is difficult to identify clear and realistic policy actions that can be agreed upon by a wide section of GON policymakers and stakeholders. Thus they are unlikely candidates for NPA conditionality.

Among the list of constraints to be addressed three issues stand out as appropriate candidates for NPA conditionality. These are:

Reform of labor market regulations. There is little reason to maintain the monopoly of the SMO on recruitment. The repeal of the regulations upholding the SMO's monopoly rights is a simple task which could be accompanied by its transformation into a simple recruitment clearing house where vacancies can be posted and job applicants can register in an attempt to improve the flow of information in the labor market. It is crucial, however, that there be no requirement that either employers or job applicants register with the SMO, as this service should be entirely voluntary. Besides the monopoly of the SMO, there is a clear need to liberalize the rules governing the dismissal of employees for economic reasons. It is crucial that employers have the ability to adjust their labor costs in relation to business prospects by laying-off personnel without applying for authorization from a public bureaucracy. Similarly, there is little justification for the requirement of authorizations for the use of overtime labor--which should be left to the discretion of individual employees and employers. Significant reforms in these three areas has the potential to greatly increase the attractiveness of investment in SMEs.

Eliminate the business licenses required of foreign-owned firms. There is little reason to require foreign investors to run a bureaucratic obstacle course to obtain an authorization to set-up their business. If there are specific sectors the GON does not want foreigners to operate in, it should establish special restriction for these and completely liberalize investment in all other sectors. The delays encountered by some firms and the conditional nature of the business license, in which an investor is not sure of his future rights to operate in the country, serve to discourage potential investors. Revising existing regulations to do away with business licenses for foreign firms is a simple policy measure to enact which entails no complicated implementation issues and is therefore a good candidate for NPA conditionality.

Abolish the *Guichet Unique* for international trade. There is little reason for the continued existence of the *Guichet Unique*. In effect, it is a disguised version of the export licenses and taxes that USAID has already fought successfully. It does little to promote international trade and its utility as a trade data collection point is virtually nil because of the small portion of international trade that it captures and the replication of responsibility with the customs service.

Illustrative Activity: Utilizing Economic Research To Promote Policy Reform

In Niger, where significant progress has been made toward developing an open political system in which policy issues are increasingly resolved in a democratic fashion and in which various groups, including labor unions, civil rights NGOs, women's groups and business associations, are becoming increasingly involved in policy discussions, promoting policies favorable to SMEs by working with stakeholders in the emerging civil society should be an important part of USAID's SO2 strategy. In particular, there is significant potential to promote reforms by linking the economic research and policy analysis capacities that are being developed under the PASPE project with civil society stakeholders who could use such analyses to develop advocacy strategies and lobby for policy reforms that are favorable to SMEs.

Unfortunately, although PASPE has brought in some private sector stakeholders to review research studies and has organized a limited number of conferences to disseminate research findings, it has made little progress in following-up policy research efforts with either civil society groups or the GON to draw conclusions and generate real impetus for policy reform. The main reason for this, which was noted in the PASPE mid-term evaluation, appears to be that the resident advisor and the rest of the PASPE staff are too burdened with administration and all the tasks associated with ensuring that sufficient progress is made on the PASPE Research Agenda. This leaves them little time to devote to research follow-up which could and should be oriented towards developing policy reform proposals from the longer research studies and seeking to involve various public and private groups in policy debates and lobbying activities.

Realistically, for PASPE to develop its capacity to provide more action-oriented follow-up to its policy research activities, there is a need for an additional expatriate technical assistant. The person would help the GON, private sector associations and NGOs develop concrete policy reform proposals as well as strategies for implementing them. Specific duties would include such tasks as:

- writing policy discussion papers on specific topics drawn from the PASPE Research Agenda and in response to requests from public and private sector stakeholders;
 - using PASPE research to jointly develop policy positions and advocacy materials with private sector stakeholders who are potential advocates of policy reforms to improve the business climate for SMEs;
 - working with private sector lobby groups to increase their capacity to use economic analysis as a lobbying tool, thereby increasing their ability to influence both government policy-makers and other private sector groups;
 - organize public policy discussion fora to promote a wider dissemination of PASPE research results; and
 - following-up PASPE research studies with GON officials to determine needs for subsequent analysis.
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E. Agricultural and Rural Enterprise Credit

1. Overview of the Financial Services Sector in Niger

The financial sector in Niger has formal, semi-formal and informal components. Popular confidence in financial institutions is very low. Since the end of 1992 savers have lost 28.2 billion FCFA in deposits from four failed banks. This partly explains the considerable surplus savings in the economy while bank deposit rates are low. Much of the rapid growth of the credit unions in the semi-formal sector may be attributed to pent up demand for savings institutions due to lack of confidence in the banking system.

The institutional capacity to provide financial services in Niger is very weak. Every other country in the Sahel has more than Niger's four commercial banks. Moreover, the banking systems in all other countries in the UMEOA region lend more for enterprise creation than these four banks. Most NGO's provide loans services either in cash or in-kind to their clients. The informal financial sector takes up the residual not met by formal and semi-formal institutions. It is the major provider of financial services in Niger. The informal sector is dynamic, offers many savings and loan services, operates with low transaction costs and is sustainable. It is not however an efficient form for moving surplus liquidity for production and transformation activities.

Good rainfall over the past two to three years, devaluation of the CFA, and the first steps toward liberalization appear to be creating positive real economic growth in Niger. Conservatism and lack of expertise in both banks and NGOs, indicate that without assistance, Nigerien financial institutions will not evolve fast enough to take advantage of these favorable conditions.

The recommendation is made that USAID continue to develop its three intermediation projects in the semi-formal sector. The projects have certain institutional weaknesses and insufficient funds to significantly impact growth in Niger's economy. The importance of the donor funds in these projects, however, is not to finance large-scale economic development, but to improve Niger's overall intermediation as the means to provide greater rural access to credit. This means semi-formal credit institutions must help mobilize assets in the formal banking system and informal savings systems. It will require:

- Transformation of the intermediaries themselves into efficient, well-run and sustainable organizations,
- Use the USAID projects to mobilize the \$0.66 bl. in excess liquidity in formal sector banks for loans in the semi and informal sectors,

- Improve enabling conditions, particularly labor and trade laws, commercial codes and enforceable of lender rights, and
- Use these intermediaries to establish the concept of useful intermediation in the informal sector in order to begin mobilization of its estimated \$1.1 bl. in liquid assets.

Self-sufficiency is an essential goal of USAID's three intermediation projects. They are designed to be catalysts for change, and consequently short-term losses can be expected - just as they occur in any start-up venture. But all three projects need and currently do not have business plans that specify loan volumes and spreads necessary to breakeven or marketing plans to be used to become sustainable. Specific strategies are needed, for example, to mobilize for loans the liquidity in the formal banking system and in the informal sector.

a. Formal Financial Institutions

Niger's formal financial sector includes administrative organizations such as the Ministry of Finance, the Central Bank and national regulatory authorities. It also includes credit delivery organizations such as commercial, savings, development and cooperative banks as well as insurance companies. All of these institutions are subject to formal regulation designed for banks and related institutions. Niger has four operating commercial banks, fewer than any other country in the Sahel.

Out of 18 banks and finance companies organized or in operation since 1978 only four banks and two finance companies still exist. The enabling environment for new business creation constrains demand for financial services. Policies and regulations concerning repossession and liquidation of borrower assets increase lending risk and therefore decreases banks' willingness to lend.

Currently, the three banks⁶⁵ that operate in the formal sector are:

- shell-shocked from the collapse of 12 financial institutions in this sector since the mid-1980's,
- Seriously burdened with excess loanable funds estimated at \$66 ml. due to (a) a recent Central Bank prohibition of use of such funds to purchase short-term securities denominated in foreign exchange⁶⁶, (b) limited investment

⁶⁵ A fourth bank, the BCN (Banque Commercial du Niger), which is joint Nigerien and Libyan owned was not contacted during this study. They are the smallest of the four banks and largely finance Libyo-Nigerien trade.

⁶⁶ In October of 1993 the BCEAO implemented a policy limiting the amount of funds member banks can invest in its regional money market window. This policy was implemented to encourage commercial banks in the F CFA zone to lend funds for private sector activities in the countries in which they operate.

opportunities in the formal sector arising from onerous government regulation, labor laws and a legal system that is biased against lender protection, and (c) a lack of knowledge and experience in lending to enterprises in the semi- and informal sectors.

These banks have functioned until recently as investment clubs for their major shareholders. At the end of 1993, for example, twenty BIAO clients held over 51% of all deposits. The three surviving banks lend a small percentage of their funds to finance trade, international corporate activities in Niger and public works projects. These loans are usually collateralized at over 100%. The few loans that are made to private sector enterprises that are almost exclusively for urban rather than rural activities.

The formal financial sector continues to be extremely cautious or unwilling to lend for micro-small or medium scale production and transformation activities. Banks lack the skills to assess, manage and recover on a rural micro and small scale enterprise portfolio. In addition, legal, regulatory and policy constraints, make it difficult for new businesses to start up, and for banks to secure loans on borrower assets. Lacking knowledge of how to lend in new markets, and facing a hostile environment in which to lend, banks are unprepared to expand their financing activities and, consequently have no need to mobilize savings.

The BCEAO's new rules have created excess liquidity estimated at 30 billion FCFA or \$60 ml. This amount is greater than all donor funded private sector credit activities combined. The solution is for banks either (a) to downsize by limiting their investment portfolios to the small set of fully collateralized loans to large traders and public works contractors, or (b) to expand and diversify their loan portfolios, perhaps sufficiently for them to induce them to attract more savings to finance an expanded lending portfolio.

All three banks have adopted the short-term risk averse strategy of down sizing. Two of them offer lower rates for long term savings than for short term accounts. The minimum balance required to maintain a commercial account in Niger is 50 times higher than among Malian banks. Commercial bank resources have been shrinking at a rate of about 10 billion FCFA or \$20 bl. per year since 1992. Most of this decrease was due to the closing of Balinex (6.5 billion cfa), Crédit du Niger (5.2 billion cfa) and a panic earlier this year at the BIAO (14 billion FCFA).

If donors want to see significant expansion in the financial sector, now is the time to promote bank financing of private sector enterprises. The commercial banks have a capacity perhaps only surpassed by the informal sector to finance a growing agricultural and MSE enterprise sector.⁶⁷

⁶⁷ Liquidity in the informal sector is higher than in the formal sector, but the structure of the informal sector makes it ineffective at financing production and transformation activities.

Subsequent discussion points out that formal sector funds could be mobilized through training, policy reform to improve the hostile lending environment and loan brokering and servicing provided by the semi-formal sector. The discussion also suggests that mobilization of informal sector funds is more complex since potential depositors do not trust financial institutions and the finance of transactions in this sector is usually not defined separately from the transactions being financed.

b. Semi-formal Financial Institutions

These institutions operate outside the purview of the formal banking authorities, but are sometimes licensed and supervised by other governmental agencies. They include credit unions, some rotating self-help savings and credit associations (such as tontines), private input suppliers and some buyer credit arrangements.

The better of the largely donor funded intermediaries are better able than banks to offer services to the geographically dispersed MSE and rural sectors. First, many of them have learned techniques to ensure high loan recovery rates. Second, a few have cost structures much lower than those of banks in the formal sector whose overhead includes relatively highly trained credit personnel. WOCCU, for example, is highly effective at mobilizing small savings. If its current growth rate continues, WOCCU will be competing with the commercial banks for deposits.

The semi-formal financial sector is highly dependent on donor funds. Most of its financial service organizations are not operationally self-sufficient and their lending rates and operating costs are highly subsidized. A number of them defend their approach by calling it a modified Grameen Bank strategy.⁶⁸

The USAID funded financial services projects and the EEC funded AFELEN project are exceptions. None of these projects have achieved operational self-sufficiency, but all four are striving towards that goal. At this point only the USAID funded WOCCU project is designed to achieve full financial self-sufficiency when a certain number of credit unions are created and share common costs. CARE/BRK and CLUSA/SICR are looking for subsidized loan funds which they in turn will on-lend to their clients. These two projects will require more guidance than they have had in the past to achieve self-sufficiency. The three USAID projects are discussed in more detail subsequently in this section.

⁶⁸ The Grameen Bank is more misunderstood than maligned. It has achieved operational self-sufficiency. It is not interested in achieving financial self-sufficiency, preferring rather to borrow funds from private sources at concessionary rates. This strategy is only as sustainable as the commitment of donors to continue to provide large sums at subsidized interest rates. For the Grameen Bank, beneficiary of the charismatic leadership of Muhammed Yunis, and situated in the most popular poorest of the poor countries in the world, this is a defensible strategy. The Sahel on the other hand, has benefitted neither from such a charismatic financial sector leader, nor from such devoted donor support. Thus achieving full self-sufficiency including the costs of capital is a more prudent strategy for Sahelian institutions than modelling themselves after the Grameen Bank.

c. The informal financial sector

The informal financial sector in Niger⁶⁹ is made up of individuals who are not subject to any regulation and who enter into transactions on the basis of personal relationships. This sector is considered to flourish in the absence of drought, but access to credit is very limited.

In the informal sector intermediation is very inefficient, even though liquidity is estimated at \$1.1 bl. Inefficiencies are due to (a) loans in the informal sector are highly dependent on personal relationships and (b) the condition that intermediation is frequently not a stand-alone activity conducted by third-parties, but is integrated into commercial transactions that are financed by one or more of the parties involved in the transaction. This process discourages growth of third-party intermediation, but provides creditors with some access to collateral in the absence of commercial codes and in the context of a legal environment that is considered to shelter borrowers from rightful claims of lenders.

Rural households tend to keep savings needed within three months in cash, but consider informal systems for longer term savings. Informal methods to save for three months or more include tontines, money keepers, livestock or other assets. Savings maintained for over three months tend to be placed in livestock. Livestock investments generally yield the highest return of all informal sector savings alternatives, except during droughts. During periods of drought the returns to livestock production fall, and households attempt to shift their savings out of animals and into cash or other more stable assets.

The informal system discourages third party intermediation that would derive profit from the spread between borrowing and lending rates. Payment for informal credit is not a distinct cost, but an implicit charge embodied in transactions of goods and services. Improved access to credit in rural areas requires promulgation of third party intermediation. Such intermediation, however, requires that charges for credit be explicitly separated from other terms of transactions in order for such intermediation to evolve into stand-alone business activity that can become self-sufficient, i.e., be amenable to business planning and realize profits. USAID efforts to improve rural access to credit should, therefore, attempt to transform a portion of informal credit into third party intermediation, and to improve the quality of this intermediation.

⁶⁹ The informal sector is described in earlier studies. See, for example, Graham, 1990 and Creevey et al., 1995.

d. Women's Access to Finance

Women are the principal victims of highly subsidized non-sustainable financial services. There is a growing body of evidence in Niger and elsewhere which suggests that women's economic activities are profitable, and that they are able to pay the full costs of obtaining financial services. Women are more likely to have access to funds priced at full cost than where significant subsidies are involved. [Kula 1995, Rhyne Otero 1993, Weidemann 1992].

Rather than working to lift whatever barriers to entry or constraints that may be gender based, many donors may offer women subsidized credit if they work in artificially created cooperatives. Neither the cooperative relationships nor the credit is sustainable. Women unfortunate enough to participate in these groups tend to be marginalized rather than be supported in their attempts to create new businesses. Moreover, they are sometimes lured by relatively lower priced credit that requires their purchase of very high priced inputs.⁷⁰

From 1989 to 1991, CLUSA spent considerable energy trying to convince male village leaders that the women in their villages should be included in loans to members. The success rate at these efforts was close to zero [Silcox and Kao 1993]. When the interest rates were raised from 11% to an effective 16.6%-17.5% and loans were clearly not gifts the problem of marketing to women ceased to exist. Men actively rationed credit when it was subsidized and a privilege. When the costs of credit and collateral requirements rose, women had free access to loans. In 1995, women's groups represented 38% of CLUSA/SICR clients, and 34% of current loans.

2. Adequacy of Niger's Financial Assets for Growth

Economic growth has accelerated during the last two years, and liquidity in the financial sector could help maintain this growth. In 1994 official estimates of growth in the agricultural sector were between 8 and 8.5 percent. While much of this growth was due to a high rainfall year, and is probably an underestimate of actual growth, it could continue if households shift more of their resources into higher return activities. Dramatic and continued increases in lending are likely to be required to accomplish this shift.

Liquidity in the formal and semi-formal sectors is estimated at \$66 ml. and \$100 ml., respectively. Liquidity in the informal sector is subsequently estimated at \$1.1

⁷⁰ The cost of subsidized credit needs further research. If borrowers receive subsidized credit in kind for input purchases and are therefore unable to purchase those inputs where they are cheapest, the non-interest costs of these transactions may be enormous. For example, a GTZ project lent funds for the acquisition of small carts which GTZ commissioned and provided. While loan rates were cheap, the carts cost twice their value in local markets.

billion. This liquidity, if mobilized into loanable funds is perhaps sufficient to finance a rate of economic growth in excess of population growth.

The informal sector is functionally less capable of intermediation than the formal and semi-formal sectors even though it possesses the bulk of potentially loanable assets in Niger. Most of its liquidity is hidden in household coffers or invested in livestock or other assets. Asset immobility is attributable to a lack of confidence in the few existing financial institutions and their remoteness from rural areas. Moreover, and as noted earlier, intermediation is not a distinct, third-party activity and, consequently, it is not a stand-alone business activity.

Less than five percent of the population of Niger is considered to have access to formal or semi-formal savings facilities, while less than two percent have access to loans. Positive growth in real per capita income would require either a ten fold increase in donor funds for semi-formal lending to rural and MSE activities⁷¹ or a significant mobilization of formal and informal sector liquidity for productive activities. It is unlikely that the former will occur, so regardless of the obstacles, mobilization of formal and informal assets for rural use is the only viable strategy. Brokering formal sector liquidity to semi- and informal enterprises and long-term demonstrations of intermediation in the informal sector are two ways that USAID's credit projects can promote this strategy.

3. USAID's Financial Service Projects

The informal sector provides nearly all (both in number and volume) financial services to agribusiness in Niger. Nevertheless, six donor funded semi-formal institutions do provide services to agribusiness. They are (a) AFALEN, an EEC funded credit project organized to fund small and medium scale enterprises (b) a loan program sponsored by the Caisse Francaise de Development (CFD) - the French government development agency, (c) Matu Masu Dubara, a women's tontine project funded by the Norwegians, (d) Bankin Raya Karkara (BRK) supported by CARE, (e) the Service d'Intermediation en Credit Rural (SICR) developed by CLUSA and (f) the Caisses Populaires d'Epargne et de Credit (CPEC) being managed by WOCCU. The last three projects are funded by USAID.

Each of the three USAID projects takes a different approach to offering financial services, and despite some major problems, each still has the possibility of becoming operationally self-sufficient in the next few years. The WOCCU/CPEC project uses the WOCCU credit union approach. CLUSA/SICR operates as a rural loan brokerage service, and CARE/BRK operates much like a finance company.

⁷¹ A tenfold increase in clients of formal and semi-formal financial institutions is an arbitrarily selected figure. A tenfold increase would mean that 50% of the population would have access to savings services and 20% of the population access to credit. Assuming that the majority of this increase would take place in the most productive regions of the country, this expansion is likely to sustain growth.

USAID is not the largest donor in the field of enterprise finance but it is the recognized leader in promoting sustainable financial institutions. It is recommended that AID/Niger take a more active role in disseminating techniques and principles from successful microenterprise institutions elsewhere in the world. USAID/Niger should pay particular attention to ensure that the CLUSA/SICR and the CARE/BRK projects have access to the technologies and technical assistance needed become operationally self-sufficient and ultimately sustainable.

The credit unions in the WOCCU project only lend members deposits. Thus each credit union pays the full costs of funds lent at "real market" rates. WOCCU has developed an approach that it uses worldwide, and which includes an established monitoring and information system. WOCCU has already organized more new credit unions than its project goals require. WOCCU's approach involves high training and monitoring costs which are highly subsidized during the early stages of new projects. This subsidy continues until the a sufficient number of credit union are organized to support the costs of maintaining a central lending facility, and a central federation that can assume the monitoring and evaluation costs of credit union regulation.

USAID's second project, the CLUSA/SICR project, has brokered loans between one or more commercial banks and rural cooperative organizations since 1985. It is the only one of USAID's three projects that specializes in on-lending funds from banks in Niger's formal sector. It does so reluctantly, however, due partly to a desire to minimize interest costs to its member/borrowers. In this project, cooperative groups act as financial service retailers. They borrow funds for on-lending from banks which act as wholesalers. CLUSA/SICR has a repayment rate of over 90% at 90 days past due for three years, making it one of the best performing financial service projects in Niger. Due in part to unwillingness of banks in the formal sector to expand credit to the project, CLUSA/SICR may reorganize itself as a finance company.

USAID's CARE/BRK project, is the most problematic of its three projects. It supports microenterprise development through access to credit and training. It lacks an MIS system, adequate internal accounting controls, and an adequately trained staff. It is likely to lose 250 million FCFA in bad debt write-offs in 1995-96. Timely audits identified a financial crisis before the institution's funds were exhausted. It's new technical advisor comes from the Canadian credit union movement *Des jardins*, and appears capable of managing the project well. CARE/BRK does not know exactly how much it has lent out, nor how much it has recovered.

4. Constraints to Improved Delivery of Financial Services

As noted above, significant growth in the financial sector in Niger is impeded by institutional constraints and a hostile to enabling environment. These constraints can be summarized as:

a. Training Constraints

On the supply side, lack of training of commercial bank and NGO personnel severely constrains the ability of these institutions to offer services to rural small and microenterprises. Indications of the lack of trained credit staff include:

- The CARE/BRK project's difficulties during their rapid expansion phase are attributable to an inadequately trained credit staff,
- Inadequately trained CLUSA/SICR agents inhibit expansion of services to non-collective entities, and
- The Bank of Africa, and SONIBANK both cite a lack of trained personnel as a reason for their aversion to developing or expanding a rural and MSE lending portfolio.

On the demand side, inadequately trained urban and rural populations limit demand for financial services. Serious expansion of financial services will require borrowers or borrowers representatives to be literate and numerate in at least a local language to enable effective communication with commercial bank and NGO credit officers.

b. Enabling Environment Constraints

Notwithstanding progress made towards liberalization and privatization, constraints to enterprise creation and enforcement of financial service contracts seriously impact both the supply and demand for financial services.

On the supply side, constraints include:

- Banks mistrust borrowers partly due to the complicated, time consuming and ineffective procedures for enforcing collateral contracts. These conditions dramatically raise the cost and risk of loans.
- Savers mistrust banks due to almost a decade of financial institution failure and high borrower default rates.
- a lack of adequately trained financial institution staff in the analysis of economic activities, and the expansion of financial services to rural and microenterprises.

On the demand side, the major constraints are:

- laws, regulations and abuses by government officials of licensing rules, raise the costs of starting up and operating a business in the

formal sector.⁷² This constraint continues to keep most enterprises both small and informal. Despite numerous strengths of semi and informal enterprises, constraints to formality are constraints to growth.

Of all these constraints, enhanced possibilities for recovery of assets associated with bad loans is perhaps the most essential way to improve the viability of financial intermediaries. The high cost of enforcing collateral contracts encourages certain borrowers to default. Defaulters know that lenders are unlikely to initiate contract enforcement procedures. Often the liquidation of collateral will not even equal enforcement and court costs. The BIAO, SONIBank and CLUSA/SICR have all incurred high costs of seizing and liquidating assets from defaulted borrowers. Factors contributing to this problem include:

- **BCEAO and GON rules assume usurious lenders and victimized borrowers.** Current laws specify interest rate ceilings, require governmental evaluation and authorization of all repossessions, forbid seizure of collateral critical to the livelihood of borrowers (i.e. land, machines and equipment if they are used as the principal means of earning income may not legally be used as collateral).
- **Borrowers are often able to slow court proceedings and prevent competitive bidding on liquidated assets.** Staff at one of the commercial banks reported that the time it takes to seize and liquidate an asset of a notable was two to five times as long as for a borrower with no political connections. When CLUSA tried to seize assets particularly a vehicle from the director of the USRC⁷³ in Zinder, the local magistrate notified the director 120 days in advance of CLUSA's intent to repossess. Not surprisingly the vehicle disappeared before it could be seized.
- **Government regulations excessively limit assets that can legally be used as collateral and, consequently, disqualify many of the assets of rural and micro enterprise borrowers.** Assets that Nigerian courts have refused to seize include cows, sheep, goats and land used to farm cash crops because farming is the principal income source of the borrower, and four sewing

⁷² Senegal and Mali have both recently revised section 47 of their Labor Codes, restricting the power of the Service de Main d'oeuvre, and the Inspection de Travail. As investors begin to finance enterprise creation in the region, they will place their plants in countries with the most favorable enabling environment. If Niger's policy makers are unable to be proactive, investors will focus on activities in other countries in the region

⁷³ Union Sous Regional de Cooperatives

machines because the borrower made his living sewing.⁷⁴ Court prevention of seizure of equipment or machinery that contributes to earning capacity of borrowers jeopardizes the likelihood and quality of loans to small and micro enterprises.

- **Exceedingly slow enforcement of collateral contracts.** The chief credit officer at BIAO reports that loan recovery through liquidation takes at least nine months from the day the bank initiates recovery procedures to the time the asset is liquidated. The BIAO has yet to obtain assets in a number of its accounts even though it commenced action more than a year ago.

c. Subsidized Credit

A number of NGO staff believe that subsidized credit is an essential strategy to stimulate demand for loans. They may also believe that loan rates sufficiently high to make intermediaries profitable would be usurious. Others see subsidized credit as a threat to the long-term viability of semi-formal intermediation and as an unwelcome barrier to women's access to credit.

Subsidized credit implies formulation of grant requests rather than business plans by donor funded intermediaries because loan growth with subsidized credit means that intermediaries experience increasing losses to their bottom line net incomes.

The solution may be actions that:

- Define breakeven and profitability implications of various loan volumes and interest rate spreads for each USAID project, then define a marketing plan and time schedule to reach sustainability,
- Improve the enabling environment to reduce loan risk and consequently intermediary costs,
- Increase rural confidence in intermediation, particularly on the demand side at first, to attract low cost deposits, to meet rural needs for a safe depository of liquid assets and, consequently, lower the cost of funds for intermediaries,
- Establish the concept of intermediation as a distinct business separate from commercial transactions in the informal sector. Establishment of this concept, together with reduction of lending risk through improvements in the enabling environment is likely to reveal a demand

⁷⁴ ABARCHI, Djibril 1995. *Les Relations Contractuelles en matière de crédit accordé par les structures financières semi-formelles*. Mission Française de Coopération et d'action culturelle, Niamey

for credit in the informal sector that is currently disguised as a component of other commercial transactions, and

- Mobilize the \$66 ml. in formal sector banks for demi- and informal loans.

These actions refocus the goal of USAID projects from short-term to long-term sustainability. Short-run losses in the USAID projects may be necessary in order to:

- Train project staff,
- Train the population that does not currently have access to credit about the potential depository safety and business of lending that financial intermediaries perform outside the informal sector, and
- Improve the enabling environment.

5. Supply and Demand for Financial Services

a. Overview

Donor capitalization of rural and microenterprise finance programs, is only justified where there is no excess liquidity in the economy or where the institutional obstacles to mobilizing that liquidity are too great to warrant efforts to mobilize it. Niger has excess liquidity, but undeveloped commercial codes that have contributed to bank failures and loss of confidence in financial institutions. It also has a chronic shortage of loan officers and other trained staff, particular staff with sufficient knowledge and experience to operate in the semi-formal and informal sectors.

Finally, Niger's informal sector combines intermediation with commercial transactions, partly as perhaps an ingenious means to protect funds loaned in Niger's hostile lending environment. Improvement of all of these conditions will require time, resources and perhaps jeopardize the viability of financial intermediaries that focus on the informal sector.

b. Interest Rate Response

In the currently oppressive enabling environment in Niger the impact of interest rates on the relationship between supply and demand for loans is unknown. The BIAO and AFELEN, for example, have a loan approval rate of 1 in 6 and 1 in 7, respectively. These ratios may be due to:

- A lack of bankable activities (suggests a need for economic growth and training),

- A lack of well-expressed lending projects (suggests a need for training),
- Bank officer inability to recognize good projects (suggests a need for training),
- An adverse lending environment that constrains banks to avoid all projects except those with certain characteristics that reduce bank risk (suggests a need for policy reform),
- A shortage of loanable funds at intermediaries accessible to more promising borrowers (suggests a need for mobilizing assets),
- A marginally unfavorable risk/reward relationship for many loans due to interest rate ceilings (suggests a need for more flexible interest rate policies).

More general conditions that complicate the relationship between financial institutions and their potential clients include:

- urban banks have excess liquidity but they are geographically inaccessible to potential borrowers in rural areas.
- Urban banks and potential clients in rural areas share a mutual distrust.
- Both urban banks and potential rural borrowers are unfamiliar with each other's methods of operation and requirements for doing business.
- At the same time, banks may perceive that the hostile lending environment creates capital risk through potential defaults in excess of potential earnings from interest income.

Analysis of the supply of loanable funds based on interest rate considerations is virtually meaningless until the risk of capital loss stops overpowering earnings prospects from interest on loans, as it does now for potential lenders and depositors. For lenders, an improved lending environment, trained bank staff who are experienced and successful in lending to rural borrowers are needed before bank management is likely to view rural loan prospects as reliable.

For rural depositors, an established record of reliable intermediation in rural areas is needed before interest rate considerations will attract rural savings. Currently, and as noted above, Nigeriens store savings as cash and in livestock. So long as the risk adjusted returns to livestock production are greater than those available for cash savings households tend to invest the bulk of their surplus in livestock

[Hopkins, 1993; 1995; Hopkins, Reardon 1993]. They save in cash what they plan to use in the short term and put the rest in livestock as long as the returns to livestock are higher than those from cash savings.

On the demand side, rural borrowers must continue to clarify the distinction between credit and other commercial transactions. They must also be trained to respond to lender requirements for business plans and timely repayment regimes.

Perhaps the best way to determine "market rates of interest" is to observe the interest rates at which women receive a substantial portion of loans granted. Subsequent discussion points out that when loans are available on concessionary terms, a rationing process occurs and this process is a barrier to female access to the loans.

(1) Suggestion for USAID strategy

A strategy for USAID to follow in this situation is (a) to continue its projects with training, outreach and sustainability objectives and (b) pressure for policy changes that will improve the lending environment. Use of externally supplied loanable funds can be justified as a means (a) to promote training, (b) to establish linkages between urban banks with excess liquidity and semi-formal institutions that have access to rural savers and borrowers, and (c) to teach the rural savers and borrowers to separate credit transactions from other commercial transactions.

This strategy is defensible even though donor loan funds are insufficient in themselves to have a significant impact on the economic growth. USAID's role is to promote growth of intermediation in order to improve rural access to credit. Its projects are strategically focused in the semi-formal sector. This is the juncture between the liquidity in the formal and informal sector. The formal sector has excess liquidity and a perhaps urgent need to expand its loan portfolios. At the same time it lacks the semi-formal sector's expertise on successful approaches to rural lending. The informal sector has liquidity, lacks trust in financial institutions. In addition, it blurs the distinction between credit and commercial transactions.

Hence, to mobilize rural savings, USAID's projects can help create depositor trust in semi-formal institutions. To help develop and meet rural demand for credit, USAID's projects can lend funds and perform other outreach activities to promulgate the distinction between intermediation and other transactions. Only as this distinction is established can rural demand for loans be distinguishable from commodity and other non-financial transactions.

The sensitivity of the supply and demand for funds to interest rates will change as lenders face a less hostile environment and as potential depositors gain confidence in intermediaries. As the danger of loss of capital from defaulting loans and deposits declines, both intermediaries and depositors are likely to be willing to do business at lower rates of interest.

As USAID's intermediation activities become successful, interest rate ceilings are likely to become less relevant. That is, intermediaries' profit margins, which are determined by the spread between deposit and lending rates and not the absolute level of rates, can widen as interest rates decline. That's exactly what happened in the US during at least the last three to five years.

USAID's projects are likely to lead to lower rates on savings deposits as confidence grows. Numerous studies on savings patterns in developing countries suggest that savers are completely indifferent to a broad range of interest rates, so long as their money is secure and accessible. Savers sometime accept negative rates of return for a secure and accessible place in which to save [Magill, Kula, Creevey et. al.]

Spreads between borrowing and lending rates, which reflect intermediary costs and profit, will increase in the short-run to improve intermediary balance sheets. Growing loan volume in the longer run will permit intermediaries to reduce their spreads and still maintain profit levels. Hence, efforts to improve depositor confidence can lower interest rates to borrowers, maintain or widen profit margins for lenders and, at the same time, help insure the sustainability of intermediaries.

The business plans of USAID's projects should specify expectations for net income growth for their businesses taking into account their internal costs, current spreads and current volumes of business. Salaries, commissions and other internal costs should be minimized to help insure sustainability. These plans should also estimate earnings growth that could result from increased volumes of business at a range of interest rates.

6. Supply of Savings in The Nigerien Economy

a. Informal Sector Savings

Sahelians do and must save in order to be prepared for future and inevitable droughts. Hopkins et. al [1993] estimate that Nigerien households save on average 6% of their annual income. Given that most Sahelian households expect a one to two year drought every ten years, households must save closer to 25% of their annual income. This larger figure has been anecdotally corroborated by CLUSA agents [Kula 1995].

Using the conservative savings rate of 6% of annual income and assuming zero debt at the end of the last major drought (87-88), savings can be estimated as:

$$(1) \text{ Population } \times \text{ Average Income Per Capita } \times (0.06) \times (7).$$

This equation estimates savings over seven years as an accumulation at zero interest rate of 6% of annual income per capita over seven years. Average annual income is estimated at \$290 (GDP/per capita). Under this approach, liquidity is estimated at \$1.1 billion, using the estimated population in 1994 as the average

population for all seven years. As noted above, the portion of these savings that are needed for short term expenditures during the next three months are held in cash. The remaining savings are likely to be held in cattle and other assets perceived to be convertible into cash.

b. Formal Sector Liquidity

In September 1993 liquidity, or bank deposits, in commercial banks was estimated at 44.4 billion FCFA (US\$ 88 million). A 25% allowance for reserves would mean that banks could lend \$66 ml. This \$66 ml. is far greater than the sum of all donor financed loan funds in the semi-formal sector. Yet it is a small percentage of the estimated \$1.1 bl. surplus in the informal sector.

c. USAID Strategy Revisited

The level of liquidity in Nigerien economy, estimated to total \$1.066 bl. in the formal and informal sectors, is far greater than the sum of donor contributions to finance rural, micro and SME activities through semi-formal financial institutions. This finding reinforces the suggestion that USAID attempt to achieve Strategic Objective 2 (SO2) by using its three credit projects to:

- Promote policy reform,
- Train staff and rural sector entrepreneurs in use of credit,
- Mobilize the \$66 ml. funds in the formal sector for rural loans through staff training and use of semi-formal projects to deliver rural financial services for their own accounts and for urban banks,
- Build rural confidence in donor projects as secure savings institutions,
- Separate intermediation from commercial transactions in the informal sector, and
- Maintain interest rates at sufficiently high levels so that credit is not rationed away from women, and
- Determine a business strategy that specifies loan volumes and spreads needed to achieve breakeven and profitability. Establish an internal cost structure that conserves capital before breakeven and provides staff incentives to achieve profitability.

d. Estimated Costs of Providing Credit

Not a single financial service project visited in Niger priced their loans as a function of the costs of providing those loans. A number of semi-formal institutions in

Niger claim to be charging "market rates of interest". Generally these rates range around 14%- 24%. Some are calculated on the declining balance, others on principal borrowed. Two important weaknesses of pricing loans at the "market price." are:

- The market for rural financial services is too limited to determine reliable rates for loanable funds. With 98% of the population having no access to loans and small numbers of NGOs providing credit at subsidized rates, competitive pressures do not exist⁷⁵.
- "Market price" in Niger now has little bearing on the actual cost of providing those loans. The actual cost of providing rural and MSE loans will eventually determine lending rates.
- None of the financial service projects visited has a sense of how to price their services in order to become operationally self-sufficient and ultimately sustainable. While several require clients to provide business plans not a single institution visited has such a plan. All three of the AID funded projects were aware of this problem and expressed a need for assistance in determining their actual costs.
- Costs that should be reflected in "market prices" of loans include the cost of capital, operating costs - including cost of ensuring prudent practices, and cost of bad debt losses.

Annex E contains a model to calculate the costs of providing loans.

e. Analysis of Demand for Credit

The future demand for loans is not estimated within the scope of this assignment. It is recognized that there are numerous production and transformation activities at the farm and microenterprise level that provide returns well above the cost of borrowed funds.

Separate analysis are needed of credit demand in the semi-formal and informal sectors because credit in the informal sector, is not normally delivered through third-party intermediation. As noted earlier, informal sector loans are usually extended partly on the basis of personal relationships and as a component of other commercial transactions.

⁷⁵ All the credit projects visited depend on significant subsidies either as subsidized loan funds, or operating cost subsidies . The WOCCU credit unions are operationally self-sufficient but continue to depend on subsidies for training, monitoring, and external control.

Among its benefits, this arrangement helps protect lenders from Niger's lack of enforceable contract laws. Among its disadvantages, this system precludes establishment of effective commodity markets because it limits third-party opportunities to compete for either of the two components of transaction, that is, extension of credit for transactions and purchase of commodities sold in transactions.

To the extent that this method of financing transactions exists in the informal sector, it tends to depress commodity prices. Hence, it reduces rural producers ability to pay for inputs. It suggests further that although the informal sector can be described as "vibrant, creative and sustainable", as it its earlier in this section, it is still be burdened by unchallenged barriers to development. Credit limitations summarize these barriers which are expressed:

- Earlier in this section as informal sector production of "unmeasured product equal to 200 percent of Niger's GDP,
- In the macroeconomic section as inefficient rural markets that are perhaps dominated by monopsonistic buyers, and
- In the marketing section as seed producers inability to sell seeds to farmers at a profit and to not produce seeds above certain minimal quantities without firm contracts.

Hence, the informal sector has both extensive savings that are immobile and reserved for disaster relief and a virtual lack of liquidity for transactions. Strategies need to be devised to extend credit to informal transactions. Creation and enforcement of well defined commercial codes, together with USAID efforts to extend its projects into this sector appear to be useful components of such strategies.

The semi-formal sector has the same problems but perhaps to a lesser extent because participants in this sector have begun to recognize intermediation as a third-party activity.

7. Case Studies of USAID's Three Semi-Formal Credit Projects

a. Maradi Microenterprise Development Project (CARE/BRK)

The Maradi Microenterprise Development Project currently operating as the Bankin Raya Karkera (BRK) in Maradi, Niger began in 1988 as part of USAID's Small Enterprise Activities Development Project. The second authorization is entering its last year. Committed to the creation of jobs through small enterprise employment, its agents have more difficulty making loans for enterprise creation, or working capital than for commerce.

CARE/BRK charges an interest rate of 18% of lent principal, on loans. BRK sporadically requires collateral but is not uniform in the collection, appraisal, or securing of that collateral. According to the current expatriate advisor, 80% of loans made by the BRK are for commerce. Detailed analysis of the CARE/BRK project can be found in audits conducted last year [Horus 1994, Tari 1995].

The CARE/BRK project is salvageable but it is a shambles. [IMCC paper with McCain, Rhyne and Christenson]. Independent audits suggest that almost half CARE/BRK's outstanding debt of 661.2 million FCFA is unrecoverable [Tari 1995]. CARE/BRK's current director is much more optimistic and expects to be able to recover two-thirds of their outstanding loans.

According to the most recent audit, these losses are attributable to:

- no system of internal control to track loans;
- no management information system (MIS);
- no system for writing off bad loans;
- no central management of individual loan portfolios;
- Inadequate training of loan officers;
- lack of supervision of individual agents;
- lack of uniform application of sanctions and controls;
- opportunities for loss and embezzlement due to an inadequate monitoring system.

These conditions are partly attributable to BRK's chronic lack of trained directors.

BRK is now under capable management committed to reviving its lending program. CARE/BRK has one billion FCFA in assets (including questionable ones) and almost 200 million FCFA in capital. CARE has developed a new management plan that will include an MIS system, internal and external controls, and better trained more professional staff. If the proposed reforms are followed, CARE can probably revive the BRK.

CARE has some difficulty with the Service de Main d'Oeuvre. It has ordered CARE to pay six million FCFA for attempting to fire staff. This is an example of the hostile regulatory environment that USAID should help to improve for all enterprises.

The BRK is a project owned by the GON, implemented by CARE and financed by USAID. A case could and should be made that any judgments against the BRK are the responsibility of the GON. If the GON were held co-responsible for judgments against an implementing NGO, there are two possible outcomes. The first is that these ridiculously large judgments would stop; the second is that the GON would be more supportive of sanctioning the Service de Main d' Oeuvre, and the civil courts.⁷⁶

b. CLUSA/SICR

The CLUSA/SICR (Service D'intermediation En Crédit Rural) project operates as a broker between commercial banks in Niger and rural cooperative organizations. The cooperative groups act as retailers of loans to their individual members. This arrangement enables members of the cooperative group to access much smaller loans than the banks could make directly. It also enables banks to make loans for rural and MSE activities at a lower cost than they could alone.⁷⁷ The cooperative groups have a legally recognized status as a co-signer of the loans and can therefore be held liable for any defaults.

CLUSA has the best performance of the three USAID funded rural financial service projects in terms of both loan generation and recovery. CLUSA/SICR charges a service fee of 2% of each loan. Since cooperative groups are required to co-finance 25% of all loans, the actual service fee ranges from 2.7% to 3.5%. The major strengths of the CLUSA/SICR program are its high recovery rate and transparent management. From 1991 to 1994 the recovery rate on bank loans managed by CLUSA exceeded 94% at ninety days [BIAO 1995]. In 1992 and 1993 this rate surpassed 95%. In 1993, loan recovery at 90 days was 97.3%. Encouraged by high recovery rates, SICR made several very large loans (4 totaling 80 million FCFA) to groups in the same area. These four loans defaulted.⁷⁸

⁷⁶ Mali and Senegal have already passed laws limiting the powers of the Service de Main d'Oeuvre, making it much easier for employers to hire and fire as they chose.

⁷⁷ SICR has a lower operating cost structure than the banks. They have a staff trained in assembling and monitoring a rural and MSE loan portfolio. SICR staff has a better sense of the economic activities being financed and of means to collateralize rural loans that would not be acceptable to commercial banks. For a more detailed discussion of how the SICR is able to assemble, manage and recover a rural and MSE loan portfolio for less cost than the commercial banks see [Kula 1995].

⁷⁸ There are differences of opinion as to why these loans defaulted. CLUSA/SICR's former national director, who approved the loan, attributes the default to poor follow-up. The current director correctly recognizes that any single loan representing 25% of the total loan portfolio presents a serious risk to the integrity of the total portfolio. In discussing the situation with SICR agents, it seems clear that both are right.

Because they represented almost 25% of CLUSA's total portfolio, they have had a disastrous impact on the overall recovery rate for 1994 (87.9%).⁷⁹

In place since 1991, CLUSA's SICR has earned a solid reputation with the commercial banks as an institution capable both managing and reporting on a rural and MSE loan portfolio. Unfortunately the historic disinterest of the banking sector in rural, or small clients has made it difficult for the SICR to capitalize on its good reputation.⁸⁰

While the SICR has clear strengths, it has failed to set up policies needed to increase revenues and to lessen its dependence on its capital endowment which is used to cover operating costs and loan guarantees. Depending on growth projections, CLUSA/SICR needs to be charging a 6.5-7.5% loan management fee before it can begin to cover its operating costs let alone, build capital (see annex E). Moreover, like BRK staff, SICR management needs more frequent and ongoing training. Training is needed in risk analysis, marketing, cost containment, loan follow-up and recovery.

CLUSA/SICR has a policy of compensating its agents based on loan recovery at a flat rate that fails to take into consideration, timeliness of repayment, risk exposure of individual loans and the size distribution of those loans. SICR has high delinquencies from zero to ninety days. Agents have been quick to expand their portfolios to make larger loans that increase risk to the overall portfolio. They have no financial incentive to recover unpaid loans once they achieve a minimum repayment rate. A multi-tiered incentive system is needed to motivate performance.

CLUSA/SICR's MIS system enables it to monitor loans, but is ineffective at tracking costs. This makes it impossible for SICR management to increase efficiency in controlling costs, or monitoring costs against revenues. CLUSA management does not have accessible information to calculate what percentage of their operating costs, administrative costs and total costs are covered by their fees. There are no periodic balance sheets and income statements, and consequently the management value of these instruments is unexploited.

SICR has several important operational conflicts. First, SICR is operated by a collective, *Kokari*, which is designated to manage the Service at the end of USAID funding. *Kokari* is effective at managing its loan portfolio and protecting its

⁷⁹ Information comes from CLUSA internal MIS documents furnished on request.

⁸⁰ In many areas, Niger and its institutions should not be held to the way things have been. Unique opportunities exist for the strengthening and expansion of existing financial institutions to support real economic growth. Devaluation, liberalization and BCEAO reform all support greater opportunities for improved financial services.

interests. Its staff, however, have no management expertise. Recently Kokari members suggested that the SICR drop its performance commission and return to paying straight salaries without the commission. While there is no indication that the current technical director would consider such a move, the proposition is indicative of the types of management-labor-client conflicts typical of organizations. These conflicts are why there must be a separation between management and staff. CLUSA/SICR continues to speak as if KOKARI will soon take over the management functions of the project. This would be a mistake.

Second, there is a conflict about treatment of SICR' clients, who are both banks supplying funds for lending and cooperative groups that receive SICR's loans. CLUSA/Niger has always been committed to helping cooperative organizations, not banks. Historical frustration with bank unwillingness to lend to cooperatives has reinforced the idea with SICR management that the banks are the "bad guys." Yet the three major commercial banks in Niger⁸¹ have suggested that they need an intermediary institution to lend to rural and MSE borrowers. The best way to serve rural and cooperative groups is to make it easier, safer and more reliable for financial institutions to lend to these groups. By contrast, most SICR credit agents are indifferent whether a loan is paid off on time or three months late. Moreover, SICR's policy of setting fees is based the mistaken perception that the cooperative groups cannot afford to pay sufficient fees to cover operating costs. Management should institute policies to insure that loans remain current and that fee structures cover operating costs.

The major advantage of the SICR as a credit matchmaker is that it can exploit its comparative advantage of assembling, monitoring and collecting on loans without undertaking the risks and costs of safeguarding funds. A major criticism leveled at NGO's that are credit matchmakers is the conflicts of interest about whom the organization should serve.⁸² This criticism holds for the SICR.

CLUSA/SICR is currently researching the possibility of either abandoning the matchmaker idea to become an *établissement financier*, that is, a finance company or combining the functions of both matchmakers and finance companies. This exploration is largely motivated by frustration at commercial bank reticence to lend for rural and/or MSE activity. It is not at all clear that the commercial banks will ever be committed to a serious expansion of financial services outside the urban and industrial sectors.⁸³ Considerable enabling environment constraints continue to limit banks' willingness to lend for rural and MSE activities. The downside of

⁸¹ A fourth bank, the *Banque Commerciale du Niger*, is Libyan owned as noted above.

⁸² Conflict of interest as a problem in NGO credit matchmakers has been cited by Elisabeth Rhyne, USAID, Global Bureau, and Matt Gamser, Director of the GEMINI Project.

⁸³ These are excess liquidity, and reduced opportunity to invest in international money markets.

moving from loan broker to finance company status, however, is illustrated by BRK.

While the BRK has many weaknesses, its biggest problem is an absence of a system of financial controls, which SIRC has access to through the banks it serves. The costs of establishing all of the internal and external controls necessary to reduce and insure against the risk of loss of funds to disaster, poor loans, poor follow-up on good loans, loss of funds in transit, theft and embezzlement, are much higher than SIRC management realizes. Christenson (1993) estimated that the costs to an NGO of safeguarding capital can be as high as 50% of the cost of funds lent.

If the SIRC decides to become an *établissement financier* it will need assistance in designing, costing and putting into place essential safeguards. This assistance requires both local and expatriate experience. An ideal consulting team would consist of three individuals:

- an expatriate financial controller with experience in small enterprise and rural banking services;
- a local insurance representative who could assist SIRC in establishing structures under which a local company would be willing to insure the new *établissement financier*, and;
- a local legal expert.

The above technical assistance should be part of an overall assistance strategy to CLUSA to:

- Identify financial objectives that can be measured in terms of outreach, returns to equity and capital, loan volume and IRR;
- Set a fee or interest rate structure that will enable CLUSA to realize the above objectives;
- Design and implement a structure and a management information system (MIS) appropriate to the institution and its objectives, and;
- train management and staff so that they can grow and respond to market demand.

USAID should be cautious in sanctioning the mobilization of cooperative members' funds for the creation of finance companies, before the above has been achieved, or while AID is still an active partner. AID lends credibility to its implementing organizations, and should not serve as an incentive for borrowers and investors to

put their funds in an institution that may not have the controls in place to ensure the safety of those funds.

c. WOCCU

USAID supports the development of a credit union movement in Niger through the Niger Credit Union Development Project II carried out by WOCCU. The first phase of the project began operating in Niger in 1989. One of three rural and MSE financial service projects financed by USAID, WOCCU has grown at more than 100% per year since 1990.

The current project has four objectives.

- Provide training in credit unions philosophy and operating principles;
- Insure safety and soundness of member deposits through operating management practices;
- Help build a critical mass of credit unions essential for the development of a central financial clearing facility for credit unions and a national service organization and;
- Obtain an appropriate legal and regulatory framework for credit unions in Niger.

The biggest criticism of the WOCCU approach is the large up-front investments necessary to accomplish the first three of the above objectives. While the up front investments in training and human capital development are high, the results in Niger look promising.

Credit unions charge 2% per month on a declining balance for outstanding loans and do not pay interest on deposits. Most credit unions are required to be in existence for one year before they can make any loans. First-time borrowers can only borrow an amount guaranteed by their own funds or those of a cosigner. As members establish a credit history, they are slowly able to borrow amounts greater than those secured by funds.

Total member assets of 50 credit unions in Niger as of June 1995 were more than 210 million FCFA. Member deposits totaled 157 million FCFA, outstanding loans to credit union members were 73 million FCFA. The average liquidity per member (excess liquidity ÷ number of credit union members) is 15,000 FCFA. Excess liquidity stands at 110 million FCFA.

WOCCU has already surpassed most of its end of project indicators for project success. Number of credit unions organized, number of credit union members, total assets, and member deposits are all well above project targets [WOCCU

Progress Report June 1995]. Outstanding loans ÷ deposits are only at 60% of targeted levels but this is largely due to the large number of new credit unions that have not yet begun to make loans.

Return on assets (ROA), number of training courses and number of people trained are only one-third of end of project indicators. Return on capital is low in part because of assets of new credit unions that earn no return. A crisis of confidence in the banking sector has resulted in a 67% increase in credit unions deposits.⁸⁴ As credit unions move more of these funds into both loans and savings in one or more of the commercial banks ROA will improve.

Failing to meet training objectives is not a serious problem in the short term. However, WOCCU should be careful that the movement does not grow faster than its directors can be adequately trained and its members sensitized to the hows and whys of sound credit union management.

USAID has financed several studies to learn how appropriate credit unions are as a tool to finance the development rural and MSE economic activity. Most credit union movements do very little to track members' economic activity that is clearly more of a donor concern than it is for credit union managers. Credit unions lend to members based on their character. Credit unions spend very little time or money evaluating the capacity of a member's activity to generate funds needed to pay back a loan. The credit union motto concerning lending is, "A good loan is one paid back."

Credit unions could provide a valuable service to their members and valuable information to the donor by helping members' determine the profitability of activities financed before granting loans. As loan size and competition increase in various production and transformation activities, **capacity** to repay will become a more important characteristic of borrowers.

Members of the research team for this study noted in a visit to the credit union of Saé Saboua that WOCCU has higher collateral requirements than SIRC. The village of Saé Saboua participates in both the CLUSA/SICR and the WOCCU programs. SICR and WOCCU require loan collateral of 25 and 40 percent, respectively. Several credit union members interviewed use the credit union to build up savings to co-finance their loan request, and a number use their credit union account to collateralize their loans.

⁸⁴ A recent crisis within the BIAO system in Africa due to a bank failure in Zimbabwe sent shock waves throughout the Meridian/BIAO system. There was never any indication that the BIAO in Niger was in difficulty. This crisis of confidence was worsened when the president of Niger encouraged the population to withdraw their funds from the BIAO. The president of Niger happens to be a significant shareholder in the competing SONIBank. The BIAO is under new management and the temporary crisis appears to be resolved.

The big question for the future of the credit union movement in Niger concerns the establishment of a central lending facility and a national training and monitoring service facility. Member confidence in their individual credit unions is high, but this confidence may not extend to a central facility, particularly after the departure of donor support.

The growth in the credit union movement, and its ability to attract deposits,⁸⁵ suggests that the credit union is an important tool in financing growth in the rural and MSE sectors. USAID should continue to support the credit union movement at least through the initial phases of the central finance facility, and national service center.

8. Other donor funded Semi-formal Financial institutions

There are about two dozen donor-funded micro or rural financial service activities managed by half as many donors. None of them stand out as innovative in their techniques or committed to sustainable delivery of services. Moreover, the group does not share a common set of operating principals or goals that include sustainability. Many do not plan to become sustainable. Of those that do, most are not subject to operating practices that will lead to self-sufficiency. All operate with significant subsidies. The best experience subsidized capital but not operating costs.

Donors have budgeted a remarkable sum of funds for semi-formal financial institution development. Jean Thompson (1994) estimates potential supply of funds at 35 billion FCFA. She overestimates, however, the level of available credit funds in the semi-formal sector by counting total budgets and not loanable funds or outstanding loans. Interviews with AFELEN, and the major donors, which include the Caisse Francaise du Development, PNUD, GTZ and USAID suggest that total loanable funds for small, medium and microenterprise activities at closer to 15 million dollars or 7.5 bl. FCFA.

One of the more promising initiatives among the semi-formal financial institutions is AFELEN (*Agence de Financement et d'Encouragement de la Libre Entreprise au Niger*). Its clients are mainly small and medium sized enterprises. It offers loans at rates that could cover its subsidized cost of capital and operational expenses if loan volumes were expanded. Their transaction's costs are high. Their dossier rejection rate is almost 90%. In their first year of operation, AFELEN financed 60 loans for a total of 1.9 billion CFA.

Many NGO projects link financial services to other transactions or desired behaviors. Projects finance the in-kind sale of motor pumps, carts, and wells.

⁸⁵ At current growth rates, credit unions deposits in two years will exceed the total amount lent by both the SICR and the BRK in 1993

Others give loans for limited activities if the participant agrees to plant trees or undertake some NRM activity. These systems have high hidden costs and are not sustainable. In all cases reviewed, in-kind credit cost the borrower more than if the credit was purchased on the open market [GTZ, Projet Tarka, FED].

Several of the semi-formal financial institutions visited, operate under the condescending assumption that people in the Sahel have nothing and therefore no knowledge of how to manage anything. Based on these assumptions, assistance must be based first on giving people something (cheap credit) and then either managing it for them, or teaching them how to manage it. The form these activities takes is to grant low interest loans, generally with no collateral or co-financing required, and then to require that payments to exceed loan amortization rates in order to create a forced savings account. The practice of forced savings should be abandoned because evidence from this study suggests that the average Nigerien saves a higher percentage of her or his income than their European or American counterpart. The practice of not requiring any investment by the operator is just bad business.

Semi-formal financial services that lack a commitment to cost recovery and eventual sustainability are beginning to undermine those that do. Both in the Rural Financial Institutions study [Creevey et. al. 1995], and in this study, instances were observed where participants in one credit project declined to join a credit union or borrow from CLUSA of CARE because they had access to subsidized loans with another project.⁸⁶

Most of the semi-formal financial service projects have no idea what it costs them to deliver loans. Many claim to charge market interest rates. In reality, there is no market for financial services for most rural micro and small scale enterprises. In the absence of a market, the term market interest rate becomes irrelevant. In order to build sustainable institutions out of the array of semi-formal institutions, loans will have to be priced at what it costs the institutions to deliver them. The inefficient will eventually drop out and those that remain will lend at rates that cover costs.

USAID has two roles in working with other donors' credit projects. First, as a recognized leader in the field of building durable financial service institutions, USAID can apply lessons learned worldwide to its credit projects in Niger. While a number of donors are not yet convinced that sustainable institutional development is important, many if not most are interested in how they can more effectively manage their resources.

⁸⁶ The example cited is of members of a CARE/women's tontine project, who declined interest in the BRK loan program.

Second, USAID can ensure with other donors that credit projects whose objectives are in conflict do not undermine each other. USAID in collaboration with the CEE, GTZ and the French need to agree to let the services focused on sustainable delivery of services operate in the most economically viable regions relegating the high subsidy programs to those areas where an argument can legitimately be made that people are so destitute that it does not pay to try to build sustainable institutions there.

9. Conclusions [Babu riba, babu bashé (No profit, no credit) Hausa]

Real per capita economic growth in Niger appears achievable. It is difficult to imagine, however, real economic growth without substantially improved access to capital for large numbers of Nigerien rural small and microenterprise operators. The total of private sector financing is difficult to estimate, but does not exceed 32 billion FCFA or \$64 ml. Per capita, this amounts to less than 3,500 FCFA or US\$ 7.00 per capita. Total loans for micro, small and medium-scale enterprises are less than 6 billion FCFA or \$12 ml. This amounts to less than US\$ 2 per capita. Today, less than 2% of the population of Niger receives financial services from formal or semi-formal institutions.

While insufficient funds are available to finance economic growth, there is an extremely large surplus of savings in the economy. Most of this savings is in the informal sector largely invested in livestock, but close to US\$ 200 million is kept in cash. Without a major increase in access to financial services it is difficult to see how real economic growth will be financed. The appropriate donor strategy is to alleviate the constraints to the mobilization of this indigenous liquidity for productive use.

The following section summarizes conclusions about the status of the financial sector in Niger in as of September 1995.

a. Likelihood of formal sector bank participation

Likelihood of formal sector bank participation in on-lending to semi and informal sector enterprises is unknown, but could contribute \$66 ml. in loanable funds and help reform commercial codes in favor of lenders. Large scale commerce (mainly imports), mining and a very small number of large industrial firms (beverage, petroleum, and energy) plus government construction contracts made up 77% of all bank lending in 1993. All of these loans tend to be fully collateralized or externally guaranteed. Bank liquidity totals \$66 ml. as noted above in the discussion of formal sector financial intermediaries.

The banks are currently unable to assess or manage the risk associated with a micro, small and medium enterprise portfolio. What is more important, they would rather not learn. If one or more of the commercial banks decides in the future to lend to small and rural enterprises, they will need to work through an institutional

intermediary better suited to evaluate the creditworthiness of proposed loan projects.⁸⁷

b. Plans for self-sufficiency for donor-funded projects

Most donor funded financial service projects lack plans to achieve operational self sufficiency, and ultimately, profitability and growth. Most of the donor projects providing financial services to the private sector, are based on a fatigued model of dependence on subsidized donor funds. The better of them have adopted procedures that ensure strong recovery rates, and/or fees that cover most operating costs.

Intermediaries usually have major recovery problems, poor record keeping, fees insufficient to cover costs, subsidize loans, inadequately trained credit agents, and no viable plan to expand services or outreach, independent of donor subsidies.

Of the USAID funded projects financial service projects only WOCCU stands out as having a clear vision of the future, high recovery rates, strong training, positive and almost exponential growth. WOCCU depends on member savings borrowed at 0% interest, but reliable and safe depositories are recognized as a valuable alternative to livestock and other informal stores of value. WOCCU also requires substantially higher training subsidies than either of the other AID funded projects, but these will decline as the number of credit unions becomes sufficiently large to finance centralized training and monitoring services.

CLUSA/SICR has most of the elements of a strong credit program with greatly reduced risk of loss agency principal because they manage loans for the commercial banks rather than lend their own assets. CLUSA/SICR is currently developing a plan for becoming a licensed finance company and operate at a profit for its owner/members. But it appears to be driven more by ideals than by financial principles. The CARE/BRK project is currently in the worst shape of the three and in the absence of donor support and monitoring, it would become insolvent immediately.

On the other hand CARE/BRK's current technical advisor is aware of the problems, and has developed a program to address them. If both CLUSA/SICR and CARE/BRK commit to implementing sound credit management principles, both have a good chance of becoming operationally self-sufficient in the next two years. CLUSA/SICR could reach operational self-sufficiency in the next year. AFELEN has considerable potential to serve the SME sector, but it is growing exceptionally slowly and its loans are subsidized.

⁸⁷ Representatives of the BOA, BIAO, and the SONIBank all articulated this position.

If the donor funded semi-formal financial activities are to have any impact on overall economic growth in Niger, it is absolutely essential that they become, first, operationally self-sufficient, and then institutionally independent of limited donor resources. The only proven way of achieving this is for these institutions to begin earning returns sufficient to attract savings and or investment capital.

c. Potential in the semi-formal financial sector

Potential exists in the semi-formal financial sector, to improve operations and achieve outreach.

The only way to realize AID/Niger targets by 2002 is for WOCCU, BRK and SICR to (a) cover all operating costs out of invested capital and equity, (b) set fees high enough to attract savings or investment capital sufficient to displace donor contributions; and (c) expand services to reach 10% of the Nigerien population in the next decade.

d. Excess liquidity in the informal sector

Excess liquidity is also found in the informal sector. Considerable savings is occurring at negative rates of interest indicating a positive demand for savings services. Almost all households save, liquid savings are either kept at home for emergencies or with *gardes-monnei*, and *tontines*. None of these forms offer any returns to the saver other than the services of accessibility and security. The willingness to accept a negative return on short term savings indicates provision of a useful service.

The considerable savings held in the form of livestock and buildings could perhaps provide higher economic returns invested in light production and transformation activities. Estimates of cash savings in the economy in the informal sector are between 90-180 million dollars, and estimates made above suggest that informal savings in both cash and cattle totals \$1.1 bl. WOCCU reports that the demand for a reliable institution in which to save is very high in rural areas. The WOCCU project in Niger has six times as many savers as borrowers with an surplus savings of 15,000 FCFA per member.

e. The informal sector will continue as a major source of finance

The informal sector will continue to be the major source of rural and agricultural finance. The informal sector is estimated to produce 200% of Niger's measured GDP. Most of the financial flows in this sector are also from informal sources, though commercial banks do supply very limited funds to the sector. The highly personal nature of informal financial services, unfortunately, makes it impossible to allocate these resources based on the potential returns of a proposed activity. Most of the informal sector financial services are linked to commerce and trade and little capital is available for transformation and production.

f. Informal financial sector decline as semi-formal institutions become viable

The role of the informal financial sector will shrink as the semi-formal institutions in Niger become viable. Complementarity exists between the informal and the semi- and formal sector institutions. The informal sector finances the residual set of activities thought of as too risky for the formal sector. In Niger this is most economic activity. As the semi-formal institutions grow both in outreach and profits in Niger, it is likely that even the banking sector will begin to get more involved. As semi- and formal sector institutions mobilize investments and savings out of the informal systems to finance transformation and production, the surplus in the informal sector will diminish. Until that time the informal sector will continue to take up most of the slack.

g. Constraints to small and medium enterprise investment

The most significant constraints to increased investment in small and medium enterprises is the lack of viable economic activities to finance. Much of the lack of bankable activities is due public sector obstacles to the creation and operation of formal sector enterprises.

Almost every financial service project contacted, remarked on the "manque d'esprit initiative", in the context of explaining the lack of bankable dossiers to finance. At the same time the courageous few who have attempted to operate small to medium sized enterprises complain of a hostile regulatory environment that requires authorizations and ceding of control of hiring and firing and other functions that are the domain of business management. The most outrageous of these offenders is the Inspection de Travail, and the civil courts that back them. Today the abuses of the Inspection de Travail make it virtually impossible for a firm to recruit and fire based on competence or other performance criteria. Required authorizations from SNE and NIGELEC for the installation of private water sources and electric generating capacity also serve to discourage the creation of private firms.

h. Constraints to increased investment in microenterprises

The major constraints to increased investment in microenterprises are the lack of extensive outreach of financial service projects, and a formal financial sector disinterest in rural, micro and informal sector enterprises.

A complete disinterest on the part of commercial banks in rural and MSE financial services coupled with a lack of deposit gathering ability of all semi-formal institutions except WOCCU has limited loanable funds to MSEs. The challenge for financial institutional development is (a) to mobilize surplus capital, (b) to find bankable projects to finance, and (c) to achieve profitability and grow.

i. Ill effects of subsidized credit

Subsidized credit has been and continues to undermine the establishment of sustainable financial institution development in Niger. Subsidized donor credit activities undermine both the supply and demand for financial services. Subsidized interest rates encourage the rural poor to remain in activities that would not be profitable in the absence of such subsidies, such as cereals marketing, rather than moving into more profitable activities that enable them to earn profits that can be used to offset the adverse consequences of future droughts.

The ubiquitous claim that there is a lack of profitable activities to invest in is in part exacerbated by the provision of subsidized credit. On the same side of the balance sheet a number of micro-entrepreneurs were identified who were not interested in borrowing from either a bank or donor project charging real rates of interest, because they could get subsidized credit from projects that have no intention of building sustainable financial service institutions.

Since 1992 CLUSA/SICR has not been able to operate in arguably profitable regions in the arrondissement of Aguié because of a FED funded project providing cheaper credit in the same area. There appears no indication that the FED program plans to become sustainable.

Subsidized credit projects also serve to hinder the mobilization of surplus savings for productive investment. If the current set of formal and semi-formal institutions providing financial services is to grow to reach large numbers of Niger's rural poor, they must be able to offer rates of return to their savers and investors high enough to attract savings. Paying positive real rates of interest to savers and positive real returns to investors necessitates charging positive real rates to borrowers. Institutions moving from operational self-sufficiency to institutional independence cannot compete with subsidized credit programs. Subsidized credit programs serve rather to slow the growth of sustainable institutions.

j. Lack of coordination among donors

The lack of coordination among donors and lack of access to information about principles of successful institutions learned elsewhere in the world, are significant constraints to consensus building about the importance of sustainable institutions and how to go about developing them.

The development of Nigerien financial service institutions, both formal and semi-formal, suffers from a lack of information regarding the lessons of small and microenterprise financial service successes worldwide. Banks, and NGOs dedicated to sustainable financial institutional development need to be aware of what works elsewhere. Too many semi-formal institutions contacted cited the observation that what works elsewhere is not important because Niger is different. While indigenous and environmental constraints should neither be ignored nor underestimated, they should not be used as an excuse to ignore established principles.

Lessons learned from the emerging successes in micro, small and medium enterprise lending which have become the accepted principles. USAID should take a leadership role in coordinating with the other principal donors in the field and the GON to share experience, develop a consensus on basic operating principles for the development of sustainable institutional development, and establish ground rules for operating that facilitate cooperation and minimize competition particularly from non-sustainable approaches. Efforts should be made to establish a consensus among major donors to conduct annual financial audits as a diagnostic tool. Agreements on annual audits will encourage greater financial discipline among service providers. Moreover, donor collaboration can also help establish standards to prevent banks from demanding excessive guarantees.

k. Next steps

If commercial banks choose to work with the rural sector through profit making intermediaries, USAID should negotiate plans with its existing projects, most notably CARE/BRK and CLUSA/SICR. Negotiations should determine whether either or both have the capacity and the willingness to intermediate between commercial banks and rural and micro and small-scale enterprises on a national level. If these discussions are not favorable USAID/Niger should work through an institutional contractor to assist in the establishment of a for-profit loan brokerage service.

10. Validity of the USAID Vision

USAID/Niger's Strategic Objective 2 (SO2) is to improve access to markets, especially through use of improved, decentralized financial services. The objective is obtainable in its level of generality. The critical question is whether Niger's financial sector is capable of the level of growth required to support overall GNP growth of at least 4%. The answer to the latter question is not at all clear.

In the "Proposed Country Strategy Plan 1995-2002" a set of assumption are made underlying the targets identified for SO2. It is not yet clear that one of the assumptions, "...no further degradation in the banking sector will occur" is valid. Both the BOA and SONIBANK, which are suffering from excess liquidity, may downsize and this is "voluntary degradation".

Credit necessary to support a four percent increase in GDP will necessitate greater levels of capital than donors are able to provide. This implies institutional growth based on mobilized indigenous capital. If development is the mobilization of indigenous resources for productive use, existing financial service projects should evolve into intermediaries capable of mobilizing local capital. Profitability, however, is a prerequisite for this evolution. There is no mention in the Proposed Country Strategy Plan 1995-2002 that the USAID funded programs will need to increase their profitability in order to achieve the projected magnitude of outreach.

The projected increase in loan demand in the Proposed Country Strategy Plan 1995-2002, is insufficient to support the level of growth needed to have a positive impact on GDP. To have ten percent annual growth in the rural sector, increased investments of 50 percent need to be made if return on equity is 20 percent. If return on equity is 10 percent, investments must increase at 100 percent per year to achieve 10 percent growth in GDP.

For growth to have a reasonable equity distribution financial services need to be available to at least 10% of the population of Niger. It is proposed that targets be expanded to increase the level of financial services to 4.0 billion FCFA or \$8 ml. by 1999, with 350,000 clients by the same time increasing to 8 billion FCFA in 2002 with 500,000 clients. Such growth will only be feasible if existing semi-formal financial institutions earn enough profit to attract these levels of capital. No new injections of capital should be needed.

USAID/Niger can do much to strengthen the enabling environment conducive to financial sector growth, support the existing institutional capacity to meet this challenge and coordinate with donors to best respond to real demands for savings and loans. In addition, it can support training of collective groups that can function as retailers of financial services, strengthen the capacity of its three projects to achieve operational self-sufficiency and ultimately profitability, and encourage commercial banks (a) to on-lend through semi-formal intermediaries and (b) to help pressure for reforms in the enabling environment.

Financial service clients should be free to invest in cereal banks, NRM practices, technology, and health services as they choose. Through the development of sustainable financial services the rural peasant, the urban artisan, and the commercant will be better able to decide her or his own fate. Do the existing formal and semi-formal financial institutions have the capacity and will to meet this challenge? It is not clear.

a. More decentralized viable and transparent financial services *Result 2.1*

This result discusses the cross fertilization potential of financial services. Though a fine principle, management and agents of financial service projects should not be burdened with multiple objectives. A particular concern is the tying of cereal banks and NRM training to decentralized financial service projects. Cereal banks may not increase food security as well as individual savings programs in secure financial intermediaries. Savings can be used to purchase food during long droughts.

Similarly, it is not clear how linking NRMs projects to financial service activities supports decentralization. Linking non-financial objectives to financial services distracts focus, raises costs and diminishes the profitability of financial intermediaries whose likelihood of self-sufficiency is already problematical.

In addition, connecting NRM's projects to loans for other purposes adds another administrative burden to intermediation. The cost of the NRMs components of loans may not be recoverable through commodity sales in Niger's weak commodity markets. To the extent that this is the case, loans for NRM's projects are not affordable and, consequently, add risk of default to loans.

b. Bankers work more with microenterprises and the informal sector. *Result 2.2*

The targets in this section seem too modest to realize the desired outcome. Banks today have excess liquidity and a desperate need to learn how to safely lend to the private sector in the absence of complete guarantees. Two banks are already working with SICR, and AFELEN is willing to work with the BRK and the SICR. The BIAO can be expected to offer loanable funds after it straightens out its internal affairs. USAID will never be in a better position than now to negotiate greater leverage on its guarantee funds.

USAID should offer to will help train bank staff in the formal sector, not only in local languages but more importantly in the technologies of managing a micro and small enterprise lending portfolio. Bank staff can be trained in-country and at third-country sites such as ACEP in Senegal, K-REP in Kenya, and the BRI, and at the Kupedes system in Indonesia. Continued pressure on the BCEAO to promote national investment is also a *sine qua non* of achieving SO2 objectives.

Given current performance of the CLUSA/SICR project the guarantee fund could be leveraged as much as five times without increasing the bank's exposure to risk.

c. Increased number and size of women's enterprises *Result 2.3*

The targets here are realistic. In Niger and elsewhere women have greater access to financial services when the interest rate are high enough to eliminate incentives to ration credit on considerations other than price. When markets rather than political power ration credit women get more of it. The repayment rates of loans to women's groups managing individual loans suggest that the returns to investment in training more groups in the financial management skills needed to be effective retailers of financial services is worth the cost.

While indicators of women's access to credit need to include numbers or percentages of total borrowers, particularly for Congress, an important lending principle should not be forgotten. That is, although it is easier to target women as beneficiaries of activities than it is to alleviate the constraints on women's access to loans, elimination of constraints is the only sustainable approach. Once the constraints to women's access to financial resources are alleviated, women will access these services when it is profitable for them to do so.

11. Recommendations

a. Semi-formal Financial Institutions

The faltering CARE/BRK project illustrates the need for USAID to take a more active role in monitoring and evaluating its financial service projects. While an earlier report was heralding the BRK as a likely success, the institution itself was foundering. If the USAID funded financial service projects, particularly BRK and CLUSA, are to achieve significant outreach, efficiency and sustainability, they will need more guidance and direction.

CLUSA/SICR has been operating for two years with little idea of interest rates needed for it to become profitable. WOCCU has fared better because it operates on the basis of an established methodology and MIS. These two features have enabled it to monitor itself more effectively than either CLUSA or CARE.

CLUSA/SICR is considering becoming a member owned *établissement financier*. BRK is headed toward becoming a mutual savings and lending institution under the upcoming revised banking law. When these institutions transform themselves, and no longer receive USAID subsidies, USAID will no longer help control their objectives.

USAID should actively help its financial service projects to become profitable and sustainable. Support should not include capitalization. Technical assistance and training funds, however, could be used to:

- Identify financial objectives that can be measured in terms of outreach, returns to equity and capital, loan volume and IRR;
- Set a fee or interest rate structure that will enable NGOs to become profitable;
- Design and implement management information systems (MIS) appropriate to each institution and its objectives,
- Train management and staff to grow and respond to market demand, and
- Establish clear operating procedures, particularly with regard to employee performance, compensation and debt recovery.
- Establish regular internal and external audits.

b. Enabling Environment

No major growth in financial services for enterprise finance is possible without alleviating the enabling environment constraints. Producers need to be free to export their products without obtaining special permission. The powers of the

Inspection de Travail need to be greatly curtailed. Licensing of enterprises including operating permits, needs to be *de facto* and not just *de jure* simplified. This will generate demand for loans. The procedures to seize and liquidate the assets of defaulted borrowers must favor the lender and not the borrower. This will increase supply of loanable funds.

A summary of specific actions that USAID could help generate to improve the enabling environment are:

- Curtail powers of the Service de Main d'Oeuvre and its Inspection de Travail (as has already happened in Senegal and Mali);
- Liberalize border trade with Nigeria, including elimination of export licenses;
- Eliminate the need for permits to own and operate generators and water storage facilities.
- Rewrite credit contract law to allow for seizure and liquidation of borrower assets without court approval requirements;
- Allow any asset usufruct or fee-simple asset to be used as collateral;
- Specify shorter delays between repossession and sale of seized assets;
- Reduce delays in litigation over credit contracts due to inefficiency and corruption;
- Specify in the upcoming revised banking law that non-mutual financial service organizations may mobilize borrower savings without obtaining special authorization.

c. Lending capacity of the formal sector

Action that USAID can take to strengthen the commercial banking sector's capacity to extend financial services to rural and MSE clients includes:

- support part or all of the costs of employing, equipping and training a rural, micro and small enterprise lending person who will work for one or more of the commercial banks. These costs would include training, salaries, a computer, a printer, and a budget for field follow-up of clients. USAID would support these costs for a period of two years. After two years the

income generated from the rural and MSE loan portfolio should cover all of its associated costs and USAID should be able to withdraw its support.⁸⁸

- Conditionalities should be tied to USAID support of commercial bank staff. Participating banks must agree:
 - To reduce loan guarantee requirements from current levels of 100 percent or more to 75 to 80 percent now and 50 percent in two years provided borrowers or on-lenders have an established repayment rate equal or superior to 95 over the prior three years.
 - Access guarantee funds only after all collection efforts have been made and after borrower collateral is liquidated.

d. New financial services activity

- If CLUSA/SICR is unable or unwilling to continue to on-lend funds of formal sector banks, USAID should support the creation of a new institution whose function would be to broker loans between commercial banks operating as credit wholesalers, and associative groups who would receive training and manage a bank loan parsed out to its members. These small groups would function as credit retailers.

e. Training in literacy and numeracy

- Identify key transformation activities and train potential borrowers to prepare business plans and loan applications.

⁸⁸ The BOA representatives contacted during this study indicated that a two billion CFA rural and SME loan portfolio would provide cash flow sufficient to justify dedication of a staff person to this portfolio. The total loan portfolio of the BOA in August 1995 was only 2 billion F CFA.

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**Niger: Macroeconomic
and
Rural Sector Assessment**

**Volume II OF 2
Annexes**

Presented to:

USAID/Niger

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Annexes

Annex A
Matrix of Constraints/Interventions/Indicators

Exhibit 1

CONSTRAINTS ANALYSIS
USAID/NIGER ECONOMIC REFORM
AND
MICROENTERPRISE PROGRAM

National Constraints	Rural Sector Constraints	Proposed Solutions	Illustrative USAID Activities
1 Population is * 8.5 ml * growing at 3.3% * 80% rural	A. Macroeconomic issues 1 Devaluation a Raised Input Costs b Raised Transport Costs	1 Greater Financial Sector Lending - Realistic Loan Appraisal - Loan Monitoring for Lenders/Donors	Bank Loan Officer Training Design Monitoring Through Lenders
2 Per Capita Income is. * Declining at 3.4% p a	2 Financial Sector a Exclusively Urban b Lacks savers' Confidence c No Legal Status for S&Ls	2. Expansion of Gold Mining - To Contribute \$185 ml GDP in 5 Years - To Add \$109 ml to NOG Revenues in 5 Years - To Add \$2.5 ml to rural income in 1986 - Develop the Liptako Region - Strengthen Loan Capacity with Gold Profits - Add Cold/Dry Storage for Produce/Meat	Survey Rural Enterprise Prospects Arrange Set-Aside Funds for Enterprise Loans Finance Cold Storage for Truck Farm Markets
3 Per Capita GDP was. * \$280 in 1982	3 Weak Price Discovery in Commodity Markets - Domestic Prices Volatile & Low at Harvest - Export Market Links Weak - Lack Storage - Non-Tariff Barriers - Lack Post-Harvest Technologies	3 Promote Export Crops - Irrigated Vegetables for Europe - Onions & Cowpeas Regionally - Refrigeration/Careful Sorting - Complete Quality Control - Contracts for Importer Risk Sharing - Improve On-Farm/Off-Farm Storage - Rehabilitate Cotton Production	Finance Cold Storage/Sorting At Airport Business & Accounting Training Quality Control Training Help Diversify European Outlets
4 Agriculture * Created 38% GDP in 1983 * Employs 85% of Active Population 5 Declining Rain-Fed Yields * Less than 300mm rain a year * Extensive Wind & Water Erosion * Single, Short (74-120 day) Plant Season * 12% Arable Land * Volatile Rural Production * Expansion of Cultivated Area * 1.8% Rural Sector Growth 1985-91 * Poor Public Administration * Little use of Fertilizer - Adds Plant stress in Draught - Represents Financial Loss in Draught * Yield of Major Crops over 10 Years are - Millet Yield = 367kg/ha - Sorghum Yield = 223 kg/ha - Rice = 2072 kg/ha - Cowpeas = 120 kg/ha - Groundnuts 313 vs 900kg/ha in Senegal	B Agricultural Production - See Exhibit 1 B	Promote Transformation Industries - Dry Vegetables, Fruit & Meat - Can Vegetables & Fruit	Develop Phosphate Fertilizer at Tahoua - Distribute Through Private Sector - Pelletize of Band to Seed
6 Mixed Irrigation Results * Poor Irrigation Management * Onion Yield up 50 % in 10 Years - Fertilizer/motorized pumps Off-Season Crop - Only Crop Besides Rice With Yield Up * Cotton Yield 1 Ton-1982 . 750kg-1988 - West Africa Mean Yield is 1200 kg/ha - inadequate Extension - Low Fertilizer use * Rice Yield up from 1981 to 5 Tons/ha - Yield among best in West Africa - Rainfed Rice Yield Varies between 800-1500 kg/ha	C Agricultural Marketing - See Exhibit 1 C	Develop Phosphate Fertilizer at Tahoua - Distribute Through Private Sector - Pelletize of Band to Seed	Broadcast Commodity Information - Combine Crop, Price & Weather Data - Broadcast in Local Languages
7 Livestock Population Smaller Since 1983 * 1984 Drought Reduced Population by 50% * Animal Population in 1994 compared with 1983 is 70 % as Large - 31 % rather than 20 % Goats/Sheep - Only Sheep Population is larger now * Transferred Ownership to Non-Pastoralists - Only 20 % of Population Owned by Pastoralists - Herds & Herd Management Quality Lower * Competition with Crops in South in Dry Season * Public Water Points Developed in 1960-70's - Eroded Traditional Control over Grazing	D Rural Enterprise Development - See Exhibit 1 D	Improve Transportation - Improve Feeder Roads in Liptako Region - Continue to Reduce Informal Road Fees	
cnstmr1 wk4	E Limited Rural Credit -See Exhibit 1 E		

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Exhibit 1 - B
B. Production Agriculture

National	Constraints Program Specific	Recommendations	Illustrative USAID Activities	Unresolved Issues
<p>1. Climate</p> <ul style="list-style-type: none"> Highly variable rainfall amounts, both spatially (e.g., independence within 10s of kilometers) and temporally (e.g., 17 to 35% variation in annual rainfall). Unpredictable, inevitable years of widespread, relatively low or high rainfall places a management burden for institutions to accommodate wide production extremes. Dry season 8 months long, 5 months of which is very hot. 	<ul style="list-style-type: none"> High rainfall areas are in the SW where arable land is less abundant. High rainfall variability causes localized droughts in good rainfall years and localized good rainfall during drought years. Production variation with rainfall years largely owing to reduction in area planted during drought years. By mid-July farmers and pastoralists can start planing for that seasons production of crops, forage and fodder. Crop yields per unit area generally decrease with higher rainfall because of soil fertility constraints, increasing incidence of pest and disease. Rainfall variability and risk of total crop failure is higher in the northern agricultural zone than the southern zone. 	<ul style="list-style-type: none"> Institutions should manage for the production extremes that result from high climatic variability. Instruments of savings should be strengthened. Technologies and organizations that improve the preservation and storage of produce should be encouraged. Water conservation practices and irrigated agriculture should be encouraged. Phosphate fertilization of rainfed crops should be encouraged. Exploit extremes of climate to introduce techniques and modify behavior. 	<p>AGRYMET FEWS DPM</p>	<ul style="list-style-type: none"> FEWS relationship with the newly engineered structure of mission. Predictive capability of mid to long term weather trends. Institutional function of SAP
<p>2. Soils:</p> <ul style="list-style-type: none"> Low fertility of most of the arable soils is a bigger constraint to production than rainfall. Arable land is virtually exploited (67 to 73% in cultivation). Significant areas of land are abandoned or are no longer productive (34% of a million hectares near Niamey). 	<ul style="list-style-type: none"> High amount of manure alone will increase a crops risk to drought. Phosphate fertilizer decreases a crop's risk to drought, regardless of use of animal manure or other nitrogen fertilizer. Improving soil fertility will increase the amount of weeding required; weeding is drought protection. Southern agricultural zone is virtually exploited with continuous cultivation. Production increases from expansion and reduced fallow will occur in the northern agricultural zone. 	<ul style="list-style-type: none"> Resource tenure insecurity needs resolution. Soil and water conservation should be introduced along with fertilization recommendations. Phosphate fertilization of rainfed crops should be encouraged. Cash crop production and marketing need support. Integration of livestock production with crop production need promotion to utilize animal maure. 	<p>ASDG II's small grants DPM interventions LTC studies</p>	<ul style="list-style-type: none"> The actual area and capability of irrigated and rainfed, and range lands. Amount of degraded (crusted) arable land suitable for water harvesting.
<p>3. Biological production systems:</p> <ul style="list-style-type: none"> Dependence on extensive, low input practices for subsistence degrades range and woodland resources. Present management of range lands and fisheries severely limits production. 	<ul style="list-style-type: none"> Decreasing yields per hectare is partly caused by the increase use of less productive land. Labor is the biggest constraint on sowing days that following rainfall and during the weeding period. Resource tenure insecurity prevents better management of the land. For example a farmer will be prevented from growing trees in a borrowed field to protect the land from wind erosion because trees threaten ownership rights. 	<ul style="list-style-type: none"> Better inputs and markets for cash crops will create a demand for extension services. Resource tenure insecurity needs resolution (registering territories, controlling size of fishing nets). Phosphate fertilization of rainfed crops should be encouraged Labor saving techniques are needed, especially for activities during peak demand periods (e.g., animal traction). Small scale irrigation should be encouraged to exploit shallow aquifers. 	<p>Africare - Goure project</p>	<ul style="list-style-type: none"> Integration of agriculture and pastoral systems. Time and effort required to rehabilitate Niger's range lands.

Exhibit 1 - B
B. Production Agriculture

National	Constraints Program Specific	Recommendations	Illustrative USAID Activities	Unresolved Issues
<p>4. Resource tenure:</p> <ul style="list-style-type: none"> Insecure resource tenure inhibits investment and labor use that are needed to increase production and reduce risk of financial loss from climate, insects & disease. Tenure disputes between pastoralists and farmers generally favor farmers and marginalize the pastoralists, the livestock sector, and wild life habitat. 	<ul style="list-style-type: none"> In the more intensive agricultural areas farmers have the political will to resolve conflicts with government mediation. In areas with potential land to expand agriculture (the pastoralist's traditional land) farmers are much less interested in discussions with the government. 	<ul style="list-style-type: none"> Provide reinforcement, positive or negative, for the development of the Rural Code, a 10 year process that should accommodate pastoralist categorical need to migrate south for market sales and grazing. Be patient. 	LTC work in ASDG II	<ul style="list-style-type: none"> Use rights <i>Mise en valeur</i> application texts. Organizations involved and methodology used to resolve tenure disputes. Is the macro economic importance of the livestock and agriculture sectors going to influence policy decisions.
<p>5. Research and extension:</p> <ul style="list-style-type: none"> R&E has focused on production and commercial agriculture while the majority of farmers practice low input subsistence based agriculture. Lack of credit, markets, tenure security, infrastructure and return on investments limit farmers to low input subsistence production. 	<ul style="list-style-type: none"> Farmer begin practicing intensive production agriculture in areas of high population density where competition for land is high and expansion is not possible. Farmers invest in inputs and techniques that reduce risk. Farmers invest in production where the risk is least. 	<ul style="list-style-type: none"> Extension efforts should concentrate on government sponsored projects that can release constraints such as tenure and credit. These model projects will help guide policy development and research. Water harvesting research should be directed toward cash crops. Techniques of improved fallow for hay production has potential, especially near urban centers. 	ASDG II and DPM grants programs.	<ul style="list-style-type: none"> Form of extension services, government or private sector.
<p>6. Human resources:</p> <ul style="list-style-type: none"> Hierarchical class based society. Low levels of education and management capability. High levels of malnutrition and intellectual retardation. 	<ul style="list-style-type: none"> Few opportunities to encourage the investment in an education. Cultural myths that discourage feeding high protein foods to infants and children. Donor ignorance of social structures and resulting poor development methodologies. 	<ul style="list-style-type: none"> Donor projects include education components in their activities, such as numeracy and literacy classes. Increased community and GON involvement in planning and paying for development activities. Empowerment should be the prime indicator of project success. 	ASDG II and DPM grants programs	<ul style="list-style-type: none"> High rate of population growth.

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**Exhibit 1 - B
B. Production Agriculture**

National	Constraints	Program Specific	Recommendations	Illustrative USAID Activities	Unresolved Issues
	<p>7. Credit and savings institutions:</p> <ul style="list-style-type: none"> • Credit is non-existent/limited for timely purchase of agricultural inputs (if available). • High percentage of savings is invested in livestock concentrated around urban areas and degrading the resource base. Livestock is a poor instrument of savings for drought years. 	<p>Refer to constraints from other team members</p>	<p>Refer to recommendation from other team members.</p>	<p>Refer to activities from other team members</p>	<p>Refer to issues from other team members</p>
	<p>8. Input markets:</p> <ul style="list-style-type: none"> • The poorly developed markets for fertilizers, seeds and pesticides requires a high margin of return for businesses to supply the resulting limited demand. 	<p>Refer to constraints from other team members</p>	<ul style="list-style-type: none"> • Target activities that encourage fertilizer use and improved seed production. 	<p>ASDG II and DPM grants for NGO (small enterprise development).</p>	<p>Refer to issues from other team members</p>
	<p>9. Produce markets:</p> <ul style="list-style-type: none"> • Low production, poor quality, and lack of organization limits access to markets that require assured quantity and quality. 	<p>Refer to constraints from other team members</p>	<ul style="list-style-type: none"> • Support the organization of cash crop producers by providing extension and training (support prices may be needed before markets are developed). 	<p>ASDG II and DPM grants for NGO (small enterprise development)</p>	<p>Refer to issues from other team members</p>
	<p>10. Transportation:</p> <ul style="list-style-type: none"> • Tariffs and fees reduce profit/demand and raise the cost of production. • Secondary road network limits rural access, will quickly constrain Liptako Region development. • Once input and produce markets are developed or strengthened, increased production of grains will be limited by the network of secondary roads. 	<p>Refer to constraints from other team members</p>	<p>Refer to recommendation from other team members</p>	<p>Refer to activities from other team members</p>	<p>Refer to issues from other team members</p>

**Exhibit 1-C
Agricultural Marketing**

Constraints	Recommendations	Illustrative USAID Activities
A. Input Markets		
1. Lack of public or private seed industry	<p>Short/Immediate term activities</p> <p>Commercialize improved seed production and distribution:</p> <ul style="list-style-type: none"> * Decentralize seed multiplication * Contract multiplication with small farmers * Increase seed production and marketing capacity of INRAN Maradi 	<p>Use Global Bureau access U.S. private sector expertise in seed industry development</p> <p>Use facilitator to initiate public/private sector partnership in commercialization of seeds</p>
2. Lack of a National Seed Policy	<p>Medium term actions</p> <p>SO2 and SO3 committees:</p> <ul style="list-style-type: none"> * To convene donors to discuss fertilizer demand and supply framework. * Reestablish national and regional committees * Strengthen relations and work-plans among IRAN, seed multiplication centers and extension services * Withdraw progressively from multiplication of M2 and M3, replaced by cooperatives and private companies. 	<p>Seed commodity subsector recommendation</p>
3. Insufficient working relationship among donors, NGOs and private sector	<p>Establish agnbusiness advisory group to:</p> <ul style="list-style-type: none"> * advise on input, output markets and quality control constraints * advise on project direction * establish links with West African Enterprise Network 	<p>Through MSI, Office of Sustainable Dev. and G Bureau resources available to assist in advisory group establishment</p>
Output Markets		
1. Lack of conservation and storage skills	<p>Immediate/Short term activities</p> <p>SO2 should access storage and conservation expertise for onions, niebe and maize</p>	<p>Reinforce technology transfer through USDA/ PASA agreement for technical assist: eg. Afr. reg. research centers, IITA, CIAT, or in the U.S. PIPS or USDA</p>
2. Lack of commercial commodity subsectors	<p>Medium term activities</p> <p>SO2 and SO3 committees should collaborate to develop niebe, souche, produce and onion commodity subsectors</p> <p>Primary issues:</p> <ul style="list-style-type: none"> * National Seed Policy * Fertilizer utilization and commercialization framework * Storage and conservation of commercial crops * Market news and information dissemination * Initiate quality control system in commodity subsector * Improve commercialization of crops 	<p>Institutional contractor to procure and manage commodity subsector promotion process in five departments</p> <p>Coordination between SO2 and SO3 committees, agri-business advisory group, NGOs and public sector</p> <p>Coordinate with other donors and Min. of Ag.</p>

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ANNEX 1 - D
DEVELOPMENT OF MICRO, SMALL AND MEDIUM ENTERPRISES

<u>Constraints</u>	<u>Recommendations</u>	<u>Unsolved problems</u>	<u>Examples of activities for USAID</u>
A/Micro-enterprise level (Informal sector)			
1- Lack of credit	Increase short and medium term loans to micro and SME dealing with: - agricultural inputs supply - agricultural products processing - monitoring micro and SME activities through intermediate lenders	Loans at market interest rates. Urban and rural demand for credit focussed on companies versus individual credit done through local authorities	Increase funding for NGO credit programs which: - have a sustainable cost in loan recovery policy - are focussed on individual entrepreneurs - cover urban as well as rural areas
2- Need for appropriate technologies	Development of simple technologies like: - groundnut presses - solar driers - phosphate grinding equipment - food preservation and canning equipment - improved technology for seed production To promote more efficient technology management		To monitor technology programs implemented by other donors To disseminate technology among the private sector at market costs
3- Lack of technical competence	To promote technical training based upon a fee		To replicate the training experience of Maradi and Zinder

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4- Low coordination between donors

To participate fully to the Government's "Master program"

Donors' objectives not compatible

Management unit for a collective assistance fund for micro and SMEs designed under the "master program" so that donors can play an important role in determining the general trend for projects helping micro and SMEs

B/ At small and medium enterprises level (formal and semi-formal sector)

Active participation in the coordinating committee of private sector donors set up under the "master program"

1- Lack of medium-term financing

To increase fund allocation for medium term loans.
To increase banks capabilities for risk analysis

Lack of cooperation between banks

Leave small and medium financing to AFELEN
Let other donors submit their needs for training in banking
Use moral persuasion to encourage banks to guarantee funds

2- Lack of managerial capability

To create a unit for assisting the set-up of SMEs, responsible for:
- supplying training in business management
- preparing the business development plan
- supplying further assistance for management

AFELEN not sustainable

Give a significant role to AFELEN
Set up monitoring system in order to:
- ensure that special attention is given to the agribusines sector

- ensure that SME activities are compatible with the business development program
- ensure sustainability
- encourage donors to monitor SMEs' activities

3- Environment

- Employment policies
- Financial sector policies
- Overwhelming government interference
- Lack of regulation to sustain free competition

Enforce clear regulations
Link economic research for developing a "missions" policy for the private sector

Lack of partners in the civil society
Lack of Government will

NPA interested in the conditions to reform the code of labor / labor supervision.

To build PASPE's capacity to bring policy studies to an adequate level for wide dissemination

Annex B
Insight on Niger's Civil Society

Annex B
Insight on Niger's Civil Society

Dagra Mamadou
Niamey, September 1995

Civil society is usually defined according to its contrary stance with respect to political society. Whereas the latter involves political classes, parties and political groups for which existence is justified by the vying for power, civil society is responsible for guarding and championing general interests, specific or corporatist, and is composed of non-political entities in that they are not motivated by quests for power.

The expansion of the democratic ideal in today's international society has had, in some cases, the effect of mobilizing various components of civil society in an effort to oppose the "political" world.

Thus, the establishment of constitutional governments and democracies in Africa since the beginning of 1990s has given birth, in many of the countries of the continent, to a liberal white-collar segment of the population that is favorably disposed to the further development of civil society.

Niger appears as a perfect illustration of this phenomenon since the establishment of a multi-party system in November 1990, followed in 1993 by popular elections resulting in the creation of a republican institution: civil society in that country has achieved amazing popularity. Since that time, civil society has reinforced its capacity to influence decisions to such an extent that it would be inconceivable today for a particular political movement in general or individual rulers specifically, to ignore its presence and power.

It is for this reason that any analysis of the current situation in Niger must be preceded by an assessment of the new political realities of the country. They include the existence of a large "social sector" which is responsible for sparking the dynamic movements fueling civil society.

I - Political context

Civil society in Niger exerts its influence within the judicial and institutional context of a pluralist society (A, below). The development of new texts which serve as the corner stones of this democracy have rapidly led to the evolution of a regime unique in Africa (B) and whose major strength will always be the protection of civil liberties (C).

A. The Legal and Institutional Context.

This context is based on the constitution ratified on December 26, 1992 which established the third Republic. It naturally supplanted the old laws:

Constitution of November 8, 1960: First Republic (1960-1974) characterized by a single-party system which was replaced by a military regime (1974-1989)

Constitution of September 24, 1989: Second Republic (1989-1991) which saw the establishment of a constitutional single-party government, followed by a transitional regime (1981-1993).

The most recent constitution established a liberal and pluralistic democracy, institutionalizing the concept of multi-party by stating in its article 10 that political parties will be "formed freely". The clause allows for unrestricted political freedom, not limiting the number of active parties: the only parties that are not allowed are those established on "ethnic, regional, or religious" grounds. Today, 20 different political parties are legally recognized.

Beyond allowing for a multi-party system - the embodiment of political pluralism - the constitution provides for a pluralistic society with respect to information, by recognizing and guaranteeing fundamental liberties and rights of people.

Furthermore, the Constitution proclaims Niger a "legal entity" (art. 9), one governed by, abiding of, and defined by laws.

Finally, from the standpoint of the nature of the political regime, the constitutions institutes a semi-presidential regime, one where the country is ruled by both a parliament and a president: the President of the Republic has important powers but is politically accountable to the parliament in the sense that he must always benefit from the confidence of the parliamentary majority. The regime depends thus on the political configuration of the parliament. It is this fact which serves to explain the current evolution of Niger's political system.

B. The Evolution of the Current Regime

Although quite recent, the democratic experience of Niger is extremely interesting. Indeed, over a very brief period of time - less than two years after the first free elections in the country's history - the regime has already invoked nearly every recourse available in its constitution: civil disobedience, censorship, dissolution, constitutionality of laws, "cohabitation". Thus, from one year to the next, the mechanisms of government have undergone radical changes: from a government ruled by a "presidential majority", Niger has moved to system of "cohabitation" in which the government benefits from the support of a parliamentary majority while the President is allied with the opposition. This system operates within the parameters provided by the constitution which outlines a "semi-presidential"

structure and has the odd attribute of being both a parliamentary and a presidential system: it is parliamentary because the government is politically accountable to the national assembly; it is presidential because all major decisions are recognized as being the responsibility of the President. The originality of this regime is that, depending on the composition of the parliament, the government could be deemed either parliamentary or presidential (depending upon whether or not the parliamentary majority is in support or in opposition to the president), following two possible interpretation of the Constitution, as in France, a country whose code of law served as a model to Niger.

There is the "presidential interpretation" of the constitution when the parliamentary majority is in concordance with the president. This was the case during the period of "l'Alliance des forces de changement" (Alliance for change) (AFC) composed of nine different parties from April 16, 1993 to September 28, 1994, at which time the Parti Nigerien pour la Democratie et le Socialisme (PNDS) left the alliance. Over that period, as well as during the minority AFC government which followed (October 1994-February 1995), the President of the Republic benefited from great latitude in exercising his powers.

This is no longer the case today, the result of "parliamentary readings" of the constitution following the result of legislative election of January 12, 1995, which created a parliamentary majority no longer in concordance with the President. The new majority consisted of 43 out of 80 deputies and was composed of 5 parties (MNSD, PNDS, UDFP, UPDP, RDA); the AFC the President's group, was composed of 8 parties (CDS, ANDP, FDN, PUND, UDPS, PSDN, PRPL, UDP) and became the opposition. A system of "cohabitation" resulted - as happened in France twice, between 1986 and 1988 as well as from 1993 to 1995 - in which the President saw his powers greatly curtailed, as the parliament began to, in essence, rule the nation, in accordance with article 62 of the constitution. It is for this reason that the President had no choice but to accept the nomination of a new Prime Minister and other members of the government.

Since that time, the permanent state of discord, the general apprehension in "cohabitation", and problems of interpretation of the constitution, has created a very difficult situation which, at times, has resulted in total paralysis (meetings at the ministry level have understandably become very infrequent). Despite this rather troubled evolution of the system in Niger, one advantage emerges: the system has truly allowed the concept of civil and political liberties to blossom.

C. The Promotion of Civil and Political Liberties

The democratization process has emerged in Niger in reaction to the monolithic character of the former exclusionary regime and the second Republic which both suppressed most forms of freedom, including freedom of expression and the right to dissent.

Consequently, it is not surprising that the constitution of December 26, 1992, was first conceived as a charter protecting human rights and civil liberties: indeed, it recognizes all fundamental rights and civil and political freedom, both at the individual and collective levels. It is the first constitution in Niger's history to devote an entire chapter ("Titre" 2) to the "rights and duties of the individual" (article 11 through 36).

On the basis of this constitutional guarantee, the country's citizens have been able to use, even abuse, their rights: thanks to article 24 allowing for the freedom of expression, all opinions are presented without fear nor pressures; freedom of the press and information (article 113) has given birth to an amazing number of independent publications (about 30, 10 of which are printed on a regular basis) and has even contributed to the creation of two private radio stations. It is however the right to convene and associate which has been most frequently invoked; its existence has engendered a very large number of association and groups of all types. It is such organizations that fuel the development of civil society and their members constitute the vast "social" sector which is characteristic of the democratic process in Niger.

II. The Composition of the "Social" Sector.

There are many different types of organizations which compose this sector in Niger. Classic type of associations are certainly present as are groupings which have only emerged in more recent times such non-governmental organizations (NGOs), particularly associations of women.

With respect to the varied types of grouping which make-up the social sector in Niger, it can be noted that there is a consistently strong tendency to associate (A, below) and that there exists certain particular idiosyncrasies specific to this tendency (B).

A - Consistencies in the Tendency to Associate.

In Niger, as in other places, the main purpose of associations and other similar organizations in civil society is the protection of interests and the promotion of individual rights.

In the area of preserving specific interests, the association movement in Niger is most preoccupied with:

Defending interest of a general character: promoting education for all, preserving national unity, protecting cultural identity, etc.

Defending corporatist interests: improving working conditions for all, promoting the use of women in economic sectors, increasing revenues for local producers, establishing a better education system, etc.

Providing specific services: promoting physical education and sports, encouraging cultural activities, protection the environment, assisting in irrigation matters, etc.

In the area of human rights, the groups forming the "Social" sector are most interested in safe-guarding general rights and the freedom of individual citizens:

The respect of civil rights is supported through various activities: public declarations, conferences, dialogues with government representatives.

The protection of individual liberties is further conducted by educating the populations on the law and their rights using easy texts to follow and other means, by uncovering any form of abuse of power by government officials, and by calling upon the justice system.

It is the high priority that civil society accords the protection of rights that is one of the particularities of the association movement in Niger.

B) Particular Aspects of the Association Movement in Niger.

They are all new elements in Niger which emanate from the recent political context and were engendered by the democratization process: beyond the defense of classic interests, the association movement is focused on:

- The primacy of democracy and the legal state.
- The primacy of basic development
- The preservation of the environment
- The necessity to promote women's rights.

Thus, Niger's association movement is singular in that there are groupings that concerns themselves solely to the promotion of civil rights, democracy, and individual freedom. In this last category, it important to note that there exist not one - as in many other countries - but four associations dedicated exclusively to the protection of human rights.

The second idiosyncratic element of the "social sector" in Niger is the proliferation of NGOs. There are approximately 200 such organizations, geared mostly to development issues and characterized by micro-projects directly benefiting local populations.

The growth of NGOs is paired with another particularity of the association movement: the gradual emergence of village and communal associations. Their increasing number suggests the common concern of the authorities and individual citizens to work on improving the quality of life of rural populations.

Civil society in Niger is also characterized by the diversity and the dynamic nature of women's groups. Organized only recently in a federation, these groups aim to improve the standing of women in all tranches of society, in the home, the work place, and in the government.

Finally, another trait specific to Niger is - a sign of the times - a growing concern with the environment. In this country located in the Sahel, in great part desert-like and threatened by greater desertification, several organizations are working to restore trees and other lost flora, to improve the management of natural resources, and to allow for "sustainable" agricultural productions. To this end, an unusual occurrence in a southern country, there is an ecology party which hopes to one day turn the Sahel into a luscious haven!

In it with these peculiarities in mind that the different types of groupings operating in the country's various sectors should be discussed.

C. The Various Types of Groupings.

Niger's civil society is made of groups that are different in their recruitment practices, their goals, and their stance on certain issues.

Despite this diversity however, there are several common elements which are in great part a result of their relative infancy as new-borns of the recent democratization. These similarities can be summarized as follows:

the absence of a large base of adherents, with the exception of the older associations:

- I. the methods of funding and the strong personal nature of their management;
- II. the frequency of conflicts within the groups (resulting in a high turnover rate);
- III. the absence in nearly every case of a viable management entity;
- IV. a tendency to politicize activities.

Beyond these similarities, the different structures of the "social sector" are distinguished by the categories to which each belongs. Although there is cross-over between each category, they can, for the sake of convenience., be classified as follows:

- associations:

- V. - unions.
- VI. - NGOs;
- VII. - women's groups;
- VIII. - communal and village level associations;
- IX. - mutual groupings.

1 - The associations.

From a legal perspective, all grouping, even those of a political nature, are presented as associations, as they are based on the premise of the freedom to associate listed on article 25 of the constitution and in accordance to ordinance 84-6 of March 1, 1984 regulating associations.

Furthermore, regardless of their different goals, most groups call themselves association. That is the reason why, should the groups with a very specialized membership or with a very precise objective be excluded (NGOs, women groups, etc.), the category of association would still count a high number of members. There are approximately 50 different associations. Many are older associations, created prior to pluralist democracy such as the National Association for Parents of Students, the Islamic Association, the National Association for the Blind, the Association for Village Chiefs, etc.

Often, associations pursue general goals or deal with specific categories.

2 - Unions.

Along with association, unions constitutes the main element of the association movement in Niger. They play the traditional role of guardians of the moral and material interests of their adherents. The union movement in Niger however go beyond this mandate and presents the following particularities:

First, there exists a central entity which includes approximately 40 unions representing workers in the public and para-public sectors called The Union for Workers in Niger (USTN in French). This central entity coexists with about 6 non-affiliated unions representing teachers, researches, lawyers. This non-affiliated unions assist to conferences organized by USTN.

There is also a very active and militant union for students called the Union des Scolaires Nigériens (USN) which was initially an association and switched to a union structure following a national conference in 1991.

There is a union representing employers.

Unions are very political and remain active in their efforts to influence the political process, a role played by USN and USTN during the period in Niger that gave birth to the current democratic regime.

Finally, there has been a recent tendency by the unions to undermine their efforts and their importance through internal dissension and strikes (strike of the USTN over 2 months between June and July 1994 and in-fighting at the USN)..

3 - The NGOs.

It is the most prolific category of organizations active in the country's civil society: while there were only 8 in 1990, NGOs number today 188 , of which 141 are national and 47 from outside the country. There are usually NGOs of "development", in accordance with the official decree 92-292 which defines NGOs as groups which, by their voluntary nature, support "development through social and economic activities"-

The majority of NGOs manage operations which impact on all sectors. Others, fewer, intervene in more specific areas: health, hydrology, education, environment, rural credit, and women in development issues.

In practice however, few NGOs are credible even when operational. Although many international NGOs are very active because they usually benefit from sound financial footing, many NGOs in Niger are afflicted by general lethargy, the result of a lack of financial resources.

Overall, it would seem that the development of NGOs is due mostly to the advantageous legal framework provided for their creation (tax-exemption for example) as well as a the hope of receiving external financing. There reigns a chaos among such organization which is in need of being remedied by competent agencies.

4. Women's groups.

The number is impressive; the CONGAFEN (Coordination of NGOs and Feminine Nigerien Associations) comprises 33 groups. This high number can be explained in part by the emphasis placed on women in development issues by the main international donor agencies (from the United States, Canada, Denmark, the European Union, etc.).

These feminine organization are multi-sectoral. They operate within all domains (education, communication, law, environment, economics, arts, culture, etc.) in order to assure the true socio-economic, political, and cultural promotion of women in Niger's economy.

While the first women association (Union des Femmes Nigeriennes (UFN) and the Association des Femmes du Niger (AFN)) were more concerned with improving the standing of women from a political standpoint, the second generation of women groupings are interested in three main issues:

the promotion of women in rural areas:

- X. promoting the health and overall life condition of mothers;
- XI. integrating women into the economy by encouraging entrepreneurship, improving market access, and increasing revenue.

Other associations of note representing women include:

- "Association des Femmes Commerçantes et Entrepreneures du Niger" (AFCEN);
- XII. "Association pour l'Intégration de la Femme dans l'Economie Nigerienne" (AIFEN);
 - XIII. the NGO called "Appui aux Activités Socio-Economique des Femmes Rurales" (ASEFER);
 - XIV. the "Group Nigerien d'Action pour une Maternité sans Risque" (GNAMASARI);
 - XV. the NGO called "Promotion Feminine pour le Credit Villageois" (PFCV).

5 - Communal and village associations.

For the most part, such associations take the form of grain banks and credit entities, usually established with the assistance of external capital.

Grain banks exist in nearly all large villages and are targeted for even further development. Usually perfectly self-sustaining and managing, their goal is to provide, at a fair price and at all times, products of used for daily sustenance (such as maize, mil, etc.).

Credit entities have been implanted in a few sites, specifically in the urban area of Niamey and in the counties of Maradi and Zinder. Operating as decentralized financial institutions, the result of their operations to date has been deemed positive; there are plans to increase their number.

6 - Mutualist groupings.

- These refer to rural producers, both in agriculture and dairy products. The groups are organized following a pyramidal model with, at the top, the Union National des Cooperative (UNC) and at the base, the Groupement Mutuelliste Villageois (GMV). Their legal status however (governed by ordinance 89-10 of April 7, 1989 dealing with the establishment of rural cooperatives, as well as decree 89-74 also of April 7) is questionable at best, having been impacted by the adoption of the December 26, 1992 constitution. The new rulings dealing with the freedom of association, and the General Directive of the Rural Code of March 1993 (which requires the approval of land commissions in the development of rural groupings) necessitates new definitions for mutualist groupings.

New legislation is currently being drafted. Furthermore, as cooperatives ultimately work to increase the revenues of local producers, the government is considering additional measures:

a study of cooperatives to identify potential impediments to their effective operation:

- XVI. encouraging those activities deemed most viable;

XVII. educating members of cooperatives to improve self-management.

Self-management would emerge from the right to freely associate, which represents a significant break from the rigid guidelines imposed by the Union Nationale des Cooperatives (UNC).

III The role of Civil Society.

Through the support of its various components, civil society in Niger assumes, within the political structure, a true public service: it mobilizes the citizens and assures their active participation in the economic, social, cultural, and at time political aspects of the country, all within the context of individual sectors of activity.

The numerous organizations which compose civil society protect the rights of their members, as well as the interest of consumers, producers, and other economic participants. It is in this respect that civil society is particularly vigilant in its monitoring of all action taken by public officials, particularly action taken impacting on workers or the populations. Thus, all internal policies and external assistance must take this factor into account.

Consequently, the implementation of the Strategic Objective #2 (SO2) of USAID in Niger (increased market access of the country's population through the use of decentralized financial services) must take into account the psychology of civil society which includes a "culture of distrust" (A, below) and also suggests that the "social sector" must be seriously considered in elaborating any operation impacting on the country's economic and social landscape.

A - A Culture of Distrust.

This culture is born out of the role of civil society in the democratization of Niger. It is materialized in the mission to preserve the democratic nature of the society, a role taken on by most structures represented in civil society - in particular the unions of workers and education, USTN and the USN - who were the chief architects of the current regime. Civil society courageously challenged the status quo, the single-party system, and should be considered a leading force in the eventual transition to a multi-party political system. It was the unions, and the students, with the help of a few budding political parties and associations, that demanded and obtained that the "Conference National Souveraine" take place, which led to the Second Republic in Niger, the necessary precursor to the current regime.

It is this historical role that has provided civil society with its current mission: while yesterday, it served as the initiator of the democratization of Niger, it acts today to preserve the new democracy. Going beyond the apolitical, civil society in

Niger has erected, in response to established political institutions, a permanent "counter-power" structure, charged with the preservation and consolidation of the democratic process. A perfect example emerged in July and August 1995 during a severe crisis in the executive branch. At the time, several unions and association requested that the President and the Prime Minister reach a compromise on several key matter with a delay of 48 hours. USTN threatened to depose both officials should they fail to conciliate. It is probably that , with the exception of revolutions, no other example of such politicization can be found.

In light of this backdrop, it is not surprising that the "Niger Model" of democratization has fueled a true climate of political distrust. Feeling proud of having engineered the democratization process, jealous of the new civil liberties provided by the constitution, Niger's citizens have grown used to exercise their rights, often unfortunately neglecting their civil duties. Although they are happy to clamor for the various privileges available under the law, they do not prove nearly as enthusiastic in fulfilling their civil and professional obligations. The existence of 6 associations whose goal is to educate the citizens of Niger on their rights and duties (Association Nigerienne de Defense des Droits de l'Homme", (ABDDG). "Democratie Liberte Developpement" (DID); "Association des Femmes Juristes du Niger" (AFJN); "Ligue Nigerienne de Defense des Droits de l'Homme" (LNDDH), "Mouvement Associatif pur la Defense des Droits de l'Homme" (MAADALCI); "Reseau pour l'Integration et la Diffusion du Droit en Milieu Rural" (RIDD-FUTUKA)) does not seem to have been of great assistance in this matter.

It is in this rather unusual context that expectations of civil society should be viewed. Awareness of these issues is necessary to effectively operate in Niger.

B- The Expectations of Civil Society.

Although Niger's civil society - or at least many of its components such as the unions for workers and students, the association for human rights - often shrugs traditional apolitism in order to express certain concerns or take political stands, it also manifests other aspirations, a reflection of its diversity.

Indeed, many of the organizations that operate within civil society act to apply pressure, either on an economic, social or cultural level, to influence the state:

- Thus, small shop owners, workers in the transport sector, other economic actors do not welcome economic reforms requiring for example greater fiscal transparency and stricter financial controls; they work hard at circumventing or defeating proposed legislation, sometimes invoking the specter of the strike.
- Government workers and those who left in "voluntary departure" from their posts, as well as women's groups are also teaming to initiate legislation strengthening private sector initiative, the development of markets; generally speaking, these groups advocate less government interference.

- Islamic associations continue their never ending struggle against the degradation of morals and the slow eradication of cultural values.

The activities and positions of the other actors in civil society (consumers, rural producers, parents, etc.) also, to various degrees, contribute to the common goal of promoting greater influence to promote a more enlightened perspective on the life of the country and advocating equal and just distribution of the fruits emerging from economic growth and social and economic progress.

Civil society appears to have become a champion of civil liberties and rights and the ardent defender of individual interests.

Conclusion and Recommendations.

The general political context of Niger, along with its social dimension, remains favorable to the implementation of USAID's Strategic Objective #2. The policies of the government support the idea in the sense that, officially, it aims to promote the rural sector by encouraging its growth and facilitating its access to markets. The existence of a number of decentralized financial institutions and the presence in the field of a multitude of NGOs are likely to facilitate the objective's implementation.

That is why, should the currently unstable political situation - caused by the "cohabitation" and other factors - improve, the following recommendations would apply:

Greater importance to the "social sector" dimension of Niger's society must be attached to the SO2 in order to create the conditions necessary to mobilize local participation to help its implementation:

Improving the legal and institutional environment (tax and banking law) in order to provide more entrepreneurial opportunities,

A continued (and more intensive) policy of encouraging private initiative and entrepreneurship.

Annexe I : Carte d'identité de la CONGAFEN

Annexe II : Extrait du "Sahel-Dimanche" du 25 Août 1995 sur les ONG au Niger

Annexe III : Manifeste de la société civile sur la crise de l'exécutif

Annexe IV : Déclaration de l'USTN sur la crise de l'exécutif

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Crise au sommet de l'Exécutif

L'USTN ET LA SOCIÉTÉ CIVILE

MONTENT AU CRÉNEAU

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Ajustement structurel

**Installation officielle
de la commission de
suivi de mise en œuvre
des politiques et
mesures de réformes**

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*Interview du Ministre de l'Hydraulique
et de l'Environnement*

« IL FAUT FAIRE
CONNAÎTRE
LE NIGER PAR
LE TRAVAIL »

déclare Sahadou Bawa

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DE
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EN COURS

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Sports

Souleymane Keita, Secrétaire général
du Liberté F.C.

« NOUS AVONS PERDU LA COUPE
MAIS GAGNÉ EN EXPÉRIENCE »

P.8

Crise politique

Bons offices des Associations nationales

Trois Associations nationales des droits de l'Homme et de démocratie (DLD, l'ANDDH, GERDES-Niger) ont entrepris de médiations pour tenter de dénouer la crise au sein de l'Exécutif

Hier, MM. Ismaël Yénikoye (DLD), Youba Diallo (GERDES-Niger) et Djibril Abarchi (ANDDH) ont eu des entretiens avec le chef de l'Etat, Mahamane Ousmane. Ils ont été déjà reçus par le Premier ministre, Hama Amadou. Ils se sont abstenus de toute

déclaration avant l'aboutissement de leur médiation. Les trois associations avaient décidé samedi dernier d'offrir leurs bons offices en vue de trouver une solution "heureuse" à la crise politico-institutionnelle en cours depuis plus d'un mois

Cette initiative nationale fait suite à l'échec des nombreuses médiations entreprises par de pays amis et l'ancien chef de l'Etat malien, Amadou Toumani Touré. Malgré ces tentatives de conciliation, la crise a connu une nouvelle escalade la

semaine dernière avec la tenue d'un Conseil des ministres en l'absence du chef de l'Etat. Le Conseil a notamment limogé des Directeurs généraux des Sociétés et Offices d'Etat. La Présidence de la République a rejeté ces décisions les qualifiant de "nulles et sans effet". La nomination des nouveaux responsables est la principale pomme de discorde entre le gouvernement et le Président de la République qui est à l'origine de la crise qui avait éclaté le 6 juillet dernier.

(ANP)

Programme d'Ajustement structurel
Création d'une Commission de suivi de mise en œuvre des politiques et mesures de réformes

L'installation de la commission de suivi de mise en œuvre des politiques et mesures de réformes a été présidée hier matin par le Premier ministre, M. Hama Amadou. Cette commission qui est un instrument de politique économique a pour but de donner un maximum de chances de réussite au Programme d'Ajustement Structurel qui se résume en d'autres termes à la préparation de la mise en œuvre de toutes les politiques et mesures de réformes décidées par le Gouvernement, la suivi d'exécution par les ministères responsables de la mise en œuvre et de proposer des mesures collectives. Placée sous l'autorité directe du Premier ministre, cette commission agit sous la coordination du ministre des Finances et du Plan

En effet, indique M. Hama Amadou, le champ de cette commission couvre non seulement les institutions de Bretton Woods, mais aussi tous les autres partenaires au développement. Le choix porté sur les personnes qui vont travailler dans cette commission doit être s'atteler à court terme à la préparation des discussions avec le F.M.I et la Banque Mondiale en vue de la signature d'accord avec ces institutions, précise M. Hama Amadou. En terminant, le Premier ministre a précisé que l'Etat, en créant cette commission de suivi, a eu pour souci de démontrer à ceux qui nous observent, mais surtout à ceux qui ont des prédispositions à nous aider dans nos efforts de redressement, que nous avons fixé nos priorités et défini un programme cohérent.

Le Président de l'Assemblée Nationale de retour de Cotonou

"IL FAUT S'ATTAQUER AUX VRAIS PROBLEMES DU NIGER" déclare Mahamadou Issoufou, aux ressortissants nigériens au Bénin



Le Président de l'Assemblée Nationale, M. Mahamadou Issoufou s'engage à Niamey hier, après un séjour au Bénin sur invitation de son homologue

béninois, M. Bruno Amoussou. Le Président de l'Assemblée Nationale a déclaré avoir assisté avec ses collègues maliens et burkin-

bé à la cérémonie d'installation du bureau de la nouvelle Assemblée Nationale béninoise. Il a profité de cette occasion pour renouer le Président béninois SEM Nicéphore Soglo et la communauté nigérienne vivant à Cotonou. Cette dernière a émis des inquiétudes par rapport à la crise qui prévaut au Niger.

M. Mahamadou Issoufou les a rassurés que grâce à la contribution et à la clairvoyance des uns et des autres, les problèmes que traverse notre pays pourraient trouver une issue heureuse.

(Nous y reviendrons)

Crise au sommet de l'Exécutif
L'USTN EXIGE QUE TOUT RENTRE DANS L'ORDRE DANS 48 HEURES

Le BENJUSTN, réuni en session extraordinaire, hier, Mercredi 9 août 1995, à l'effet d'examiner l'évolution grave, de la crise au sein de l'exécutif, fait la déclaration suivante :

- Notant la persistance du dysfonctionnement des institutions de notre pays, et l'escalade de la crise secouant l'exécutif,
- Considérant que cette grave crise minant l'exécutif depuis bientôt un mois, trouve ses origines et son fondement dans le refus délibéré du Président de la République de convoquer et de présider les réunions du Conseil des ministres, ce qui du reste a conduit, le Premier ministre et son gouvernement à prendre des décisions pour le moins anuconstitutionnelles,
- Convaincu que ces actes posés par les plus hautes autorités de notre pays, n'honorent ni leur personne, ni le Niger, mais traduisent dans les faits leur orgueil et leur

mépris royal vis-à-vis de la démocratie et du peuple nigérien.
- Constatant avec amertume et indignation que les efforts de médiation tant nationaux qu'internationaux n'ont pu désamorcer la crise au sein de l'exécutif,
- Soucieux de la préservation de l'Unité Nationale, du renforcement du cadre démocratique, et du respect des règles qu'imposent l'alternance démocratique,

LE BENJUSTN

- * Exige du Président de la République, et ce, pour la seconde fois consécutive, la convocation et la présidence sans délai, de la réunion du Conseil des ministres conformément aux dispositions de l'article de la Constitution
* Exige du Premier ministre, et ce, concomitamment à cette convocation, l'abrogation de tous les actes pris en dehors du cadre constitutionnel,
* Exige du Président de la République et du Premier ministre le respect scrupuleux de l'esprit et de la lettre de la Constitution du 26 décembre.

* Enfin, l'Union des Syndicats des Travailleurs du Niger, estime, que la crise au sein de l'exécutif a trop duré et qu'au plus tard le vendredi 11 août 1995, tout doit rentrer dans l'ordre.

Faute de quoi, l'USTN mobilisera toutes ses militants, tous ses militants et sympathisants et associera à ses actions de lutte qu'impose la situation, les Associations de Défense des Droits de l'Homme, les Associations Féminines, les Organisations non Gouvernementales, les Organisations Politiques, les Patriotes et Démocrates sincères pour démettre de ses fonctions tout responsable de l'exécutif qui ne se pliera pas à nos exigences.

En tout état de cause, le BENJUSTN, tient à rappeler aux uns et aux autres que le Niger est un Etat de droit au sein duquel personne n'a le droit et ne peut en aucun cas et d'aucune manière s'arroger le droit d'hypothéquer l'avenir de notre pays et de son peuple qui appartient à l'Unité Nationale, à la Démocratie et au Progrès Social.

Manifeste des organisations féminines des syndicats des Associations de Défense des Droits de l'Homme et de Promotion de la Démocratie

Manifeste de la société civile

Depuis son avènement la 3ème République a connu des crises politiques répétées empêchant toute action positive en faveur de notre peuple et de son développement. Les crises de ce genre ont conduit à la Conférence Nationale Souveraine qui a entamé une instabilité chronique et une tyrannie courante de l'éclosion de construction du bien public constituent les caractéristiques marquantes de la vie économique politique et socio-culturelle du Niger. Le bras de fer qui oppose actuellement le Président de la République et le Gouvernement n'est qu'une preuve supplémentaire de ces événements irresponsables. Sous le fallacieux prétexte du vide juridique la classe politique au pouvoir impose à notre peuple déjà lourdement éprouvé des épreuves inouïes. Face à cette situation de blocage, d'exacerbation de la logique des clans de morale de la tension nous Société Civile conscients de nos responsabilités devant l'histoire et laissa de toutes ces manoeuvres politiciennes adoptons le manifeste

- Considérant que le Niger est un Etat de droit et que celui-ci impose sous le contrôle de la juridiction compétente, la soumission au droit des pouvoirs publics ;
- Considérant que notre loi fondamentale ne prévoit pas de disposition formelle relative à la soumission des pouvoirs publics à l'obligation de se conformer aux principes fondamentaux qui constituent l'ossature des lois républicaines et les fondements des décisions juridictionnelles ; qu'au titre de ces principes figurent au premier rang celui d'utiliser les voies de droit relatives au règlement des litiges et des conflits ;
- Considérant qu'en l'espèce, il appartient à la Cour Suprême juge constitutionnel et juge de l'excès de pouvoir d'interpréter les dispositions constitutionnelles et législatives, d'apprécier la légalité des actes administratifs et en dernier ressort de trancher les différends susceptibles de naître autour de ces questions ;

- Considérant par conséquent que les pouvoirs publics en refusant de recourir à la haute juridiction et en ne donnant le privilège exorbitant d'interpréter eux-mêmes notre constitution, violent ce principe sacro-saint et usurpent ainsi les pouvoirs qui appartiennent à la Cour Suprême ;
- Considérant que le blocage institutionnel créé par cette attitude de refus délibéré de saisir la haute juridiction du pays en vue d'une solution définitive est règlementairement contraire au principe de la consécration des institutions de la République ;
- Considérant que la satisfaction des besoins d'intérêt général et la solution des maux qui assaillent le Niger ne saurait souffrir d'un fonctionnement défectueux ni d'un dysfonctionnement de nos institutions. Nous Société Civile Dénonçons les manoeuvres dilatoires des pouvoirs publics et diversions qu'ils créent ou tentent à travers les opérations genre "médiation", "bons offices" qui n'ont

d'autres effets que de retarder le règlement définitif de la crise par l'organe constitutionnellement établi pour cela. Opone résolument pour un arbitrage de la Cour Suprême selon les procédures et dans les conditions légales et exigeons par conséquent des pouvoirs publics qu'ils s'en tiennent strictement à cette voie et observent le principe de la continuité du fonctionnement des institutions et de service public. Dénonçons avec force la logique de clan et d'arbitraire arbitraire entretenu par le Président de la République et le Gouvernement. La Société Civile, au nom des droits de l'homme bafoués, se réserve le droit de pour pleinement son rôle de contre pouvoir en usant de tous les moyens légaux que lui offre la Constitution si dans les 48 heures qui suivent aucune action légale de règlement de la crise devant la Cour Suprême n'est entreprise par le Président de la République et le Gouvernement

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ENQUÊTE

LES "ONG" AU NIGER

LE GRAND DESORDRE

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25-6-7

Intervention des ONG dans le monde rural

LE GRAND DÉSORDRE

Par Saidou Dsouira

Elles sont nombreuses ! Elles poussent comme des champignons. Elles sont partout sur l'étendue du territoire national. La prolifération des ONG constitue sans nul doute une nouvelle approche de la politique économique internationale. Aujourd'hui, partout en Afrique, ce phénomène prend de l'ampleur. Au nombre de 8 en 1990 dans notre pays, elles sont 141 nationales et 20 étrangères actuellement, soit un total de 161.

Au départ, les ONG nationales se sont concentrées dans le département de Dosso et dans la Communauté Urbaine de Niamey. Progressivement elles se sont installées un peu partout sur le territoire national. Toutefois la majorité, ont leurs sièges à Niamey avec des antennes régionales.

Sur le terrain, les ONG nationales interviennent dans divers domaines. Certaines mènent des activités de développement intégré. D'autres par contre se sont spécialisées dans des secteurs bien déterminés. Des ONG comme Aman-Iman qui signifie "l'eau c'est la vie" en tamasheq, l'Association de Brigade Hydraulique de Mayahi ont fait de la maîtrise de l'eau leur créneau. Elles sont décidées à aider les populations à maîtriser leurs points d'eau et satisfaire de manière rationnelle leur besoin en consommation. Ceci à travers le forage des puits villageois ou maraichers.

Dans le domaine de l'assainissement et de l'hygiène, Taapta (santé) Ecologique, Agagi et EASD (Energie, Assainissement, Santé et Développement) interviennent à travers des actions encourageantes. Mais c'est dans le domaine de l'environnement que les ONG sont plus nombreuses. C'est l'exemple de Goy Kondo (Association pour le Développement Rural), Alliance Vert, Environnement Plus, Organisation Nationale de Volontaires pour la Préservation de l'Environnement au Sahel, Vivre pour prospérer au Sahel entre autres. Dans ce domaine, les actions des ONG se résument à la protection de l'environnement par la production des plants, la fixation des dunes, etc.

Certaines ONG profitent des exonérations pour tricher.

Il y a également des ONG nationales spécialisées dans le domaine de l'éducation et de la formation. C'est le cas par exemple de l'Association Nigérienne des Educateurs pour le Développement. Dans le domaine du maraîchage, citons l'Eglise évangélique de la République du Niger dont les actions portent entre autres sur la réalisation de petits projets de maraîchage.

Dans tous les cas, il est difficile de spécifier les domaines d'intervention de l'ensemble des ONG nationales en activité au Niger d'autant plus que leur nombre semble pléthorique : 141 au total. On est même tenté de se demander ce qu'elles font concrètement sur le terrain car la plupart ne sont que l'ombre d'elles-mêmes : aucune réalisation, aucun résultat positif au profit des populations au nom desquelles elles se proposent d'agir. Une chose

est sûre : plutôt que d'œuvrer au développement à la base, par un renforcement de la capacité des populations à prendre en charge leur propre développement, certaines ONG se livrent à d'autres activités qui n'ont en réalité rien à voir avec leur mission première, du moins celle consignée dans leur cahier de charges et les documents d'agrément. En tout cas, au Niger, on ne peut pas dire que tout marche.



Autres comportements : elles traitent directement avec les bailleurs de fonds, et rarement leurs requêtes de financement passent par le ministère de tutelle. Elles négocient ainsi avec certains Organismes et Ambassades qui sont leurs principaux bailleurs de fonds. Certaines ONG profitent des exonérations pour tricher. A ce propos, les ONG nationales — tout comme étrangères — font souvent des commandes de marchandises qui n'ont rien à voir avec le protocole d'accord-type. En effet, il est dit que les ONG sont exonérées de droits et taxes de douane dans le cadre de leurs activités. Cette exonération constitue la contrepartie de l'Etat nigérien dans l'exécution de leurs projets respectifs. Malheureusement, les demandes d'exonération sont de plus en plus nombreuses et portent sur des commandes non-conformes au protocole-type.

Devant l'ampleur du phénomène, la Direction générale des impôts (DGI) a rappelé les ONG à l'ordre et à une stricte application des textes. Il va falloir donc instituer un mécanisme de contrôle des exonérations accordées aux ONG afin d'éviter la fraude fiscale. Pire, des ONG étrangères notamment, s'occupent de plusieurs choses à la fois alors qu'elles doivent circonscrire leurs activités à une zone d'intervention ou un secteur précis et fournir plus d'efforts de mobilisation de ressources internes pour davantage gagner la confiance des bailleurs de fonds étrangers peu enclins à aider les ONG nationales souvent inexpérimentées et de création récente.

D'autres ONG nigériennes n'ont ni siège, ni téléphone, ni boîte postale, bref, aucune coordonnées.

En tout état de cause, l'évolution numérique des ONG nigériennes n'est pas proportionnelle à l'impact de leur

intervention sur le terrain. Ceci s'explique très souvent par le manque de sérieux et le cantonnement dans l'informel de la part de certaines ONG. D'autres ONG nigériennes n'ont ni siège, ni téléphone, ni boîte postale, bref, aucune coordonnées.

L'Etat, à travers le Ministère de tutelle doit à son tour s'efforcer d'organiser et redynamiser les activités des ONG nationales, notamment par la formation

De leur côté, les ONG étrangères, très expérimentées et disposant de gros moyens doivent faire quelque chose pour aider leurs concurrents nationaux. Pour cela, il faut intensifier les rencontres périodiques entre ONG, organiser des tables rondes, des forums, des ateliers, des voyages d'études et séminaires. A travers ces rencontres, les responsables d'ONG nigériennes sans grande expérience peuvent tirer d'énormes profits dans le cadre d'un partenariat judicieux. Cette formation doit couvrir les domaines de la gestion, de la comptabilité, de la collecte de données statistiques, de l'élaboration, l'exécution et l'évaluation des projets. C'est ainsi que l'ONG Solidarité Canada-Sahel a organisé en juillet dernier une rencontre à l'intention de certaines ONG nationales et étrangères. Cette rencontre visait, selon le coordinateur M. Ibrahim Chalaré à l'accroissement des capacités d'intervention des ONG en matière de coopération et d'éducation publique. Il s'agit pour Solidarité Canada-Sahel de former le personnel des ONG par le renforcement des connaissances en matière de gestion. La formation au profit des ONG nationales est un atout qu'il faut renforcer en ce sens qu'elle permet aux animateurs de se familiariser avec les outils de planification et d'évaluation des activités de leur organisation d'une part, et développer leur connaissance en matière de préparation, d'organisation et l'animation des réunions de groupe, mais aussi et surtout en matière de prise de décision et de résolution de problèmes, ainsi que l'utilisation des moyens de communication sociale, d'autre part.

des responsables. Plusieurs séminaires ont, certes, été organisés à l'intention des ONG, mais il semble que les notions élémentaires de gestion et de comptabilité sont encore mal maîtrisées. Cette formation est plus que nécessaire parce qu'elle permet de maîtriser le phénomène des ONG qui devient de plus en plus international.

PLUS DE TRANSPARENCE DAN

Par Abdou Saidou

Le Niger pays de prédilection des ONG ? On est en droit de le croire. Et pour cause. Les ONG étrangères présentes au Niger sont au nombre de 47, toutes en activité sur le terrain, contrairement à certaines de leurs concurrentes nigériennes. Certes, comparé à d'autres pays africains, une cinquantaine d'ONG, c'est peu. Mais ce qui compte c'est, l'efficacité. Même si souvent un flou entoure leurs activités. Toujours est-il que les populations bénéficiaires ne s'en plaignent pas. Selon Maazou Mahamane du service des ONG à la Direction du Développement régional au ministère des Finances et du Plan, il y a des ONG qui ont un statut particulier car, ayant des sections à l'étranger. Dirigées par des Nigériens, elles sont considérées comme des ONG nigériennes, c'est le cas de S.O.S Sahel international. Certes et le Croix Rouge nigérienne. Le trait commun à toutes ces Organisations Non Gouvernementales, c'est qu'elles interviennent toutes, ou presque dans le monde rural. Leur domaine d'intervention ? L'hydraulique, la Santé, le Développement intégré, l'environnement, la promotion féminine, bref, toutes les activités économiques et sociales.

Une chose est sûre, c'est qu'aujourd'hui, ces ONG se sont, dans certains domaines, pratiquement substituées à l'Etat. Il est même apparu que les bailleurs de fonds accordent plus de confiance à elles qu'aux institutions de

l'Etat. A l'évidence, l'installation d'une ONG au Niger engendre un manque à gagner pour le trésor public à cause des nombreuses exonérations : en revanche elle crée des emplois. L'aspect social de ces ONG est donc très important dans la mesure où il réorbe le chômage.

M. Maazou Mahamane n'a pas été en mesure de nous donner le chiffre exact des emplois créés par ces ONG, toujours est-il que ce sont des centaines de Nigériens qui sont recrutés. La majorité d'entre elles viennent avec leur financement. Etant des agences d'exécution, le plupart du temps l'aide de leur pays passent par elles. Aujourd'hui, elles sont les plus actives sur le terrain.

Ces ONG ont à leur actif 66 projets et micro-réalisations en exécution d'un montant de 5 milliards 691 millions F CFA. Certains de ces projets ont une enveloppe avoisinant le milliard. Du reste, indique-t-on au Ministère des Finances et du Plan, c'est un total de 197 projets et micro-réalisations y compris les 66 projets en exécution d'un montant de 12,521 milliards qui sont prévus par toutes les ONG tant nationales qu'étrangères. Le Niger, à cause des difficultés financières ne contribue plus à l'exécution de nombreux projets. On ne connaît pas la aussi le montant de la contrepartie nigérienne. Cependant la seule aide apportée par l'Etat aux ONG est l'exoné-

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Interview

du Chef de service ONG/Associations au Ministère du Plan

«SUR LES 170 ONG NIGÉRIENNES, À PEINE 10 SONT CRÉDIBLES»

déclare Mme Capo Adjaratou

Realisée par Aline Maman

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Mme. CAPO Adjaratou, on assiste ces dernières années à une prolifération des ONG dans notre pays. A quel est dû selon vous, ce phénomène et quels sont les critères à satisfaire pour être une ONG au véritable sens du terme ?

Il est vrai que ces derniers temps on assiste à une multiplication excessive des ONG dans notre pays. De huit qu'elles étaient en 1990, le Niger compte aujourd'hui 170 ONG nationales. Certaines personnes ayant constaté qu'elles ne trouvaient plus leurs comptes dans les paris politiques ont prêté créer des ONG, des Associations où elles escomptent tirer des bénéfices.

En ce qui concerne votre deuxième question, pour être une ONG au véritable sens du terme, il y a plusieurs conditions à remplir. D'abord, l'ONG doit être autonome, ce qui signifie qu'elle ne doit ni dépendre fortement de l'Etat pour son financement, ni lui être imputée dans la poursuite de ses objectifs. Ensuite, elle ne doit pas avoir un but lucratif, les ressources qu'elle recueille étant destinées exclusivement à financer les projets qu'elle entreprend. Enfin, sa dotation doit être éliminée, en majeure partie, par des contributions volontaires.

Comme tout ce qui touche au développement, les ONG n'échappent pas à leur tour aux critiques. On prétend même que certaines d'entre elles, ne sont que des organisations à peine déguisées. Quel est votre point de vue ?

Effectivement dans toute organisation qui touche au développement, les critiques ne

manquent pas en ce sens qu'on en trouve des bonnes et des mauvaises. Il y a donc des ONG qui exercent réellement pour le bien-être des populations nécessiteuses. Par contre, certaines sont là uniquement pour leur propre intérêt, non pas pour faire des actions d'intérêt collectif mais plutôt des actions d'intérêt individuel. Donc, c'est tout à fait normal que les gens se posent des questions. D'ailleurs même au niveau des ONG qui sont en train d'exécuter des projets, on constate que certains responsables abusent de l'utilisation des biens de leur organisation. Par exemple les véhicules 4X4 qui sont censés servir sur le terrain sont utilisés pour les courses personnelles ou familiales du patron. Donc une part importante du matériel ou des ressources recueillies servirait à couvrir autre chose que les activités de l'ONG.

D'autre part on constate que le personnel de certaines ONG est trop jeune et manque d'expériences. Enfin, quant aux moyens d'action, on parle de cotisations des membres. Or on a observé que très souvent la création de l'ONG précède la cotisation alors que ça devrait être le contraire.

Vous voulez dire par là qu'il existe des ONG qui ont été créées sans qu'auparavant les «fondateurs» soient en possession d'un minimum de moyens financiers ou matériels ?

Bien sûr ! Il y a aujourd'hui beaucoup d'ONG implantées au Niger qui n'ont ni bureau ni boîte postale à leur disposition. Alors qu'une ONG qui se veut crédible doit d'abord mûrir son projet ; ensuite mobiliser le minimum de ressources humaines compétentes et enfin avoir le minimum de moyens financiers et matériels pour pouvoir démarrer ses activités. Or, on a l'impression que c'est autour d'une table de belote ou de thé que des copains se regroupent pour lancer l'idée de création d'une ONG. Donc n'ayant pas bien réfléchi sur leur projet et ne disposant pas du personnel compétent et d'un minimum de moyens matériels, ces ONG sont complétement démunies et au lieu qu'elles assistent, ce sont elles qui sont assistées. Ce qui fait que sur les 170 ONG nigériennes à peine 10 peuvent se prétendre crédibles.

Certains pensent que les relations entre les ONG d'une part, le gouvernement et les partenaires de développement d'autre part, sont influencées par le rapport existant entre les contributions financières des deux parties. Qu'avez-vous à dire à ce sujet ?

Quand une ONG élabore son projet, elle a déjà sa méthode d'approche, sa stratégie pour exécuter ses actions. Les contributions financières émanant du gouvernement ou des bailleurs de fonds n'influencent pas tellement sur leur ligne de conduite ou leurs objectifs. Je pense que si problème il y a, il se situe au niveau des ONG elles-mêmes. Elles doivent être crédibles et rechercher le financement pour le secteur qu'elles maîtrisent. Si par exemple un bailleur de fonds leur propose un financement pour un secteur dans lequel elles ne sont pas spécialisées, elles doivent refuser l'offre et chercher ailleurs un autre bailleur de fonds.

Mais, Madame, compte tenu de la situa-

tion financière difficile que traverse le pays et compte tenu du fait que certaines organisations ne visent que leur propre intérêt, pensez-vous réellement que certaines ONG vont décliner l'offre destinée à un secteur autre que celui qu'elles maîtrisent ?

Je crois que ce que vous venez de dire est un autre problème des ONG. En effet, pour se faire reconnaître, les ONG doivent auparavant nous présenter dans leur dossier un



Photo : Méfissa Hamani

«Au lieu qu'elles assistent, ce sont elles qui sont assistées»

programme d'actions bien ficelé. Or le plus souvent leur programme d'actions est vague, ambiguë, embrassant plusieurs secteurs à la fois alors que parallèlement elles n'ont même pas le minimum pour démarrer leurs activités.

Toujours au niveau des critiques faites à l'encontre des ONG, il semble que certaines ONG profitent des exonérations douanières pour faire entrer des matériaux non compatibles avec leur fonctionnement. Qu'avez-vous à dire à ce sujet ?

Effectivement, ce sont des choses qui arrivent. La douane a eu à plusieurs reprises à nous le signaler. Il est même arrivé une fois que la Direction des impôts suspende la délivrance des exonérations de T.V.A. parce qu'elle s'est rendue compte que des commandes de certaines ONG, le matériel de construction par exemple, n'ont rien à voir avec les besoins des ONG en question. Mieux, certains responsables d'ONG lancent au départ une commande de Toyota 4X4 par exemple et au moment de la livraison ils s'arrangent avec le fournisseur pour avoir une voiture de prestige pour leurs courses personnelles. Or normalement seul le personnel expatrié travaillant dans une ONG étrangère a droit à cette exonération douanière pour leur véhicule personnel, mais à condition qu'il ait séjourné moins de 6 mois au Niger.

Compte tenu de tous ces problèmes que vous venez d'évoquer, avez-vous reçu des plaintes provenant des populations

bénéficiaires vis à vis des ONG qui les assistent ?

A vrai dire, les populations bénéficiaires n'ont pas l'habitude de se plaindre. Cependant pour montrer leur mécontentement, les villageois refusent souvent de participer aux activités ou demandent le départ de l'ONG de leur région. Par exemple, tout récemment, les villageois de Tchagounré n'ont pas raté l'occasion au cours d'une visite des autorités administratives pour demander à celles-ci, le départ d'une ONG oeuvrant dans un aménagement hydro-agricole, le long du fleuve.

Y a-t-il eu des cas, où vous avez été amené à retirer à une ONG, son agrément pour certains vices de forme ?

Effectivement, dans les textes réglementaires, il est dit en cas de non respect des objectifs que l'ONG s'est assignée on a la possibilité de lui révoquer l'agrément. De même, toute ONG qui au bout de 2 ans n'a pas démarré ses activités, se voit retirer son agrément. Mais jusqu'à présent nous n'avons pas eu à appliquer cette sanction. Cela est dû au fait qu'au Niger, le mouvement des ONG est très récent. A ce titre, nous avons préféré appliquer la loi de la nature. Ainsi, les ONG qui sont assez dynamiques, vont pouvoir percer et celles qui ne le sont pas vont disparaître d'elles-mêmes. Mais, cette année, comme nous avons commencé à faire le rapport d'activité, par ONG, nous n'hésiterons pas à sanctionner les ONG actives.

Concrètement pensez-vous que l'aide des ONG a des avantages par rapport à l'aide officielle ?

Le gouvernement s'est donné pour option le développement à la base en privilégiant l'intervention du secteur privé, dans lequel, les ONG jouent un rôle déterminant. C'est pourquoi l'Etat est en train de se désengager en faveur des ONG puisque ce qu'il est en train... de faire traditionnellement à travers ses services techniques, les ONG peuvent le faire de façon plus efficiente. A ce titre, on peut dire que l'aide des ONG a des avantages assez appréciables. Seulement il ne faut pas que cette aide soit en dichotomie avec les grandes orientations nationales du pays.

Avez-vous un appel à lancer en direction des ONG ou des conseils à prodigier aux futurs «fondateurs» d'ONG ?

L'appel que je lancerai, c'est surtout pour que les ONG aient un code de conduite exemplaire, car il y va de leur crédibilité. Des gens se sont regroupés pour créer une ONG en vue de mener des actions d'intérêt collectif. La moindre des choses, c'est qu'ils se fassent dans la transparence en essayant d'atteindre les objectifs qu'ils se sont fixés. D'autre part, je conseillerai aux gens qui veulent créer une ONG de mûrir leur réflexion avant de concrétiser leur projet. Dans notre ministère, celui des Finances et du Plan, nous avons un service chargé de la coordination, du conseil, de l'appui et de la reconnaissance des ONG. Les gens peuvent venir se renseigner avant de créer dans la précipitation leur ONG.

LES CHIFFRES

raison. Ce faisant, elles estiment qu'elles n'ont pas de compte à rendre à l'Etat nigérien. En vérité, c'est que les cadres nigériens chargés de suivre les activités de ces ONG étrangères ont toujours fait preuve d'un laxisme criard. Sinon comment comprendre que beaucoup de choses les plus élémentaires échappent à leur contrôle. On n'est donc pas étonné du flou qui entoure la gestion et les activités de ces ONG.

Toutefois, rassure-t-on, c'est que les autorités nigériennes n'ont jamais insisté pour avoir certaines informations. Ce qui explique ces difficultés que rencontre le service des ONG pour collecter le maximum d'informations. Plus grave encore, même au siège de ces ONG on se refuse à donner des chiffres. Ce manque de transparence se traduit souvent par des chiffres erronés, à la limite de la fantaisie. Personne pour le moment ne s'en émeut, sauf peut-être les techniciens qui en ont besoin pour une évaluation future du ou des projets.

En réalité le manque de suivi sur le terrain est un handicap pour ceux-là mêmes chargés de suivre les ONG. Il n'y a donc rien d'étonnant que beaucoup d'informations leur échappent. Cela est d'autant plus vrai qu'ils ne se font qu'aux rapports de ces ONG. Tout le monde connaît la portée d'un rapport. Les chiffres sont souvent surestimés alors que la réalité est tout autre sur le terrain.

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REPUBLIQUE DU NIGER
MINISTERE DE L'AGRICULTURE
ET DE L'ELEVAGE

EXECUTION DE LA LETTRE DE MISSION DU PREMIER
MINISTRE
AU MINISTRE DE L'AGRICULTURE ET DE L'ELEVAGE

Août 1995

CODE RURAL

Elaboration de textes complémentaires du Code Rural

Poursuite de popularisation et installation des commissions foncières -

Mise en place des Secrétaires Permanents Départementaux -

Elaboration de schémas d'aménagements fonciers.

Le Comité National chargé de l'élaboration du Code Rural a franchi un pas important dans l'accomplissement de sa mission. Et ceci avec l'adoption et la promulgation, en Mars 1993, des Ordonnances 93-014 portant respectivement ^{et 93-015} régime de l'eau et principes d'orientation du Code Rural.

Après la large diffusion de ces instruments juridiques auprès des différentes couches socio-professionnelles, ses activités tournent aujourd'hui autour de deux pôles notamment :

- la mise en oeuvre progressive des instruments juridiques adoptés et promulgués ;
- et l'élaboration des textes complémentaires à l'Ordonnance 93-015 fixant les principes d'orientations du Code Rural.

La mise en oeuvre du Code Rural

A ce niveau il s'agit de mettre en place de manière progressive les structures de gestion foncière prévues par la Loi d'orientation du niveau sous-régional et régional.

En effet, les commissions foncières et les Secrétaires Permanents Départementaux permettront d'atteindre deux objectifs indispensables pour une meilleure gestion de nos ressources naturelles avec pour corollaire un développement harmonieux du monde rural.

Ceci d'une part à travers la maîtrise du foncier avec la généralisation de l'écrit comme moyen de preuve et d'autre part l'affectation des différentes ressources naturelles aux activités rurales avec l'élaboration des schémas d'aménagements fonciers régionaux.

Ces objectifs justifient amplement le choix prioritaire du Comité National quant à l'installation de ses structures.

Etant donné la complexité et la sensibilité des questions foncières dans notre pays, une démarche prudente a été adoptée pour la mise en place de ces structures.

Dans un premier temps, il a été préconisé une phase test où pour chaque département un arrondissement choisi sur des critères précis sera doté d'une commission foncière.

Installation des commissions foncières et des Secrétariats Permanents Départementaux

Les commissions foncières constituent la cheville ouvrière de la mise en place du Code Rural.

A cet effet, il a été prévu leurs installations au niveau de chaque arrondissement et commune.

Depuis l'adoption par le Haut Conseil de la République (H.C.R.) de l'Ordonnance 93-015 du 02 Mars 1993, il a été installé deux (2) commissions dans les départements de Diffa et Zinder avec le concours financier de la Coopération Danoise en 1994 (Mainé-Soraa à Diffa et Mirriah à Zinder).

Pour l'année en cours, il est prévu l'installation de cinq (5) commissions foncières avec le concours financier de l'Agence Américaine pour le Développement International (USAID). D'ici fin 1997, il sera installé 32 commissions foncières et 7 Secrétariats Permanents Départementaux.

D'ores et déjà, le Secrétariat Permanent du Code Rural est à pied d'oeuvre pour élaborer un document de projet qui sera présenté à tous nos partenaires au développement. Aussi, il sera demandé à tous les projets de développement et aux Organisations Non Gouvernementales (ONG) d'insérer dans leurs programmes d'activités, la mise en place des commission foncières. Le Niger prendra toutes les dispositions nécessaires pour la pérennisation de ces structures.

Elaboration des textes d'application des Ordonnances 93-014 et 93-015 du 02 Mars 1993.

Plusieurs textes complémentaires ont été identifiés et retenus par l'Atelier-Bilan sur le Code Rural tenu à Dosso en Septembre 1994. Des Avant-Projets de textes sur la propriété rurale et les contrats d'exploitation, la mise en valeur, les terroirs d'attache, l'administration rurales ont été élaborés. Ils feront l'objet d'examen lors d'un atelier regroupant les cadres techniques, les représentants des populations, l'administration judiciaire, les chefs coutumiers, les autorités administratives, les ONG et les Bailleurs de Fonds.

Les textes seront ensuite transmis au Gouvernement pour examen et adoption. Avant fin 1997, il sera élaboré et adopté 17 textes d'application aux Ordonnances 93-014 et 93-015 du 02 Mars 1993.

Elaboration des schémas d'aménagements fonciers

Il est institué au niveau de chaque département l'élaboration d'un schéma d'aménagement foncier par l'Ordonnance 93-015 du 02 Mars 1993 en son article 127. Le schéma d'aménagement foncier a pour objet de préciser les espaces affectés aux diverses activités rurales ainsi que les droits qui s'y exercent. Pour la période 1995-1997, il sera élaboré et soumis au Gouvernement cinq (5) schémas d'aménagement foncier pour examen et adoption.

Les textes d'application, les Schémas d'aménagement foncier, le contenu des Ordonnances 93-014 et 93-015 du 02 Mars 1993 feront l'objet d'une intense campagne de popularisation pour toucher le maximum de Nigériens.

Le coût global de la mise en oeuvre effective du Code Rural nécessite une enveloppe qui avoisine les **DEUX MILLIARDS (2 000 000 000) de FRANCS CFA.**

Annex C
The Rural Code and Natural Resource Management

Annex C

The Rural Code and Natural Resources Management

The idea of framing a rural code in Niger dates from 1985. The idea became a reality in 1993 with the adoption of statute 93-015 on March 2, which established the main themes of the rural code.

The primary objective set by the legal instrument is to assure better management of natural resources (soil, water, forests, fauna, etc.) through regulation. In the context of this overall theme, the new law deals specifically with guaranteeing:

- the rights of rural producers
- sound resource conservation and management methods
- appropriate administrative and institutional support for the rural areas
- a fair, appropriate land allocation

While it is true that the adoption of this law constitutes a considerable achievement, as of two years later, practical application has been impeded by several obstacles, the more important being:

- the drafting of enabling legislation
- the creation of land commissions
- land tenure assessments

I - The Drafting of Further Enabling Legislation.

The adoption of enabling legislation is a necessity for effective implementation of "Ordinance" (edict) 93-015, particularly as the texts outlining the regulations constitute, in concert with the General Directive ("Loi d'Orientation"), form the main precepts of the newly developed rural code.

1. Regulatory texts that have been identified:

Those are relative to the aggregate of problems associated with the management of natural resources and the governing of the rural sector.

In more precise terms, the texts must regulate the following issues:

- land use optimization;
- land tenure;
- land improvements provided by the public sector;
- expropriation;
- conflict resolution;
- rural records;
- status of cooperatives;
- fauna;
- fishing and fish-farming;

rural ownership;
rural land concessions;
land use;
decentralization and the status of the forests;
land use planning;
protected areas;
reform of the forest code.

All of these texts must be drafted and adopted prior to the end of 1997.

2. Projects of the texts that have already been initiated.

There are at the pre-feasibility stage, and have to do with:

promotion of resource management practices;
land ownership assessments (with respect to grazing rights);
the state and the administration of the land tenure commissions;
the state of cooperatives and groups;
associations.

These feasibility studies are scheduled to soon be closely examined during a conference that will include all interested parties.

3. Priorities

It has been determined in the implementation program of complementary legislation that two projects in particular should be given top priority: the texts dealing with rural records and those dealing with the resolution of conflicts involving natural resources.

The feasibility studies should be completed before the end of 1996.

The means by which conflicts will be resolved will include conciliation attempts at the local level or will, this failing, be handled through a court of law. The current forms of conflict resolution (conducted by the administration) will be abandoned because rulings have been constantly appealed, following the frequent reassignment of public mediators.

Rural records must also be given priority as they will serve to support the work of land commissions once they are created.

II Development of Land Commissions.

Land commissions constitute a key component of the implementation of the rural code. It is their function to ensure proper management of natural resources in general and land use specifically. Consequently, for the latter their role is key.

Therefore, these commissions will be created in an incremental and methodical fashion. Obstacles to their effectiveness will however need to be eradicated.

1. The role of land commissions.

A commission must be created in each county and each village. Composition of the commissions has been established in article 118 of the General Directive. They will operate under the auspices of a district attorney ("Sous-Prefet") or the mayor; the commissions will also require a permanent secretary of the rural code, professionals from municipal or county services departments, the usual "local" authorities, and representatives from rural groups.

Land commissions have, as a general rule, the mission of conducting a resource inventory, to be followed by the appropriate distribution of rights of exploitation in a manner assuring optimal land use. In more specific terms, they are in charge of all land use management issues which implies that the commissions will be responsible for all transactions involving land (buying, selling); proof of ownership will be provided in written form and will be validated by local authorities (village chiefs).

In order to fulfill such objectives, the General Directive includes language clarifying the responsibilities of the commissions: the text provides for a consultative role but also, in some cases, empowers the commissions to make decisions:

- On one hand, the commissions must always provide advice on all issues pertaining to land valuation and land use, as well as land distribution (article 120).
- On the other hand, the commissions are empowered to assess land use and establish land rights. They can also transform the rights of rural concessionaires to rights of ownership. Furthermore, the commissions can transfer one third of unused land, in that they are mandated to optimize land use for the community.

2. Timetable for the creation of land commissions

Fifty-seven land commissions will be required to ensure the effective implementation of the rural code (this will entail one commission per county).

Due to the inherent difficulties in financing and establishing these commissions, their establishment entities will be gradual. That is the reason why, to date, only two commissions have been established with the financial assistance of the Danish development agency (DANIDA); they are located in Maine-Soroa in the county of Diffa and in Mirriah, in the county of Zinder.

Of the seven commissions planned for 1994, those are the only two currently in operation. The other five are scheduled to be created under the auspices of USAID. They will be located in:

- Tchrozerine in the Agadez county;
- Birni-N'sgaoure in the Dosso county;
- Guidan-Roundji in the Maradi county;
- Konni in the Tahoua county;
- Tillabery in the Kollo county.

In all, by the end of 1997, thirty-two commissions will be established.

3. Obstacle to the Efficient Operation of the Land Commissions.

Establishment of the land commissions in Maine-Soroa and Mirriah was not sufficiently planned; it was in fact improvised. Consequently, it is not surprising that the commission in Maine did not function as hoped, particularly as it lacked a legal framework within which to operate. The Commission in Mirriah was more successful, though more for informal reasons (initiative of local professionals and enthusiasm of the community) than better preparation.

In concrete fashion however, both commissions initiated pre-registrations in order to establish a rural record (there were about 1000 pre-inscriptions in Mirriah and 200 in Maine). The pre-registration process served to familiarize local authorities with written contracts as means of documenting land transactions.

Finally, the twelve-month operation has also served to identify the issues that must be resolved in order to ensure more efficient operation of the commissions. There were 3 types of difficulties.

- the absence of any texts providing a legal context for the commission activities.
- an inadequate composition of the commission themselves.
- a lack of preparation prior to the establishment of the entities.

A conference held to discuss the results of this first year of operation, held in Dosso on August 30 and September 3, 1994, provided some recommendations to remedy these problems including:

- avoiding the "improvisation" (sic.) in setting up the commissions;
- accelerating the rate at which supplementary legal texts are drafted;
- assuring the commissions benefit from a more representative composition as well as true autonomy in their decision-making.

Since then, a project to institute new guidelines governing the status and mode of operation of the land commissions has been prepared. Also, the size of the commissions will be increased with the addition of a representative for each rural

group. Furthermore, it has been agreed that future commission will benefit from " sound financial, technical, and methodological planning".

It is only under such conditions that the commissions will be able to successfully conduct their mission of conducting land tenure assessments, one of their primary tasks.

III. Rural Land Assessments.

The effective implementation of land evaluations will satisfy the major concerns surrounding the general concept of the rural code: providing a reliable and safe method of coping with land issues in the rural areas, developing sound methods of managing local natural resources, and establishing a more efficient land use management pattern.

This will take place with the help of land use management plans developed at the county level, as well as land ownership records at the next communal level. Several issues, however, need to be resolved in order to facilitate this process.

1. The development of a land management plan.

Resource inventories are currently being conducted by the land commissions in order to support the elaboration of a Land Management Plan (LMP) for each county. The expected result is a "document intended to identify the areas appropriate to certain type of land use as well as clarifying the different 'rights' interest involved" (art. 127 of Ordinance 93-015).

The LMPs are being developed through the participation of the land commissions and draw on studies assessing the concerns of local rural populations. The goal of each plan is to streamline land use practices and to provide directives ensuring sound management of local resources, in strict accordance to regulations as outlined in article 129 of the General Directive.

There are currently no final land management plan since, to date, the institutions responsible for the implementation of the rural code are not operational. Between 1995 and 1997 however, five LMPs are scheduled to be submitted to the government for review and approval: the LMPs will come from the counties of Diffa, Dosso, Maradi, Tahoua, and Zinder.

2. The establishment of a record keeping procedure for rural areas.

A key component of the LMP at the local level involves a "rural record" which, per the guideline of article 130 of the General Directive, is composed of two specific documents:

- a graphic (visual) representation of the space used by the commune or the local areas,
- a complete record of land ownership and concessions.

These records are to be kept by the land commissions and will be the direct responsibility of the local permanent rural code secretaries.

These rural records provide the backbone to the sound management of natural resources, particularly in the area of land use. Correct record keeping will guarantee secured rights of ownership (art. 117 of the General Directive) with the help of the various procedures instituted: assessment and legal acknowledgment of land rights, the establishment of individual records, and the issuance of official documents.

3. Obstacle to land right assessments.

The primary obstacles related to land tenure assessments are related to the lack of qualified legal and other trained professionals. Since the adoption of the General Directive, local institutions in charge of supporting the directive's implementation (local permanent secretariats, both at the local and the county levels) are far from being operational. This problem is exacerbated by the general absence of land commissions. Furthermore, the sparse complimentary (and thus supporting) legislation accentuates the difficulties. Finally, once the land commissions are actually up and running, they will need more than a written mandate to take certain types of actions; they will also need to be able to handle the technical issues germane to effective land use management.

Conclusion and recommendations

In light of recent - and frequent - conflicts between crop farmers, dairy farmers, and cattle owners in various regions of Niger, the effective implementation of the rural code has become a serious and urgent matter.

The rapid approval of texts outlining means of implementation is consequently the first priority, since these provide support for the creation of the land commissions and would strengthen land use and ownership assessments. For the supplementary written documentation, two specific projects should be mentioned, which would serve to further integrate cooperatives by more clearly defining their role in the implementation of the Rural Code:

- a law project which would modify the composition of associations, by including local structures in the management of natural resources;
- a law project for cooperatives, assuring total freedom of association with respect of various interest groups.

As to other issues, it is appropriate to refer to the recommendations which emerged from the conference organized in Dosso on August 31 and September 3, 1994, and which were scheduled to be further discussed in Marādi between September 11 and 15, 1995, by representatives of the administration, village chiefs, judges, technical services providers, and financial backers.

Recommendations

To ensure the rapid implementation of the Rural Code, the following steps should be taken:

- 1 - The restructuring and strengthening of the Permanent Secretary's office for the rural code;
- 2 - The establishment of local institutions supporting the rural code;
- 3 - The ratifying of complementary enabling legislation and guidelines to ordinance 93-105. In particular, those pertaining to:
 - The status and operational guidelines for the land commissions.
 - Rural record procedures and mandates;
 - Conflict resolution with respect to use of natural resources;
 - Optimization of natural resources,
 - Farming community lands (ownership, land use, etc.);
- 4 - The establishment of land commissions in areas where they are most urgently needed, following appropriate operational planning.

REPUBLIQUE DU NIGER
MINISTERE DE L'AGRICULTURE ET DE L'ELEVAGE
Comité National du Code Rural
Secrétariat Permanent

COMPTE RENDU DE L'ATELIER BILAN
SUR LE CODE RURAL

Dosso, du 31 Août au 3 Septembre 1994

Septembre 1994

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INTRODUCTION

Du 31 Août au 03 Septembre 1994, s'est tenu, dans la Salle de réunion de la Préfecture de Dosso l'Atelier-bilan du Code Rural.

La cérémonie d'ouverture a été présidée par Monsieur le Ministre de l'Agriculture et de l'Elevage, Président du Comité National du Code Rural en présence du Préfet de Dosso, du Directeur de l'USAID au Niger et de la Représentante de DANIDA.

Avant le démarrage des travaux il a été procédé à la mise en place d'un bureau de séance composé de :

Président : Mr Ali AKILOU, Secrétaire Général du MAG/EL

Vice-président : Mr ISSA Aboubacar, C/GRN

3 Rapporteurs généraux :

- Aboubacar Sidi, SDSA II/DEP/MAG/EL
- Hamadou Bourahima, USAID/Niamey
- Mamoudou Hassane, Code Rural

Monsieur Sadou BAWA, Conseiller en développement rural au Secrétariat Permanent du Code Rural et Monsieur PETER Block de LTC ont été désignés pour présider respectivement, la deuxième et la troisième session prévues le 1er Septembre, 2è jour de l'atelier.

Après la mise en place du bureau, l'ordre du jour fut adopté tel que proposé (Voir annexe). Il prévoit 4 journées de travail, les deux premiers jours ont été consacrés aux travaux de la plénière, le 3è jour aux travaux de commissions et le 4è jour à l'adoption en plénière des travaux des commissions et clôture de l'atelier.

I. COMMENTAIRES SUR LES ALLOCUTIONS OFFICIELLES

Après l'allocution de bienvenue de Monsieur le Préfet de Dosso, deux allocutions particulièrement importantes ont marqué l'ouverture de cet atelier. Intervenant peu avant le Ministre de l'Agriculture et de l'Elevage, le Directeur de l'USAID, après avoir rappelé les grandes caractéristiques géo-climatiques et humaines du Niger, a salué l'avènement du Code Rural nigérien qui devra pouvoir "assurer un accès équitable des populations aux ressources naturelles et à sécuriser les agro-pasteurs dans leurs droits". Il a ensuite fait remarquer qu'au Niger, "La situation foncière est caractérisée par une grande complexité des règles et coutumes régissant les terres et les points d'eau. Il a en outre souhaité que l'atelier de Dosso puisse s'inscrire dans un processus long et méthodique de sensibilisation, de concertation et d'analyse des situations foncières. Face aux aléas climatiques qui constituent une contrainte majeure au Niger, la quiétude dans la gestion

rationnelle et équitable des ressources naturelles, exige un cadre juridique dynamique et évolutif devant amorcer un processus maîtrisable de transformations quantitatives et qualitatives, des conditions de production et d'existence des populations a déclaré le Directeur de l'USAID. Et qu'à ce titre l'aide des USA dans ce processus totalise déjà 282 millions de francs CFA que l'USAID a mis à la disposition du SPCR entre 1986 et 1993. Il a en outre souligné que "cette aide pourra se poursuivre, voire s'intensifier si nécessaire au regard de l'intérêt tout particulier que son pays et lui même attachent à tout ce qui concourt au développement durable et harmonieux du Niger, plus précisément au bien être de ses populations rurales et pastorales".

Pour le **Ministre de l'Agriculture et de l'Elevage**, qui a salué l'heureuse initiative d'organiser une telle rencontre, l'atelier de Dosso lui donne l'occasion d'exprimer un double réconfort ; d'abord la situation générale de la campagne agricole au 31 Août 1994 qui est très satisfaisante et prometteuse, ensuite, l'opportunité qui lui est ainsi offerte de pouvoir constater et apprécier l'état d'avancement de l'important dossier relatif à l'élaboration dans toutes ses dimensions d'un Code Rural nigérien.

Après avoir rappelé à son tour, les graves problèmes de dégradation continue de nos ressources naturelles renouvelables et souligné les fréquences de plus en plus élevées des conflits sociaux relatifs aux modes d'accès à ces ressources naturelles, le **Ministre de l'Agriculture et de l'Elevage** déclare qu'ils sont à l'origine même, de nombreuses réflexions et débats nationaux ayant amené les Autorités nigériennes à décider d'entreprendre l'élaboration d'un Code Rural. Il rappelle à ce sujet que la première étape du travail du Comité National du Code Rural (CNCR) a abouti à l'adoption de deux ordonnances 93-015 et 93-014 du 2 Mars 1993, fixant respectivement les Principes d'Orientation du Code Rural et le régime de l'eau.

A terme, le Code Rural prendra progressivement la place de l'ensemble des règles juridiques pré-existantes, ainsi que les principales tendances qui se dégagent en matière de gestion et d'exploitation des ressources naturelles en milieu rural, a déclaré le **Ministre de l'Agriculture et de l'Elevage**.

II. PRESENTATION DU RAPPORT INTRODUCTIF PAR LE SECRETARIAT PERMANENT DU CODE RURAL

Ce rapport est axé sur six points principaux ci-après :

1°) **Le processus d'élaboration du Code Rural** : Il a démarré en 1985 par la constitution d'un Comité Informel de Réflexion sur l'Elaboration du Code Rural suivi par la création en 1986 d'un Comité ad'hoc chargé de l'Elaboration du Code Rural. Ce comité a été érigé en Juillet 1989 en Comité National du Code Rural ayant pour objectif de conduire une Réflexion devant aboutir à la mise en place d'un cadre juridique réglementant la gestion des ressources naturelles.

Les premiers textes de loi portant sur les Principes d'Orientation du Code Rural et le Régime de l'Eau ont été adoptés le 2 Mars 1993 par ordonnances N°93-015 et 93-014.

Dans le cadre d'une large information des différentes couches socio-professionnelles, il a été créé une Commission Nationale de Réflexion du Code Rural en Octobre 1993. C'est ainsi que 11 ateliers régionaux et plusieurs débats en français et en langues nationales ont été organisés.

Dans le cadre de la mise en oeuvre des instruments juridiques qui ont été élaborés, il a été prévu la création et l'installation de manière progressive, de 57 commissions foncières, dont 7 en 1994 ainsi que l'élaboration de schémas d'aménagements fonciers. Ces schémas seront élaborés en relation avec les collectivités à travers les secrétariats permanents municipaux ou d'arrondissements du Code Rural qui sont les organes permanents des commissions foncières, chargés notamment de la gestion des dossiers ruraux.

2°) Le contenu de la loi fixant les Principes d'Orientation du Code Rural : Il prend en compte à la fois le droit coutumier nigérien, le droit islamique, les lois et règlements fonciers coloniaux et actuels, auxquels il doit progressivement se substituer.

Pour ce faire, il renferme quatre thèmes majeurs :

- sécurisation des opérations^{foncières} ruraux,
- conservation et gestion des ressources naturelles,
- organisation et administration du monde rural,
- aménagement du territoire.

3°) Stratégies de mise en oeuvre du Code Rural :

- nécessité d'une décentralisation véritable de pouvoirs et de ressources afin de pouvoir rendre effective la mise en oeuvre du Code Rural. C'est pourquoi il est prévu au niveau du terrain, des structures locales (SP/D, SP/A, SP/C, CF) pour la gestion foncière ;
- Au niveau du Département, le SP est chargé de l'élaboration du schéma§ d'aménagements fonciers qui visera l'affectation des espaces ruraux aux différentes activités rurales ainsi que les droits qui s'y exercent;
- Le travail du SP/D se fera en étroite collaboration avec les différents SP/A et SP/Municipaux, qui sont des organes permanents des commissions foncières (CF), chargées quant à elles, de la gestion du Code au niveau des dossiers ruraux ;
- Les dossiers ruraux se composent de deux documents :

- un document graphique d'ensemble de l'espace rural sur lequel figure l'assiette des droits fonciers,
- un fichier, constitué de fiches individuelles ouvertes chacune au nom des titulaires des droits fonciers.

- /La mise en place des Commissions Foncières (CF), chevilles ouvrières de la mise en oeuvre du Code Rural, elles disposent des compétences consultatives et d'un pouvoir de décision.

Dans le premier cas, leur avis est impératif, sous peine de nullité pour toutes les questions relatives à la détermination du contenu de la "mise en valeur" des terres et la procédure d'élaboration des concessions rurales pouvant conduire à l'acquisition d'un droit de propriété sur les terres concédées.

Dans le 2^e cas, elles ont compétences pour procéder à la reconnaissance et à l'établissement du contenu des droits fonciers. Elles ont un pouvoir général de contrôle de la mise en valeur des terres de l'Arrondissement ou de la Commune. elles peuvent transférer à un tiers, l'usage de terre non mise en valeur.

4°) Les contraintes : Les plus importantes sont au nombre de 5 :

- délicatesse et complexité du sujet, compte tenu de la rareté de ressources foncières, devenant de facto convoitées par tous les acteurs ;
- Absence d'une véritable orientation politique nationale pendant la période d'élaboration des textes ;
- Nombre pléthorique des membres du comité consultatif rendant difficile leur mobilisation régulière ;
- Insuffisance des ressources humaines au niveau du Secrétariat Permanent ;
- Difficultés de mobilisation des fonds ce qui engendre des écarts dans la réalisation des activités programmées.

5°) Le programme d'action pour les 3 prochaines années :

- renforcement des structures du Comité national du Code Rural par l'actualisation des textes (un projet de décret et un projet d'arrêté sont actuellement dans le circuit) ;
- Officialiser la création du Secrétariat Permanent du Code Rural en tant que structure d'exécution du CNCR chargée de l'élaboration du Code Rural. Celle-ci devant se faire par arrêté, en précisant sa nature (établissement public, service public ou projet) ;

- Consécutivement à cette disposition, prendre un autre arrêté fixant la composition des membres de l'équipe devant constituer le Secrétariat permanent du Code Rural en précisant les fonctions ;
- De même, pour les SP/D, SP/A, et CF ces structures doivent être créées officiellement par textes réglementaires, déterminant aussi leur composition;
- Elaboration des textes complémentaires qui conditionnent d'ailleurs la mise en oeuvre effective du Code Rural. Douze textes complémentaires vont être élaborés, dont 4 avant fin 1994 ;
- Installation des Commissions Foncières ;
- Elaboration de Schémas d'Aménagement Foncier ;
- Création d'un centre de documentation foncière conformément à une recommandation du séminaire de Guidiguir.

6°) Les acquis :

- La capitalisation des études de gestion des ressources naturelles ;
- Une plus grande prise en compte du foncier dans la conception des projets;
- Abandon de la pratique d'une réglementation au coup par coup avec le cadre mis en place, la loi d'orientation.

L'exposé du Secrétariat Permanent a pris fin avec la présentation sommaire de l'ébauche de l'Évaluation interne de la campagne de popularisation.

Les actions principales suivantes ont été menées par la commission spéciale créée à cet effet :

- édition et diffusion massive de la loi d'orientation en français et dans toutes les langues nationales,
- Formation des principaux acteurs,
- tenue de 11 ateliers régionaux,
- tenue d'ateliers spécifiques s'adressant à certaines associations professionnelles d'éleveurs et d'agriculteurs.

La popularisation a débouché sur 33 principales suggestions et quatre axes de recommandation émis à l'occasion des différents séminaires régionaux.

Les documents présentés ont par la suite fait l'objet d'un débat avec en préliminaire des questions pratiques et d'éclaircissement, notamment l'objectif du séminaire. Les discussions de fond ont soulevé des questions importantes sur lesquelles les réflexions doivent continuer au cours des travaux en commissions. Il s'agit principalement de :

- les questions institutionnelles dont le statut actuel du Secrétariat permanent du Code Rural ;
- La stratégie à mettre en place pour la recherche d'un financement durable;
- La possibilité de prise en compte des grandes interrogations soulevées lors de la campagne de popularisation par les 12 textes complémentaires qui doivent être élaborés ;
- La cohérence entre l'Ordonnance 93-015 et la loi sur la décentralisation ;
- La mise en place de mécanisme devant permettre une meilleure coordination entre le Secrétariat permanent du Code Rural et les autres Projets et Programmes de développement ;
- La formation des personnes impliquées à tous les niveaux.

III. DISPOSITIF DU SUIVI-EVALUATION DU CODE RURAL PRESENTE PAR LE LAND TENURE CENTER

Dans le cadre de l'appui qu'apporte le Land Tenure Center au Secrétariat Permanent à travers la SDSA II, un programme de suivi-évaluation est en cours d'installation.

L'approche repose sur trois axes : l'identification des indicateurs, le mécanisme de suivi des indicateurs et les niveaux d'intervention.

Par rapport au foncier, certaines questions se posent : Quel dispositif mettre en place ? Quels sont les indicateurs qualitatifs et quantitatifs disponibles pouvant aider à la compréhension de la problématique foncière ? Comment utiliser ces indicateurs pour appuyer le processus d'élaboration des textes complémentaires du Code Rural ?

Dans le cadre du Code Rural, nous observons deux formes de suivi : l'évaluation/suivi et le suivi/évaluation.

Le premier fait l'état des lieux et permet de s'assurer entre autres que les textes complémentaires sont conformes aux problèmes majeurs rencontrés.

Le second suit la performance des institutions et la réaction des opérateurs ruraux. Ainsi, le dispositif s'appuie sur quatre thèmes principaux du Code Rural :

- sécurisation des opérateurs ruraux. A ce niveau la loi stipule qu'il n'y a pas de hiérarchie entre le droit écrit et le droit coutumier ;
- Organisation du Monde rural. Il s'agit là de l'évaluation du travail des commissions foncières ;
- Conservation et gestion des ressources naturelles. Ce suivi doit s'appuyer sur le PNGRN et son dispositif de suivi/évaluation ;
- Aménagement du territoire ;

Les débats suscités par l'intervention, en plus des discussions ayant trait à certains détails sur les dispositions traditionnelles par rapport au foncier, ont porté sur le choix d'un système de suivi approprié pour le Secrétariat Permanent du Code Rural à travers notamment l'identification :

- d'indicateurs d'impact
- des niveaux d'intervention
- des mécanismes de suivi.

IV. ATTENTES ET CONTRAINTES DU CODE RURAL PAR LE LAND TENURE CENTER

Le Land Tenure Center a été associé au processus du Code Rural depuis 1986 et cela, de manière ponctuelle.

La démarche adoptée pour l'élaboration associe une approche juridique et une approche socio-économique, tout en insistant sur une démarche participative et décentralisée.

Il peut, être déduit qu'il est attendu du Code Rural, des mesures réglementaires :

- de portée nationale et d'applicabilité locale,
- sécurisantes et incitatrices d'efforts productifs,
- équitables et prometteuses d'une utilisation optimale des ressources naturelles,
- durables et souples pour répondre aux différentes tendances socio-économiques.

Après le développement qui a été fait sur l'historique et l'avenir du Code Rural à travers ses grandes options et les constats qui en découlent il paraît judicieux d'orienter à court terme les réflexions sur les points suivants :

- la propriété rurale,
- la mise en valeur,
- les contrats d'exploitation,
- la hiérarchie des droits.

V. PRESENTATION DES TRAVAUX DE RECHERCHE ET RECOMMANDATION DES ETUDES DE LTC

Depuis son implication au processus de mise en place du Code Rural, LTC a eu à faire plusieurs contributions, et compte les poursuivre dans l'avenir. Au titre de sa collaboration, l'institution a eu à formuler certaines recommandations qu'elle juge utiles dans le cadre de l'élaboration des textes complémentaires.

L'intervention a essentiellement porté sur des suggestions et des recommandations :

- Les textes législatifs (Principes d'Orientation du Code Rural et textes complémentaires devant suivre) doivent être souples pour s'adapter à la nature dynamique de la gestion du foncier. Il doivent également être sensibles aux particularités locales ;
- Les textes complémentaires devront d'abord clairement définir le rôle des différentes hiérarchies administratives et institutionnelles : Commissions Foncières, justice, Chefferie traditionnelle, administration ;
- Le Secrétariat Permanent du Code Rural a besoin d'être plus étoffé compte tenu des tâches qui lui sont dévolues ;
- La représentation de la population locale doit être plus importante au niveau des commissions foncières ;
- L'élaboration des textes complémentaires doit tenir compte de certaines priorités pour répondre aux urgences, dont :
 - la définition des rôles et de la composition des commissions foncières,
 - la définition du droit de propriété et du mode d'acquisition dans le contexte nigérien,
 - une réglementation de la résolution des conflits et de la classification des niveaux de compétences ;

- une définition claire de l'intégration de l'agriculture et de l'élevage par rapport à l'utilisation des terres.

Les débats sur les deux exposés, ont permis de relever beaucoup de préoccupations, notamment la prise en compte des lieux d'implantation des autres programmes de gestion des ressources naturelles, pour la mise en place des commissions foncières pour une meilleure harmonisation des interventions.

VI. PERCEPTIONS ET ATTENTES DU MONDE RURAL NIGERIEEN, LTC

Ce thème découle des travaux de recherche entrepris au niveau des structures et autorités traitant des conflits fonciers, notamment les tribunaux, les sous-préfectures et les chefs de cantons.

La majorité des conflits observés gravitent autour des sujets suivants :

- revendication de propriété ;
- Morcellement des terres ;
- Limite des champs ;
- Remise en cause des jugements et des conciliations.

La suite de l'intervention a porté sur certains thèmes dont le contrôle des aires de pâturage, le statut des terres aménagées et la gestion des terres des cuvettes qui ont permis de mettre en relief, au cours de débats, le caractère spécifique de chaque région par rapport aux us et coutumes. De même, le contenu de la propriété rurale a retenu l'attention des participants.

VII. EXPERIENCE DES INTERVENANTS EN MILIEU RURAL : RAPPORT ENTRE LA GESTION DES RESSOURCES NATURELLES ET LE CODE RURAL, PERSPECTIVES D'AVENIR

Par rapport aux expériences qu'ils ont vécues sur le terrain, certains projets ont eu à présenter des formes d'organisation et de gestion devant permettre une exploitation rationnelle des ressources naturelles et pour lesquelles les textes sont insuffisants ou inexistantes. La prise en compte immédiate de ces préoccupations par le Code Rural est très sollicitée pour un meilleur accomplissement des actions de développement.

Les différents projets concernés sont :

- Le Projet de Développement de l'Agro-foresterie et d'Aménagement des Terroirs (PDAAT) de Dosso ;
- L'Union Internationale pour la Conservation de la Nature (UICN) - Aménagement de la rônèraie de gaya ;

- Le Projet Energie II - Volet offre ;
- Le Projet Intégré Keita.

Les attentes générales de ces différents projets se résument comme suit :

- Les textes régissant l'organisation du monde rural en associations, en Coopératives ou en Groupements d'Intérêts Economiques, ne donnent pas toute la latitude aux populations locales pour s'organiser à des fins lucratives.

Ces textes sont limitatifs pour permettre une gestion rationnelle des ressources. C'est le cas de la rôneraie de Gaya qui a une valeur potentielle de plusieurs milliards de francs CFA. Il est donc nécessaire voire indispensable de procéder désormais à de changements importants et innovateurs dans l'élaboration des textes réglementant l'organisation et la gestion du Monde rural ;

- Les communautés rurales doivent avoir une part de responsabilité de plus en plus significative dans l'organisation de la police rurale. En fait, elles doivent avoir la possibilité de sauvegarder elles-mêmes leur patrimoine commun et de pouvoir décider de son utilisation ou de ses différents usages.

REPUBLIQUE DU NIGER
MINISTERE DE L'AGRICULTURE ET DE L'ELEVAGE
Comité National du Code Rural
Secrétariat Permanent

COMMISSION IV

TEXTES COMPLEMENTAIRES

Atelier Bilan du Code Rural du 31 au 3 Septembre 1994

INTRODUCTION

La Commission N°II composée de 11 membres dont la liste en annexe, réunie dans la Salle de réunion du PDAAT, s'est penchée sur l'identification des principes d'orientation du Code Rural, et l'élaboration d'un ordre de priorité de ces textes.

Après la mise en place de son bureau de séance composé de:

Président : Salaou BARMOU

Rapporteurs : Aboubacar KASSOUKOYE

La Commission a procédé à l'examen de la liste des textes complémentaires proposés par le Secrétariat Permanent du Code Rural dans son rapport introductif atelier bilan Dosso.

Ces textes complémentaires proposés par le S/P du code Rural ont été complétés par un autre texte portant sur le statut des groupements ruraux.

II. LISTE DES TEXTES COMPLEMENTAIRES

- La mise en valeur
- Les terroirs d'attaches des espaces pastoraux
- Les aménagements réalisés par la puissance publique et les servitudes s'y rattachant et le statut des terres de culture de contre-saison
- L'expropriation pour cause d'utilité publique
- Le dossier rural
- La faune
- La pêche et la pisciculture
- La propriété
- Les concessions rurales
- Les contrats d'exploitation
- La décentralisation et le statut des forêts
- Les schémas d'aménagement fonciers

- Les aires protégées
- La révision du Code Forestier (PM)

Après avoir discuté de tous ces points la commission a dégagé trois groupes de priorité dans l'élaboration de ces textes.

Groupe I : Il s'agit des textes déjà mis en chantier par le Secrétariat Permanent du Code Rural.

- la mise en valeur,
- les terroirs d'attaches.

Groupe II : Il s'agit là des textes spécifiquement contrôlés par l'équipe du Code Rural.

- la propriété,
- le règlement des conflits sur les ressources naturelles,
- les aménagement réalisés par la puissance publique,
- l'expropriation pour cause d'utilité publique,
- les contrats d'exploitation,
- les concessions rurales.

Groupe III : C'est sont des textes qui ont vu un début d'étude par d'autres institutions de l'Etat:

- la faune,
- la pêche et la pisciculture,
- la décentralisation et le statut des forêts,
- les aires protégées,
- la révision du Code Forestier,
- statut des groupements ruraux,
- dossier rural,
- schéma d'aménagement foncier.

CONCLUSION

Les textes complémentaires doivent résoudre les questions posées et les interrogations faites lors de la campagne de popularisation des principes d'orientation du Code Rural.

La commission a également abordé et discuté les questions lacunes des principes d'orientation.
Elle n'a pas jugé opportun de s'engager dans un processus de révision de cette loi.

Mais demande au Comité national du Code Rural de prendre en compte les observations faites de la campagne de popularisation.

LA COMMISSION

2013
2013

**5. PROPOSITION DE PROJET DE DECRET PORTANT ORGANISATION,
ATTRIBUTIONS ET FONCTIONNEMENTS DES INSTITUTIONS CHARGEES DE
L'APPLICATION DES PRINCIPES D'ORIENTATION DU CODE RURAL**

***RAPPORT DE PRESENTATION DU PROJET DE DECRET PORTANT
ORGANISATION, ATTRIBUTIONS ET FONCTIONNEMENT DES INSTITUTIONS
CHARGEES DE L'APPLICATION DES PRINCIPES D'ORIENTATION DU CODE
RURAL***

Le projet de texte ci-après propose un cadre juridique destiné à favoriser le fonctionnement des institutions chargées de l'application des principes d'orientation du Code Rural.

En effet, le livre II de l'ordonnance 93-015 du 02 mars 1993, crée un certain nombre d'institutions.

Ces institutions ont pour objet l'administration et l'organisation du monde rural. Parmi ces institutions, nous retiendrons le comité national, les secrétariats permanents et les commissions foncières.

L'article 126 de l'ordonnance précitée prévoit la réglementation de ces institutions quant à leur organisation, fonctionnement et attributions par décret.

Actuellement deux commissions foncières tests et deux secrétariats permanents d'arrondissement sont installés à Mainé Soroa et Mirriah. Après un an de fonctionnement, leur évaluation fait ressortir des difficultés d'organisation et de fonctionnement. Ces difficultés sont dues essentiellement au défaut de réglementation en la matière. La généralisation de ces institutions nécessite préalablement que le comité national, les secrétariats permanents et les commissions foncières soient dotés d'un texte les régissant.

Le présent projet soumis traite du comité national, des secrétariats permanents et des commissions foncières. En regroupant dans un même texte ces trois institutions, nous faisons ressortir leur interdépendance d'une part et la nécessaire hiérarchie devant exister entre elles d'autre part.

Le Comité National chargé de l'application des orientations

L'article 122 de l'ordonnance précitée l'a juste institué et le définit comme un service public qui sera aidé dans sa mission par les secrétaires permanents. Ses attributions sont d'ordre général et relatives à l'application des principes d'orientation du Code Rural.

Comme organe hiérarchiquement supérieur, c'est le Ministre de l'Agriculture qui en assure l'autorité.

Les orientations d'ordre général données par la loi propose ceci dans le décret :

Composition :

Neuf (9) membres sont proposés dont six nommés par les ministres impliqués dans l'application de la Loi d'orientation. Les trois autres membres, c'est à dire le Secrétaire

Général de l'Agriculture, le Secrétaire Général de l'Association des Chefs Traditionnels et le Secrétaire Permanent National sont membres d'office compte tenu du rôle qu'il doivent jouer.

On constate à ce niveau que les groupes ruraux ne sont pas impliqués compte tenu du caractère administratif de l'organe. Cet organe fonctionne comme un conseil d'administration qui contrôle et se prononce sur les activités, les orientations et le respect des principes d'orientation dégagés par la loi et que les secrétaires permanents sont obligés de respecter par l'intermédiaire des commissions foncières. Le Secrétaire Général de l'Agriculture supplée le Ministre de l'Agriculture pour présider la commission. Ce choix est fait en raison des observations faites par les techniciens lors de l'évaluation des deux commissions tests. En effet, le Ministère doit être impliqué dans l'application du Code Rural. En associant le Secrétaire Général, nous pensons que l'objectif sera atteint. Pour renforcer cette présence et pour une concertation réelle, des réunions périodiques sont prévues avec les cadres départementaux de l'Agriculture, de l'Environnement, les secrétaires permanents et les bailleurs de fonds.

Enfin, le comité se doit d'informer sous forme de rencontres périodiques les Ministres de l'Agriculture et de l'Environnement.

Les secrétariats permanents

Ils sont considérés comme l'organe administratif à des degrés différents soit du comité national, soit des commissions foncières.

Ainsi, nous avons trois degrés de service des secrétariats permanents.

Le premier degré est le niveau national. Il est dénommé Secrétariat Permanent National. Les principes d'orientation du Code ne l'ont pas prévu, mais nous estimons qu'il est nécessaire sinon indispensable car les membres du comité national ne sont pas permanents. Le Secrétariat Permanent National va servir de support administratif au Comité National.

Enfin, ce niveau national sera chargé de coordonner les activités du niveau départemental et constituera un observatoire national de la réforme foncière.

Les attributions du secrétariat permanent national sont clairement définies et permettent de dégager des objectifs précis à atteindre.

De ces attributions sont tirées les justifications des services à créer. Aussi, pour ne pas avoir une pléthore de cadres à temps plein, possibilité est donnée au secrétaire permanent de prendre des consultants pour une mission précise.

Le second degré des secrétariats est le niveau départemental. Les secrétariats permanents départementaux sont prévus par la loi. Leur attribution d'ordre général est la confection du schéma d'aménagement foncier et le suivi des orientations du département en matière de développement rural. Le fait de créer cette structure auprès du Préfet, permet de percevoir directement le lien hiérarchique qui doit exister. Aussi, c'est dans l'organisation du travail et du traitement des données et surtout dans le mode de désignation du Secrétaire Permanent que le lien organique entre le niveau national et le niveau départemental se perçoit. C'est de la mise en oeuvre de cette proposition qu'on verra l'efficacité et corriger les insuffisances. Les difficultés rencontrées pour créer un mécanisme de fonctionnement viennent du fait que la loi n'a pas été précise. Il a été tenu compte des observations des cadres techniques lors de l'évaluation pour faire une proposition de profil et de durée pour assurer la

stabilité du secrétaire permanent. Une combinaison d'interventions dans la nomination du secrétaire permanent permettra à ce dernier de cerner les relations d'ordre hiérarchique le liant aux trois personnalités associées à son choix.

Le troisième degré est le niveau de l'arrondissement.

Le secrétariat permanent d'arrondissement est l'organe technique et administratif de la commission foncière. De sa bonne organisation et de son bon fonctionnement dépendra le travail de la commission foncière.

Les critères et le mode de désignation du secrétaire sont les mêmes que ceux du départemental.

Les commissions foncières

Bien que la loi ait prévu la composition des commissions foncières, les observations de ceux chargés de les faire fonctionner nous obligent à proposer un réajustement. C'est ainsi qu'un juriste non magistrat et l'élargissement de la représentation des groupes ruraux à deux membres sont proposés. Aussi, la nomination personnelle des chefs de service n'est pas déterminante pour la commission foncière.

Pour le fonctionnement des commissions foncières, beaucoup de détails ont été donnés. En effet, certains actes accomplis par la commission peuvent constituer le point de départ de la preuve d'un droit sur le foncier. C'est pour cela, sans pour autant avoir la prétention d'organiser à travers les présentes dispositions le régime du droit foncier rural, nous annonçons que nous n'avons pas trouvé de meilleur mécanisme juridique d'enregistrement des terres que celui prévu par le décret du 26 juillet 1932 portant réorganisation du régime de la propriété foncière en Afrique Occidentale Française (A.O.F.). Ce mécanisme est bon et nous l'avons adapté au fonctionnement que les commissions foncières sont supposées avoir en tenant bien sûr compte des données de l'évaluation de celles qui fonctionnent.

Vous trouverez de manière détaillée :

- la procédure d'enregistrement des terres, c'est à dire qui peut enregistrer, comment déclarer un fonds de terre, quel fonds de terre peut-on déclarer, comment la commission va procéder à l'enregistrement, en cas de contestation comment faire, enfin qui va trancher les litiges ;

- les formalités proprement dites de l'enregistrement, c'est à dire que doit-on écrire dans le registre, comment tenir ce registre et les dossiers ruraux, le nombre de registres à ouvrir.

En adoptant une procédure simplifiée, nous pensons sécuriser le monde rural.

Telles sont les grandes lignes et les justifications du présent projet de texte.

**PROJET DE DECRET PORTANT
ORGANISATION, ATTRIBUTIONS
ET FONCTIONNEMENT DES
INSTITUTIONS CHARGEES DE
L'APPLICATION DES PRINCIPES
D'ORIENTATION.**

CHAPITRE I. : DU COMITE NATIONAL

Article 1 : Le comité national institué par l'ordonnance 93.015 du 2 mars 1993 est composé de 9 membres :

- 6 membres nommés par :

le Ministre chargé de l'agriculture et de l'élevage

le Ministre chargé de l'hydraulique et de l'environnement

le Ministre chargé des Finances et du Plan

le Ministre chargé de l'aménagement du territoire

le Ministre chargé du génie rural

le Ministre de la Justice (législation civile)

- sont membres d'office : le secrétaire général du Ministère de l'agriculture, le secrétaire permanent national et le secrétaire général de l'Association des chefs traditionnels.

Le secrétaire général du ministère chargé de l'agriculture supplée son ministre pour présider le comité national.

Article 2 : Le comité national est un service public. Il est chargé de la vulgarisation et du suivi de l'application de l'ordonnance n° 93-015 du 2 mars 1993 fixant les principes d'orientation du code rural. Il est appuyé dans sa mission par le secrétariat permanent national.

Article 3 : Le comité national se réunit périodiquement sur convocation du président pour :

- fixer annuellement les objectifs du secrétariat permanent national et son budget de fonctionnement

- statuer sur le programme annuel d'activités du secrétaire permanent national

- se prononcer sur le rapport annuel d'activités du secrétariat permanent national

- examiner tout projet de texte portant application de la loi d'orientation

- se prononcer obligatoirement sur les schémas d'aménagement foncier départementaux avant leur soumission pour adoption

- se prononcer sur toute question d'importance certaine pour la mise en application de la loi d'orientation

- se prononcer sur tout projet d'envergure nationale relatif à des aménagements agrosylvo pastoraux ou hydrauliques.

Article 4 : Le comité national se réunit à la fin de chaque année avec les cadres départementaux de l'agriculture, de l'environnement, les secrétaires permanents départementaux et d'arrondissement et éventuellement les bailleurs de fonds.

Cette réunion tient lieu de concertation en vue de la fixation de nouveaux objectifs pour l'année à venir.

Article 5 : Le comité national tient les Ministres chargés de l'agriculture et de l'environnement informés de ses activités sous forme de rencontres périodiques.

Chapitre II. : DES SECRETARIATS PERMANENTS DU CODE RURAL

Du Secrétariat Permanent National

Article 6 : Il est créé auprès du Ministre de l'agriculture et de l'élevage un Secrétariat Permanent National.

Article 7 : Le Secrétariat Permanent National a pour mission :

- la préparation des réunions du comité national et la rédaction de ses rapports ;
- la coordination des activités des secrétariats permanents départementaux et ceux d'arrondissement ;
- la gestion administrative et financière du secrétariat permanent national ;
- la préparation du budget du Secrétariat Permanent ;
- de faire des propositions de recherches de financement à soumettre au Ministre de l'agriculture et de l'élevage ;
- l'élaboration des projets de textes complémentaires du code rural ;
- la conservation nationale des fichiers du foncier rural ;
- la création d'un centre de documentation et d'une banque de données sur le foncier rural ;
- le suivi et l'évaluation des commissions foncières.

Article 8 : Le Secrétariat Permanent National comprend les services centraux et les secrétariats permanents départementaux et d'arrondissements.

Section 1. Des services centraux du Secrétariat Permanent National

Article 9 : Le secrétariat permanent national comprend les services centraux suivants :

- le secrétariat
- le service de la législation
- le service administratif et financier
- le service suivi et évaluation des commissions foncières
- le service de la conservation nationale du fichier du foncier rural
- le service de la documentation et de banque de données sur le foncier rural.

Article 10 : Le secrétariat permanent national est dirigé par un secrétaire permanent national nommé pour 3ans par décret pris en conseil des Ministres sur proposition du Ministre de l'agriculture et de l'élevage.

Article 11 : Le Secrétaire Permanent peut se faire assister de consultants temporaires ou d'un bureau d'études spécialisés.

Article 12 : L'organisation et les attributions de chaque service seront fixées par arrêté du ministre de tutelle.

Section 2. Du Secrétariat Permanent Départemental

Article 13 : Il est créé auprès de chaque préfet un secrétariat permanent départemental.

Article 14 : Le secrétariat permanent est dirigé par un secrétaire permanent départemental nommé pour 3 ans par le Ministre de l'agriculture sur proposition du préfet en concertation avec le secrétaire permanent national.

Le secrétaire permanent départemental doit être un haut cadre expérimenté ayant des connaissances en développement rural.

Le salaire, les indemnités et autres avantages seront pris en charge soit par l'Etat, soit par la collectivité dont il relève.

Article 15 : Le secrétariat permanent départemental a pour mission :

- le contrôle et la coordination de la gestion des ressources naturelles du département ;
- la réalisation des études d'impact pour l'élaboration du schéma d'aménagement foncier du département ;
- l'enquête publique préalable à l'élaboration du schéma d'aménagement foncier ;
- l'élaboration du Schéma d'Aménagement Foncier ;
- la coordination et la synthèse des activités des secrétariats permanents d'arrondissement ou de commune et la transmission des rapports au secrétaire permanent national ;

- la coordination au niveau départemental des activités des commissions foncières d'arrondissement en collaboration avec les secrétaires permanents d'arrondissement ;
- la gestion administrative et financière du secrétariat permanent départemental ;
- la convocation de réunions périodiques de concertation sous la présidence du préfet avec l'ensemble des cadres techniques du département impliqués dans la gestion des ressources naturelles ;
- l'archivage au niveau départemental des fichiers du foncier rural de chaque arrondissement .

Le secrétaire permanent propose au préfet l'ordre du jour des réunions de concertation.

Article 16 : Le secrétariat permanent départemental comprend les services ci-après :

- le secrétariat
- le service d'aménagement foncier et d'enquête publique
- le service d'archivage des fichiers fonciers du département
- le service d'informatisation des données foncières du département.

Article 17 : Toute demande d'autorisation administrative d'utilisation de l'espace rural et d'accès aux richesses agricoles, sylvicoles et pastorales, est préalablement traitée par le secrétaire permanent.

Les autorisations doivent être conformes au schéma d'aménagement foncier du département.

Section 3. Du Secrétariat Permanent d'Arrondissement

Article 18 : Il est créé auprès de chaque sous-préfet un secrétariat permanent d'arrondissement ou de commune.

Article 19 : Le secrétariat est dirigé par un secrétaire permanent nommé pour 3 ans par le Ministre de l'agriculture sur proposition du sous-préfet en concertation avec le secrétaire permanent national.

Le secrétaire permanent d'arrondissement doit être un cadre expérimenté ayant des connaissances en développement rural.

Article 20 : Le salaire, indemnités et autres avantages seront payés soit par l'Etat, soit par la collectivité dont il relève.

Article 21 : Le secrétaire permanent d'arrondissement a pour mission :

- la gestion administrative et financière du secrétariat permanent ;
- l'établissement et la conservation des dossiers ruraux de l'arrondissement ;

- de contribuer à l'élaboration du schéma d'aménagement foncier au niveau départemental ;
- d'apporter l'appui nécessaire à l'accomplissement et à l'exécution des tâches de la commission foncière ;
- la rédaction des rapports d'activités et de réunions de la commission foncière et leur transmission au secrétariat permanent départemental.

Article 22 : Le secrétariat permanent d'arrondissement est l'organe administratif et technique de la commission foncière. Il comprend les services ci-après :

- secrétariat
- service de l'aménagement foncier
- service de l'enregistrement des fonds de terre et de la tenue du dossier rural d'arrondissement.

Chapitre III. : DES COMMISSIONS FONCIERES

Section 1. Attributions et Composition

Article 23 : Il est créé auprès de chaque sous-préfet une commission foncière chargée :

- d'assurer le contrôle et la mise en valeur des ressources naturelles de l'arrondissement ;
- de procéder à la délimitation et à l'enregistrement des fonds de terre ruraux ;
- de l'établissement d'un document graphique de l'ensemble de l'espace rural de l'arrondissement ;
- de participer à l'élaboration du schéma d'aménagement foncier du département ;
- de déterminer l'assiette de chaque droit et de fixer le montant des indemnités en cas d'expropriation pour cause d'utilité publique ;
- de fixer le prix d'acquisition des terres aménagées qui font l'objet d'une procédure de préemption ;
- de donner son avis sur toute question relative à l'orientation de la politique foncière de la collectivité territoriale telles que le contenu de la mise en valeur, les procédures de concessions rurales, les contrats d'exploitation ;
- de décider du caractère définitif des concessions rurales ;
- de décider du transfert à un tiers de l'usage des terres non mises en valeur.

Article 24 : Les commissions foncières seront installées dans chaque arrondissement en fonction des possibilités financières de l'Etat et des collectivités.

Article 25 : Les commissions foncières sont composées telles que prévues par l'article 118 de l'ordonnance 93-015 du 2 mars 1993.

Toutefois :

- les chefs de services pourront se faire représenter par leurs collaborateurs ;
- le service de l'alphabétisation et de la formation professionnelle sera représenté ;
- un juriste non magistrat composera la commission ;
- la représentation des agriculteurs et des éleveurs peut être élargie à deux par groupe rural.

L'autorité administrative déterminera les conditions d'élection des représentants de chaque groupe rural.

Section 2. Du fonctionnement des commissions foncières

Paragraphe 1. De la procédure d'enregistrement des terres.

Article 26 : Les droits fonciers ruraux sont constatés par l'enregistrement des fonds de terre ruraux non bâtis au registre tenu à cet effet au secrétariat permanent d'arrondissement.

Chaque fonds de terre enregistré doit être matérialisé sur le document graphique de l'arrondissement.

Article 27 : Peuvent enregistrer leurs droits :

1°) le propriétaire, alors même que sa capacité est restreinte aux seuls actes d'administration

2°) le copropriétaire chargé de l'administration des biens indivis

3°) le titulaire d'un des droits réels énumérés ainsi qu'il suit et avec le cautionnement du propriétaire : l'usufruit, les droits d'usage, les contrats de longue durée (à partir de 10 ans), le droit de superficie, les servitudes, les contrats par lequel le débiteur donne au créancier la possession de son bien avec faculté d'en percevoir les fruits jusqu'à paiement total de la créance

4°) le tuteur, administrateur ou curateur d'un incapable ayant l'une des qualités ci-dessus.

Article 28 : Sont seuls susceptibles d'enregistrement, les fonds de terres ruraux non bâtis.

Article 29 : Tout enregistrement doit être précédé d'une déclaration au registre prévu à cet effet.

La déclaration porte sur les mentions suivantes :

- l'origine de la propriété ou du droit
- les nom et prénoms, qualité et domicile, état civil

- description du fonds de terre ainsi que des constructions et des plantations qui s'y trouvent, avec indication de sa situation

- tout renseignement jugé utile par le déclarant.

Le déclarant signe ou appose son empreinte conformément aux usages. La déclaration est une simple formalité administrative de recensement des terres supposées mises en valeur ; à cet effet, elle n'a aucune force probante.

Article 30 : Le domaine public restant imprescriptible, tout enregistrement qui aurait pu être fait au nom d'un particulier est nul de plein droit.

Article 31 : Avant de procéder à l'enregistrement, la commission foncière s'assure :

1°) de l'identité des parties ; l'identité est garantie par l'autorité coutumière présente, les témoins présents ou par la production des actes publics ou de décisions judiciaires ;

2°) de la capacité ;

3°) de la disponibilité du champ ;

4°) du droit du disposant.

Article 32 : Si la vérification révèle l'absence ou l'insuffisance de l'un des éléments mentionnés ci-dessus, la commission refuse la délimitation du fonds de terre et l'enregistrement. Procès-verbal est dressé dans lequel le secrétaire permanent fait connaître les causes du refus de la commission.

Article 33 : Pendant le délai de 30 jours prévu pour l'information du public et des parties, toutes personnes intéressées peuvent intervenir pour refuser l'enregistrement à savoir :

1°) par opposition, en cas de contestation sur l'existence ou l'étendue du droit de propriété du requérant ou sur les limites du fonds de terre ;

2°) par demande d'inscription, en cas de prétentions élevées à l'exercice d'un droit réel susceptible de figurer dans le dossier rural.

Ces oppositions ou demandes d'inscription sont faites soit par voie de déclarations orales, reçues par le secrétaire permanent d'arrondissement, soit par lettres adressées au dit secrétaire et transcrites par ses soins sur le même registre.

Les déclarations et lettres ci-dessus spécifiées doivent contenir l'indication des noms, prénoms, domicile des intervenants, les causes de l'intervention.

Article 34 : Sont admis à intervenir par voie d'opposition ou de demande d'inscription :

1°) en leur nom propre, toutes les personnes déclarées aptes à enregistrer leurs fonds de terre ;

2°) au nom de ces mêmes personnes, leurs créanciers ;

3°) au nom des incapables, outre leurs représentants légaux, leurs parents, alliés ou créanciers et le Procureur de la République ;

4°) au nom des absents, leurs mandataires, ou, à défaut, leurs parents, alliés ou créanciers, le Procureur de la République pour les biens vacants.

Article 35 : Aucune opposition ou demande d'inscription n'est recevable après l'expiration du délai de 30 jours.

Toutefois, lorsque la délimitation n'aura pu être faite dans le délai fixé à l'article ci-après, les personnes intéressées et qui auront été régulièrement convoquées conserveront le droit de former opposition à l'enregistrement jusqu'à la clôture des opérations de délimitation qui doit être portée à leur connaissance.

Article 36 : L'opération de délimitation des fonds de terre a lieu chaque trois mois.

Article 37 : A chaque opération, la commission foncière fait procéder, par l'un des géomètres assermentés rattachés au secrétariat permanent ou à la commission foncière, à la délimitation des fonds de terre à enregistrer.

Article 38 : Les dates fixées pour les délimitations doivent être portées à la connaissance du public 1 mois à l'avance au moyen :

1°) de trois avis transmis aux fins de publication dans les points d'eau pastoraux importants, dans les marchés de la région où se trouve situé le fonds de terre, et d'affichage à la sous-préfecture ;

2°) d'une invitation adressée au sous-préfet d'avoir à assister ou à se faire représenter pour défendre les intérêts de l'administration ;

3°) d'une invitation adressée par l'intermédiaire de l'administration aux chefs coutumiers concernés d'avoir à assister à la délimitation ;

4°) d'invitations personnelles transmises directement ou par voie administrative :

- a) au déclarant du fonds de terre ;
- b) au propriétaire du fonds de terre si la déclaration n'est pas faite par lui ;
- c) à chacun des propriétaires limitrophes nommés de s'y trouver présents ou de s'y faire représenter par un mandataire régulier.

Les pièces justificatives de l'accomplissement de ces diverses formalités restent annexées au dossier de la procédure

Article 39 : La délimitation est effectuée à la date fixée par le géomètre désigné à cet effet, en la présence de deux ou trois membres de la commission foncière, du déclarant ou son représentant, si ce n'est pas lui qui a requis l'enregistrement, du représentant de l'administration, du chef coutumier et, autant que possible, des propriétaires riverains dûment convoqués.

Cette opération comporte expressément la reconnaissance des limites par bornes ou clôtures et la constatation de l'acquiescement donné par les intéressés à la consécration définitive des dites limites.

Si des contestations s'élèvent entre le déclarant et l'un des propriétaires riverains, et si elles ne peuvent être réglées par le représentant de l'administration et le chef coutumier, au moyen d'une entente amiable entre les parties, la parcelle litigieuse est délimitée et bornée sur le terrain et indiquée sur le plan, à toutes fins utiles.

Article 40 : Séance tenante, le géomètre dresse un procès-verbal faisant connaître :

- 1°) les jour et heure de l'opération ;
- 2°) les noms et prénoms et qualités, avec rappel de sa prestation de serment ;
- 3°) Les noms, prénoms et qualités des assistants, avec indication des motifs de leur présence ;
- 4°) la déclaration que les mesures prescrites en vue de la publicité ont été régulièrement prises;
- 5°) la description des limites reconnues avec mention de la longueur des côtés, chacun des sommets du polygone formé par le terrain étant désigné par un numéro d'ordre ;
- 6°) l'énonciation sommaire de la nature et de la consistance du fonds de terre ;
- 7°) la description des parcelles spécialement délimitées à raison d'une contestation ;
- 8°) la mention relative à la signature du procès-verbal par les assistants ou leur incapacité de signer.

Ce procès-verbal, après clôture, est signé par le géomètre rédacteur et par tous les assistants lettrés.

Article 41 : Le procès-verbal de délimitation, aussitôt après clôture est remis par le géomètre au secrétaire permanent qui relève au registre des oppositions, pour valoir comme telles, les mentions relatives aux contestations élevées sur le terrain.

Article 42 : Dès réception du procès-verbal de délimitation, le secrétaire permanent procède, si tout est régulier, à l'enregistrement du fonds de terre sur le registre prévu à cet effet.

Article 43 : Dans le cas contraire et si l'examen du registre spécial fait ressortir l'existence d'opposition ou de demande d'inscription, l'enregistrement n'est fait qu'autant que le déclarant rapporte mainlevée de toutes les dites oppositions et demandes ou déclare y acquiescer.

A cet effet, une copie de chacune des mentions inscrites au registre des oppositions lui est notifiée par les soins du secrétaire permanent au fur et à mesure de leur inscription.

Article 44 : La mainlevée consiste en une renonciation formelle émanant des auteurs des oppositions aux prétentions par eux émises.

L'acquiescement établit l'accord complet des parties sur l'étendue et le mode d'exercice du droit à inscrire. Cet accord ne met fin au litige qu'à la condition de ne porter atteinte ou préjudice à aucun droit reconnu à des tiers dans la déclaration.

Article 45 : Dès que le déclarant a fait connaître au secrétaire permanent son refus d'acquiescer aux prétentions des intervenants et l'impossibilité d'obtenir la mainlevée amiable de leurs oppositions ou demandes d'inscription et, au plus tard, un mois après l'achèvement de la procédure, le dossier constitué est transmis soit à l'autorité coutumière soit à la juridiction administrative du lieu de la situation du terrain pour être traité conformément aux articles 149 et 150 du titre III de l'ordonnance 93-015 du 2 mars 1993 portant principes d'orientation du code rural.

Article 46 : Après règlement des litiges soulevés par les interventions au moyen d'une conciliation de l'autorité coutumière ou d'un jugement ou arrêt devenu définitif, le dossier de l'affaire est retourné au secrétaire permanent soit avec le procès-verbal de conciliation dont modèle est défini par la commission foncière soit avec une expédition de la décision judiciaire et, s'il y a lieu, d'un certificat négatif de recours délivré par le greffier en chef de la juridiction compétente.

Article 47 : Dès réception des pièces, le secrétaire permanent procède à l'enregistrement du fonds de terre sur le registre prévu à cet effet après rectification du bornage et du plan s'il y a lieu.

Toutefois, l'enregistrement ne peut être accordé qu'autant que les droits du déclarant n'ont reçu, du fait de la sentence, aucune modification de nature à rendre la déclaration inacceptable dans les termes où elle a été conçue.

Paragraphe 2. De la formalité d'enregistrement des terres. Des registres et dossiers.

Article 48 : L'enregistrement sur les registres du foncier rural comporte :

- 1°) l'inscription au registre des dépôts d'une mention constatant l'achèvement de la procédure ;
- 2°) l'inscription au dossier rural ;
- 3°) la rédaction des bordereaux analytiques ;
- 4°) la mention sommaire des divers droits au fichier du dossier rural ;
- 5°) l'établissement d'une attestation à délivrer au déclarant ;

Article 49 : L'attestation d'enregistrement constitue devant les juridictions nigériennes le point de départ unique de tous les droits réels existant sur le terrain au moment de l'enregistrement.

Article 50 : Toute action tendant à la revendication d'un droit réel non révélé en cours de procédure est irrecevable.

Article 51 : Les personnes dont les droits auraient été lésés par suite d'un enregistrement ne peuvent se pourvoir par voie d'action réelle mais seulement en cas de dol, par voie d'action personnelle en indemnité.

Le domaine public restant toutefois imprescriptible, tout enregistrement qui aurait pu en être faite au nom d'un particulier est nulle de plein droit.

Article 52 : Il est institué dans chaque commune ou arrondissement un dossier rural comprenant deux documents distincts :

- un document graphique d'ensemble de l'espace rural sur lequel figure l'assiette des droits fonciers ou la nature de chaque droit
- un fichier constitué par les fiches individuelles ouvertes chacune au nom du titulaire des droits. L'identité complète du titulaire doit être portée sur la fiche.

Le secrétaire permanent est chargé de la conservation des dossiers ruraux.

Article 53 : Le secrétaire permanent établit pour les archives, un dossier comprenant :

- 1°) les pièces de la procédure d'enregistrement ;
- 2°) le plan définitif du fonds de terre ;
- 3°) la série des bordereaux analytiques successivement établis ;
- 4°) les actes et pièces analysés.

Article 54 : Les secrétaires permanents d'arrondissement tiennent les registres ci-après :

- 1°) le registre de déclaration des fonds de terre ;
- 2°) le registre d'enregistrement ;
- 3°) le registre des oppositions ;
- 4°) le registre des dépôts d'actes à enregistrer ;
- 5°) le répertoire des titulaires de droits réels et la table, par fiches individuelles mobiles dudit répertoire.

Article 55 : Le registre des oppositions et le registre des dépôts des actes à enregistrer sont arrêtés chaque jour, par le secrétaire permanent d'arrondissement, à l'heure de la fermeture des bureaux.

Le registre d'enregistrement est tenu en double exemplaire et, dès achèvement, l'un d'eux est transmis au dépôt des archives nationales à Niamey.

Article 56 : Les registres énumérés à l'article 54 sont cotés et paraphés, avant tout usage, par le juge de paix de l'arrondissement.

Article 57 : Les préfets, les sous-préfets, les inspecteurs d'Etat, les inspecteurs des finances, les Procureurs Généraux près les cours d'Appel, les Procureurs de la République près les tribunaux, les juges de paix peuvent, chacun dans leur ressort, demander personnellement la communication, sans déplacement, des registres des secrétariats permanents d'arrondissement.

Ces fonctionnaires et magistrats peuvent, en outre, obtenir par écrit et gratuitement, communication des renseignements consignés aux différents registres et dossiers ruraux.

Paragraphe 3. Des règles générales de manutention des registres.

Article 58 : Les divers registres énumérés à l'article 54 sont tenus sans grattage, surcharge ni interligne : toute rature, s'il y a lieu, est faite au moyen d'un trait fin, avec approbation en marge ou à la fin du texte.

Toutes les écritures nécessitées pour l'exécution des formalités requises sont faites à la main, à l'encre noire ; exceptionnellement les copies des pièces et attestations peuvent être établies à la machine à écrire.

Article 59 : Tout document délivré par le secrétariat permanent doit porter la signature du secrétaire permanent accompagnée du sceau officiel de son service.

Article 60 : Sont abrogées toutes dispositions contraires au présent décret.

Article 61 : Les Ministres chargés de l'agriculture et de l'élevage, de l'aménagement du territoire, des Finances et du Plan sont chargés chacun en ce qui le concerne de l'application du présent décret qui sera publié au journal officiel de la République du Niger.

Annex D
Natural Resource Management in Agricultural Production

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Annex D

Agriculture Sector Development Grant, Phase II

Ministry of Agriculture and Livestock
Ministry of Hydrology and Environment
Ministry of Finance and Plan

**ECONOMIC ANALYSIS OF SUSTAINABLE INCREASES
IN AGRICULTURAL PRODUCTION: LINKAGES
BETWEEN STRATEGIC OBJECTIVES 2 AND 3**

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LIST OF ACRONYMS

AFVP	Association Français des Volunteers de Progrès, Niamey
ANR	Agriculture and natural resources
API	Assessment of Program Impact
APOR	Action pour la Promotions des Organisations Rurales, Représentant la CLUSA, Niamey
ASDG II	Agriculture Sector Development Grant, Phase II
CLUSA	Cooperative League of the USA
DANIDA	Danish International Development Agency
DEP	Direction des Etudes et de la Programmation
DE	Direction de l'Environnement
DPM	Disaster Preparedness and Mitigation Project, USAID
C/GRN	Cellule de Gestion des Ressources Naturelles
CPSP	Country Program Strategy Statement
FAO	Food and Agriculture Organization of the United Nations
FCFA	Franc Communauté Financière Africaine
FED	Fonds Européen de Développement
FEWS	Famine Early Warning System
GON	Government of Niger
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IFPRI	International Food Policy Research Institute, Washington, DC, 1-202-862-8149
IIMI	International Irrigation Management Institute (Institut International de Management de l'Irrigation)
INRAN	Institute National de Recherche Agricole du Niger
IPDR	Institute Pratique de Développement Rural
IRG	International Resources Group
IRR	Internal Rate of Return
IUCN	International Union for the Conservation of Natural Resources
MAG/EL	Ministère de l'Agriculture et de l'Elevage
MH/E	Ministère de l'Hydraulique et de l'Environnement
M&E	Monitoring and evaluation
MFP	Ministry of Finance and Plan
NFM	Natural forest management
NGO	Non-government organization
NPV	Net Present Value
NRM	Natural Resource Management
MSI	Management Systems Int.
ONAHA	Office National des Aménagements Hydro-Agricoles
ORSTOM	L'Institut Français de Recherche Scientifique pour le Développement en Coopération
PAAD	Program Assistance Approval Document
PASP	Projet Agro-Sylvo Pastoral (GTZ)
P/NGRN	Programme National de Gestion des Ressources Naturelles

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PRSAA Programme de Renforcement des Services d'Appui de l'Agriculture
SIM Système d'Information sur les Marchés, OPVN
TDY Temporary duty
TOR Terms-of-reference
UNDP United Nations Development Program
USAID U.S. Agency for International Development

1. INTRODUCTION

1.1 Overview

1.1.1 Background

In the context of reviewing the proposed strategy for USAID's assistance to Niger, concerns were raised regarding the approach to stimulating economic growth. Specifically, A.I.D./W expressed reservations about the potential sustainability of promoting economic growth in the rural sector by targeting the informal rural producers.

The basic questions raised by A.I.D./W was two-fold: first, is there reason to believe that the rural sector in Niger can grow at a rapid pace in the near term, and second, if growth can take place, is enough being done to remove real supply constraints on growth in the agricultural sector, such as arable land, access to affordable technologies, and adoption of improved land use and natural resource management (NRM) practices?

A TDY assignment was carried out in Niamey in early June, 1995, by Ms. Elena Shirley (of the MSI PRISM Project for USAID/PPC/CDIE). As part of her terms-of-reference (TOR), she was charged with assisting the Program Office in providing cursory analysis of issues regarding Strategic Objective 2 (SO2: increase market access for rural people, mainly by their use of local financial services), which were expressed by A.I.D./W during the CPSP program review. One of the recommendations from this TDY was that the assessment to appraise the growth potential of the rural sector in Niger will need to take into account not only the efforts currently underway under SO2, but also those constraints on growth addressed under Strategic Objective 3 (SO3: increase adoption of practices for conservation and productive use of natural resources). The consultant also suggested and USAID/Niger agreed that another assessment team member be added to look at the relationships between land tenure and land use management strategies and increased access to investment capital and agricultural inputs and technologies in the rural sector.

This report, jointly prepared Dr. K. Christophersen (IRG) and the assessment agricultural production specialist team member, Joe Tabor (U of Arizona), addresses the linkages between SO2 and SO3. The report is both fully integrated as Annex B in the overall assessment report and submitted to USAID/Niger separately through ASDG II. It addresses key issues related to SO3, such as tenurial security, increased investments in NRM practices, intensification of agriculture, crop diversification, and their linkages to SO2. It also includes analyses of how these factors need to interact to generate a healthy and sustainable rate of growth in Niger's rural sector.

Dr. Christophersen, funded under USAID/Niger's Agricultural Sector Development Grant, 2nd phase (ASDG II), worked with the assessment team in Niger during the August 10 - September 2, 1995 period to collect information and prepare the draft report. Mr. Tabor was funded through KPMG-Pete Marwick. An additional two person-weeks was provided in the U.S. for both consultants to complete the analysis and integrate the results into the overall assessment report.

1.1.2 Improved Use and Conservation of Agricultural Resources

Niger's capacity to increase crop production is technically very high. Whereas millet and sorghum yields now typically reach 300 - 400 kilos per hectare, research results at ICRISAT, INRAN, and elsewhere have demonstrated repeatedly that crop yields can be increased 10-fold—up to three tons per hectare with proper management and the addition of critical inputs such as organic and chemical fertilizer, pesticides, and natural resource management (NRM) interventions. The problems are rooted in a myriad constraints (discussed in detail elsewhere in this report) that are less related to the biological and physical capacity of the natural resource base to produce food than they are to the cultural/social and economic obstacles.

The GON and the donors are all well aware of these constraints and have been addressing the issues at different levels. Over the past several years, GON efforts and donor-funded programs in the agriculture and natural resources (ANR) sectors have culminated in the development of a policy framework for rural development in Niger (Sous-Comité Développement Rural, no date). This framework focuses on the development of appropriate policies and legislative action in five broad areas:

1. Natural resources management (gestion des ressources naturelles—GRN),
2. food security
3. decentralization
4. availability of credit
5. intensification and diversification of agricultural and livestock production.

Donors currently active in the ANR sectors are all focusing on these major areas of priority as clearly evidenced in the similarities of their objectives, goals and purposes (see also Table 1.1 for a summary overview of other donor activities). USAID's SO3 portfolio, for example, clearly reflects adherence to the overall policy framework through the Agriculture Sector Development Grant II Project (ASDG II), Disaster Preparedness and Mitigation Program (DPM), the Africa-wide Famine Early Warning Systems Project (FEWS—a Washington-based project), AGRHYMET (regional data collection and research center for agricultural hydrology and meteorology) and support of US and Niger-based non-governmental organizations (NGO). USAID's support of the Africare project in Gouré and the Peace Corps African Farming Systems Initiatives project also promotes NRM interventions at the micro level.

ASDG II is working closely and effectively with the Rural Code seeking to promote the establishment of additional Commission Foncières (land tenure offices) in each arrondissement. The project is also continuing to work on decentralization, improved access to information, NGO support through small grants and training, increased access to credit, and is working closely with the Cellule de Gestion des Ressources Naturelles (CGRN)—all highly prioritized issues by both the GON and USAID/Niger (see Strategy Paper—1995 and the efforts of the recent Results Package teams—1995). The project has focused on policy reforms that affect natural resource management through support of the Land Tenure Center work with the Rural Code. DPM is providing support to the GON's *Système d'Alerte Précoce* who is developing its relationship with the numerous ministries and agencies. USAID's support of AGRHYMET helps provide valuable information for researchers (for example, data upon which to develop climate prediction models, and GIS-based information upon which to design sociological and NRM surveys). USAID's support of NGOs and the Peace Corps (*e.g.*, Care, CLUSA, Africare, ASDG II's and DPM's grants program) directly improves the lives of Nigeriens. It also provides field level monitoring of economic growth, NRM, and changes that are affected by national policy.

Whereas concrete results from all of these ongoing efforts may sometimes be difficult to discern or measure, it must be recognized that the issues are very complex and time consuming to resolve. There are no quick technical fixes, instead all proposed solutions must be subjected to lengthy and detailed negotiations between different stakeholders. The process of needed policy reform and legislative action is well underway, however, and the GON has made substantial progress in consolidating the issues, setting the priorities, and mobilizing their own and donor resources to address them as effectively as possible. The results attributable to the investments made by one donor, therefore, often cannot be clearly distinguished from those attributable to others. All donors now address basically the same issues through slightly different approaches and with more or less generous budgets.

Progress on policy reforms last year was excellent when compared to progress made in the past. The GON satisfied conditions for disbursement for ASDG II Tranches IA and IB, and the Tranche IIA Conditions Precedent are nearly satisfied. Specific policy achievements in 1994 include (Mission API Report, 1994):

- The Rural Code drafted two (and began work on a 3rd) of the 17 specific laws needed to fully implement the Code (which was passed in March, 1993). Two pilot Commission Foncières (Land Tenure Commissions) were established in two arrondissements with funding from DANIDA. The Rural Code was translated into four local languages and a broad campaign was conducted to inform rural communities about the content of the Code.
- Donors (particularly USAID, the French, DANIDA, and The World Bank) are coordinating their efforts with respect to implementing the Rural Code.

- GON's Sub-Committee for Rural development will act on the recommendations made by a USAID study on decentralization by undertaking the necessary reforms to provide a legal basis for community NRM committees.
- The Celulle de Gestion des Ressources Naturelles (CGRN) has been accepted by the GON and the donor community as the focal point for strategic NRM planning, coordination, and implementation in Niger. Efforts are currently underway to develop a national NRM plan, in coordination with the National Environmental Action Plan (NEAP).

Given these encouraging developments, albeit too slow in coming in the minds of some, USAID's stated strategy with respect to SO3 is clearly on the mark, *at least with respect to recent policy reform efforts*. SO2 and SO3 will not be achieved, however, unless there is a substantial increase in agricultural production, as will be demonstrated in the analysis below. In its present form, SO3 focuses more on conservation than on production, as reflected in the emphasis on NRM technologies that primarily affect degraded lands (*e.g.*, soil and water conservation techniques, agroforestry, etc.). The SO3 language refers primarily to forestry 3 to 1 over agriculture, in sharp contrast to the titles of USAID's activities (7 references to agriculture and 1 to forestry). Range and livestock are hardly mentioned at all. The shrub lands of Niger are important, indeed, especially for fuel and fodder, but they will not drive Niger's economy. For these reasons SO2 and SO3 are not as strongly linked as needed.

The challenge at this point is to considerably speed up the process by which Niger can begin to show solid production and economic growth in the agricultural sector. The most important priority in this context is to link key SO2 and SO3 elements to unleash: (i) the capacity to increase food production to at least keep pace with a rapidly expanding population (SO3), and (ii) promote the development of micro-enterprises in association with the increases in food (staple and cash crop) production (SO2). With respect to SO3, the mandates of ongoing projects can and should be adjusted to reflect a stronger emphasis on agricultural production on active farm land. This, in turn, also means that the process of policy reforms and legislative actions flagged in the Sous Comité Développement Rural Report (Principes Directeurs d'une Politique de Développement Rural Pour le Niger) must gather a much stronger momentum.

USAID, of course, is not alone in its NRM focus as indicated in Table 1.1 listing the activities of other donors. The World Bank's proposed NRM Project (PNGRN) will certainly affect agricultural policy and economic growth in Niger. During the first phase (5 years) it will work in 380 communities in five districts and affect approximately 270,000 people. It will address many of the constraints on agricultural production and economic growth. DANIDA's support of the first two test Tenure Commissions (*Commission Foncières*) has raised important issues that USAID should consider in its upcoming support for additional test commissions.

Table 1.1: NRM-Related Activities and Donor Involvement

Activity	Direct Donor Involvement
Agricultural extension	World Bank, IFAD (FIDA); Netherlands
Agriculture	FED
Agriculture markets	Canada; Norway; Netherlands
Animal husbandry	FAC; FED
Apiculture	France (AFVP)
Cereal banks	Norway; PAM
Cotton	Norway
Decentralization	FED
Environmental education	Netherlands
Fisheries	FED; GTZ
Forest management	FAO; GTZ; UNDP (PNUD)
Forestry	SOS Sahel; Norway
Fuelwood conservation	World Bank; DANIDA
Integrated pest management	GTZ
Irrigation management	WB (in preparation); FAC; FED; BAD
Natural resource management	World Bank (in preparation); Switzerland
Peppers	Canada
Rural Code	DANIDA
Rural development	Italy
Rural infrastructure	PAM
Soil and water conservation	IFAD(FIDA); FED; GTZ
Village territory management	FAC; SNV
Water management	SNV; UNDP (PNUD); Switzerland
Well management	France (AFVP); DANIDA; FED; GTZ; Japan
Wildlife management	FED
Women in development	Norway

Source: SDSA II, 1995

1.1.3 Approach

This study attempts to provide rough orders-of-magnitude estimates of the extent to which crop yields for millet, cow peas, and peanuts could increase as major production constraints are gradually removed over time. These constraints (discussed in detail in Section 2.3 below) include: (i) land tenure, (ii) access to credit, (iii) physical access to chemical fertilizer (phosphates and urea), (iv) access to markets, and (v) access to extension services¹. Since production increases are largely a function of: (i) the interventions successfully extended to the

¹ Many other related and non-related constraints are discussed in detail in the main assessment report.

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farm population, and (ii) the physical availability of inputs needed for the technical packages extended, the study is limited to the analysis of the most promising interventions generically applicable in widely different ecological zones. These include water harvesting techniques, the application of organic and chemical fertilizer, animal traction, integrating trees into the farm landscape, and shifting from traditional fallow to managed fallow.

A necessary condition, of course, is that the interventions must make financial sense to the farmers, otherwise participation will not likely be enthusiastic. The first task, therefore, is to carry out farmer perspective financial analysis of the interventions on a per hectare basis. If the interventions are financially feasible, the second task is to aggregate the resulting crop yield increases over an area sufficiently large to produce the quantities of food needed to accommodate an estimated 3.3 percent increase in population. Both production extensification (gradually bringing traditional fallow areas back into production if needed) and intensification (intensifying production on currently active farm fields) are considered in the analytical framework. The latter solution is favored so as to avoid the seemingly endless land use conflicts between livestock herders and farmers. Extensification, however, will certainly be needed in the long run to keep pace with the rapidly growing population.

An analytical spreadsheet model (Lotus 123r4) was developed for purposes of this study. The model is sufficiently generic to be applicable to many different agricultural development scenarios ranging from slow to rapid introduction of (up to six different) natural resource management (NRM) interventions. All input assumptions and results are presented in tabular format. The model has three dimensions: (i) farmer perspective financial analysis—whether the proposed interventions make financial sense to the participating farmers; (ii) aggregation of per hectare results over the area needed to meet the demands over time for millet, cowpeas, and peanuts; and (iii) estimation of the Government of Niger's (GON) and donor investments needed to accommodate the aggregation process. All per hectare and aggregate financial results are expressed in net present value (NPV) and internal rates of return (IRR) terms². The model only intends to provide rough orders-of-magnitude estimates of crop yield increases on typical farm areas in the northern and southern regions of the country. There was not sufficient time nor budget to develop the analytical framework in sufficient detail to accommodate a much finer breakdown of different land categories and farming systems in Niger.

To the extent possible, the assumptions pertaining to: (i) crop yield increases, and the synergetic effects of combining interventions, (ii) total crop production, (iii) arable and actively farmed land, and (iv) crop prices and production costs, are based on documented information. Other key assumptions are introduced as input variables rather than as documented information,

² The criteria for feasibility are that the NPV is equal to or is greater than 0 and that the IRR is equal to or greater than the opportunity cost of capital. The opportunity cost of capital can be defined as the rate of return investors can reasonably expect from a composite of similar investment opportunities associated with the same risk level.

such as the price elasticity of demand for the different crops and the rate at which traditional fallow land is brought back into production in response to increases in demand. The yield increases assumed in the base case of the study are relatively modest compared to those attainable under research conditions.

The model projects crop production increases over time *as if the major inputs are made available when needed*. This assumes that the major tenure problems are being gradually resolved, credit is available, new markets are developed, physical inputs (fertilizer and insecticides) are available, and the extension service is growing to accommodate an increasing number of participants. All of these constraints are currently being addressed in a major way by several donors as discussed above (including USAID through ASDG II and other SO3 activities) and there is substantial reason for long-term optimism. The analytical framework is also designed to demonstrate what will likely happen over time if the proposed development scenarios analyzed here do not take place. The differences between doing nothing (continued degradation of the resource base and declining yields) and implementing the improved interventions are very large indeed, as will be demonstrated in later chapters.

1.2 Climate

The word *sahel*, Arabic for shore, implies a dynamic environment. With each wave of annual rainfall, climatic data shows longer cycles of change (*e.g.*, every 10-20 years; Todorov, 1985), much like changes of the sea level with periodic tides. There are even much more extreme cycles that are on a geologic time scale, evidence of this is old sand dunes in Nigeria and giraffe petroglyphs in the Sahara desert. This climatic variability resonates throughout the annual cycles of biological and human systems in Niger.

Inadequate rainfall most often gets the major blame for the variability of Niger's agricultural production.³ Small surpluses are produced during high rainfall years (particularly when the rains come early) and deficits appear during low rainfall years. Donors have provided Niger with grain to cover the deficit years (Table 1.2). This practice, of course, reduces the incentive to invest in agriculture since it distorts grain prices and hurts producers with a surplus.

Table 1.2: Food Aid for Niger

Year	Food (Tons)
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³ Production may be more dependent on early rains (more fields planted) than the total amount of rain during a year.

1990	30,258
1991	65,060
1992	9,678
1993	31,198

Source: Système d'alerte précoce et de gestion des catastrophe

Temporal and spatial rainfall variability are also high in Niger and each requires different coping mechanisms. Farmers have adapted to temporal variability through storage and savings. They address spatial variability by planting widely spaced fields (to increase the probability of getting enough rainfall on at least some of their fields) to hedge their investments (McCorkle *et al.*, 1988). The GON must also accommodate spatial variability on a regional scale. For example, 29 percent of Niger receives 250-600 mm of annual rainfall while only nine percent of the country receives above 600 mm (World Bank, 1994a). The 600 mm and above falls on the less productive areas of the Dosso and Tillabéry Departments. Table 1.3 shows temporal rainfall variability statistics for major towns in Niger. The minimums, maximums, and coefficients of variation⁴ are more important for developing management strategies than are the means.

Table 1.3: Rainfall Statistics of Major Towns in Niger for the period 1931-1990

Station	Maximum (mm)	Mean (mm)	Minimum (mm)	Coefficient of Variation (%)
Agadez	216	115	40	35
Filingué	609	348	135	32
Tahoua	582	369	206	27
Tillabéry	698	393	197	31
Zinder	659	404	220	26
Birni N'Konni	642	477	289	21
Maradi	730	491	283	29
Niamey	813	545	319	22
Dosso	710	549	230	24
Gaya	1041	797	476	17

Source: Sivakumar *et al.*, 1993

⁴ Coefficient of variation (CV) is a measure of relative variation, defined as: standard deviation divided by the mean. It is often presented as a percent.

2. MANAGEMENT TO INCREASE PRODUCTION AND REDUCE VARIABILITY

2.1 Agriculture

According to Bationo (1995), fertility, not rainfall, is the major constraint on Nigerien agriculture. Low soil fertility causes a plant (crop, forage plant, or tree) to use water inefficiently. Fertilizer significantly increases yields without increasing the plant risk to drought if the proper amounts of nutrients (primarily nitrogen, phosphorus, and potassium) are applied (Payne, 1995). Nigerien farmers, however, use an average of 23,000 tons of fertilizer annually (van der Linde et al., 1994) or only 3.2 kg/ha of cultivated land (western European farmers use around 300 kg/ha). The big consumption areas for fertilizer are the southern parts of Maradi and Zinder Departments, irrigated perimeters, and dry season, irrigated gardens in Diffa, Dosso and Tahoua Departments (van der Linde, et al., 1994).

Several studies evaluating the profitability of applying chemical fertilizers conducted before the 1994 devaluation of the CFA franc showed discouraging results (Eid, 1989; SOMEA, 1992). Because of the devaluation, however, the economics of fertilizer application has improved (as will also be demonstrated in the analysis below). The value of additional grain produced from fertilization and the relatively low cost of Tahoua rock phosphate compared to imported fertilizer have made fertilizer application feasible for Nigerien farmers.

Based on data from the FAO fertilizer trials (Eid, 1989) Niger should expect at least a 30 percent increase in millet yields by applying 100 kg of triple super phosphate per hectare (20 kg of phosphorus/ha or 241 kg of simple superphosphate/ha⁵) if annual rainfall⁶ is greater than 250 mm. The high variability of the data (19-152 percent yield increase) shows that there are significant factors other than phosphate fertility levels that also need consideration. ICRISAT data also confirms these results (Bationo, 1995). Phosphate fertilizer has a long residual effect, up to five years in Nigerien soils (Bationo *et al.*, 1990) which means that subsequent maintenance fertilization will require smaller amounts to achieve similar yields. Also phosphate fertilizer is safe to apply and there is no risk of "burning" the crop.

Bationo *et al.* (1990) found that finely ground rock phosphate from Tahoua gives the same yield response as Nigerian single superphosphate (comparison by unit weight of material) when they were applied on acid soils (Chien, 1995)—the condition of most soils used for millet cultivation in Niger. Despite this finding, however, farmers generally do not prefer it because:

⁵ Conversions based on Bationo *et al.* (1990) and are presented to give a general idea of amounts needed. Phosphate equivalency between materials and yield responsiveness are much more complicated than presented in this report.

⁶ Annual rainfall is a crude but convenient method to represent water stress on crops.

(i) the powdered rock is more difficult to apply than imported granulated forms, and (ii) the Tahoua phosphate is not readily available in local markets. The extent of Tahoua rock phosphate reserves has not been studied nor has the range in quality of harvested phosphate nodules. The Tahoua samples that were studied have high content of iron and aluminum oxides that prevents the usual increase in availability that acidulation⁷ offers. Soil surveys by Gavaud, 1965 through 1975, and other scientists at ORSTOM show that there is a wide distribution of soils high in phosphate in the Tahoua region. This suggests that further prospecting in the area is needed. Also, the present price of Tahoua phosphate (25 FCFA/kg) is set by *Centrale d'Approvisionnement* and may not reflect what the price would be from a functioning mine. The phosphate reserves in Park W near Tapoa do not provide as large of a crop response as the Tahoua rock unless acidulated (Bationo *et al.*, 1990). In addition, a soon to be signed international program for wildlife habitat conservation will discourage exploitation of the Park W phosphate reserves (Price, 1995).

2.2 Livestock

Livestock⁸ production is a major economic activity providing significant economic benefit⁹ to Nigerien farmers, herders and the GON. The livestock population estimate for 1994 was 3.1 million Tropical Livestock Units (> 10% margin of error), or roughly equivalent to 2 million heads of cattle, 3.75 million sheep, 6 million goats, 375,000 camels, and 500,000 horses and donkeys. The World Bank (1994) suggests that exploitation of the rangelands in the northern pastoral zone exceeds the carrying capacity of the land due to insufficient herd mobility caused by a gradual change of herd ownership (from pastoralists to investors or traders) and security problems in the north. Studies of plant populations in the pastoral zone over the past 10 years confirm the overstocking by showing the disappearance of valuable forage species (*e.g.*, cram cram, *Cenchrus biflorus*) (Maidaji, 1995).

Approximately 10 to 20 percent of the Nigerien cattle is still owned by nomadic pastoral communities of the Fulani and Tuareg¹⁰ who spend the entire year in the pastoral and agro-pastoral zones. Forage quality is low from March to July but its limited availability becomes a major problem after February. Water is also a problem. In a dry year, total biomass production is only 60 percent of that of a normal year. In 1984 when half the cattle died, biomass production was not more than 30 percent of normal (World Bank, 1994a).

⁷ Phosphate rock is treated with acid, usually sulfuric acid, which usually make the phosphorus more available to the plant. This simple process is a potential Nigerien industry.

⁸ Cattle, sheep, goats, donkeys, horses, camels, chickens, guinea fowl, ducks, rabbits, and swine.

⁹ Food, skins & hides, savings instrument, traction, and social status.

¹⁰ No reliable data exists (World Bank, 1994a).

Extension of technologies to encourage destocking (*e.g.*, meat drying and salt curing), especially after poor rainfall years will encourage better market development. Pastoralists and farmers also need alternatives to livestock as instruments of savings to encourage them to destock, especially after poor rainfall years.

Pastoralists need access to Nigeria and southern pastures during the cropping season. Agricultural expansion is cutting off passageways to southern rangelands. Farmers receive little discouragement from expanding onto traditional range lands. In some areas farmers cultivate "trap fields"¹¹ to reap a portion of heavy fines levied against pastoralists by local authorities (Maidaji, 1995).

2.3 Constraints

Many agricultural practices have been developed to improve Nigerien food production and conserve the resource base. However most of these practices have failed to override social, institutional, market, and labor constraints—most of them related to risk. The high level of risk requires a high return on investment. Risk haunts nearly every management decision of a Nigerien: highly variable rainfall; one of the highest infant mortality rates in the world; insecure land tenure and usufruct for many; use of livestock as one of the more secure instruments of savings; poorly developed markets; and high unemployment. Left unsupported, progress made in resolving one constraint will be offset by lack of progress in the others.

Agricultural research and extension in the past have largely concentrated on production agriculture that would require more purchased inputs than used in traditional agriculture. Most farmers, however, continue to practice low investment agriculture—minimizing the use of purchased inputs—by opting to expand onto pasture lands or decrease their fallow periods. If good rains continue farmers will likely continue to expand further into the agro-pastoral zones as they did north of Zinder during the first half of this century when rainfall was abundant, unless credit is made available to allow farmers to increase the use of purchased inputs (Delehanty, 1985).

Competition for resources will also increase conflicts between farmers and pastoralists unless land tenure concerns are resolved. When higher authorities address conflicts between farmers and pastoralists, the decisions usually favor the farmer (Lund, 1993). Project personnel working with Rural Code issues notice that farmers have the political will to resolve resource tenure conflicts with other farmers (*i.e.*, in regions composed of just farmers). However, they also notice that farmers lack political will to resolve conflicts in agro-pastoral regions (*i.e.*,

¹¹ A farmer cultivates a small, isolated field in traditional rangelands in the hope he can catch a pastoralist's livestock damaging the crop. Fines imposed by authorities on the pastoralist can be costly.

where agricultural expansion is a coping strategy) (Moestrup, 1995; Wild, 1995).

Although Niger is praised for having one of the best primary networks of paved roads in West Africa, the majority of farmers lack adequate access to markets because secondary roads are not in any condition to facilitate the marketing process for production in excess of subsistence. Transportation may soon become a critical constraint to sustainable economic growth.

With respect to SO3, the major "umbrella" constraints briefly discussed here include *tenure*, the availability of *credit*, *extension* services, and *physical inputs* such as organic and chemical fertilizer and pesticides, adequate *access to markets*, and *availability of labor*. Each are briefly discussed below in the context of the analytical framework developed for this study.

2.3.1 Tenure

Security of tenure is the sine qua non of successful NRM investments, and is critical to the success of the proposed interventions¹². Without it, people will have little incentive to participate in the proposed schemes. Farmers may want to apply fertilizer and other physical inputs, reclaim unproductive land through water harvesting, plant trees etc., but will be reluctant to do so if their tenure is insecure. Local communities and farmers clearly recognize the risk of future dispossession of their rented or borrowed farm fields as was clearly demonstrated by Hopkins, Berry and Gruhn (1995). The less secure the farmers are with respect to their land holdings, the less prone they will be to practice any kind of improved NRM.

Substantial progress is currently being made in Niger with respect to the tenure issue. The principal text of the Rural Code (1993) has been drafted and is currently being field tested in the rural areas by way of workshops and dialogues between stakeholders (ASDG II is very much a part of this process). The next step is to tighten the basic principles of the Rural Code into legislative texts to be passed into law by the GON. Once passed, conflict resolution within the context of the legal framework will be the major responsibility of the Commission Foncières (land tenure offices) to be established in all 36 arrondissements and 21 communes. Progress in this area has been painfully slow—only two such offices have been established to date with support from DANIDA. It is anticipated, however, that USAID will help establish another five or six Commissions Foncières with support through ASDG II, and that Belgian Aid will fund the establishment of yet another five or six in the near future. It is fully anticipated that all 57

¹² Secure tenure does not have to be in the form of private property ownership, as in the West, or through the registry of formal titles to the land or trees. Attempts to impose patterns of resource use different from local tradition based upon the criteria developed at "the top" rather than at the village or regional level, may trigger a misallocation of resources. Historically, African households have cooperated in systems to manage both private and common property resources (forests, rivers, pastures) in ways not based on the principles of Western property ownership. Competition for the shrinking resources is closely correlated with a rapid increase in population and persistent economic stagnation. The "tragedy of the commons" (Hardin 1968) is very much in evidence on the pasture land and in the natural forests where common property resource rules are disputed and resources are overused.

land tenure offices will be staffed and functioning within the next five years.

For purposes of the analyses below the areas targeted for agricultural production increases should be those where the land tenure problems are least evident. This will include areas with relatively high proportion of land in traditional fallow where land use conflicts are less severe than in the areas where the reverse is the case.

2.3.2 Credit

The availability of credit is another important "umbrella" constraint addressed in much greater detail elsewhere in the overall assessment report. Farmers will certainly need access to credit in order to procure the physical inputs they need (chemical fertilizer and insecticides) to buy in local markets, to pay herders for tethering animals on their farm fields and for renting animal traction for plowing and/or weeding. The analysis assumes that credit will become increasingly available over the next 10 years. Areas currently well endowed with credit availability should be targeted first to be followed by other areas as new credit institutions are being established.

2.3.3 Extension

The availability of extension services is critical. Farmers are not easily convinced to change from traditional farming methods unless they are clearly shown the how-to's and the benefits they are likely to receive from doing things differently. Subsistence-level farmers are typically risk averters and will be prone to continue with the traditional farming methods unless the promise of substantially higher yields by changing their ways is clearly demonstrated. The analytical framework developed for this study will gradually increase the number of farm household participants over time in accordance with some prespecified targets. As the number of participants increases it is assumed that extension services will also be made available to accommodate the participants.

2.3.4 Availability of Physical Inputs

The availability of physical inputs such as chemical fertilizer (phosphates and urea) and insecticides is perhaps the least problematic *in the future* of the constraints discussed here. In the present, however, the constraint is real—fertilizer is very scarce and costly. The major prerequisite to making such inputs available is access to credit. Farmers are well aware of the potential crop yield increases attributable to the application of fertilizer and insecticides and would buy the inputs if they had the financial means. Until credit is made increasingly available, the markets for bought agricultural inputs will remain too small to attract the traders.

2.3.5 Market Access

The vast majority of donor-funded activities in the ANR sectors have, in the past, focused mostly on the production side—increasing the production of crops, trees and improving the quality of livestock in the country. Less emphasis has been placed on what happens to the commodities once they have been produced—the markets. The most recurrent theme among farmers after several years of asking the same questions in different contexts and for different reasons is the difficulties farmers have in marketing their products. First, they are price takers rather than price makers—they must accept the prevailing market price, usually low since harvests occur roughly at the same time and markets are quickly saturated. Second, farm fields located relatively far away from the paved roads or from local weekly markets often lack the means to transport their products either to pickup points for the trader trucks or to the local markets.

On the first point, an important addition to donor funded project should be the provision of appropriate training in marketing, management, and accounting. The challenge is to transfer some of the control over prices from the buyers to the sellers by way of arranging meetings between them for the purpose of negotiating contracts on product quality, quantities to be transacted, prices, and when deliveries will occur. Management and accounting expertise will be needed to ensure that the contract stipulations are respected. On the second point, the availability of credit to invest in charettes or other means of transportation is, again, a critical factor.

2.3.6 Availability of Labor

The success of any NRM intervention will always be limited to the availability of labor. Even if all the other constraints are successfully resolved, the labor constraint will continue as a major limiting factor. Under traditional farming systems, the entire farm household is fully occupied on their fields during the farming season. Extending activities that require additional labor during this busy time period, therefore, will be difficult. Over time, however, the labor constraint will be gradually relieved somewhat as the population grows, yet not to the full extent of the overall population growth since the urban growth rate far exceeds the rural. Activities requiring additional labor input during the off season will certainly be easier to extend. In the analysis presented below, all interventions are introduced slowly and incrementally, particularly those that require additional labor input during the farming season.

Specific examples of individuals farmers or entire villages that have overcome these (and other) constraints are best discussed in the context of donor-funded projects. When a project is present, farmers will typically cooperate, largely because of the incentives offered. The German-funded Projet Agro-Sylvo Pastoral (PASP), for example, has a high rate of farmer participation because: (i) extension workers are provided to give technical advice, (ii) the project provides a tractor to build water harvesting dikes and small ditches in the pasture areas to promote fodder production, (iii) the project provides a truck to transport rocks to the farm fields to build contour dikes, etc. Average crop yields are substantially higher than they were before

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as a result. It remains to be seen what will happen after the project has ended. USAID's Forest and Land Use Project at Guesselbodi also provided incentives: (i) technical assistance and training, (ii) salaries for workers (considerably higher than salaries Nigerien institutions would pay), etc. Workers hired included guards to keep livestock out of the recently harvested areas for a period of at least three years, and workers to carry out silvicultural treatments in the degraded areas to restore the vegetation. The management plan was followed during the project period and farmers, woodcutters, and herders appeared to cooperate. After the project, however, the situation quickly reverted back to the way it was before—little has changed. The farmer/herder conflicts re-emerged, the management plan is not followed, and guarding the cutover areas has been suspended for lack of funds (Christophersen et al, 1993).

Most projects will have similar incentives that will attract participation. Agreements are reached between farmers and herders and other stakeholders through village level dialogues and local conflict resolution sessions, all under the auspices of projects which may be well designed and carried out by highly competent professionals. Technical assistance and training are provided, farmers participate and the economic well-being of the target region increases. All of the characteristics of a successful project may be present. The missing ingredients, however, are the policies and clearly defined legal statutes that should ideally accompany the implementation of field projects. Farmers and herders may agree to cooperate and temporarily suspend their conflicts if the project provides the incentives for them to do so. Farmers will also invest in and improve their farm fields despite insecure tenure if they are temporarily protected by the presence of a project. Unless such agreements are established through policy accompanied by clear legal statutes, however, pre-project situations will soon re-emerge after the project has ended.

It is precisely for these reasons that the GON's current efforts to promote the establishment of the Rural Code through legal channels and the efforts on the other policy axes discussed above are so important. Projects implemented after these major policy issues have been resolved should be much less complex because tenure problems will largely have been resolved, credit will be available, and farmers will be able to purchase all inputs needed without subsidies. In this respect again, USAID's SO 3 is on the mark in its support through ASDG II of the GON policy agenda, particularly the Rural Code and the establishment of the Commissions Foncières.

3. EVALUATION OF SELECTED NRM PRACTICES

3.1 Land Area and Farm Household Targets for Improved NRM Practices

This chapter specifies the key economic and biophysical assumptions associated with selected NRM practices: (i) water harvesting, (ii) organic fertilizer, (ii) chemical fertilizer, (iii) animal traction, (iv) managed fallow, and (v) field trees. Beginning with the land area and farm households targeted for land improvement schemes, the assumptions are summarized in Table 3.1.

Table 3.1: Target Land Area and No. of Participating Households

Land Elig. for NRM Improv.'s	Ha's	Ha/HH	Total # HHs	% Ha's Target for Imp.	Ha/HH Imp.	HHs Target	# HHs Receive Exten.
North	9,270,000	23.1	400,500	75 %	17.4	85 %	340,425
South	5,730,000	13.6	422,750	75 %	10.2	85 %	359,338

Note: HH denotes households. Each HH consists of eight individuals on the average (for both north and south).

3.1.1 North

The north zone of this analysis is the agro-pastoral zone that occurs in the Sahelian bioclimatic zone. Annual rainfall ranges between 250 and 400 mm on average and is highly variable (often by as much as 30 percent). Agricultural expansion onto traditional fallow land is the most rapid in this zone causing persistent and long-lasting conflicts between farmers and pastoralists. The area is bordered by the pastoral zone to the north and agricultural zone to the south.

3.1.2 South

The south zone is the agricultural area located in the Sahelo-Sudanian bioclimatic zone. Annual rainfall ranges between 400 and 900 mm and is moderately variable (up to 20 percent). Agricultural expansion onto traditional fallow in this area is nearly impossible because there is little traditional fallow left. The only realistic option left to increase production is through intensification which is beginning to happen to some extent. Farmers are beginning to apply some chemical fertilizer and pesticides, although not yet in significant amounts to affect arrondissement level production statistics (i.e., yield decreases from continued extensive farming onto the remaining traditional fallow area offset the yield increases associated with increased yields from intensive farming).

3.1.3 Farm Households

The third column shows the average number hectares owned per household which is the basis for the estimate of the total number of farm households in both regions as indicated in column four. The fifth column shows the percentage of the average land holding per household targeted for improvement. If 75 percent of the average holding of 23.1 million hectares in the north is the target, this means that 17.4 hectares will be improved per farm household as indicated in column six. The target number of farm households (85 percent) is set in column seven, translating into the total number of households to receive extension services over the 10-year period. These variables are used in the model as calibrating mechanisms to equate supply and demand in response to population increases. A high population growth means higher targets.

3.2 Economic Assumptions

The economic assumptions relating to the discount rate and the extent to which prices and costs are likely to change (increase and/or decrease in real terms in the future) are summarized in Table 3.2.

Table 3.2: Economic Assumptions

Assumptions	Farmer Perspective	Aggregate
Discount rate	30 %	15 %
Price appreciation rate	0 %	0 %
Cost appreciation rate	0 %	0 %

3.2.1 Discount Rate

Two discount rates are used in the analysis—one to reflect the perspective of the individual farmers, and the second to reflect the perspective of the GON. The relatively high, farmer perspective discount rate of 30 percent is assumed to reflect the subsistence-level farmer's natural aversion to risk. As stated by French (1979): "For an impoverished villager, a year from now is very far away. Consciousness must be focused on a present in which the margins for survival are extremely narrow." Farmers know that their present farming system produces enough to feed their families under normal conditions, but rarely any surplus to sell. The implicit discount rate that a peasant places on making changes is therefore high. A lower (15 percent) rate for the aggregate analysis is assumed because the perspective shifts from the farmers to the GON. The aggregate analysis includes the investments made by the GON and the donors in the enabling conditions needed to make the aggregation scenarios possible. Since the investment portfolios for a government are more diversified than for a farmer, risks can be spread and a lower discount rate is warranted.

3.2.2 Costs and Price Appreciation Rates

Although the analytical framework developed for the study can accommodate real cost and price appreciation (depreciation) rates, none are assumed for the base case analysis. Since there are no reliable statistics on which to project any real price and cost changes over time, however, it is been assumed that prices and costs will remain constant in real terms over the 10-year analytical period.

3.2.3 Costs and Prices

The assumptions concerning generic costs for labor and physical inputs and commodity prices are summarized in Table 3.3. The crops are assumed to be price elastic (see Table 3.8 and Section 3.4 below). For the three crops analyzed, prices are assumed to decline by 1.1 percent per year to reflect the substantial increases in supply brought about as a result of the land improvement schemes. For the increasing cowpea and peanut fodder harvests, prices are assumed to decline by 1.3 percent per year to reflect the fact that increasingly larger quantities of such fodder will enter the market each year causing prices to decrease.

■ *Labor costs*

A realistic labor cost assumption is difficult to estimate because local farmers will not be salaried workers for a project. Participants will, instead, be asked to invest their time (and cash) to work on the recommended interventions. For example, farmers participating in a water harvesting scheme will spend time preparing the site, mining the rocks, hauling them to the site, finding the contours, building the dikes, and then maintaining them. Since there are no salaries involved, however, the time investments made by the farmers are measured by the opportunity costs—the incomes they *would have* earned elsewhere had they not worked on the project interventions. For purposes of the analysis, this opportunity cost during the off season is based on the gathering and selling fuelwood roadside.

Based on responses received during field interviews, a 600 FCFA per day is the assumed opportunity cost during the farming season decreasing to 425 FCFA per day during the off season. The latter is based on the estimate that one fuelwood cutter can cut and prepare up one stère of fuelwood per day, for which he is paid 850 FCFA at the rural market (Christophersen et al, 1993). If the wood takes two days to sell on the average, the estimated opportunity cost of time during the off season is 425 FCFA per day.

Table 3.3: Labor Costs, Physical Input Costs, and Product Prices

Labor Costs	FCFA/Person Day
May - October	600
November - April	425
Physical and Other Input Costs	FCFA
Rent animal traction	5,000 FCFA/day
Tethering animals	2,000 FCFA/yr
Phosphates	3,750 FCFA/sack @ 50 kg
Urea	7,500 FCFA/sack @ 50 kg
Insecticides	3,000 FCFA/liter
Improved millet seeds	80 FCFA/kg
Improved cowpea seeds	200 FCFA/kg
Tree seedlings	50 FCFA ea
Crops/Forage/Fuelwood	FCFA/Kg at Farm Gate, FCFA/Stere FW
Millet	50 FCFA/kg
Cowpeas	90 FCFA/kg
Peanuts	100 FCFA/kg
Cowpea fodder	50 FCFA/kg
Peanut fodder	40 FCFA/kg
Leguminous forage	15 FCFA/kg
Fuelwood	850 FCFA/stere

Sources:

1. Labor costs: mission field interviews and adapted from Christophersen et al (1993)
2. Physical inputs: mission field interviews
3. Crop farm gate prices: adapted from MAGEL annual statistics
4. Fuelwood prices: Christophersen et al (1993)
5. Leguminous forage: mission field interviews

■ *Physical input costs*

Physical input costs for chemical fertilizer and insecticides were obtained from interviews conducted at ICRISAT, but adapted to real field conditions. Renting animal traction costs approximately 5,000 FCFA for a full day. Tethering animals on the farm field is a different matter, often subject to some bartering arrangement between the farmers and the herders. The farmers may let the livestock feed off the crop residues in exchange for depositing manure on the fields, or other in-kind pay arrangements may be made. For the sake of simplicity, it is assumed that the farmer will have to give up some minimal value (2,000 FCFA per year) either

in the form of cash or some in-kind payment (equivalent in cash to the assumption made) in order to receive the organic fertilizer deposited directly in his field.

■ *Prices*

Reliable information on farm gate producer prices are also difficult to document because they vary widely throughout the year and with the size of the harvest. Between 1980 and 1985, the average (GON set) prices for millet, cowpeas and peanuts were 68, 83, and 102 FCFA per kilo, respectively (MAGEL Annual Statistics). Since then, free market prices have been fluctuating and reliable statistics are not readily available. The assumed prices in Table 3.3 are probably conservative estimates, particularly in view of the recent devaluation of the FCFA.

The use of price subsidies and incentives is an important policy question for both the GON and the donors. Sustainable increases in crop production can be easily be bought with subsidies and incentives designed to attract participation. If the success of projects and programs is largely attributable to direct incentives by the donors, the activities will not be sustainable and, therefore, not replicable unless the GON accepts the fiscal commitment to maintain the system. It is important to determine options of interest based on the merits of the intervention itself, not on the direct and indirect benefits the donor is willing to offer to attract participation. If this is not done and projects succeed only if padded with direct incentives, the result is that the country will not be weaned from outside support. Once direct incentives are adopted, a precedent is set which will be difficult to undo later, even if no longer warranted. All results generated in the analyses below, therefore, assume no subsidies or direct incentives.

3.3 Biophysical Assumptions

The field interventions assumed to be extended to farmers and the assumed crop yield increases in response to implementing them are summarized in Tables 3.4 - 3.7. They include water harvesting, the application of organic and chemical fertilizer, managed fallow, animal traction, and the introduction of field trees on the farm fields.

Table 3.4: Interventions

Interventions	Days	Season	TC
Water harvesting			
Construction, 300 meters/ha	0.1 days/m	Off	12,750
Maintenance (all years)	5 days/yr	During	3,000
Organic fertilizer			
Field collection	8	Off	3,400
Tethering of animals	1	Off	425
Spreading	1	Off	425
3rd weeding	2	During	1,200
Renting livestock to tether	NA	NA	2,000
Chemical fertilizer			
Field application, phosphates	1	During	600
Field application, urea	1	During	600
Field application, pesticides	3	During	1,800
50 kg sacks phosphate, 4 sacks needed	NA	NA	15,000
50 kg sacks of urea, 2 sacks needed	NA	NA	15,000
1 liter pesticides	NA	NA	3,000
Improved millet seeds, 10 kg needed	NA	NA	800
Improved cowpea seeds, 70 kg needed	NA	NA	14,000
Managed fallow			
Cut for desired spacing	4	During	1,275
Weed around desired trees	3	During	850
Collect/broadcast forage seeds	3	During	850
Animal traction			
Rent animals for site prep.	NA	NA	5,000
Rent animals for weeding	NA	NA	5,000
Field trees (up to 50 trees/ha)			
Plant/protect	3	During	1,800
Maintain (prune, weed)	3	Off	1,275
Seedlings	NA	NA	2,500

Sources:

1. Labor and maintenance assumptions are mission estimates based on field interviews.
2. Physical input costs were obtained at ICRISAT and adapted to field conditions.

3.3.1 Water Harvesting

D'Herbès and Valentin (in press) measured the amount of crusty soils in a very large area near Niamey as part of the HAPLEX-Sahel study. They show that 34.2 percent of the study area is severely degraded. Water harvesting for agricultural production can be applied to nearly 16 percent of the total area. Water harvesting techniques for range and shrub-land improvement can be applied to 18 percent of the total area.

Water harvesting interventions require supervision by extension agents. If they are not done right, farmers may actually be worse off with the structures than without them. The techniques can assume different forms ranging from planting grasses along the contours to slow down the flow of water and increase the rate of infiltration, to labor intensive efforts involving mining rocks, carrying them to the site, building the dikes, and backfilling the dirt. Water harvesting is typically adopted by land poor farmers in areas where agriculture land is limited.

3.3.2 Organic and Chemical Fertilizer

Phosphate is the most limiting nutrient for agriculture in Niger. Research (ICRISAT and INRAN) has shown that the application of phosphates will increase millet yields by at least 30 percent. When combined with urea, millet yields will increase by another 40 percent or more on the average. Once these inputs are added, additional investments in animal traction and organic fertilizer will pay off in terms of yet higher crop yields.

3.3.3 Animal Traction

Animal traction will, as mentioned above, become increasingly attractive as fertilizer inputs are increased and weeding becomes more important. Also, with increased soil fertility and peanut and cowpea fodder will become increasingly available, it will be possible to own and feed traction animals. One day of animal traction can accomplish as much work as one man can do in five days (mission estimate on the basis of field interviews conducted). Animal traction, therefore, is a significant labor saving technique which will free up workers to do other things.

3.3.4 Managed Fallow

Improved crop management and increased application of purchased inputs will save labor as well as preserve the area currently in traditional fallow. Managed fallow for grass and legume hay production on the traditional fallow area will then be possible. This will also support the integration of agriculture with livestock and help resolve the conflicts between pastoralists and agriculturalists. Seeds for growing high forage value grass and legumes will need to be made available if local collection is not economical.

3.3.5 Field Trees

Natural regeneration and/or tree planting in farm fields will help protect soils from erosive winds and reduce the time spent by women collecting fuelwood. Although this practice protects the land from degradation, windbreak studies suggest that it may even cause a slight crop yield increase because of the improved micro-environment and the additional accumulation of livestock manure encouraged by the shade under the trees during the hot season. For purposes of the analysis, field trees are a soil conservation intervention that provides some fuelwood and minimal crop yield benefits.

3.3.6 Crop Yield Responses

The initial crop yields (without interventions) and the estimated crop yield responses per hectare to the proposed interventions are summarized in Tables 3.5 and 3.6. In Table 3.5, the initial crop yields are based on an overall average for the country (1980 - 1994) of 398 kg for millet, 143 kg for cowpeas, and 369 kg for peanuts (MAGEL, 1992 and 1995). Yields in the south are assumed to be approximately 20 percent higher than the north yields on the average. Hence, an initial yield of 350 kg of millet is assumed for the north and 420 kg for the south to bracket the crop yields on both sides of the overall average. The assumptions for the cowpeas and peanuts bracket the overall average yield assumptions in a similar fashion.

The amounts of cowpea and peanut hay are a function of the quantities of grains and/or peanuts produced. Based on the crop yield statistics (MAGEL, 1992 and 1995) the ratio between cowpeas and peanuts and cowpea and peanut fodder is estimated to be approximately 2 i.e., 125 kg of cowpea grains harvested will produce approximately 250 kg of dry cowpea fodder. A ratio of 1.8 is applied for the peanut fodder (personal communication with Amadou Seydou, UTA). Actual yields harvested will depend on the area per hectare allocated to the different crops. If peanuts are grown on only 10 percent of the hectare analyzed, for example, peanut and peanut hay yields will be adjusted in the modeling framework accordingly.

In the absence of any interventions, it is assumed that crop yields will decline at an average rate of 2.66 percent per year which is consistent with the MAGEL annual statistics (1992 and 1994).¹³

¹³ Millet, cowpeas, and peanut yields declined at average rates of 0.74 4.42 and 2.81 percent between 1980 and 1994 (MAGEL 1992 and 1994). An average decline of 2.66 percent is assumed since millet and cowpeas are nearly always grown in association and peanuts as a monoculture.

Table 3.5: Initial Crop Yields

Crops	North	South
Millet	350 kg/ha	438 kg/ha
Cowpeas	125 kg/ha	156 kg/ha
Peanuts	325 kg/ha	406 kg/ha
Cowpea fodder	250 kg/ha dry	312 kg/ha dry
Peanut fodder	585 kg/ha dry	731 kg/ha dry

Sources:

1. Annuaire des Statistiques de l'Agriculture, 1992, Ministère de l'Agriculture et de l'Elevage
2. Resultats Definitifs de la Campagne Agricole d'Hivernage, 1994/1995, Mai 1995, Ministère de l'Agriculture et de l'Elevage

Estimated crop yield increases in response to the interventions are presented in Table 3.6 for the two regions. These are adapted from ICRISAT and INRAN research data and from interviews conducted in the field. The estimates are intended to reflect field realities, not controlled research conditions. For example, research carried out at ICRISAT has clearly demonstrated the benefits of rotational cropping rather than growing crops in association. Farmers, on the other hand, consistently insist on growing millet and cowpeas in association for food security reasons to spread the risk. They need to harvest the millet crop to feed the family until the next harvest and hope to harvest some cowpeas for home consumption or to sell in the local markets. It is, therefore, assumed that millet and cowpeas will always be grown in association replaced only by a much higher proportion of peanuts during early rainfall years. Compared to the estimated ecological limit on production of nearly three tons of millet per hectare, the assumed discrete crop yield increases in Table 3.6 are much lower to reflect field realities (research yields cannot be expected to be fully replicated on farm fields). In addition, a variable was added in the analytical framework to reflect the synergetic effect on crop yields as interventions are combined; i.e., the crop yields will increase beyond the additive total of the individual interventions by the value given to the variable.¹⁴

¹⁴ Crop yields will increase exponentially over time as this variable is activated. Perhaps a more accurate presentation would be for the variable to reflect a quadratic function to indicate the limit of the synergetic effects of combining interventions. Since the analytical period is only 10 years in this study, however, there would be little difference between the two ways of expressing the impacts.

Table 3.6: Net Crop Yield Increases in Response to Interventions-

Crops	Millet	Cowpeas	Peanuts	Cowpea fodder	Peanut fodder
NORTH					
Water harvesting	50	18	0	36	0
Organic fertilizer	210	75	185	150	333
Chemical fertilizer	300	107	260	214	468
Managed fallow	0	0	0	0	0
Animal traction	165	59	135	118	243
Field trees	30	11	30	21	54
SOUTH					
Water harvesting	60	21	0	43	0
Organic fertilizer	252	90	222	180	400
Chemical fertilizer	360	129	312	43	562
Managed fallow	0	0	0	0	0
Animal traction	198	71	162	141	292
Field trees	36	13	36	26	65

The impacts on crop yields as a result of the interventions are discrete estimates based on an assumed breakdown of the hectare analyzed. In the north, the representative hectare analyzed is broken down as follows: 52 percent is in traditional fallow, 48 percent is actively cropped (as reflected in MAGEL statistics). Of the 48 percent cropped land, 90 percent is taken up by millet in association with cowpeas, the remainder is allocated to the production of peanuts. Cowpea yields on the 90-percent millet/cowpea area are a function of the millet yield in the analytical framework. If 125 kilos of cowpeas and 350 kg of millet are harvested from a full hectare (Table 3.5), the approximate ratio of cowpeas harvested to millet is 125/350, or 36 percent. On the much smaller area (48 percent), therefore, the increase in cowpea yield in the north is 36 percent of the millet yield, or 18 kg. The same procedure applies for all interventions.

Crop yield increases in the south in response to the interventions are an average of 20 percent higher than in the north. In the south, however, land is much less abundant and the breakdown between traditional fallow and actively cropped area is reduced to 10/90 (10 percent in traditional fallow and 90 percent cropped). Since crop yields are typically higher in the south,

it is assumed that farmers there are more apt to grow cash crops (peanuts) more frequently and more extensively than in the north. The allocation of the hectare analyzed, therefore, is assumed to change from the 90/10 millet/cowpeas and peanuts in the north to an 85/15 split in the south.

■ *Water harvesting*

It is assumed for purposes of the analysis that a net increase of 50 kg of additional millet will be produced per hectare as the water harvesting intervention is implemented in the north (Table 3.6), or from the average of 350 kg (Table 3.5) to 400 kg per hectare¹⁵.

■ *Fertilizer*

The assumed crop yield increases attributable to organic and chemical fertilizer in Table 3.6 are based on joint application of the inputs.

■ *Managed fallow*

For the sake of analytical simplicity and for lack of any documented information, it is assumed that managed fallow does not have any impact on the crop yields on the actively cropped area¹⁶. The increasing portion of the hectare changed from traditional to managed fallow will produce commodities such as leguminous fodder and fuelwood. Traditional fallow becomes managed fallow when the farmer collects forage seeds elsewhere and broadcasts them on the fallowed areas, and when certain naturally regenerated trees are protected and maintained, or the farmer plants certain desirable tree species and maintains them for the purpose of promoting the production of fuelwood and poles. For purposes of the analysis, it is assumed that the managed fallow will produce an additional 250 and 350 kg of fodder per year in the north and south regions, respectively, multiplied by the fractional hectare changed to managed from traditional fallow¹⁷. Furthermore, it is assumed that an additional 0.25 steres¹⁸ of fuelwood will be produced per year after protecting naturally regenerated trees and planting new ones. Harvesting of the additional fuelwood is assumed to begin in year five—when the trees

¹⁵ Research has shown that crop yields may reach as high as 500 kg per hectare, or a 100 kg increase above the average.

¹⁶ It may be reasonable to assume, however, that once the managed fallowed areas are brought back into production, crop yields will be higher than for traditional fallow fields brought back into production.

¹⁷ The managed fallow intervention is particularly sensitive to resolution of the land tenure constraint. It would be difficult to introduce today because farmers making the investments of time and money would not necessarily reap the benefits. Fallow land is part of the commons to the herders and the fodder produced may be consumed before the farmers could harvest it.

¹⁸ One stere is equal to one stacked cubic meter.

have matured to the point where harvesting can begin (pruning, thinning, etc.).

The additional volumes of fodder and fuelwood produced under the managed fallow and field tree (see below) interventions are summarized in Table 3.7. As the proportion of managed fallow increases (transferred from traditional fallow) over time, fodder production will also increase at the same rate. The additional fuelwood produced is held constant at 0.25 steres based on the assumption that the farmer will select the trees to protect over the entire hectare once rather than only on the portion of the hectare he seeds for additional forage production. The additional fuelwood produced under the field tree intervention (0.25 steres per hectare beginning in Year 6) will gradually increase to reflect the staggered introduction of trees (10 per year) over time, i.e., the first 10 trees will generate 1/5th of the 0.25 steres harvested from all 50 trees in year 6, and so on for subsequent years.

Table 3.7: Fodder and Fuelwood Production, Managed Fallow and Field Trees

NORTH				SOUTH		
Managed Fallow		Field Trees		Managed Fallow		Field Trees
Year	Fodder Kg/Ha	Fuelwood Steres/Ha	Fuelwood Steres/Ha	Fodder Kg/Ha	Fuelwood Steres/Ha	Fuelwood Steres/Ha
1	13	0.25	0	15	0.30	0
2	25	0.25	0	30	0.30	0
3	38	0.25	0	30	0.30	0
4	50	0.25	0	30	0.30	0
5	63	0.25	0	30	0.30	0
6	75	0.25	0.05	30	0.30	0.06
7	88	0.25	0.10	30	0.30	0.12
8	100	0.25	0.15	30	0.30	0.18
9	113	0.25	0.20	30	0.30	0.24
10	125	0.25	0.25	30	0.30	0.30

Note:

1. Additional harvestable FW ingrowth resulting from Managed Fallow, 0.25 steres/ha
2. Fuelwood produced as a result of planting trees (Field Tree intervention), 0.25 steres/ha

■ *Animal traction*

A net yield increase of 165 kg of millet per hectare in the north is assumed in Table 3.6 as a result of implementing the animal traction intervention (Mission estimate based on personal

communication with Amadou Seydou of UTA).

■ *Field trees*

The field trees intervention (up to a total of 50 trees per hectare) will cause millet yields to increase by an assumed 30 kg per hectare on the average (Mission estimate based on personal communication with Amadou Seydou of UTA)¹⁹.

3.4 Consumption and Price Elasticities

Consumption statistics and the assumed price elasticities for the three crops analyzed are summarized in Table 3.8. The consumption statistics for millet, cowpeas, and peanuts are averages assumed to apply to the north and south regions alike. The consumption numbers given for fodder are not documented. They are input assumptions intended to reflect a desired level of consumption of nutritious fodder of livestock belonging to the farm households. This assumption can easily be varied in the analytical framework. Price elasticities are also input variables instead of documented information. The assumptions were made to reflect the probable phenomenon that prices will decline in real terms as supplies increase in the quantities assumed in Section 4 below.

Table 3.8: Consumption and Price Elasticities

Crops	Kilos Consumed, Kg/Capita	Price elasticities
Millet	160	-1.1
Cowpeas	7	-1.1
Peanuts	2	-1.1
Cowpea fodder	25	-1.3
Peanut fodder	25	-1.3

Sources for consumption data:

1. Enquete sur le Budget et la Consommation des Menages au Niger, 1989/1990 - 1992/1993, Profil de la Pauvreté
2. Enquete sur le Budget et la Consommation des Menages au Niger, 1989/1990 - 1992/1993, Volume B.

¹⁹ The yield increase assumption is based on 50 trees (several species) per hectare generating benefits in the forms of windbreaks and improving the micro-climate on the farm field. If the 50 trees were *Acacia Albida*, crop yields would be substantially higher.

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4. ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Per Hectare

The per hectare analysis presented below is infused with as much field reality as possible. It is intended to reflect how a farmer would intensify his production within the confines of his availability of labor and physical inputs. It is assumed that the major umbrella constraints discussed above will be gradually resolved and that the farmer will gain increased access to the input he needs, when he needs them.

Given this background, Table 4.1 states the assumptions on how crop production on typical hectares in the north and the south may evolve over the 10-year analytical time period. In the north, the initial breakdown of the hectare (as discussed above) was 52 percent in traditional fallow and 48 percent actively farmed. In Table 4.1, it is assumed that the area in traditional fallow will decrease in small increments of five percent per year and be transferred to either managed fallow or to active cropping. The former should be preferred over the latter since it would indicate that the demand for additional farm land is not yet very strong and that intensification of the currently active crop land would be sufficient to accommodate the increases in crop yields needed. The base case assumes that all of the land transferred from traditional fallow will be added to the managed fallow category, not to cropping.

The water harvesting column shows that four percent of the hectare will be reclaimed each year until the entire area in need of the water harvesting intervention has been reached. It is assumed that up to eight percent of the area in the north could benefit substantially from the application of water harvesting techniques. After completion of the water harvesting intervention in year 2, the crop yields attributable to the intervention will continue during years 3 - 10.

The percentages in the organic and chemical fertilizer column (OF + CF) describe the assumed evolution of the hectare under an improved cropping scheme. In year 1, water harvesting is applied and chemical and organic fertilizer are used on only two percent of the hectare.²⁰ In years 2 - 10, organic and chemical fertilizer are applied in combination (assuming credit has been made available and tenure security has increased) on an increasing area over time as the hectare gradually transforms from traditional to improved cropping. The cultivated area under improvement is increasing over time as traditional fallow is decreased and constraints are gradually resolved.

²⁰ 100 percent less 47 percent traditional fallow, less 42 percent traditional cropping, less 4 percent in water harvesting, less 5 percent managed fallow equals a residual of 28 percent of the hectare in improved (OF + CF) cropping.

Table 4.1: Evolution of Improved Farm Fields (%)

Years	Tradit. Crop.	Tradit. Fallow	Water Harv.	OF+ CF	Manag. Fallow	Anim. Trac.	Field Trees	% Total
<i>NORTH</i>								
0	48	52	0	0	0	0	0	100
1	42	47	4	2	5	0	10	100
2	36	42	4	8	10	0	10	100
3	30	37	0	18	15	18	10	100
4	24	32	0	24	20	24	10	100
5	18	27	0	30	25	30	10	100
6	12	22	0	36	30	36	0	100
7	6	17	0	42	35	42	0	100
8	0	12	0	48	40	48	0	100
9	0	7	0	48	45	48	0	100
10	0	2	0	48	50	48	0	100
<i>SOUTH</i>								
0	90	10	0	0	0	0	0	100
1	80	5	4	6	5	6	10	100
2	70	0	4	16	10	16	10	100
3	60	0	4	26	10	26	10	100
4	50	0	4	36	10	36	10	100
5	40	0	0	50	10	50	10	100
6	30	0	0	60	10	60	0	100
7	20	0	0	70	10	70	0	100
8	10	0	0	80	10	80	0	100
9	0	0	0	90	10	90	0	100
10	0	0	0	90	10	90	0	100

The animal traction intervention is added to the technical package in year 3 after which the farmer will switch from manual site preparation and weeding to animal traction on the entire cultivated area every year. It is important to note again that this intervention, in addition to generating increasing crop yields, also is a significant labor saving intervention. Planted field trees are assumed to be introduced at a rate of 10 trees planted each year until the maximum total of 50 trees per hectare has been reached. As discussed above, the impact of this intervention is the creation of an improved microclimate and reduction in wind erosion that will increase crop yields and provide some fuelwood benefits. The wood benefits are assumed to begin in year five when the first trees have reached a size where some pruning harvests will contain some value.

Finally, it is assumed that the crops are grown (somewhat) on a rotational basis. Every year will see a millet/cowpea crop, but a relatively larger peanut cash crop (and less millet/cowpeas) will be grown during early rainfall years (as indicated by the "toggle" assumptions in Table 4.2 below). In the north, up to two larger peanut crops may be grown over the 10-year period, in the south, up to eight larger peanut crops may be produced for the cash market.

4.1.1 Crop Yields Per Hectare

Based on the assumptions specified above, the calculated net crop yield increases per *partial* hectare are given in Table 4.2 (the hectare is partial because a declining portion is still in traditional or managed fallow). In the north, for example, the farmer will see a 537 kg increase in the millet yield he will harvest on the 0.48 ha he cultivates in year 10 (Table 4.1), or roughly equivalent to 1,120 kg per full hectare, well below the maximum potential indicated by ICRISAT, INRAN, and others. In year 10 in the south, millet yields will increase by 1,043 kg per 0.76 ha, or equivalent to approximately 1,372 kg per full hectare, again well below the potential. It is important to emphasize that these figures reflect the net yield increases over and beyond the declining yields the farmers could expect to harvest without any of the interventions.

The toggle column indicates the (random) years when rains come earlier than usual and farmers choose to plant a higher proportion of the cultivable area in peanuts than in millet and cowpeas. As assumed above, this phenomenon occurs 2 out of 10 years in the north, and up to 8 out of 10 years in the south. For purposes of the analysis, two years in the north and three years in the south are assumed.

The crop yield increases also account for the synergetic effect (five percent) of combining interventions (organic and chemical fertilizer, water harvesting, and animal traction). The last two columns—cowpea and peanut fodder—are calculated yield increases based on the ratios between grains and fodder for the two crops as discussed above.

Table 4.2: Net Increases in Crop Yields With Interventions

Year	Toggle	Millet	Cowpeas	Peanuts	Cowpea Fodder	Peanut Fodder
<i>NORTH</i>						
1	0	11	4	1	8	2
2	0	54	19	5	38	9
3	1	56	20	223	40	402
4	0	190	68	18	135	32
5	0	247	88	23	176	42
6	0	315	113	30	225	53
7	0	390	139	37	279	66
8	0	471	168	45	337	80
9	1	244	87	304	174	547
10	0	537	192	51	384	92
<i>SOUTH</i>						
1	0	34	12	5	24	9
2	0	121	43	14	86	25
3	1	92	33	497	66	895
4	0	321	115	35	229	63
5	0	452	162	51	323	92
6	1	194	69	593	139	1067
7	0	696	249	82	497	147
8	0	835	298	99	596	179
9	1	319	114	685	228	1233
10	0	1043	372	126	745	227

Notes:

1. North toggle: larger peanut cash crop planted up to 2 years out of 10 (peanuts increases to 70 percent of the area, millet/cowpeas decreases to 30 percent).
2. South toggle: larger peanut cash crop planted up to 8 years out of 10 (as above).

4.1.2 Benefits and Costs Per Hectare

Based on the assumed farm gate prices for each crop (Table 3.3) and the net crop yield increases (Table 4.2) the total benefits per hectare for the north and south regions are calculated in Table 4.3. The costs associated with the interventions are summarized in Table 4.4. Finally, all benefits and costs are brought together in Table 4.5 and the net present value (NPV) per hectare is calculated on the net cash flow (benefits minus costs).

Table 4.3: Total Benefits, FCFA/Ha

Year	Millet	Cow-peas	Pea-nuts	C'pea Fodder	P'nut fodder	Man. Fallow	Field Trees	Total
NORTH								
1	561	361	91	401	65	400	0	1879
2	2635	1711	466	1882	329	588	0	7611
3	2691	1765	21745	1922	15029	775	0	43927
4	8851	5869	1701	6322	1150	963	0	24855
5	11260	7549	2191	8043	1448	1150	0	31641
6	14033	9517	2776	10024	1791	1338	43	39521
7	16926	11617	3400	12090	2137	1525	85	47781
8	19938	13854	4063	14241	2486	1713	128	56423
9	10034	7063	27215	7167	16183	1900	170	69731
10	21544	15369	4516	15388	2605	2088	213	61722
SOUTH								
1	1699	1092	491	1214	354	480	0	5330
2	5904	3834	1363	4217	962	705	0	16986
3	4420	2899	48432	3157	33475	705	0	93087
4	14984	9935	3343	10703	2260	705	0	41930
5	20631	13831	4846	14736	3202	705	0	57950
6	8655	5870	55400	6182	35729	705	51	112592
7	30217	20738	7554	21584	4749	705	102	85649
8	35314	24539	9041	25224	5532	705	153	100509
9	13163	9265	61388	9402	36504	705	204	130632
10	41814	29830	11145	29867	6430	705	255	120046

Table 4.4: Total Costs, FCFA/Ha

Year	Water Harvest	Organ. Fertil.	Chem. Fertil.	Managed Fallow	Animal Tract.	Field Trees	Total
<i>NORTH</i>							
1	510	149	1016	149	0	1115	2939
2	510	596	4064	298	0	2230	7698
3	240	1341	9144	446	1800	3345	16316
4	240	1788	12192	595	2400	4460	21675
5	240	2235	15240	744	3000	5575	27034
6	240	2682	18288	893	3600	5575	31278
7	240	3129	21336	1041	4200	5575	35521
8	240	3576	24384	1190	4800	5575	39765
9	240	3576	24384	1339	4800	5575	39914
10	240	3576	24384	1488	4800	5575	40063
<i>SOUTH</i>							
1	510	447	2160	149	0	1115	4381
2	510	1192	5760	298	0	2230	9990
3	240	1937	9360	298	2600	3345	17780
4	240	2682	12960	298	3600	4460	24240
5	240	3725	18000	298	5000	5575	32838
6	240	4470	21600	298	6000	5575	38183
7	240	5215	25200	298	7000	5575	43528
8	240	5960	28800	298	8000	5575	48873
9	240	6705	32400	298	9000	5575	54218
10	240	6705	32400	298	9000	5575	54218

Table 4.5: Summary, NPV Per Hectare

	TOTAL BENEFITS		TOTAL COSTS		NET CASH FLOW	
Year	North	South	North	South	North	South
1	1879	5330	2939	4381	-1060	950
2	7611	16986	7698	9990	-86	6996
3	43927	93087	16316	17780	27611	75308
4	24855	41930	21675	24240	3180	17690
5	31641	57950	27034	32838	4607	25113
6	39521	112592	31278	38183	8244	74410
7	47781	85649	35521	43528	12259	42122
8	56423	100509	39765	48873	16658	51636
9	69731	130632	39914	54218	29817	76414
10	61722	120046	40063	54218	21660	65828
NPV					24142	92545

The positive net present values for both the north and south regions indicate that the proposed interventions are financially feasible given the assumptions. These include a relatively high discount rate of 30 percent to reflect a strong aversion to risk among subsistence level farmers, and conservative farm gate prices²¹.

4.1.3 Sensitivity Analysis

The sensitivity analysis shows how the NPV results would change if the assumptions were changed. If prices and costs were higher or lower than those originally assumed in the base case, how much would the NPVs change? Where a large change in an assumption causes only a small change in the overall result, the assumption is not sensitive and need not be so carefully monitored. Where, on the other hand, a small change in an assumption yields a large change in the overall result, that assumption is sensitive and should be closely monitored.

Results of the sensitivity analyses for the north and south regions are presented in Table 4.6. The base case assumptions on prices (farm gate prices for crops, fuelwood, fodder); costs (labor and physical inputs); and the discount rate are reflected in the center column of the table. The effect of varying the assumptions by 25 percent increments above and below the base case assumptions are given in the other columns of the table.

²¹ The internal rates of return (IRRs) are not calculated because there are no negative net cash flows (NCF) for the southern region, and the two small negative NCF numbers in years 1 and 2 for the northern region would generate an IRR without much meaning. It is clear that the proposed interventions are very attractive and it is reasonable to assume that farmers will participate when and if the constraints discussed above are resolved.

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Table 4.6: Sensitivity Analysis

Variables	-75%	-50%	-25%	Base Case	+25%	+50%	+75%
<i>NORTH</i>							
Costs	63740	50541	37341	24142	10943	-2257	-15456
Prices	-38982	-17941	3100	24142	45184	66225	87267
Disc. Rate	74888	48724	33512	24142	18069	13952	11050
<i>SOUTH</i>							
Costs	140986	124839	108692	92545	76398	60251	44104
Prices	-36528	6496	49521	92545	135569	178594	221618
Disc. Rate	272649	181110	126694	92545	70078	54678	43738

For both regions, prices (for the crops, fodder, and fuelwood) is the most sensitive variable. In the north, prices can decline by slightly more than 25 percent vis-a-vis the base case before the NPV switches from positive to negative. The cost variable is somewhat sensitive in the north as a slightly more than 50-percent increase will switch the NPV. The discount rate assumption does not exhibit any sensitivity as the NPV does not switch to negative in any of the cases.

4.2 Aggregation

This section aggregates the field interventions by projecting the implementation of the proposed technologies over 10 years, based on assumptions on the rate of adoption of the technologies in each region. The results are presented in Tables 4.7 - 4.16 below.

4.2.1 Extension

Table 3.1 above summarizes the assumptions on the numbers of farm households and area needed to adopt the proposed farm productivity improvement schemes over time in order to keep pace with the rapidly growing population. These variables are used to calibrate a rough equivalency between supply and demand for the crops analyzed. For example, the target number of 340,425 farm households in the north and 359,338 in the south (85 percent of the total farm population in both regions) will produce enough millet on 75 percent of the cultivated hectares they farm to roughly keep pace with a 3.3 percent increase in population over time.

Farmer participation is, of course, inherently difficult to estimate. It is largely dependent on the effectiveness of the extension agents, how many extension agents there are, the appropriateness of the extension messages, and how often they visit the villages and work with the farmers in their fields. If the extension message is effective, the agents are motivated and

dynamic, and the recipient farmers are receptive and disposed to teach other, one can count on a strong demonstration effect. It is not uncommon that entire villages have adopted certain techniques through the "over-the-fence" demonstration effects if the message gets across and the results are clearly visible and attractive to the farmers.

For purposes of the analysis, the following assumptions are made with respect to the demonstration effect:

- Farmers contacted/year: 30 percent
- Training effectiveness: 30 percent
- Demonstration effect: 5 percent

These assumptions are not documented by any research other than being confirmed as realistic by the Programme de Renforcement des Services d'Appui de l'Agriculture (PRSAA), a World Bank supported project. The purpose of the project is to offer extension services to farmers with a view to increasing crop yields. The assumptions reflect their implementation experiences. It is assumed that the extension service will be able initially to contact up to 30 percent of the target households per year in each region.²² This will be in the form of village level teaching workshops where the extension agents will introduce the techniques, working in particular with village leaders who have committed to implement the techniques. In turn, the village leaders will train other farmers. It is further assumed that the training will be effective for only 30 percent of those contacted each year since extension agents are not all effective communicators. A demonstration effect of five percent is also assumed; i.e. for every 100 farmers successfully trained by the extension agents, another five farmers (five percent) will adopt the technologies without any direct contact from the extension agents. As increasing numbers of farmers adopt the technologies, the five-percent demonstration factor becomes increasingly important, since the fixed percentage will apply to an increasing number over time; i.e., the rate of participation becomes exponential as indicated in Table 4.7 below.

²² According to Mr. H. Wada of the PRSAA, the ideal number of farm households per extension agent is 2,500, although the actual experience has been approximately 5,000 households per agent.

Table 4.7: Cumulative Participation of Farm Households

Year	North	South	Total
1	30638	33957	64596
2	62808	67915	130723
3	96587	103570	200157
4	132055	141008	273063
5	169296	180318	349614
6	208399	221593	429992
7	249457	264933	514390
8	292568	310439	603007
9	337835	358220	696055
10	340425	359338	699763

4.2.2 Population Growth

Population and population growth are the dominant demand variables. As population grows, the demand for the commodities (millet, cowpeas, peanuts, and fodder) will grow by the average per capita consumption as assumed in Table 3.8. As assumed in the overall assessment report, the overall population in Niger is approximately 8.9 million in 1995 (of which 80 percent is rural), growing at a rate of 3.3 percent per year as indicated in Table 4.8. Since the urban growth rate far exceeds the rural growth rate (six percent is assumed), however, the labor constraint discussed above assumes a critical role; i.e., the supply of labor in the rural area will not increase at the same rate as the overall population growth rate. For this reason, labor saving techniques such as the use of animal traction and improved planting and weeding techniques must be prioritized.

Table 4.8: Population

Year	Urban	Rural	Total	Urban % of Total
1	1780000	7120000	8900000	20.0%
2	1886800	7306900	9193700	20.5%
3	2000008	7497084	9497092	21.1%
4	2120008	7690488	9810496	21.6%
5	2247209	7887034	10134243	22.2%
6	2382042	8086631	10468673	22.8%
7	2524964	8289175	10814139	23.3%
8	2676462	8494543	11171005	24.0%
9	2837050	8702599	11539648	24.6%
10	3007273	8913184	11920457	25.2%

4.2.3 Supply and Demand

Projections of the domestic supply and demand for millet, cowpeas and peanuts in Niger are presented in Tables 4.9 - 4.15 below. Demand is determined by multiplying the average consumption per commodity (Table 3.8) by the total population (Table 4.8), resulting in estimates of the extent to which demand will increase over time. On the production side, the initial number appearing in the "Without Intervention" columns of Tables 4.10 - 4.12 are the average crop production figures taken from Table 4.9. The average production of millet over the 1984 - 1994 period, for example, was nearly 1.5 million tons.

In Table 4.10, demand for millet (column 2) is projected as described above. Supply is projected in Column 5—the total of the supply that would be forthcoming both without and with the interventions (Columns 3 and 4). The initial (without intervention) supply is the average tonnage of millet produced taken from Table 4.9 but declining over time at the 2.66 percent rate assumed above (see Section 3.3.6). Column 6 shows the assumed tonnage of millet participating farm households will likely withhold from the cash crop market for food security reasons. It is assumed that farmers will withhold at least one year's crop plus another 25 percent to hedge against the probability that production will occasionally fail because of drought (these assumptions are confirmed through field interviews). Any excess supply of millet over and beyond meeting the aggregate demand and the tonnage withheld for food security reasons is assumed to be sold on the export market generating additional incomes for the participating farm households (Column 8). Thus, in year 1, participating farmers in that year will withhold an estimated 103,000 tons for food security reasons from the total supply generating a slight millet deficit of nearly 1,000 tons that year. Hence, no additional income for the participating farmers will be generated. The crossover to a surplus situation occurs in year four after which additional incomes will become commonplace and increase over time as the surpluses increase. The additional income, of course, will be generated only if markets for the surpluses (particularly in Nigeria) are readily available.

The projections of the demand for and supply of cowpeas (Table 4.11) and peanuts (Table 4.12) are derived in the same fashion as for the millet. Again, one year's crop plus 25 percent are assumed withheld from the open market for food security reasons.

Projections of the production of cowpea and peanut fodder are given in Tables 4.13 and 4.14. The supply and demand for cowpea fodder are estimated in columns 2 and 3, respectively where the latter is estimated on the basis of the consumption of cowpea and peanut fodder per participant household (25 kilos per household for each commodity—see Table 3.8) plus 25 percent for food security reasons. The production of fodder is a function of the production of cowpeas and peanuts each year. It is assumed that all surplus production will be sold on the open domestic market (or exported to Nigeria) generating the incomes indicated in the last columns of Tables 4.13 and 4.14.

Table 4.9: Crop Production

Year	Millet	Cowpeas	Peanuts
1984	771040	194843	30800
1985	1449893	115332	8400
1986	1383395	292935	54500
1987	996930	208768	40427
1988	1766316	301549	12921
1989	1332729	320496	25522
1990	1676532	223650	17533
1991	1846020	318207	39664
1992	1787054	402319	57100
1993	1425619	162823	20152
1994	1971960	382578	67433
Average	1491590	265773	34041

Source: Annuaire Des Statistiques De L'Agriculture, 1992, Ministry of Agriculture and Livestock, Resultats Definitifs De La Campagne Agricole D'Hivernage, 1994.

Table 4.10: Demand and Supply, Millet

Demand		Supply			Surplus/Deficits		
Yr	Tons	Without Interventions	With Interventions	Total	Food Security 25%	Surplus or Deficits	Income from Sale of Surplus (\$)
1	1424000	1491590	34901	1526491	103353	-862	0
2	1470992	1451914	175439	1627352	209157	-52797	0
3	1519535	1413293	304378	1717670	320251	-122116	0
4	1569679	1375699	739562	2115261	436900	108681	10868137
5	1621479	1339105	1339391	2678497	559382	497636	49763591
6	1674988	1303485	1872615	3176100	687987	813125	81312537
7	1730262	1268813	2848124	4116937	823023	1563651	156365133
8	1787361	1235062	4043764	5278826	964811	2526655	252665466
9	1846344	1202209	4700532	5902741	1113688	2942710	294270978
10	1907273	1170231	6159239	7329469	1119620	4302576	430257634

Table 4.11: Demand and Supply, Cowpeas

Demand		Supply			Surplus/Deficits		
Yr	Tons	Without Interventions	With Interventions	Total	Food Security 25 %	Surplus or Deficits	Income from Sale of Surplus (\$)
1	62300	265773	12465	278237	4522	211416	38054826
2	64356	258703	62657	321360	9151	247853	44613611
3	66480	251822	108706	360528	14011	280037	50406725
4	68673	245123	264129	509253	19114	421465	75863642
5	70940	238603	478354	716957	24473	621544	111877967
6	73281	232256	668791	901047	30099	797667	143580071
7	75699	226078	1017187	1243265	36007	1131559	203680632
8	78197	220064	1444202	1664266	42210	1543858	277894512
9	80778	214211	1678761	1892972	48724	1763471	317424725
10	83443	208513	2199728	2408241	48983	2275814	409646563

Table 4.12: Demand and Supply, Peanuts

Demand		Supply			Surplus/Deficits		
Yr	Tons	Without Interventions	With Interventions	Total	Food Security 25 %	Surplus or Deficits	Income from Sale of Surplus (\$)
1	2848	34041	4246	38287	1292	34147	3414673
2	2942	33136	18715	51851	2614	46294	4629413
3	3039	32254	596135	628389	4003	621347	62134687
4	3139	31396	653465	684862	5461	676261	67626111
5	3243	30561	744504	775065	6992	764830	76482969
6	3350	29748	1202542	1232290	8600	1220340	122034000
7	3461	28957	1346720	1375677	10288	1361928	136192838
8	3575	28187	1526993	1555180	12060	1539545	153954467
9	3693	27437	2390799	2418235	13921	2400622	240062169
10	3815	26707	2623619	2650326	13995	2632516	263251629

Table 4.13: Cowpea Fodder Produced

Year	Tons	Demand + 25%	Surplus/Deficit	Income from Sale of Surplus (\$)
1	24929	16149	8780	1756086
2	125313	32681	92633	18526538
3	217413	50039	167373	33474678
4	528259	68266	459993	91998595
5	956708	87403	869305	173860908
6	1337582	107498	1230084	246016842
7	2034374	128597	1905777	381155411
8	2888403	150752	2737651	547530262
9	3357523	174014	3183509	636701809
10	4399456	174941	4224516	844903124

Table 4.14: Peanut Fodder Produced

Year	Tons	Demand + 25%	Surplus/Deficit	Income from Sale of Surplus (\$)
1	7642	16149	-8507	0
2	33687	32681	1006	80493
3	1073043	50039	1023004	81840281
4	1176238	68266	1107972	88637777
5	1340107	87403	1252703	100216278
6	2164575	107498	2057077	164566155
7	2424096	128597	2295498	183639866
8	2748587	150752	2597836	207826845
9	4303438	174014	4129424	330353905
10	4722514	174941	4547574	363805895

4.2.4 Additional Income Created

The additional income earned by the participating farm households as a result of producing crop and fodder surpluses and selling them on the open market (including exports) is summarized in Table 4.15. These estimates are, of course, based on the successful resolution of all major constraints discussed above; i.e., land tenure, access to extension services, physical farm inputs, credit, and access to markets. Because of the large and increasing surplus volumes produced as more participants adopt the technologies, farm incomes generated will also increase over time. In this context, perhaps access to markets is the most formidable constraint. The domestic markets will be saturated as the numbers in the surplus/deficit columns in Tables 4.10 - 4.12 are zero or higher. Export markets to Nigeria, Burkina Faso, and Benin must, therefore,

become the major outlets for the bulk of the surplus commodities. A second possibility would be to promote the establishment of value-added small enterprises (such as millet flour mills and peanut oil pressing, etc.).

Table 4.15: Aggregate Additional Income Created for Farm Households (US\$)

Year	Millet	Cowpeas	Peanuts	Cowpea Fodder	Peanut Fodder	Total
1	0	38054826	3414673	1756086	0	43225585
2	0	44613611	4629413	18526538	80493	67850055
3	0	50406725	62134687	33474678	81840281	227856371
4	10868137	75863642	67626111	91998595	88637777	334994263
5	49763591	111877967	76482969	173860908	100216278	512201712
6	81312537	143580071	122034000	246016842	164566155	757509605
7	156365133	203680632	136192838	381155411	183639866	1061033880
8	252665466	277894512	153954467	547530262	207826845	1439871552
9	294270978	317424725	240062169	636701809	330353905	1818813586
10	430257634	409646563	263251629	844903124	363805895	2311864845

Based on the assumptions, additional farm incomes could reach as high as \$2.3 billion by year 10 in the aggregate, increasing from \$43 million in year one. This converts to additional incomes per year per participating farm household as indicated in Table 4.16. In year one, participating farm households can expect to increase their incomes by \$669 on the average, increasing to a maximum total of \$3,304 in year 10. Per capita income for the participating farm households will increase from \$84 in year 1 to \$413 in year 10, assuming an average household size of eight individuals.

Table 4.16: Increased Income/Year Per Farm HH (US\$)

Year	Per Household	Per Capita
1	669	84
2	519	65
3	1138	142
4	1227	153
5	1465	183
6	1762	220
7	2063	258
8	2388	299
9	2613	327
10	3304	413

4.3 Investments Needed for Aggregation Scenarios

The per hectare analysis demonstrated that the proposed activities are financially feasible from the farmers' perspective given a 30-percent discount rate. This, however, can only succeed if the major constraints are resolved and enabling conditions are put in place. Both the GON and donors must make substantial investments which are roughly estimated in this section. All investments assumed are estimated in the context of the aggregation scenario analyzed above. It is expected that the GON will provide the necessary personnel and that the donors will "prime the pump" with investments in necessary technical assistance, infrastructure, vehicles and operating costs.

4.3.1 GON Investments

The GON investments needed to accommodate the aggregation scenarios are summarized in Table 4.17. The additional extension staff needed is shown in column 3, assuming that one additional extension worker will be needed for every 2,500 participants. This ratio is optimal (or a most desired ratio) according to the PRSAA project discussed in Section 4.2.1 above (although the current ratio is closer to 4,000 household per extension agent). Additional supervisory personnel needed is a function of the number of extension agents needed. In this example, it is assumed that an additional 0.3 staff (approximately one supervisor or above per three extension agents) will be needed (also a ratio roughly estimated by PRSAA). Thus, 26 additional extension agents in year 1 will be supported by an additional eight persons, some of whom will be extension supervisors, and others professionals higher up in the extension hierarchy. Likewise, the 0.3 ratio also applies to the support staff (secretaries, drivers, other administrative personnel). In column 6, the cumulative payroll in FCFA is based on an assumed 75,000 FCFA per month salary for the extension agents and 95,000 FCFA per month for the supervisory personnel and above, on the average. The FCFA figures are converted to US dollars in column 7 based on an exchange rate of 500 FCFA to one dollar.

Table 4.17: GON Investments

Year	Farmer Partic.	Extension Agents Added for 2500 Particip.	Superv. Person. & Above Added/ Agent	Support Staff Added/ Agent	Cumul. Payroll FCFA	Cumul. Payroll US \$
1	64596	26	8	8	39067445	78135
2	66128	26	8	8	79061391	58123
3	69434	28	8	8	121055035	242110
4	72906	29	9	9	165148360	330297
5	76551	31	9	9	211446352	422893
6	80378	32	10	10	260059243	520118
7	84397	34	10	10	311102779	622206
8	88617	35	11	11	364698492	729397
9	93048	37	11	11	420973990	841948
10	3708	1	0	0	423216360	846433

Note: Extension agent ratios are provided by Programme de Renforcement des Services d'Appui de l'Agriculture (PRSAA)

4.3.2 Donor Investments

It is assumed that donors will make all other investments needed to accommodate the implementation of the proposed technologies. It should be clearly understood that these are rough order-of-magnitude estimates, *certainly not recommended for USAID to fund alone*. Certain investments will be needed in the forms of technical assistance, training, infrastructure and operating and maintenance costs in order to accommodate the implementation of the proposed technologies. The logic behind the estimates is based on the needed expansion of the extension services in the rural areas, in each arrondissement and in the villages. If X farm households are to receive extension advice in year 1, then Y additional extension workers and support staff will have to be hired (Table 4.17), trained, equipped, vehicled, and housed in order to effectively reach the participants. In year two, more extension workers, supervisors, and support staff will have to be hired, trained, and so on for the entire 10 years as more farm household participants enter the program. Whereas it anticipated that the GON will commit to increasing its payroll to accommodate the additional staff as discussed above, it is essential that the donors collectively invest in the enabling conditions such as funding long- and short-term training in relevant subject matters, providing the necessary infrastructure and vehicles, technical assistance, and the like.

The assumptions and investment estimates are summarized in Tables 4.18 - 4.20. These represent initial ideas for consideration by several donors, USAID included. USAID, for example, is already providing substantial long-term TA through ASDG II and other projects.

It would be possible, for example, to add TA incrementally to existing contracts to accommodate the implementation of the activities suggested in this report and in those proposed in the overall assessment report, or the scopes-of-work of the existing TAs in ongoing projects could be amended to reflect a more active role in implementing these activities.

■ *Long term TA*

Minimal long-term technical assistance (TA) will be needed to implement a massive program such as the one analyzed in this assessment, particularly in professional fields where expatriate advisors have a definite comparative advantage. Three such areas would certainly include economics, management, and marketing. All long-term expatriate TA should be drawn from professional fields not particularly strong in Niger. For budgetary purposes, the assumed annual cost of an expatriate technical advisor is \$150,000 including salaries and allowances, insurance, travel (home leaves, etc.) and related overheads for home-based institutions, and hiring of some local support staff (drivers, office staff, etc.). The estimate of 48 person months (or four long-term expatriate technical assistants) per year for the first five years is based on fostering a multidisciplinary approach to implementing the technologies to work on implementation while carefully selected counterparts receive appropriate long- or short-term training in the US or in some other 3rd country.

■ *Short term TA*

There are also several fundamental topics for which short-term TA support will probably be needed, again in professional areas where Niger is not particularly strong. Probable examples include: (i) short term TA to address policy matters, working through projects such as ASDG II; (ii) facilitate the establishment of credit institutions or other means to reduce risk; (iii) assure access to markets for wood and crop products resulting from the interventions; (iv) support research.

It is estimated that at least 18 person-months of short-term TA will be required to address the above and other tasks for each of the first five years, as they are identified during implementation, followed by 12 person-months thereafter. The cost per short term TA month is estimated at \$18,000 including salaries, travel, per diem, insurance, and overhead costs for home-based institutions.

Table 4.18: Technical Assistance and Training

Yr	Person-Mo. of LT TA @ \$150000 /Year	Pers.-Mo. of ST TA @ \$18000 /Month	TC for TA /Year	LT Trng @ \$25000 /Year	ST Trng Mid level @ \$125000 /Session	ST Train. Field Lev. @ \$25000 /Session	Total Cost US\$
1	48	18	7524400	5	5	10	1000000
2	48	18	7524000	5	5	10	1000000
3	48	18	7524000	5	5	10	1000000
4	48	18	7524000	5	5	10	1000000
5	48	18	7524000	5	5	10	1000000
6	12	12	2016000	2	2	5	400000
7	12	12	2016000	2	2	5	400000
8	12	12	2016000	2	2	5	400000
9	12	12	2016000	2	2	5	400000
10	12	12	2016000	2	2	5	400000

■ *Training*

Appropriate training is essential to the success of the proposed activities. In areas where Niger is weak (economics, management and marketing for example, as mentioned above), long-term training would be appropriate, some to a MS levels, and some even to a Ph.D level at an assumed cost of \$25,000 per year²³. For this reason, the assumption is made that donors will collectively fund five candidates to receive graduate level training each year for five years, followed by two candidates each year for the next five years. Upon completion of their training, these individuals will assume the roles and responsibilities of the expatriate TAs and/or assume important roles in the context of implementing the proposed activities.

Also included in the training category are different level short-term training in the forms of short courses, workshops and seminars. For the sake of simplicity, short term training for mid- to high-level professionals or decision-makers is assumed to cost \$125,000 per session, and that five such sessions covering different (probably policy-oriented) topics will be held each year for the first five years, followed by two sessions per year for the next five years. Finally, field level training (retraining) of the extension workers and NGO personnel will be needed—a

²³ It is recognized that donors, USAID included, have de-emphasized long-term training because trainees often do not return to work in the capacities for which they have been trained. Long-term professional training to the M.S or Ph.D (terminal degree) levels is, nevertheless, important to ensure that the GON gradually increases its professional capacity to deal effectively with the problems without having to continue to rely on outside technical assistance. GON policy reform certainly is needed to provide incentives for LT trainees to return to their posts.

\$25,000 cost per session and 10 sessions per year for the first five years are assumed.

■ *Infrastructure and Operating Costs*

The assumptions and corresponding investment magnitudes for infrastructure, transportation, and operating costs are summarized in Table 4.19. In column 2 it is assumed that the extension workers will need approximately 60 m² of floor space in the village for use as a home (this is the PRSAA policy) and/or office to be built for an approximate turnkey cost of \$500 per m². Hence, a total of 1,550 m² of housing or office space will be constructed during the first year, and so on for the subsequent nine years as indicated in the table. Transportation in the form of motorcycles for the extension workers (also a PRSAA policy) at an average cost of \$4,000 each is shown in column 3 (26 motorcycles—one for each extension agent—in year one). Column 4 shows the estimated transportation infrastructure needed (4 WDs) for the extension supervisory staff, again one vehicle per additional staff (which will complement the already sparse fleet of vehicles available for extension purposes). Operating costs for the vehicles and the buildings is assumed in column 5—three percent of the initial investment costs. Assumptions pertaining to computer hardware and software for the extension service is calibrated to the number of additional extension workers needed, although each new extension agent will certainly not receive his/her personal computer. This investment (and the 4 WD vehicles) is more in line with overall institution building rather than just to accommodate the incoming extension staff. The total cost for buildings and vehicles is summarized in column 7. Finally, column 8 reflects the assumptions pertaining to maintenance and replacement of the vehicles and computers.

Table 4.19: Infrastructure, Transportation and Operating Costs

Yr	Buil-ings, m ² /Addit. staff: 60 @ \$500	Motor-cycles for Ext. Staff @ \$4000	4WD for Superv. Staff @ \$32000	Operat. Costs for Bldngs & Veh. 3% Inv.	Comp. HW & SW/Ext Staff @ \$3000	Total Cost, Bldngs & Veh.	Maint. & Replace. Costs of Col. 6, 7 3%
1	1550	26	8	33796	77515	1126548	36122
2	1587	26	8	68394	79353	1153265	73100
3	1666	28	8	104722	83321	1210928	111928
4	1750	29	9	142866	87487	1271474	152697
5	1837	31	9	182918	91861	1335048	195504
6	1929	32	10	224972	96454	1401800	240452
7	2026	34	10	269129	101277	1471890	287647
8	2127	35	11	315493	106341	1545485	337201
9	2233	37	11	364176	111658	1622759	389234
10	89	1	0	366116	4449	64661	391507

■ *Summary: GON and donor investments*

Table 4.20 is the global summary of all investments made by the GON (Table 4.17), the donors (Tables 4.18 and 4.19), and the participating farmer net cash flows over time. The latter is derived by adding the net cash flows per hectare (from Table 4.5) horizontally along a diagonal matrix—i.e., the net cash flows (benefits minus costs) for participating farmers in year 1 are added horizontally to the NCFs for participating farmers beginning in year 2 and so on for all 10 years. The results indicate that only one slight negative NCF will occur in year 1 followed by increasing positive numbers. The estimated GON and donor investments are listed as negatives offsetting the participant NCF in column 3, generating the aggregate NCF in column 6. Based on an assumed discount rate of 15 percent for the aggregate analysis, the effort is economically feasible since the NPV is positive and the IRR (27 percent) is greater than the discount rate (the assumed opportunity cost of capital).

Table 4.20: Summary

Year	Participants	Participant Net Cash Flow	GON Investments	Donor Investments	Aggregate Net Cash Flow
1	64596	-440	-78135	-9797981	-9876556
2	130723	466156	-158123	-9898112	-9590079
3	200157	7275524	-242110	-10034899	-3001485
4	273063	8776584	-330297	-10178524	-1732237
5	349614	11054072	-422893	-10329331	301849
6	429992	17163197	-520118	-4379678	12263401
7	514390	21376516	-622206	-4545942	16208368
8	603007	26818923	-729397	-4720520	21369006
9	696055	34989661	-841948	-4903827	29243886
10	699763	42267509	-846433	-3242533	38178543
NPV					17477136
IRR					27%

5. POLICY REQUIREMENTS

5.1 Validity of USAID/Niger Vision

The analysis presented in this report clearly demonstrates that, under most favorable conditions with respect to resolving key constraints, Niger would be physically capable of maintaining and/or exceeding food self-sufficiency requirements over the next 10 years without having to encroach further on the reserves of arable land now in traditional fallow. ICRISAT, INRAN, donors, and the farmers themselves are all more or less aware of this, but are also pessimistic about the realistic possibilities of actually succeeding in this effort. Long term progress on needed policy reforms has been slow (except for this year's excellent record), and the current pace will not accommodate the production scenario analyzed in this report.

Perhaps a more interesting question to ask is what will happen if food production does *not* increase as analyzed above. If so, the "with interventions" column in Table 4.10 (millet supply and demand) will become zero while crop yields will decline as indicated in the "without interventions" column. The impact on the supply/demand situation for millet, the most important staple crop, over the next 10 years, is shown in Table 5.1. Deficits will begin immediately and increase over the entire time period. Only two options are available: (i) increase millet imports, or (ii) rapidly put back into production the remaining arable land currently in traditional fallow. Neither option is desirable.

Farmers have indeed been increasing the area cultivated at an exponential rate (the second option) by reducing or eliminating fallow periods and expanding onto land used for grazing (especially in the Sahelian zone), not by intensifying production on existing crop land. In some of the more productive areas—the southern half of the Maradi and Zinder Departments—most of the arable land is continuously cultivated with no or very little remaining in fallow. This reliance on extensive, low investment agriculture to support a 3.3 percent annual increase in population is clearly unsustainable. Evidence of this is stagnant or decreasing grain yields and escalation of farmer/herder conflicts.

The scenario analyzed is clearly the favored option. In order to implement it, however, the major constraints discussed in Section 2.4 (tenure, the availability of credit, extension services and physical inputs, access to markets, and availability of labor) must be resolved. USAID's SO3 reflects these concerns (as do other donors with respect to their strategic objectives), but progress made towards resolving them, albeit in the right direction, has been too slow. Whereas USAID's SO3 focus should remain on the current mix of policy-oriented (macro) assistance through ASDG II and field-oriented (micro) assistance through Africare and the Peace Corps, additional investments should be made through existing TA contracts or new TA contracts will be needed to accommodate a much faster pace of policy reform to unleash the constraints to higher food production.

Table 5.1: Demand and Supply for Millet Without Interventions

Demand		Supply			Surplus/Deficits		
Yr	Tons	Without Interventions	With Interventions	Total	Food Security 0%	Surplus or Deficits	Income from Sale of Surplus (\$)
1	1424000	1491590	0	1491590	82682	-15093	0
2	1470992	1451914	0	1451914	167326	-186404	0
3	1519535	1413293	0	1413293	256201	-36244	0
4	1569679	1375699	0	1375699	349520	-543501	0
5	1621479	1339105	0	1339105	447506	-729879	0
6	1674988	1303485	0	1303485	550390	-921892	0
7	1730262	1268813	0	1268813	658419	-1119868	0
8	1787361	1235062	0	1235062	771849	-1324147-	0
9	1846344	1202209	0	1202209	890950	1535085	0
10	1907273	1170231	0	1170231	895696	-1632738	0

The validity of USAID's SO3 portfolio is confirmed, although modifications are recommended. In its current form, the portfolio is clearly consistent with the GON policy reform agenda, yet too little emphasis is placed on increased agricultural production on active farm land. The focus should be broadened as discussed in greater detail below.

5.2 Intermediate Results Needed for Rural Growth

The prerequisite for successful implementation of the development scenario analyzed in this report is permanent resolution of the six major constraints briefly discussed in Section 2.4: (i) tenure, (ii) availability of credit, (iii) availability of extension services, (iv) availability of physical inputs, (v) access to markets, and (vi) availability of labor. All of these constraints must be successfully resolved, otherwise increased agricultural production will have little meaning. One should not promote increases in production while neglecting the provision of increased and more efficient market access. Likewise, provision of fertilizer without credit or extension services would be equally misguided. Intermediate results needed for rural growth in the context of these constraints are briefly discussed below.

5.2.1 Tenure

Perhaps the most urgent intermediate priority is to promote the establishment of Commission Foncières in all 36 arrondissements and 21 communes in order to resolve the land tenure constraint. As well documented by Hopkins (1995), farmers are reluctant to invest in

their land if security of their tenure is in question. The Commission Foncières is a first, perhaps flawed, but most important step in the process of implementing the letter and spirit of the Rural Code. Flaws can be eliminated over time as the presence and functioning of the Commission Foncières take hold. USAID/Niger (and other donors) should prioritize this task through the existing project portfolio or the addition of new activities.

5.2.2 Credit

Credit must be made available to participating farmers as soon as the implementation phase (of the production scenario analyzed) begins. As an intermediary solution, this can be accomplished by strengthening existing credit institutions while prioritizing the creation of new ones.

5.2.3 Extension Services

An intermediate solution to the extension constraint would be to tap into the excellent track record of the World Bank financed PRSAA project. Many of the assumptions made for the analysis with respect to the role of the extension services are patterned after the experiences of this project. Donors and GON should meet with PRSAA staff as soon as possible to determine the kinds of technical extension advice needed, for how many participating farmers, where, and how soon. The next step would be to strengthen the Institut Pratique de Developpement Rural (IPDR) in Kollo to accommodate the training needed for additional extension staff. This support should be maintained throughout the 10-year period to train additional extension staff as increasing numbers of participants enter the system, and existing staff will need retraining.

5.2.4 Inputs

A major constraint to the increased food production scenario analyzed here is the physical availability of farm inputs such as organic and chemical fertilizer and pesticides, as illustrated in Table 5.2. Based on the assumptions made, the projected crop yield increases will not be forthcoming unless these inputs are available. Emphasis (by donors and the GON), therefore, should be placed on making such purchased inputs readily available in local markets by supporting the "commercant" sector—those who engage in transportation and trade of a wide variety of commodities, including farm inputs. To date, purchased inputs have largely been provided and subsidized under the auspices of donor-funded projects and there has been little incentive for entrepreneurs to get involved. If, however, donor subsidies were to be phased out and credit becomes available, thriving markets for purchased farm inputs may develop without much GON or donor interference. One possible action might be to foster a collaboration between fertilizer traders and regions where the increased food production scenario are to be implemented.

As shown in Table 5.2, large quantities of fertilizer and pesticides will be needed over time in order to accommodate the increased food production goals. For example, the equivalent of some 262 10-ton truck loads of urea will need to be transported to different markets in Niger every day of the year ($956,250 \text{ tons}/10\text{-ton loads}/365 \text{ days} = 262 \text{ loads/day}$) in year 10. More than 500 truck loads of phosphates will need to be transported. The even larger quantities of organic fertilizer needed (assumed five tons of manure per participating hectare) can be accomplished, to some extent, by tethering animals overnight (or nights) in the farm fields plus collecting manure and transporting it to the fields wherever and whenever possible.

Table 5.2: Summary, Material Inputs Needed

Year	Organic Fertilizer (Tons)	Rock Phosphates (Tons)	Pesticides & Fungicides ('000 liters)	Urea (Tons)
1	4385315	175413	877	87706
2	8903596	356144	1781	178072
3	13647791	545912	2730	272956
4	18629196	745168	3726	372584
5	23859672	954387	4772	477193
6	29351671	1174067	5870	587033
7	35118270	1404731	7024	702365
8	41173199	1646928	8235	823464
9	47530874	1901235	9506	950617
10	47812500	1912500	9563	956250

5.2.5 Markets

Market access is key to the success of any production effort. Surpluses must be sold, otherwise there would be little incentive to produce them. Three intermediate activities are important: (i) development and maintenance of access/feeder roads between producing areas and local markets, (ii) provision of credit to facilitate transportation of commodities to local markets (charettes), and (iii) arrange regular meetings between producers and buyers for the purpose of negotiating contracts.

5.2.6 Labor

Labor saving techniques are needed for subsistence crops to increase production of cash crops. The peak demands for labor are after a rainfall event for sowing millet and in August and September during weeding. It will be difficult to improve upon the "divot every two steps" method of sowing millet that these sandy soils allow. Reducing the area needed for planting through higher yields from fertilization and improved varieties and increasing the use of animal traction are the most likely labor saving interventions for both sowing and weeding. If time

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permits, a field receives two weedings using conventional methods. Additional weeding may be needed if fertilizers are applied. The additional weeding hopefully will be compensated by higher yields and fewer fields cultivated. Extension of companion techniques (*e.g.*, denser plant spacing, animal traction) is needed to help the farmers reduce labor demands when using fertilizers. Activities that can be carried out during the dry season when labor demand is low should be prioritized in the extension packages (such as investing in soil and water conservation structures and irrigation).

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion 1: Food Production

Niger can substantially increase food production to more than offset increases in population estimated to grow at a rate of 3.3 percent per year. This, however, can only be accomplished if the major constraints discussed in Section 2.3 are resolved. The removal of the land tenure constraint is most important in this regard.

Recommendations with respect to Conclusion 1:

1. USAID should, under the auspices of ASDG II, host a workshop for GON, PRSAA, CGRN and others with a view to determining the most efficient approaches to providing extension services to accommodate large increases in agricultural production as analyzed in this report. The results of the workshop should be action-oriented.
2. The simplest and fastest way to increase agricultural production and rural income is to apply phosphate fertilizer to rainfed cereal crops. The associated benefits are equally substantial but less predictable. Another specific agriculture investment that will greatly increase cash crop production is pesticides for cowpeas (four times increase in yields). Although fertilizer and pesticides have not been popular topics in USAID for the past several years, they are essential to sustainable economic growth in Niger. Any remaining institutional constraints against the increased use of such inputs should be discontinued and thriving markets for fertilizers and pesticides should be encouraged and actively promoted through the private sector.
3. USAID, GON, and other donors should collaborate to: (i) determine the extent and quality of rock phosphate reserves in the Tahoua region; (ii) develop application techniques of the powdered rock material that are more accepted by farmers; and (iii) develop methods to easily distinguish between acid soils that respond to rock phosphate and other soils that will require the more soluble simple or triple superphosphate.
4. USAID should, in collaboration with other donors and the GON, seek to introduce the proposed interventions first in the areas where land pressures and potential land use conflicts are least problematic. This would likely be in the northern areas where the proportion of traditional fallow to cropped land is the highest. Introduction of the interventions in areas where land pressures and potential conflicts are more evident should occur once land tenure problems there have been resolved or are in the process of being successfully resolved.
5. USAID should prioritize and promote the establishment of credit institutions and strengthen existing ones to accommodate large increases in loan applicants.

6.2 Conclusion 2: Linking SO2 and SO3

The two interventions (phosphates and pesticides) discussed above, implemented over a relatively short time with a reasonable transition to a free market, are essential for supplying the increases in production and, hence, necessary "voltage" to run the activities that USAID/Niger has developed in SO2 and SO3. Without a significant increase in production, markets will be slow to develop, demand for credit will be low, improved NRM will be limited to project sites, and agricultural expansion will continue to degrade the land.

Recommendations with respect to Conclusion 2:

1. USAID should, perhaps under the auspices of ASDG II, carry out a study of the market potential (domestic and export) for surplus agricultural commodities produced under scenarios such as analyzed in this report. As a function of the market potential, the study should prepare a list of potential value-added micro enterprises that could be created and determine the financial feasibilities of establishing such enterprises.
2. Based on the results obtained from the study (recommendation 1), USAID should prepare a training program intended to accommodate the creation of additional micro enterprises with a strong focus on marketing, accounting, and management.

6.3 Conclusion 3: Policy Reforms

Resolution of all major constraints discussed in Section 2.3 require policy reforms. The most important policy issue overall, however, is the problem of very rapid population growth (3.3 percent per year). Unless the growth rate is reduced, the most favorable result of the efforts described and analyzed here will be to have gained time before all traditional fallow land has been converted to active farm fields, and crop yield increases on existing farms are dissipated as a result of the population increases. USAID's role in addressing the population issues in SO1 is, therefore, of utmost importance.

Recommendations with respect to Conclusion 3:

1. Demand projections for the millet, cowpeas, and peanuts in this study are based on the 3.3 percent population growth rate. A reduced growth rate will improve the prospects for additional food security and generate higher surpluses for export and higher foreign exchange earnings. USAID should revisit SO1 within the context of the population growth impact on the agricultural production scenarios analyzed in this report to determine if and the extent to which SO1 should to be modified.

6.4 Conclusion 4: Rural Code

Insecurity of tenure and usufruct is more important of an issue than equity when developing the Rural Code. Also, it is an issue more easily resolved. Once rights are assured then free market forces can react with investments and rents. Donor concerns about problems of inequity can be addressed in other programs. Nevertheless, much benefit will result if the GON assures that laws and incentives are developed which encourage sustainable management of the land and that policies are influenced by the economic importance of both livestock and agriculture.

Recommendations with respect to Conclusion 4:

1. USAID should continue to promote and prioritize, through ASDG II and in collaboration with other donors and the GON, the establishment of the Commission Foncières in all arrondissements and communes.
2. Recurrent cost study for the Commission Foncières—how the GON could/should assume the recurrent cost burdens associated with the functioning of the Commission Foncières in each arrondissement. This effort should be undertaken under the auspices of the ASDG II.
3. USAID should collaborate closely with other donors to share the financial burdens of establishing the Commission Foncières. To date, DANIDA has funded two, the Belgian Aid Agency will (probably) fund another five, and USAID's ASDG II will fund another five land tenure offices. The total for which funding will probably be forthcoming, therefore, is approximately 12. This leaves another 45 offices to establish in the rest of the arrondissements and the 21 communes.

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(*Note*: all of the following references were consulted in the preparation of the overall assessment report, they were not all quoted).

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ANNEX A: INDIVIDUALS/INSTITUTIONS CONTACTED

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- Paul WILD, Project Director, Gouré
- Carol WILD, Agro-forestry Advisor, Gouré

AGRHYMET:

- Mr. Mamadou Diouf, Assistant Director

Ambassade de Belgique:

- Mr. Breyne Herman, Chef de Secteur Agricole

APOR:

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- Mr. Bill Stringfellow
- Mr. Alain Grimard
- Ahmed Wacho, Conseiller en informatique

Centrale d'Approvisionnement:

- M. Djibo Kio, Directeur

C/GRN:

- Mr. Ibrahim Idi-Issa, Ingénieur Agro-Aménageur

Code Rural:

- Mr. Yacouba Ide, Secrétaire Permanent
- Mr. Mamadou Hassan, Conseiller Juridique

DANIDA:

- Ms. Sophia Moestrup, Representative

FAO:

- Mr. Zakary

FEWS/USAID:

- Mark McGuire, Regional Field Representative

ICRISAT:

- Dr. William A. Payne, Principal Millet Physiologist
- Dr. Karlheinz Michels, Agroclimatology, Wind Erosion, and Production Systems
- Jojo Baidu-Forson, Principal Scientist
- Andre Bationo, Principal Soil Scientist

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- Dr. T. Olalekan Williams, Livestock Economist
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- Mr. Annou Garba, Dir. Section Cartographie et Classification des Sols
 - LY Abdoulaye Samba, Agroeconomiste
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- Mr. Tom Price, Représentant Adjoint et Conseiller en Sciences humaines
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- Mr. Kent Elbow, Associate Researcher
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- Mr. Bagoudou Maidaji, Ingénieur Agropastoraliste
 - Mr. Djariri Badamassi, DEP
 - Mr. Sidi Aboubacar, ASDG II
 - Mr. Yabilan Maman, Dir. de l'Agriculture, Chef Service de Statistique Agricoles
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Projet PAC (USAID Disaster Preparedness and Mitigation Project):

- Mr. Jack Soldathe, COP
- Mr. Jeff Marzilli, Institutional Specialist
- Mr. Kevin Wiedmann, Operations Specialist
- Dr. Patrick Thomas, Development Anthropologist

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- Mr. Moctar Koni, Formateur
- Abdoulaye Mounkaila, Agent Gestion Terroir Villageois (GTV)
- Salamatou Ibro, Agent Polyvalente, Korïa Haoussa
- Mr. Coulibaly Ibrahim, Directeur du Projet

Société Cotonnière du Niger (SCN):

- Mahamet Kagansy, D.G.

UNDP (PNUD):

- M. Outtara

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- Mr. John Schamper, Supervisory Agricultural Development Officer

US Embassy and AID/Niger:

- Mr. Ravic R. Huso, DCM
- Mr. Jim Anderson, USAID Director
- Mr. David Miller, NRM Advisor
- Mr. Curt Nissly, ADO
- Mr. George Thompson
- Mr. Gary Merritt, Program Office

UTA (Unité Technique d'Appui):

- Mr. Amadou Seydou, Directeur

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ANNEX B: NIGER RURAL SECTOR ASSESSMENT TERMS OF REFERENCE

(Resource economics support capability)

1. Provide an area estimate of various categories of land with farming capability in an effort to assess Niger's basic biophysical potential for increased agricultural production.
2. Provide specific examples of application of natural resource conservation practices that have led to increased agricultural production, and analyze the motivation for the application of such practices by farmers.
3. Conduct generic profitability analysis of the resource conservation practices most likely to be applied.
4. Analyze the potential for generalization of such practices under the present policy environment.
5. Assess the possibility of sustainable increases in agricultural production, based on the potential generalization of improved practices, and their impact on potential economic growth.
6. Identify the policy changes (macro economic and other) necessary to motivate the potential economic growth in Niger's rural sector.
7. Review the work currently being conducted by the GON and the donor agencies regarding the necessary policy changes, and identify essential policy gaps to be filled.
8. Provide recommendations for rural sector growth strategy stressing the necessary linkages between SO2 and SO3.

Annex E
Lending Institutions Cost of Operations

Annex E

Sensitivity and Financial Flows Analysis Rural and/or Microenterprise Lending Activity Niger

The purpose of this annex is to provide the reader with a dynamic tool to analyze the viability, dependency of internal rate of return on a range of exogenous costs and timing of expenditures and payments, of a rural and or microenterprise lending project. While it was originally designed for the NCBA/CLUSA credit project which operates as a broker service, it can be used with only minor modifications for any rural or MSE credit project. This annex includes a set of worksheets and a diskette. The diskette enables the user to change any of the *a priori* conditions. The model requires that the user have access to Lotus 123 version 4 or Microsoft Excel version 4 or higher. The user is invited to play with the model and make changes to improve it or better respond to particular needs. Worksheet B is the input sheet; worksheet A is the data sheet; worksheet C holds hidden formulas for calculations used in the model. Users should make a copy of the model before using it. It is also helpful to change only one variable at a time to isolate the impact of individual change.

The strength of the worksheet is that it models all financial flows over a sufficiently long period of time for an institution to become sustainable (15 years). It calculates institutional sensitivity to performance, growth, expenditures, and inflows. The principal weakness of this annex is that it lacks the accounting perspective. The model would be stronger if the tables were presented in the form of consolidated financial statements, separating income statement and balance sheet information, and providing separate cash flow analysis.

In the model, interest rate or the fee for managing lend funds can be treated either an exogenous or endogenous variable. In practice, interest rates or loan fees should be endogenous, set on an analysis of costs against projected income. Projected income in turn needs to be sufficient to attract investor owners. If the user treats the interest rate or fee as endogenous variable, the **Backsolver** option available in LOTUS-123 can calculate the fee necessary to maintain the Internal Rate of Return set by the user (Use: Range, Analyze, Backsolver, ENTER).

Setting interest rates at a point that enables a credit project to cover all costs but earn no income is imprudent if growth and sustainability are objectives of the project. First, if the expected out come is worse than projected, the lending facility will begin to decapitalize. While this can be expected to occur on occasion, the lending enterprise can not sustain long term losses. Second, if internal rates of return are low, the lending enterprise will not be able to attract investment capital whether from its member borrowers or other commercial sources. Few financial institutions are able to achieve sustainability with access to commercial

sources of funds. In the sensitivity analysis an IRR of 15% was used and judged adequate to attract capital. The user is free to use any IRR she or he chooses.

In this annex two similar terms are used with important differences. The first is "the cost of lending funds". This term refers to all costs of lending, including bad debt losses, but excluding the cost of loan funds. The cost of lending funds is the figure used throughout the model. The second term "cost of funds lent" which includes the cost of loan funds. Assuming that a credit institution in Niger could borrow funds from commercial sources at 10%, the cost of funds lent would be 10% higher than the cost of lending funds.

Sensitivity Tables

Sensitivity analyses were conducted on a number of variables to test the assumptions of the model under changing conditions. The Quote Part Frais de Gestion (QPF) or service fee is the cost of lending funds. If the project were lending borrowed funds such as is the case with CARE, instead of managing a loan portfolio for a bank as in the case of CLUSA, the minimum interest rate would have to be the QPF plus the cost of borrowed funds.

Analyses suggests that the operation of the credit enterprise is most sensitive to repayment rates and average portfolio size per credit agent. *Ceteris paribus* another devaluation which would raise the price of imported goods like vehicles, computers, motorcycles and communications equipment would not directly impact the viability of the enterprise. Repayment rates for activities sensitive to the exchange rate would likely be effected by a devaluation. It should be noted that repayment rates were not significantly reduced by the last devaluation among the USAID funded credit projects.

The model is sensitive to loan size as stated above. Reducing the average loan size by a factor of ten raises the cost lending funds from about 8% to over 17%. This is an important consideration in the design of a program.

The model does not demonstrate whether a finance company, or a brokering or matchmaker service is superior. There is a trade off between cost, sustainability and risk considerations and the ultimate decision is somewhat subjective.

Cost. The establishment of prudent financial practices to secure funds, protect against losses due to theft, mismanagement, or embezzlement, and ensure appropriate regulation and transparency will increase the cost of lending. The lowest cost means of direct lending would be for a credit facility to use a commercial bank as the funds window. In this case, the marginal costs of securing funds could be reduced to a fee to the bank for handling funds, (generally 1%-2.%), plus additional staff costs of hiring a certified accountant, plus the costs of annual audits. The estimated cost of these measures would increase the cost lending funds by 2.5-3%. If a credit facility directly handled both dispersement

and collections, the costs associated with the prudent management would include bonding of employees, the purchase of safes and the hiring of guards to secure funds. In this case, the cost of lending funds would rise almost four percent (4%). Given the present loan sizes, the cost of lending funds to an institution that was involved in lending not brokering loans, would be 11.1%-12.1% once the facility achieved scale.

Sustainability. Institutional sustainability is unlikely to occur without links to commercial sources of funds. Banks are the most ready source of these funds. It does not particularly matter whether the lending facility, manages bank funds lent for a commission, like with the current CLUSA project, or borrows from the bank and on-lends to its clients. All of the commercial banks in Niger stated that they could not manage a micro- or rural lending activity without working through an agent or broker better adapted to managing a small loan portfolio. Changes in BCEAO regulations since October 1993 requires banks to invest more locally. In this environment offering commercial banks a credit brokerage service has a better chance of becoming independent of donor funds than a direct lending facility would. Further a credit facility can only meet real loan demand by accessing formal or informal sector liquidity. All of the donor funds currently available for MSE lending is insufficient to meet demand.

Risk There are two risks to consider in deciding whether a finance company or brokerage is the more appropriate model. The first risk which favors the creation of a finance company, is the risk that banks will not buy into the program and will be unwilling to expand any rural and micro- enterprise lending portfolio in spite of its performance. CLUSA's decision to reorganize as a finance company rather than as a brokerage service is due in part to difficulty encountered in securing adequate funds to meet increased demand. The risk that commercial banks in Niger will not work with rural and micro- enterprise borrowers despite high portfolio performance is less than it was before October 1993, but is still higher than in many countries where successful bank-NGO lending linkages exist.

The second risk is that funds will either be mismanaged, or that commercial sources of funds will fear mismanagement of funds and not be willing to lend to or invest in a finance company once the project no longer receives any donor monitoring or assistance. None of the credit projects in Niger, has a strong board or executive structure, and with the exception of WOCCU none have an established vision for creating one. In the absence of a strong management and board structure, the after-project viability is in question and does not inspire confidence among the banking sector. Mismanagement risk is substantially higher when the lending institution is handling funds.

Operating and Labor Cost Sensitivity

Change in operating costs	no change	20% increase	20% decrease	50% increase
Minimum cost of lending funds	8.6%	9.5%	7.7%	10.9%

Change in Labor Costs	no change	20% increase	20% decrease	100% increase
Minimum cost of lending funds	8.6%	9.0%	8.2%	10.6%

This model is not highly sensitive to increases in operating or labor costs because the assumed loan sizes are very high for most microenterprise credit facilities. This is because the facility is brokering bank loans to cooperative and solidarity groups. Credit agents are assumed to hold an average portfolio of USD \$300,000 (this is consistent with the CLUSA approach). If the size of the cooperative groups was much smaller or if micro-loans were made to individuals, operating and labor costs would be a much higher percentage of total lending costs, and the impact of cost changes would be much greater. We will look at this below.

The model calculates labor costs based on exogenous values for salaries and number of workers for most positions input by the user, and total average portfolio size for each credit agent.

Loan Growth Sensitivity

percentage change in loan demand	no change	20% increase	20% decrease
Minimum cost of lending funds	8.6%	8.1%	9.3%

Sensitivity to growth in total loan volume is fairly high. In this model the user is asked to estimate loan volume for years 1,3, 5, and 10. The model then estimates loan volumes for all years after year one using the least squares.

Sensitivity to Repayment Rates

repayment rate	90%	93%	95%	97%	99%
Minimum cost of lending funds	11.4 %	9.7%	8.6%	7.5%	6.3%

The model is highly sensitive to repayment rates. As the repayment rate falls from 99% to 90% the cost of lending funds rises 81%. This comes as no surprise, but underlines the absolute importance of ensuring high recovery rates. The strong relationship between repayment rates and the cost of lending also underlies the importance of ensuring that fees or interest rates cover a realistic assessment of bad debt loss.

Sensitivity to inflation or devaluation (assuming that unlent funds are invested in foreign currency accounts)

Currency Value	no change	50% devaluation in year three ¹
Minimum cost of lending funds	8.6%	8.9%

Devaluation of a currency or high inflation impacts the operating costs of a credit facility in three ways. The first is to increase the cost of imported goods necessary for the operation of a MSE credit facility. This includes all items not locally manufactured. In Niger, this includes everything but labor. The second affect of high inflation or a devaluation, is the deterioration of the credit facility's capital stock. A fifty percent devaluation of a currency will cut the value of the lending facility's capital stock in half. Inflation will have a corresponding effect. This is the most serious impact of a devaluation or high inflation. The third effect

¹. The impact of devaluation in the model was calculated by doubling the price of all investments in the period when they are replaced. Thereafter, cost of investment goods continues to increase by the value of inflation set in the model. In this model inflation is set at 4%.

of inflation or devaluation is to adversely impact the possibility of borrowers repaying on time.

In this model devaluation was calculated by doubling the cost of all imported goods in years three four and five. For subsequent years the cost of investments is adjusted up by the inflation value (an exogenous variable set at 4%). Because the capital was not devalued, the model operates as if the capital stock of the credit facility holds its value during inflation. The effect on the model is as if capital funds were invested in foreign currencies. If the credit facility cannot obtain such authorization the value of the capital stock would also have to be devalued in the model. In Niger, the credit NGOs do not hold foreign currency accounts. Only banks are authorized to hold them. An institution that directly lends funds held in local currency accounts would lose 50% of its portfolio value with a 50% devaluation. Conversely an institution that was on-lending banks funds, would be much less affected by a 50% devaluation. Banks are much vulnerable to devaluation because of they can hedge risk by holding foreign currencies.

As the cost of investments increase, the impact of increased investment costs on total operating costs of a credit facility is marginal. This is because the marginal contribution of investments to total cost of the credit facility is low given the relatively large loan and portfolio size.. This is good news for the credit facility that either holds its unlent funds in foreign currency accounts, or on-lends bank funds.

Finally the impact of a devaluation on repayment is relatively low for microenterprise loans. Repayment of most microenterprise loans is motivated by the possibility of receiving a new loan Borrowers will repay even if they lose money on one loan cycle in order to retain their right to continued loan access. To a smaller extent, repayment probability is influenced by the use of funds. As the cost of imported goods doubles, the demand for them will fall. If too many loans are used to finance short term commerce, there may be a short term fall in repayment rates. Agriculture, which is generally more risky than small trade, is helped considerably by a devaluation. So would any other export good, if they existed.

Sensitivity to loan size

Loan size, (as measured by average loan portfolio per agent), is a function of lending methodology. The high average loan size in the initial run of the model, implicitly assumes that loans for agricultural and micro-enterprises are wholesaled to cooperative and solidarity groups, who retail these loans to their members. The loan retailers assume the bulk of the costs associated with the assembly and follow-up of micro-loans. If the credit facility were to lend directly to individual microenterprises, or to much smaller groups than does the CLUSA program, then the average portfolio size of each credit agent would fall significantly.

As the average loan size falls, the per loan cost rises. The next table approximates the effect of two lending methodologies. The first assumes a CLUSA approach, where loans are wholesaled to groups, and the average loan size is large enabling credit agents to support a loan portfolio of USD \$300,000. The second scenario assumes that credit agents hold an average portfolio of USD \$30,000.

Average Loan Portfolio	150,000 FCFA (USD \$300,000)	150,00 FCFA (USD \$30,000)
Cost of lending funds (IRR = .15)	8.6%	17.4%

The above table has implications for the design of lending methodologies, and underlies the importance of pricing loans according to the cost of delivering them. It costs over twice as much to deliver a one thousand dollar loan as it does to deliver a ten thousand dollar one. If a credit facility is lending both to individuals, groups and cooperative societies, the cost of those loans should vary.

Conclusion

This model is meant as a management and design aid. It is highly flexible and allows for an almost infinite range of inputs. The user can assume a direct lending program like the CARE/BRK model or a brokerage function like the present CLUSA approach. As should be clear, there are no hard answers. Hopefully the model provides a sharper illustration of the trade-offs involved in different policies and decisions.

The operation of a agricultural and or microenterprise lending program is highly sensitive to recovery rates, portfolio size, and the fee or interest rate set. If sustainability is an objective, loan programs must set fees to cover all costs including a return on investment sufficient to attract commercial sources of funds. Maintaining high recovery rates is very important. Worldwide, successful microenterprise credit programs have had good success using incentives and bonuses to reward excellent recovery rates.

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Annex F
Agricultural Data

Annex F Agricultural Data

Table 1 (Crop 1) National Crop Data, Niger, 1982-94

Millet

a Planted Area (in Hectares, irrigated & non-irrigated)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Compound Growth	Coefficient of Variation	Average
Agadez	180	180		885	1,074	1,105	1,110	1,232		756	625		954	0.15	0.44	
Diffa	53,234	22,315	39,748	53,845	52,456	54,809	56,751	61,133	114,080	87,803	87,257	59,029	68,802	0.02	0.36	
Dosso	592,200	623,940	588,895	639,934	645,997	590,365	631,068	595,687	755,609	790,237	789,697	830,779	818,238	0.03	0.14	
Maradi	632,690	659,430	623,314	643,451	681,127	666,266	812,353	807,866	958,451	907,425	1,071,422	1,047,800	1,098,978	0.05	0.22	
Tahoua	398,300	421,000	415,908	439,145	459,937	453,819	503,495	508,642	701,137	663,548	810,562	927,279	798,182	0.06	0.30	
Tillabery	808,100	827,920	743,081	796,588	758,105	894,380	798,252	783,252	883,794	939,601	845,487	793,540	954,712	0.01	0.09	
Zinder	599,100	580,765	605,769	594,868	660,791	555,979	714,974	807,926	1,193,022	1,000,365	1,357,278	1,012,560	1,180,208	0.06	0.32	
C.U.Niamey											26,458	15,088	13,983		0.30	
Total	3,083,804	3,135,550	3,016,695	3,168,696	3,239,487	3,016,723	3,518,003	3,565,738	4,606,093	4,389,733	4,988,796	4,688,075	4,934,057	0.04	0.20	

Source: Annuaire Des Statistiques De L'Agriculture, 1992, November, 1993, Ministry of Agriculture and Livestock
 Evaluation De La Campagne Agricole 1994 - 1995, November, 1994, Ministry of Agriculture and Livestock
 Resultats Definitifs De La Campagne Agricole D'Hivernege 1994/95 May, 1995, Ministry of Agriculture and Livestock

b Yield (kg per hectare)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Compound Growth	Coefficient of Variation	Average
Agadez	2,000	2,000		1,599	1,586	1,589	1,588	1,583		1,136	1,323		1,577	-0.02	0.15	
Diffa	374	289	20	481	202	32	604	75	345	242	601	270	472	0.02	0.61	
Dosso	428	431	273	447	410	369	465	446	419	399	425	351	414	0.00	0.12	
Maradi	424	405	272	479	442	302	480	367	292	422	374	309	395	-0.01	0.18	
Tahoua	393	423	210	446	484	430	562	467	193	450	362	227	468	0.01	0.28	
Tillabery	394	409	245	443	434	374	508	357	236	455	438	466	447	0.01	0.19	
Zinder	459	436	726	471	397	215	495	340	173	387	237	251	306	-0.03	0.36	
C.U.Niamey											490	569	322		0.22	
Total	419	419	345	458	427	330	501	382	258	418	358	315	400	0.00	0.16	387

c. Production (Metric tons)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Compound Growth	Coefficient of Variation	Average
Agadez	360	360	0	1,415	1,703	1,756	1,783	1,950	0	859	827	0	1,504	0.13	0.75	
Diffa	19,910	6,449	795	25,899	10,596	1,754	34,278	4,585	39,358	21,248	52,441	15,938	32,475	0.04	0.75	
Dosso	253,462	268,918	160,768	286,050	264,859	217,845	293,447	265,876	318,600	315,305	335,621	291,603	338,751	0.02	0.17	
Maradi	268,261	267,069	169,541	308,213	292,218	201,212	389,929	296,487	279,868	382,933	400,712	323,770	434,096	0.04	0.24	
Tahoua	156,532	178,083	67,341	195,859	222,610	195,142	282,964	237,536	135,319	298,596	293,423	210,492	373,549	0.08	0.34	
Tillabery	318,391	338,619	182,050	352,880	329,018	259,698	405,512	279,621	208,575	427,518	370,328	369,760	426,756	0.02	0.23	
Zinder	274,987	253,214	439,788	280,183	262,334	119,535	353,912	274,695	208,393	387,141	321,675	254,153	381,144	0.02	0.27	
C.U.Niamey	0	0	0	0	0	0	0	0	0	0	12,964	8,585	4,503		2.00	
Total	1,291,902	1,312,712	1,040,284	1,450,499	1,383,337	996,943	1,761,805	1,360,550	1,186,113	1,833,600	1,787,992	1,474,331	1,972,777	0.04	0.20	

Table 1 (Crop 2)

Sorghum

a. Planted Area (in Hectares; irrigated & non-irrigated)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Compound Growth	Coefficient of Variation
Agadez				34	36	32	36	35		37	12		32		0.24
Diffa	18,150	2,850	318		9,609	9,103	5,922	11,571	4,119	12,475	7,295	2,041	1,049	-0.21	0.73
Dosso	59,800	68,140	62,799	58,194	97,753	109,009	86,909	72,544	155,833	51,831	38,574	34,311	62,498	0.00	0.43
Maradi	408,840	409,225	403,723	419,582	360,461	430,284	528,801	609,040	745,790	819,645	819,644	842,254	759,034	0.05	0.31
Tahoua	258,400	243,500	224,286	236,730	207,850	205,850	200,902	196,089	249,079	280,590	315,238	346,596	321,527	0.02	0.19
Tillabery	70,200	73,830	76,417	95,663	78,538	68,255	83,404	114,921	165,717	90,732	98,645	119,160	93,549	0.02	0.27
Zinder	319,190	311,045	330,906	331,023	341,952	519,773	563,565	611,421	918,075	919,582	1,246,159	880,547	777,905	0.08	0.47
C.U.Niamey				1,000			282	1,789			4,951	3,919	317		0.88
Total	1,134,580	1,106,590	1,098,449	1,142,226	1,094,199	1,342,306	1,469,821	1,617,410	2,238,413	2,174,892	2,530,518	2,228,828	2,015,911	0.05	0.31

b. Yield (kg per hectare)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Compound Growth	Coefficient of Variation
Agadez				971	972	1,093	1,055	1,100		649	917		1,178		0.10
Diffa	701	447	9		126	1	400	505	63	193	168	55	263	-0.08	0.87
Dosso	407	344	344	441	526	447	404	454	130	451	373	354	375	-0.01	0.23
Maradi	218	209	151	198	221	217	329	252	120	178	83	75	180	-0.02	0.36
Tahoua	423	508	331	371	473	355	557	364	197	437	284	121	221	-0.05	0.34
Tillabery	387	433	357	341	406	381	328	338	84	344	383	420	374	0.00	0.24
Zinder	301	290	158	302	267	240	371	191	118	153	138	139	167	-0.05	0.36
C.U.Niamey				200			199	293			271	284	317		0.17
Total	316	321	215	288	323	273	381	260	126	214	152	131	197	-0.04	0.32

c. Production (Metric tons)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Compound Growth	Coefficient of Variation
Agadez	0	0	0	33	35	35	38	39	0	31	11	0	38		0.86
Diffa	12,723	1,274	3	0	1,211	9	2,369	5,843	259	2,408	1,228	112	276	-0.27	1.61
Dosso	24,339	22,752	21,603	25,664	51,418	48,727	35,111	32,935	20,232	23,378	14,388	12,148	23,437	0.00	0.41
Maradi	89,127	85,528	60,962	82,238	79,662	93,372	173,976	153,478	89,495	145,897	68,030	63,169	136,626	0.04	0.35
Tahoua	109,303	123,698	74,239	87,827	98,313	73,077	111,902	71,376	49,069	122,616	89,528	41,938	71,057	-0.04	0.29
Tillabery	27,167	31,968	27,281	32,621	31,074	26,005	27,357	38,843	13,920	31,212	37,781	50,047	34,987	0.02	0.28
Zinder	96,076	90,203	52,283	99,969	91,301	124,746	209,083	116,781	108,333	140,696	171,970	122,396	129,910	0.03	0.32
C.U.Niamey	0	0	0	200	0	0	56	524	0	0	1,342	1,113	100		1.71
Total	358,738	355,424	236,371	328,551	353,014	365,970	559,891	419,820	281,308	466,237	384,275	290,922	396,432	0.01	0.22

Table 1 (Crop 3)

Cowpeas

a Planted Area (in Hectares, irrigated & non-irrigated)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Compound Growth	Coefficient of Variation
Agadez					130	79	102	25						-0.01	0.36
Diffa	21,456	23,005	21,835	26,344	27,440	25,842	22,618	15,211	19,877	36,870	10,837	4,252	19,704	0.03	0.26
Dosso	258,060	379,810	398,573	465,803	446,326	341,188	397,396	377,283	376,326	488,232	737,419	570,343	378,514	0.05	0.38
Maradi	340,462	362,485	358,530	368,186	377,109	476,552	536,007	633,357	713,298	648,380	955,852	1,015,333	622,860	0.08	0.44
Tahoua	281,800	285,100	257,225	265,128	203,099	221,202	224,459	331,152	245,791	425,385	604,635	587,993	624,375	0.00	0.29
Tillabery	291,100	286,945	225,714	158,792	215,233	311,938	285,301	253,318	270,567	473,598	405,102	203,787	277,267	0.15	0.58
Zinder	197,990	251,990	252,861	281,216	320,412	414,008	457,512	589,492	859,469	565,575	1,157,979	899,557	1,035,870		1.18
C.U.Niamey				1,000			1,799				4,449	26,785	3,940	7,820	
Total	1,370,868	1,549,135	1,512,738	1,566,269	1,589,749	1,790,809	1,925,194	2,199,838	2,485,328	2,642,489	3,898,409	3,285,205	2,968,410	0.07	0.34

b Yield (kg per hectare)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Compound Growth	Coefficient of Variation
Agadez					908	886	951	950						0.04	0.64
Diffa	294	174	35	210	421	72	623	64	538	540	282	169	483	0.02	0.79
Dosso	81	91	111	38	223	40	51	367	81	219	125	32	99	-0.09	0.68
Maradi	272	202	171	18	103	118	107	77	81	90	37	17	92	-0.03	0.54
Tahoua	210	200	123	40	126	43	141	133	16	183	127	29	152	-0.02	0.44
Tillabery	102	92	68	79	160	130	205	111	222	172	248	75	83	-0.04	0.35
Zinder	252	215	122	235	233	213	261	99	127	167	78	110	155	0.00	0.53
C.U.Niamey				125			135			210		157	5		
Total	185	149	86	97	192	113	152	149	87	158	103	51	129	-0.03	0.32

c Production (Metric tons)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Compound Growth	Coefficient of Variation
Agadez	0	0	0	0	118	70	97	24	0	0	0	0	0	0.00	1.71
Diffa	6,315	3,996	770	5,525	11,563	1,868	14,100	972	10,700	19,897	3,054	719	9,517	0.03	0.84
Dosso	20,831	34,403	44,214	17,890	99,487	13,599	20,129	138,618	28,944	106,935	91,927	18,251	37,473	0.05	0.78
Maradi	92,606	61,225	6,772	39,004	59,999	57,417	48,575	57,464	58,499	35,404	35,359	17,261	57,303	-0.04	0.44
Tahoua	54,886	52,910	31,632	10,694	25,528	9,422	31,611	44,116	3,970	77,932	76,961	17,052	94,905	0.05	0.68
Tillabery	29,865	24,585	15,374	12,670	34,450	32,028	58,765	28,108	6,065	82,579	107,288	15,284	23,013	-0.02	0.79
Zinder	49,896	54,280	30,822	66,009	74,626	88,029	119,428	58,487	108,779	94,310	87,685	98,951	160,560	0.10	0.39
C.U.Niamey	0	0	0	125	0	0	243	0	0	934	0	619	39	0.00	1.87
Total	254,199	231,399	129,664	151,917	305,771	202,433	292,948	327,789	216,957	417,991	402,274	168,136	382,810	0.03	0.34

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Table 1 (Crop 4)

Groundnuts

a. Planted Area (in Hectares; irrigated & non-irrigated)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Compound Growth	Coefficient of Variation
Agadez							41					0	0	0.00	1.41
Diffa	327					13	14					0	0	#NUM!	1.81
Dosso	16,086	11,785	12,430	6,334	23,553	29,410	12,228	10,394	18,599	24,398	14,798	10,126	23,034	0.03	0.40
Maradi	84,178	77,345	65,107	8,716	30,312	91,649	41,329	14,686	19,675	43,663	67,827	58,161	47,089	-0.05	0.52
Tahoua	2,000	960	0	0	151	703	4,323	0	1,567	2,078	12,217	13,909	2,336	0.01	1.43
Tillabery	6,150	3,920	1,507	0	450	2,174	5,139	8,639	1,006	3,338	971	4,665	2,550	-0.07	0.78
Zinder	81,630	73,150	63,814	14,710	63,757	34,295	15,223	23,779	21,849	30,058	79,367	21,538	75,989	-0.01	0.58
C.U.Niamey														0.00	#DIV/0!
Total	190,371	167,160	142,658	29,760	118,223	158,244	78,297	57,498	62,696	103,533	175,180	108,399	150,998	-0.02	0.41

b. Yield (kg per hectare)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Compound Growth	Coefficient of Variation
Agadez							1,300					0	0	0.00	1.41
Diffa	412						285					0	0	#NUM!	1.03
Dosso	599	621	258	417	479	499	463	476	273	501	614	664	657	0.01	0.25
Maradi	418	384	221	109	276	211	41	515	319	373	395	173	430	0.00	0.45
Tahoua	272	250	0	0	0	401	524	0	398	392	177	91	499	0.05	0.83
Tillabery	473	370	300	0	600	570	498	385	481	621	0	92	488	0.00	0.58
Zinder	478	496	238	332	543	145	28	353	231	278	240	324	390	-0.02	0.44
C.U.Niamey														0.00	
Total	459	449	175	442	428	210	193	463	315	336	316	235	447	0.00	0.31

c. Production (Metric tons)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Compound Growth	Coefficient of Variation
Agadez	0	0	0	0	0	0	533	0	0	0	0	0	0	0.00	3.48
Diffa	0	0	0	0	0	0	4	0	0	0	0	0	0	0.00	3.48
Dosso	9,640	7,320	7,320	7,320	7,320	7,320	7,320	7,320	7,320	7,320	7,320	6,720	15,132	0.04	0.27
Maradi	35,218	29,685	12,053	951	8,354	19,348	1,701	7,565	8,268	16,267	26,810	10,065	20,240	-0.05	0.69
Tahoua	544	240	0	0	0	282	2,562	0	632	814	2,161	1,272	1,165	0.07	1.09
Tillabery	2,910	1,450	452	0	270	1,240	2,557	3,324	484	2,073	0	430	1,245	-0.07	0.88
Zinder	39,053	36,300	5,116	4,886	34,633	4,986	433	8,400	5,058	8,284	19,042	6,974	29,651	-0.02	0.87
C.U.Niamey														0.00	0.00
Total	87,365	74,975	24,941	13,157	50,577	33,176	15,110	26,609	19,762	34,758	55,333	25,461	67,433	-0.02	0.57

Table 2

National Crop Data, Niger, 1980-92 (Rainfed and Irrigated)															
Year	Millet		Sorghum			Cowpeas			Groundnuts			Rice			
	Area (ha)	Yield (kg)	Production (tons)												
1980	3,072,420	444	1,362,785	788,070	479	367,995	1,105,100	243	268,735	189,600	685	126,125	20,060	1,490	28,892
1981	3,088,248	432	1,313,842	982,320	327	321,650	1,197,832	235	281,617	208,700	478	101,700	20,870	1,884	38,945
1982	3,083,804	419	1,292,548	1,134,580	316	358,731	1,427,948	197	281,744	180,385	460	87,484	20,234	2,037	41,220
1983	3,135,550	414	1,298,345	1,108,590	321	3,554,155	1,808,525	169	271,349	167,580	447	74,970	22,160	2,022	44,798
1984	3,029,730	254	771,040	1,098,449	215	238,498	1,512,739	129	194,843	142,600	216	30,800	19,284	2,518	48,548
1985	3,168,705	458	1,449,893	1,142,228	288	329,220	1,566,199	74	115,332	29,700	283	8,400	20,585	2,754	56,694
1986	3,239,487	427	1,383,395	1,109,110	325	360,184	1,590,541	184	292,935	118,200	461	54,500	27,645	2,730	75,482
1987	3,016,723	330	996,930	1,342,306	273	365,847	1,790,809	117	208,768	158,244	254	40,427	24,802	2,477	61,428
1988	3,525,947	501	1,768,318	1,489,821	381	580,189	1,925,194	157	301,549	78,256	185	12,921	17,555	3,011	52,884
1989	3,508,632	380	1,332,729	1,587,410	266	421,878	2,209,048	145	320,496	59,518	429	25,522	22,535	3,415	76,953
1990	4,606,002	364	1,676,532	2,336,897	120	281,278	2,662,503	84	223,650	62,768	279	17,533	10,228	962	9,838
1991	4,385,952	421	1,846,020	2,070,819	226	488,971	2,866,153	133	318,207	103,533	383	39,664	5,134	1,147	5,889
1992	4,988,796	358	1,787,054	2,530,518	152	387,762	3,898,409	103	402,319	175,180	326	57,100	14,523	1,417	20,576
1993	3,860,299	369	1,425,819	2,238,829	129	288,691	3,357,718	48	162,823	84,702	238	20,152	8,060	1,489	9,025
1994	4,934,657	400	1,971,960	2,015,594	197	396,578	2,966,418	129	382,578	151,036	446	67,433	7,828	na	550
Growth Rate	0.03	-0.01	0.03	0.07	-0.06	0.01	0.07	-0.04	0.03	-0.02	-0.03	-0.04	-0.07	0.00	-0.25
Coef of Variat	0.19	0.14	0.22	0.36	0.35	1.38	0.39	0.38	0.28	0.42	0.35	0.66	0.39	0.44	0.63
Average	3,642,863	398	1,445,001	1,528,903	288	579,974	2,112,329	143	268,463	127,999	369	50,982	17,287	1,957	38,180

Source: Annuaire Des Statistiques De L'Agriculture, 1992, Ministry of Agriculture and Livestock, p.82.
 Resultats Definitifs De La Campagne Agricole D'Hivernage 1994/95 May, 1995, Ministry of Agriculture and Livestock

Table 3 (Crop 1)

Millet (Rainfed and Irrigated)	Crop Data, Southern (S) & Northern (N) Areas, Niger, 1982-94													Compound Growth	Coefficient of Variation	Average
	Magaria (S) & Tanout (N) Arrondissements, Department of Zinder						Madarounfa (S) & Dakoro (N) Arrondissements, Department of Maradi									
a. Planted Area (In Hectares; irrigated & non-irrigated)	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994			
Magaria	175,000	157,260	162,723	169,248	162,184	122,234	192,239	152,529	144,279	159,215	146,557	302,778	221,487	0.02	0.25	
Tanout	120,870	112,785	118,897	96,841	169,515	188,527	188,527	214,504	235,334	252,425	587,409	148,130	278,111	0.07	0.59	
Madarounfa	96,000	99,790	96,882	97,899	92,597	91,892	95,607	90,428	69,748	70,557	199,943	90,137	108,335	0.01	0.31	
Dakoro	131,670	139,960	118,241	120,551	144,848	141,108	182,266	199,317	315,741	271,827	569,855	231,406	284,788	0.07	0.55	
b. Yield (kg per hectare)																
Magaria	491	553	432	437	399	206	485	335	211	633	97	211	350	-0.03	0.40	372
Tanout	330	272	18	428	363	215	485	411	404	369	58	231	370	0.01	0.45	304
Madarounfa	473	481	364	566	563	350	527	520	458	667	353	447	534	0.01	0.18	485
Dakoro	322	274	75	435	353	306	461	217	216	217	163	322	288	-0.01	0.36	281
c. Production (Metric tons)																
Magaria	86,061	87,130	70,300	74,115	64,711	25,180	93,236	51,097	30,443	100,837	142,813	63,740	77,464	-0.01	0.39	
Tanout	39,905	30,680	2,140	41,450	61,534	40,533	91,438	88,181	24,475	93,203	33,914	34,232	102,899	0.08	0.58	
Madarounfa	45,408	48,000	35,360	55,411	52,132	32,162	50,480	47,023	31,945	47,075	70,664	40,271	57,869	0.02	0.22	
Dakoro	42,398	38,350	8,870	52,440	51,081	43,179	84,025	43,252	68,200	58,986	92,853	74,430	81,555	0.06	0.39	

Table 3 (Crop 2)

Sorghum	Crop Data, Southern (S) & Northern (N) Areas, Niger, 1982-94													Compound Growth	Coefficient of Variation	Average
	Magaria (S) & Tanout (N) Arrondissements, Department of Zinder						Madarounfa (S) & Dakoro (N) Arrondissements, Department of Maradi									
a. Planted Area (in Hectares; irrigated & non-irrigated)	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994			
Magaria	115,000	98,915	95,902	96,776	110,360	117,898	114,215	142,493	48,488	345,361	515,746	285,529	172,003	0.03	0.67	
Tanout	54,120	55,720	59,060	55,061	39,013	112,253	142,671	137,579	71,610	174,937	175,416	148,130	100,487	0.05	0.46	
Madarounfa	70,000	69,385	70,500	76,370	62,835	48,276	53,781	67,712	39,610	35,533	35,533	44,410	51,235	-0.03	0.25	
Dakoro	84,640	80,955	71,959	69,752	48,348	57,754	72,193	69,512	193,155	135,611	135,610	151,007	161,185	0.06	0.44	
b. Yield (kg per hectare)																
Magaria	234	281	224	300	287	234	301	266	127	144	116	120	218	-0.01	0.31	219
Tanout	400	222	30	324	242	222	510	190	85	183	45	82	258	-0.04	0.64	213
Madarounfa	239	265	220	252	307	208	317	300	168	581	224	172	348	0.03	0.37	277
Dakoro	154	146	44	175	156	262	291	140	85	214	93	77	217	0.03	0.45	158
c. Production (Metric tons)																
Magaria	26,930	27,795	21,577	29,033	31,673	27,612	34,379	37,903	18,858	49,887	59,826	34,395	37,481	0.03	0.32	
Tanout	21,650	12,425	1,772	17,875	9,441	24,920	72,762	26,140	11,155	32,013	7,894	11,571	25,882	0.01	0.81	
Madarounfa	16,730	18,385	15,510	19,245	19,390	10,041	17,049	20,314	6,643	20,679	7,973	7,654	12,710	-0.02	0.33	
Dakoro	13,034	11,820	3,166	12,205	7,542	15,132	21,008	9,732	16,460	39,070	12,578	11,639	35,038	0.09	0.62	

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Table 3 (Crop 3)

Cowpeas														Compound Growth	Coefficient of Variation	
a. Planted Area (in Hectares; irrigated & non-irrigated)																
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994			
Magaria	60,000	84,915	101,961	106,322	100,833	102,726	123,042	149,567	166,193	172,255	525,189	327,917	234,271	0.12	0.71	
Tanout	26,020	43,855	11,636	14,100	35,759	33,608	36,459	69,401	93,331	28,752	100,726	79,217	151,633	0.16	0.70	
Madarounfa	46,600	49,770	56,936	60,435	57,757	58,600	69,157	63,136	38,104	54,203	58,915	53,423	48,858	0.00	0.14	
Dakoro	88,736	87,160	60,362	63,317	57,013	69,035	77,980	104,314	156,793	186,268	208,142	228,973	218,643	0.08	0.51	
b. Yield (kg per hectare)																
Magaria	347	248	150	270	297	228	258	126	180	184	38	97	181	-0.05	0.42	199
Tanout	159	154	7	160	75	110	276	120	14	112	8	41	110	-0.03	0.71	104
Madarounfa	278	291	219	25	116	160	166	127	137	58	82	6	160	-0.04	0.60	140
Dakoro	207	115	93	15	103	97	78	77	160	75	33	6	30	-0.15	0.85	84
c. Production (Metric tons)																
Magaria	20,820	21,059	15,294	28,707	29,947	23,216	31,745	18,845	29,915	28,239	19,957	31,962	42,470	0.06	0.27	
Tanout	4,137	6,754	81	2,256	2,882	3,697	10,063	8,328	1,307	3,220	806	99,224	16,625	0.12	2.08	
Madarounfa	12,955	14,483	12,489	1,511	6,700	9,376	11,480	80,818	5,220	3,144	4,802	343	7,806	-0.04	1.52	
Dakoro	18,368	10,023	5,614	950	5,872	6,696	6,082	8,032	25,087	13,970	6,765	1,353	6,546	-0.08	0.73	

Table 3 (Crop 4)

Groundnuts														Compound Growth (%/10)	Coefficient of Variation	
a. Planted Area (in Hectares; irrigated & non-irrigated)																
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994			
Magaria	30,000	24,770	25,969	4,121	33,231	15,611	6,665	7,685	6,891	8,132	36,197	7,100	21,625	-0.03	0.63	
Tanout	0	10	0	0	0	0	0	0	0	0	0	0	0	0.00	3.48	
Madarounfa	27,840	30,510	31,649	4,421	16,616	32,919	27,307	5,918	4,866	11,201	17,942	22,582	23,360	-0.01	0.51	
Dakoro	5,442	3,035	0	0	100	0	146	1,679	0	0	885	974	0	#NUM!	1.66	
b. Yield (kg per hectare)																
Magaria	447	525	240	338	507	180	43	362	254	281	112	440	469	0.00	0.46	323
Tanout	0	500	0	0	0	0	0	0	0	0	0	0	0	0.00	3.48	38
Madarounfa	432	432	175	120	255	278	12	600	448	376	343	49	640	0.03	0.59	320
Dakoro	388	241	0	0	220	0	41	80	0	0	0	450	0	#NUM!	1.42	109
c. Production (Metric tons)																
Magaria	13,400	13,400	6,233	1,393	16,848	2,810	287	2,782	1,496	2,283	4,054	3,127	10,136	-0.02	0.88	
Tanout	0	5	0	0	0	0	0	0	0	0	0	0	0	0.00	3.48	
Madarounfa	12,027	13,160	5,539	531	4,237	9,151	328	3,551	2,180	4,216	6,152	1,111	14,958	0.02	0.80	
Dakoro	2,111	730	0	0	22	0	6	134	0	0	0	438	0	#NUM!	2.17	

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Table 4 Area Under Cultivations by Department, 1982-94

a. Rainy Season

	Agadez	Diffa	Dosso	Maradi	Tahoua	Tillabery	Zinder	Total
1982	300	96,217	939,300	1,466,150	921,955	1,194,384	1,198,870	5,817,176
1983	330	50,570	1,095,035	1,508,485	932,135	1,192,325	1,217,440	5,996,320
1984	225	62,950	1,066,817	1,460,177	898,355	1,066,514	1,254,330	5,809,368
1985	1,664	80,859	1,174,545	1,440,535	942,572	1,072,058	1,222,952	5,935,185
1986	1,666	89,565	1,226,968	1,429,801	885,948	1,073,528	1,386,912	6,094,406
1987	2,066	89,767	1,093,883	1,664,751	881,574	1,085,994	1,524,055	6,342,000
1988	2,213	85,305	1,138,596	1,918,717	933,185	1,177,043	1,751,274	7,003,313
1989	2,037	88,514	1,060,397	2,035,309	1,038,912	1,166,503	2,041,749	7,433,411
1990	1,362	134,148	817,000	1,079,503	745,000	1,049,511	1,418,000	5,241,514
1991	1,806	137,148	1,455,847	2,442,213	1,370,276	1,532,759	2,515,578	9,451,617
1992	1,276	105,389	1,611,122	2,914,545	1,744,483	1,356,034	3,841,605	11,571,414
Growth Rate	-0.04	0.04	0.05	0.11	0.09	0.03	0.18	0.10
Coef of Varia	0.52	0.27	0.18	0.29	0.26	0.12	0.43	0.26

b. Dry Season

	Agadez	Diffa	Dosso	Maradi	Tahoua	Tillabery	Zinder	Total
1984	1,620	3,998	10,899	2,711	20,836	11,226	11,513	62,803
1985	1,928	3,176	9,220	4,612	18,937	10,584	5,953	54,410
1986	2,460	6,779	6,794	2,117	15,582	10,301	4,224	48,257
1987	2,740	5,427	4,059	2,097	15,869	5,892	5,822	41,906
1988	4,102	7,649	3,213	4,651	21,999	6,177	3,684	51,475
1989	3,793	9,898	2,801	4,206	35,914	3,277	3,917	63,806
1990	3,773	5,279	1,259	2,203	23,769	7,327	4,828	48,438
1991	3,822	6,775	1,075	2,487	19,675	5,212	5,923	44,969
Growth Rate	0.13	0.08	-0.28	-0.01	-0.01	-0.10	-0.09	-0.05
Coef of Varia	0.30	0.33	0.70	0.34	0.28	0.36	0.41	0.14

Source: Annuaire Des Statistiques De L'Agriculture, 1992, Ministry of Agriculture and Livestock, p.82.

Table 5 Crop Data for Onions by Department^{1/}

	a. Planted Area (in Hectares; irrigated & non-irrigated)						Compound Coefficient	
	1986	1987	1988	1989	1990	1991	Growth	of Variation
Agadez	247	182	319	424	228	141	-0.11	0.36
Diffa	ND	38	82	75	93	98	0.27	0.54
Dosso	364	224	154	433	294	91	-0.24	0.45
Maradi	79	49	105	81	107	79	0.00	0.23
Tahoua	1,519	1,800	2,231	3,861	5,006	4,326	0.23	0.42
Tillabery	532	609	289	271	225	203	-0.18	0.44
Zinder	110	121	296	262	462	371	0.28	0.47
Total	2,851	3,103	3,476	5,407	6,415	5,309	0.13	0.30

	b. Yield (kg per hectare)						Compound Coefficient	
	1986	1987	1988	1989	1990	1991	Growth	of Variation
Agadez	22,514	24,560	24,163	24,625	24,886	2,640	-0.35	0.39
Diffa	ND	8,000	21,012	24,964	24,828	25,000	0.33	0.57
Dosso	9,212	10,325	6,312	14,466	39,088	31,576	0.28	0.67
Maradi	21,696	21,755	14,657	15,250	26,682	23,038	0.01	0.21
Tahoua	23,244	29,500	32,389	24,015	34,998	33,778	0.08	0.15
Tillabery	11,808	10,803	47,484	22,920	26,649	19,695	0.11	0.53
Zinder	23,660	25,223	22,375	27,100	35,636	20,999	-0.02	0.19
Total	19,229	23,604	30,077	23,275	34,293	31,792	0.11	0.20

	c. Production (Metric tons)						Compound Coefficient	
	1986	1987	1988	1989	1990	1991	Growth	of Variation
Agadez	5,561	4,470	7,708	10,441	5,674	3,727	-0.08	0.38
Diffa	ND	304	1,723	1,872	2,309	2,450	0.68	0.66
Dosso	3,353	2,313	972	6,284	11,492	2,873	-0.03	0.77
Maradi	1,714	1,066	1,539	1,235	2,855	1,820	0.01	0.34
Tahoua	35,308	55,460	72,260	92,722	175,200	146,124	0.33	0.51
Tillabery	6,282	6,579	13,723	6,211	5,996	3,998	-0.09	0.43
Zinder	2,603	3,052	6,623	7,100	16,464	7,791	0.25	0.63
Total	54,821	73,244	104,548	125,845	219,990	168,783	0.25	0.45

^{1/} Onions are grown only in the dry season.

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Table 6

Formal Sector Fertilizer Imports Through Donations and Purchases (Tons)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1/1/95- 7/09/95	Growth Rate	Coef of Variation
a Fertilizer Donations																	
Urea	NA	NA															
Canada	NA	NA	4,065	2,451	2,983			2,984					498.00	989.00	3,464		
Japan	NA	NA								458							
Netherlands	NA	NA				3,978			2,000								
FAO	NA	NA						298									
Subtotal	NA	NA	4,065	2,451	2,983	3,978	0	3,282	2,000	458	0	0	498	989	3,464	-0.01	0.89
NPK 15-15-15																	
Japan	NA	NA		1,257	1,330		789	1,291	1,495	1,526	1,353	499	493	674	640		
Netherlands	NA	NA				2,504	2,890										
BID	NA	NA				440											
FAO	NA	NA	254	241													
Subtotal			254	1,498	1,330	2,944	3,779	1,291	1,495	1,526	1,353	499	493	674	640	0.08	
S T Phosphate¹																	
USAID	NA	NA				2,000											
FAO	NA	NA			499	498											
Subtotal			0	0	499	2,498	0	0	0	0	0	0	0	0	0		
S S Phosphate²																	
USAID	NA	NA				350											
BID	NA	NA				50											
Subtotal			0	0	0	400	0	0	0	0	0	0	0	0	0		
Ammonium S																	
BID	NA	NA				90											
Potassium																	
BID	NA	NA				20											
b Fertilizer Purchases																	
Urea	2,220	3,640	2,245	2,451	3,058	4,145				159.00	272.00		69	22		-0.30	0.82
NPK 15-15-1	1,023	1,330	1,377	2,218	2,520	2,605				20.00	788.00	1872.00	717	1,241		0.01	0.54
NPK 28-12-0			66														
NPK 28-20-0		95															
S T Phosphate ¹					499	2,498							37.00			-0.31	1.06
S S Phospha	3,440	794			50	350		788.00	888.00	420.00	153.00	257.00				-0.21	1.38
Tahoua Phos	387	350	211	1,770													
Ammonium Sulphate					90												
Potassium								1.00	53.00	15.00							
D A. P.									1.00	30.00							

1/ Super Triple Phosphate

2/ Super Simple Phosphate

2/2

Table 7

Formal Sector Fertilizer Sales and Warehouse Sales Prices (Tons)

a GON Sale:	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1/1/95- 7/09/95	Growth Rate	Coef. of Variation
Urea																	
15-15-15	4,093	3,093	2,668	2,726	3,835	2,966	2071.00	1455.00	1640.00	2737.00	870.00	86.00	541	887		-0.11	0.56
24-23-12-6-2	1,609	1,772	1,404	2,136	2,503	2,237	1754.00	1157.00	1348.00	2701.00	3235.00	1932.00	1,382	1,696		0.00	0.30
S T Phospho	96	35	7	1	7	1										-0.60	34.01
S S Phospho	353	681	299	47	530	765	256.00	396.00	236.00	188.00	289.00	211.00	34	66		-0.12	213.95
Tahoua Phos	4,786	6,999	3,205	3,823	1,584	430	581.00	647.00	622.00	203.00	481.00	114.00	279	15		-0.38	2081.79
Ammonium ξ	92	666	800	730	487	11	19.00	268.00	30.00	63.00	9.00	11.00		22		-0.10	297.21
Calcium Nitre	37	5	2	56	61	2	13.00	4.00		1.00						#NUM!	23.11
Potassium	10	19	66	58	50	17	34.00	14.00								0.05	24.98
DAP					20	4	2.00	1.00		14.00	2.00	41.00	8	1		-0.28	12.50
									1.00	9.00	16.00	2.00		2		0.05	5.78
b NOG prices/kg																	
Urea																	
15-15-15	35	50	50	50	60	65	65.00	65.00	65.00	65.00	40.00	40.00	60	60	70	0.05	11
24-23-12-6-2	30	45	45	45	60	65	65.00	65.00	65.00	65.00	45.00	45.00	65	65	68	0.06	12
S T Phospho	30	45	45	65	60	65	65.00	65.00	65.00	65.00	45.00	45.00				0.04	12
S S Phospho	30	45	45	45	70	75	75.00	75.00	75.00	45.00	45.00	45.00	75	75	75	0.07	16
Tahoua Phos	20	35	35	40	45	50	50.00	50.00	50.00	50.00	30.00	30.00	50	50	55	0.07	10
Ammonium ξ	28	28	28	35	35	35	35.00	35.00	35.00	35.00	25.00	25.00	25	25	25	-0.01	5
Calcium Nitre	20	35	35	35	60	60	60.00	60.00	60.00	60.00	40.00	40.00				0.07	14
Potassium	20	35	25	35	45	50	50.00	50.00	50.00	50.00	30.00	30.00	50			1.50	11
DAP						65	65.00	65.00	65.00	65.00	50.00	50.00	50			-0.04	7
									65.00	65.00	65.00	65.00	65			0.00	0

1/ Super Triple Phosphate

2/ Super Simple Phosphate

Table 8

Fertilizer Relative Agronomic Efficiency Index
(Efficiency as a Percent of Single SuperPhosphate)

	1985	1986	1987
	Initial Benefit	Residual Benefit	Residual Benefit

Tahoua Phosphate Rock	82.0b	75.8b	91.4a
Tahoua PAPR\1	46.3c	32.7c	12.8c
Parc W Phosphate Rock	42.5c	52.6c	49.3b
Parc W PAPR\1	68.5b	44.5c	58.0b
Triple Super Phosphate	86.7ab	83.7ab	96.2a
Single Super Phosphate	100.0a	100.0a	100.0a

PAPR is partially acidulated phosphate rock

Source: A. Bationo, S. H. Chien, J. Henao, C. B. Christianson, and A. U. Mokuwye, Agronomic Evaluation of Two Unacidulated and Partially Acidulated Phosphate Rocks Indigenous to Niger, Soil Science Soc. Am. J. 54: 1772-77, Table 4, p. 1775.

Table 9

Phosphate Concentration and Solubility

Total P	Solubility	
	Water	Citrate

cpannexf.xls

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Table 8

	Fertilizer Relative Agronomic Efficiency Index (Efficiency as a Percent of Single SuperPhosphate)		
	1985 Initial Benefit	1986 Residual Benefit	1987 Residual Benefit
Tahoua Phosphate Rock	82.0b	75.8b	91.4a
Tahoua PAPR1	46.3c	32.7c	12.8c
Parc W Phosphate Rock	42.5c	52.6c	49.3b
Parc W PAPR1	68.5b	44.5c	58.0b
Triple Super Phosphate	86.7ab	83.7ab	96.2a
Single Super Phosphate	100.0a	100.0a	100.0a

PAPR is partially acidulated phosphate rock

Source: A. Batlono, s. H. Chien, J. Henao, C. B. Christanson, and A. U. Mokwunye, Agronomic Evaluation of Two Unacidulated and Partially Acidulated Phosphate Rocks Indigenous to Niger, Soil Sci. Soc. Am. J. 54: 1772-77, Table 4, p. 1775

Table 9

Phosphate Concentration and Solubility

Total P	Solubility	
	Water	Citrate

cpannexf.xls

Annex F2

Fertilizer Yield Study (kg application of element N-P-K per ha) (Eid, 1989)
and Yields of millet grain in kg/ha

Village	Rainfall	0-0-0	0-20-0	46-20-0	46-19'-0
Aguie	278	391	467	644	501
Aguie	337	499	625	883	743
Aguie	373	415	658	1088	560
Bande	301	136	241	428	260
Bande	352	290	524	794	615
Bande	545	71	105	101	95
Bande	ND, 1981	143	351	498	280
Bande	ND, 1982	329	504	1046	778
Dadinkowa	ND, 1981	169	367	586	627
Dadinkowa	ND, 1982	466	564	942	808
Daganou	231	144	156	196	287
Dan Takaya	ND, 1982	547	841	770	977
Dungass	265	292	436	453	395
Dungass	ND, 1981	140	283	437	339
Dungass	ND, 1982	578	646	690	785
Guidam Roundji	208	177	164	183	232
Guidam Roundji	344	292	721	1121	809
Guidam Roundji	454	446	750	955	705
Guidimouni	204	105	104	64	98
Guidimouni	261	256	485	780	320
Guidimouni	318	258	395	726	487
Guidimouni	449	360	534	738	570
Guidimouni	566	215	453	727	393
Madarounfa	321	175	333	311	199
Madarounfa	401	508	793	935	886
Madarounfa	553	515	670	901	600
Matameye	283	282	387	415	430
Matameye	288	133	335	348	257
Matameye	304	418	563	981	722
Matameye	427	312	500	778	685
Matameye	446	298	477	643	665
N'Gortiloum	105	167	152	139	130
N'Gortiloum	302	377	468	572	471
N'Gortiloum	346	252	297	625	481
Tessaoua	330	504	734	854	577
Tessaoua	330	361	634	889	484
Tessaoua	362	430	811	1102	922

ND: no rainfall data given

Annex F3

Tableau #1: Evolution des superficies productions et rendements de 1953 à 1994

Superficies (S) en milliers d'hectares, productions (P) en milliers de tonnes et rendements (R) en kg/ha

1953	989.00	216.00	218.	385.00	183.00	475.	1.50	1.00	687.	4.80	3.80	750.	80.00	4.00	50.	141.80	78.20	537.
1954	988.00	372.00	377.	399.00	267.00	669.	2.00	1.30	650.	4.80	3.90	813.	114.00	15.00	132.	142.30	73.00	513.
1955	989.00	480.00	485.	389.00	307.00	789.	2.10	1.80	857.	5.10	4.60	902.	129.00	17.00	132.	195.40	140.20	718.
1956	1121.00	485.00	433.	570.00	384.00	639.	4.40	3.30	750.	5.50	3.90	709.	349.00	24.00	69.	259.60	131.00	505.
1957	1455.00	620.00	428.	534.00	300.00	582.	3.80	3.30	868.	5.50	4.60	838.	351.00	4.00	11.	304.00	192.80	634.
1958	1505.00	621.00	413.	432.00	260.00	602.	3.80	3.30	868.	5.40	4.70	870.	341.00	55.00	161.	324.20	187.70	517.
1959	1595.00	673.00	422.	458.00	273.00	596.	3.50	3.90	1114.	5.30	4.40	830.	388.00	50.00	129.	312.80	104.50	334.
1960	1692.00	718.00	424.	440.00	222.00	505.	3.10	2.80	903.	8.20	7.40	902.	375.00	48.00	123.	321.40	150.50	468.
1961	1640.00	776.00	473.	453.00	275.00	607.	2.90	2.20	759.	9.20	9.60	1043.	427.00	50.00	117.	349.00	151.80	435.
1962	1840.00	934.00	508.	463.00	320.00	691.	3.20	2.40	750.	9.10	11.20	1231.	475.00	73.50	155.	323.00	205.40	638.
1963	1887.00	971.00	515.	485.00	352.00	726.	3.30	2.20	667.	9.40	10.10	1074.	484.00	63.30	131.	318.50	220.30	692.
1964	1777.00	1013.00	570.	453.00	315.00	695.	5.10	4.10	804.	9.40	11.80	1255.	493.10	68.00	134.	292.90	184.40	830.
1965	1810.00	789.50	438.	465.00	265.80	571.	4.40	2.70	614.	8.70	11.70	1345.	432.30	48.00	111.	341.40	276.50	810.
1966	1743.00	841.80	483.	545.70	277.10	508.	3.50	2.20	629.	9.20	20.50	2228.	608.00	67.60	111.	339.40	288.20	849.
1967	1865.00	1000.10	538.	530.20	342.20	645.	4.60	2.60	585.	11.50	32.50	2826.	689.40	77.00	112.	356.60	289.30	811.
1968	1895.20	732.60	387.	595.60	215.10	361.	3.60	1.80	500.	15.30	39.00	2549.	744.50	74.20	100.	432.00	252.40	584.
1969	2271.90	1095.40	482.	595.00	289.30	488.	2.80	1.50	538.	15.50	38.00	2452.	968.10	83.30	86.	319.80	206.90	647.
1970	2309.80	870.90	377.	593.10	230.20	388.	2.70	1.60	593.	18.40	27.10	1852.	979.80	84.30	86.	357.50	204.60	572.
1971	2355.80	958.90	407.	579.30	266.80	481.	2.90	1.90	655.	17.10	27.30	1596.	999.60	72.10	72.	394.20	258.50	651.
1972	2194.50	918.80	419.	566.80	208.40	368.	3.70	2.30	622.	17.20	31.80	1849.	920.80	144.10	157.	418.50	280.20	622.
1973	2007.70	626.90	312.	448.00	126.10	281.	5.20	2.60	500.	17.80	46.30	2801.	832.00	92.20	111.	363.80	77.10	212.
1974	2230.00	882.60	396.	547.70	218.90	400.	6.00	3.70	617.	14.80	30.20	2041.	918.80	132.70	144.	258.00	129.10	504.
1975	1692.90	581.30	343.	790.90	253.80	321.	6.00	3.70	463.	17.20	29.30	1703.	839.30	218.50	280.	319.70	41.70	130.
1976	2526.90	1019.10	403.	615.50	286.60	466.	15.80	11.90	753.	21.70	28.70	1323.	837.40	218.10	258.	164.20	79.20	482.
1977	2728.50	1130.30	414.	732.50	342.00	487.	7.70	5.80	727.	23.00	28.60	1157.	726.30	206.80	285.	174.30	62.30	472.
1978	2728.70	1122.80	412.	795.90	371.20	468.	10.90	8.70	798.	25.40	31.60	1244.	952.40	271.50	285.	210.20	98.80	461.
1979	2922.70	1255.20	429.	716.70	350.80	489.	12.20	9.50	779.	19.50	23.80	1221.	944.40	304.10	322.	144.90	88.50	611.
1980	3072.40	1382.80	444.	768.10	388.00	479.	15.20	10.00	658.	20.10	29.90	1488.	1105.10	288.70	243.	189.80	228.10	1193.
1981	3038.20	1313.80	432.	982.30	321.70	327.		11.00	#DIV/0!	20.70	38.90	1879.	1197.60	281.60	235.	208.70	101.70	487.
1982	3083.80	1292.50	419.	1134.60	358.70	316.	12.60	7.30	579.	20.20	41.20	2040.	1427.90	281.70	197.	190.40	87.50	480.
1983	3135.60	1298.30	414.	1106.60	355.40	321.	10.50	6.70	638.	22.20	44.80	2018.	1608.50	271.30	169.	167.60	75.00	447.
1984	3029.70	771.00	254.	1098.40	238.50	215.	10.70	7.10	664.	19.30	48.50	2513.	1512.70	194.80	129.	142.60	30.80	216.
1985	3168.70	1449.90	458.	1142.20	329.20	288.	7.20	3.40	472.	20.60	58.70	2752.	1568.20	115.30	74.	29.70	8.40	283.
1986	3239.50	1383.40	427.	1109.10	360.20	325.	9.40	6.10	649.	27.60	75.50	2736.	1590.50	292.90	184.	118.20	54.50	461.
1987	3016.70	998.90	330.	1342.30	365.80	273.	14.00	7.80	557.	24.80	61.40	2476.	1790.80	208.80	117.	158.20	40.20	254.
1988	3525.90	1768.30	501.	1469.80	580.20	381.	9.60	4.90	510.	17.60	52.90	3006.	1925.20	301.50	157.	78.30	12.90	165.
1989	3565.70	1213.30	340.	1468.80	259.50	177.	3.60	2.60	722.	11.00	17.70	1609.	2209.00	320.40	145.	59.50	25.50	429.
1990	4606.10	1110.30	241.	2238.40	281.20	126.	5.80	1.80	321.	22.90	3.10	135.	2585.30	216.50	84.	62.70	17.00	271.
1991	4383.90	1844.30	421.	2068.70	380.90	184.	2.80	1.80	643.	2.40	6.60	2750.	2149.40	332.20	155.	106.80	38.40	360.
1992	4988.70	1787.30	358.	2530.50	383.60	152.	2.28	.97	428.	28.02	91.08	3250.	3898.40	401.60	103.	175.20	57.10	328.
1993	4691.00	1425.60	304.	2238.80	288.60	129.	.50	.07	148.	6.06	9.03	1489.	3357.70	162.80	48.	84.70	20.15	238.
1994	4934.60	1971.90	400.	1971.90	396.50	201.	2.41	1.75	728.	7.83	.55	70.	2966.40	382.50	129.	151.00	67.40	448.

Annex G
Business Plan for Export of Irrigated Green Beans

Annex H
Cereal Transport Costs

Annex H
Cereal Transport Costs

1. Transport costs from the Border Town, Jibye Nigeria to Niamey Niger, Spring 1994

Distance traveled: 709 km

Truck, 35 ton capacity, hauling between 33 and 34 tons (350 sacks of grain) valued between 388,235 and 400,000 FCFA.

Nigerian Duties and Fees

Cost for vehicle exiting Nigeria: 4000 to 4800 Niara (47,059 to 56,470 FCFA).

Market tax: 15 Niara store (176 FCFA)

Cost for guarding: 2 Niara/sack (8,235 FCFA for 350 sacks).

Loading costs: 15 Niara/sack (61,764 FCFA for 350 sacks).

Nigerien Duties and Fees

Customs costs: 100 FCFA/sack (35,000 FCFA for 350 sacks)

Customs tax for extra hours: 920 FCFA (920 FCFA)

Unloading costs: 50 FCFA/sack (17,500 FCFA for 350 sacks)

Enter Madarounfa: 1 Gendarmerie post

1 Customs post

Exit Madarounfa: 1 Customs post

Enter Maradi: 1 Gendarmerie post

1 Police post

Exit Maradi: 1 Police post

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1 Customs post
1 Gendarmerie post
1 Birgade Routiere Gendarmerie
Guidan Roumji 1 Customs post
1 Gendarmerie post
Enter Madaoua 1 Gendarmerie post
Exit Madaoua 1 Police post
1 Customs post
Malbaza 1 Police post
1 Customs post
Enter Tocrnaoua? 1 Gendarmerie post
Exit Tocrnaoua? 1 Gendarmerie post
1 Customs post
Birni N'Konni 1 Police post
Yaya 1 Gendarmerie post
1 Customs post
Dogondoutchi 1 Customs post
1 Police post
Dosso 1 Police post
1 Customs post
Birni N'Dayou (Margou) 2 Gendarmerie posts
Enter Niamey 1 Gendarmerie post
1 Police post
2 Customs posts

Total Control Posts: 32

12 Gendarmerie posts @ 2,000 FCFA each (24,000 FCFA)

8 Police posts @ 1,000 FCFA each (8,000 FCFA)

12 Customs posts @ 3,000 FCFA each (36,000 FCFA)

Government of Niger Charges: 103,920 FCFA (297 FCFA/sack)

Government of Nigeria Charges: 47,235 to 56,646 FCFA (135 to 162 FCFA/sack)

Labor cost: 87,499 FCFA (250 FCFA/ sack)

A sack of grain is approximately 95 kg.

Note: The following posts are presently closed, those exiting Maradi and Madaoua, Malbaza, and Birni N'Dayou. Government pressure on post personnel have reduced payments by drivers whose trucks conform to all government regulations.

2. Transport Costs to Selected Towns from Zinder, Niger

Zinder to Agadez: 18,000 FCFA per ton (1,800 FCFA per large sack or 900 FCFA per small to medium sack).

Zinder to Arlit: 20,000 FCFA per ton (2,000 FCFA per sack).

Zinder to Niamey: 11,000 FCFA per ton (1,100 FCFA per sack).

Zinder to Tanout: 6,000 FCFA per ton (600 FCFA per sack).

Source:

Personal communication: Seyni HAMADOU, Système d'Information sur les Marchées, OPVN

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Annex J
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Annex J
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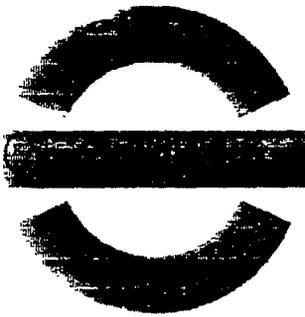
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Annex K
Comments on the First Draft of the Report



Niamey le 29 Décembre 1995

Du Président de KOKARI

A GEORGES THOMPSON / Chef Division REDME

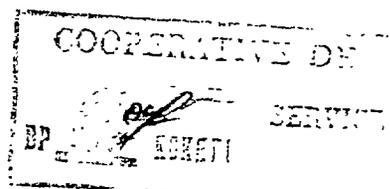
Objet: Commentaires de KOKARI sur le rapport provisoire d'évaluation d'Octobre 1995 du Programme de réformes économiques et de Micro-entreprises de l'USAID.

Monsieur,

Nous avons lu avec beaucoup d'intérêt le rapport cité en objet. Il appelle de notre part les commentaires suivants:

Les consultants n'ont eu aucun entretien avec les membres de KOKARI ce qui est à la base des multiples imperfections contenues dans ce rapport provisoire. Ils se sont contentés des fausses informations développées et entretenues à dessein par nos adversaires qu'ils n'ont donc pas pris soin de vérifier ce qui est dommage de la part des consultants.

Pour revenir aux accusations sans fondement contre la coopérative KOKARI: Il est dit en page 17 je cite "KOKARI qui est directement responsable du développement et de la gestion du portefeuille crédit du SICR, est en conflit permanent avec la direction du SICR". KOKARI ne peut pas être en conflit permanent avec la direction du SICR car sur les trois membres qui composent la Direction deux sont membres de KOKARI sauf si la Direction se résume seulement au Directeur du SICR. Dans la même page il est noté et je cite "KOKARI, qui ne possède aucun savoir-faire en matière de gestion, se considère comme le seul candidat à la reprise du projet après l'arrêt du financement de l'USAID". Cette phrase démontre la légèreté des investigations des consultants et leur mépris vis à vis de KOKARI car on ne peut pas dire dans une page que le système SICR assure efficacement le suivi des crédits et enregistre de bons taux de



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recouvrement et prétendre que KOKARI n'a aucun savoir-faire. Il me plait de porter à votre connaissance que les agents de crédit avaient reçu une formation en matière d'instruction des dossiers bancaires basée sur la méthode des "scoring" par le Task-Force Crédit/DOR. Cette méthode est simple et en même temps efficace. pour preuve les bons résultats enregistrés par Task-Force-Crédit/DOR. Vous conviendrez avec moi qu'une formation doit faire l'objet de suivi pour détecter les insuffisances et les corriger de manière progressive. Ensuite ils ont affirmé en même temps que "KOKARI exerce des pressions pour garantir l'intérêt personnel de ses agents de recouvrement" je m'inscris en faux contre cette allégation car KOKARI n'est pas un syndicat pour exercer des pressions sur qui que ça soit. Notre devise Disponibilité-efficacité-Solidarité et notre expérience propre ne nous permettent pas d'exercer des pressions sur le SICR. "KOKARI aimerait, par exemple, que le SICR paye un salaire à ses agents en plus des commissions de performance" Avant d'écrire ces informations les consultants auraient dû demander et analyser le contrat de travail des agents de KOKARI et le règlement intérieur du SICR qui prouvent que jusqu'à preuve du contraire les agents sont payés conformément aux contrats et le règlement intérieur en vigueur entre le SICR et les agents de KOKARI.

Les consultants affirment dans la page 17 que les difficultés actuelles du SICR sont dues à l'octroi de primes inappropriées aux agents de KOKARI en se référant aux quatre prêts importants dans la ville de Tahoua. Les membres n'ont jamais bénéficié de primes inappropriées car ils ne sont payés que quand le taux de remboursement atteint au moins 97% et les quatre crédits en question ont été accordés en Juin 1994 par le volet crédit DOR/CLUSA alors que le SICR a démarré officiellement le 1er Octobre 1994.

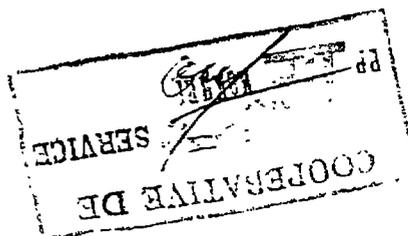
Nous voulons à l'avenir que les consultants prennent le temps nécessaire, pour vérifier la véracité des informations avant de les insérer dans les colonnes de leur rapport pour éviter de telle situation en vue de préserver la crédibilité et le sérieux de leur travail.

Je vous saurais gré de bien vouloir transmettre ces observations à l'équipe des consultants et leur exprimer notre disponibilité à collaborer.

Recevez Monsieur le Chef de Division REDME, l'assurance de notre franche collaboration.

Ampliations:

- MD PAPA SENE BUREAU REGIONAL CLUSA
- D.B BA
- SAIDOU AMADOU USAID/Niamey



Review of Draft Report "USAID/Niger Economic Reform and Micro enterprise Program"

Mike McGahuey, AFR/SD/PSGE

General Comments

The report provides good information and some good analysis. However, I think that the report missed addressing the major questions and issues. And, several very good ideas—such as widespread use of phosphorus, are marginalized by framing them as stand alone, magic-bullet prescriptions instead as important components of a system. Finally, progress by SO2 and SO3 in establishing enabling conditions for broad-based use of more productive, less-degrading practices is largely ignored. In sum, the following two main questions are inadequately addressed: (a) Does Niger have potential for substantial growth in the rural sector and, if so, (b) has the Mission program been on track?

- 1. The report did not adequately address the question of whether or not Niger has the potential for growth in the agriculture sector. In particular, the report did not fully address the production potential. There are estimates for single inputs like phosphorus, but these are treated in isolation of a general development process.**
- 2. With respect to production (SO3), this report is a proposal, not an assessment. Rather than assess the potential by addressing the above questions, the report designed a program based on a single-dimensional prescription—more use of phosphorus. Was this what the team was asked to do? (A focus on phosphorus is necessary, but hardly sufficient to increase production. And, if phosphorus, or any other input, is to be successfully promoted by somebody, that somebody needs to ensure that this investment has the highest return and lowest risk. History shows that dealing with phosphorus in isolation of other inputs: Senegal tried narrow prescriptions in the early 1970s which was abandoned by government and farmers alike in the 1980s. Farmers went back to a systems approach to production. See a 1984 report by Dancette et. al.)**
- 3. The sections on production fail to take into account the SO3 focus on identifying and establishing the enabling conditions for broad-based adoption of more productive and less degrading practices. The paper assesses SO3 from a narrow technology prism by stating that SO3 focusses more on conservation practices rather than production practices. SO3, from this perspective is "practice-neutral." The intent of SO3 is to expose farmers to a wide array of production practices and then to empower them to act on their decisions. It is not to establish a prescription for each zone based on narrow biophysical criteria—farmers have a habit of making their own choice, but empowered, more knowledgeable farmers have a wider range of options for investing. The basis for the SO3 focus on conditions rather than on technical prescriptions is fifteen years of learning. These lessons made it clear that many farmers will invest in more productive and sustainable practices if incentives are sufficient, risks sufficiently low and constraints reduced. These lessons also made it clear that farmers, once empowered and more knowledgeable about the options, often make production decisions that outsiders would not expect. The point is that trying to mandate a particular mandate produces marginal returns. It is more productive to develop demonstration sites, empower people, and let them make their own**

decisions. In my mind, one of the options that would be used more widely would be phosphorus, but it would be used as part of a system.

4. The paper disregards the leadership by Niger and by the Mission in identifying and establishing the enabling conditions over the last ten years. Niger has made substantial progress over the last ten years on a number of fronts including the transition from a military to democratically-elected government, changes in the rural code that authorize rural communities to manage natural resources on village lands, steps to establish systems to resolve land disputes and confer greater tenure security, the legalization of self-determined cooperatives; reduction in transport transaction costs, and the orientation of GON agencies toward outreach and away from regulation. This leadership is an important contribution to development progress in the subregion as well as to the rest of Africa. Since Niger is ahead of others in addressing these serious issues, the lessons produced have application beyond Niger's borders. (In some respects, the issues that Niger must face today because of the burgeoning people-to-resource ratio are those which others will be facing in the future. There is no reason to pay for these lessons over and over.)

5. The paper disregards the increase in number of farmers who have invested in more productive, less-degrading practices over the last ten years. As we speak, farmers and communities are investing capital and labor in soil and moisture conservation and soil enriching measures. There is no precise report on the number of people who have adopted better practices but numbers from Mardi, Badagisheri, Majjia, and communities engaging in natural forest management schemes are illustrative. (The following are estimates of how farmers and communities are investing: about 10,000 ha under farmer-managed natural regeneration in the Maradi/Aguie region; about 3,000 ha have been treated with water-harvesting practices in the Badagisheri area; about 7,000 ha are protected by windbreaks in the Majjia Valley; and, 225,000 ha are under community-managed natural forest management for production and sale of fuelwood. A significance of these examples is that they provide insights into what to do to promote broader intensification. These cases also show that farmers base their investment decisions on an array of criteria. Consequently, programs should focus on empowering people to make choices and to capitalize on those choices; programs should avoid supporting narrow prescriptions.

6. The idea that wider use of Niger phosphate would catalyze broader use of other production and conservation practices is not supported in field observations and literature. These sources indicate that investments in higher-priced inputs follow investments in measures to reduce soil and water loss. From a farmer's perspective, establishing an environment to increase fertilizer-use efficiency (FUE) is a first step. This suggests that a winning strategy for the extension of any capital inputs would be to identify those farmers who have already invested in soil and water-conserving measures and work with them. They may be more likely to use inputs, and the efficiency of those inputs would probably be higher which would produce a more effective demonstration for their colleagues.

7. The report should decouple gold and phosphorus. This suggestion oversimplifies and distracts from the real constraint to intensification: lack of broad-based enabling conditions. Capital, using evidence in the report, is not the constraint to intensification. The report estimates a high level of liquidity in the Niger economy. The issue that the assessment should have focussed

on is "Why are the majority of Niger farmers and entrepreneurs not investing these funds into more intensive agriculture (including use of phosphorus)?" In addressing this issue, the assessment should have asked three additional questions: "Where are people intensifying?"; "What distinguishes those who invest in more intensive production and those who do not? (i.e., the enabling conditions)"; and, "What are SO2 and SO3 doing to establish the enabling conditions?"

As noted above, tens of thousands of hectares in Niger have come under more intensive management by farmers and communities during the last five to ten years. As per analyses in preparation for programs under SO2 and SO3, a list of candidate "enabling conditions" would include devolution of authority, greater security of resource tenure, increased access to markets, increased access to capital, increased knowledge about management options, increased skills at the household and community level to manage enterprises, etc. The report noted most of these, but it failed to note that the Mission's programs have made substantial progress in testing and establishing these conditions over the last ten years. It does not assess whether the Mission is on the right path or not.

(The assessment should refer to experiences with phosphorus in Senegal. Senegal processes phosphorus but exports the vast majority with little being purchased by its own farmers—even though the soils are seriously deficient in phosphorus. The problem in Senegal, as in Niger, is not availability so much as want of enabling conditions.)

Recommendations for Assessment

1. **Build on what works.** As we speak, farmers are investing in more intensive production practices. In Niger they are building water-harvesting and anti-erosion structures, establishing windbreaks, managing field trees, managing natural regeneration of forests, applying mineral fertilizer, applying pesticides, establishing pole plantations, and managing manure. A couple of lessons emerge from these. First, studies in Burkina indicate that farmers start with measures to stabilize the physical and chemical environment and then move to more expensive and risky inputs. For inputs such as fertilizer (including phosphorus), this makes ultimate sense: by reducing erosion and maximizing soil moisture, farmers increase fertilizer-use efficiency. Secondly, farmers use an array of criteria for selecting production practices. Consequently, programs should not focus resources on a narrow prescription. (Bob should have a very good handle on what people are doing and why.)

2. **Maintain a focus on the identification, establishment, and validation of "the Enabling Conditions for Broad-based Use of Better Practices."** The biggest bang for the buck comes from contributing to the empowerment of farmers and communities to make choices and to capitalize on those choices. This has been the basis for SO3 since its inception.

b:\nigerast

ASIF SHAIK

EXECUTIVE SUMMARY

Key Questions Addressed

The Economic Reform and Microenterprise Program team was asked to address two specific questions in its overall sector assessment:

1. Does Niger have the potential to achieve sustainable per capita GDP growth?
2. To what extent does the rural economy contribute to that potential?

Background

When USAID Proposed Country Strategy Plan was reviewed internally, concerns were raised about Niger's ability to achieve sustainable economic growth in excess of its 3.3 percent rate of population growth. Some reviewers suggested that unless some means can be found to achieve a rate of economic growth in excess of the rate of population growth, USAID might be most effective if its strategy were to concentrate exclusively on USAID's Strategic Objective 1 (SO1), that is, efforts related to family planning, maternal/child health services and child nutrition.

An exclusive focus on SO1 would mean giving up the remaining two components of USAID's proposed strategy, namely:

- SO2, which involves efforts to improve access to markets, especially through use of improved, decentralized financial services
- SO3, which seeks sustained, widespread adoption of management practices that improve conservation and productive use of Niger's forests, fields, waters and pastures.

The underlying premise of this approach is that, in the absence of economic growth potential, the best return will come through emphasis on humanitarian and welfare concerns. At the same time, little will be lost through reduced investments in markets and productive resources.

Overall conclusions

The study team's findings directly support the conclusion that USAID should not abandon its investments in markets and the management of productive resources. This conclusion is supported by the answers to the two questions put to the team:

Question 1 *Does Niger have the potential to achieve sustainable per capita GDP growth?*

The overall conclusion of this report is that Niger has significant potential to achieve sustainable per capita GDP growth. There are multiple contributors to growth, some recent and some well-established. Major recent factors which will support growth include the gold reserves at Liptako, the fertilizer reserves at Tahoua and the impact of devaluation of the CFA franc. Established, and strengthening trends in rural market development, land investment, tenure security and incentives for improved resource management, significantly assist the growth of rural farm and non-farm activities, and enhance both Niger's overall rate of growth and rural participation in that growth (see Table).

Question 2: *To what extent does the rural economy contribute to that potential?*

The agriculture/rural development sector can make a significant contribution, both directly and indirectly.

- It can directly contribute annual income growth in excess of the rate of rural population increase. If we also consider the transition to cash input farming and the widespread use of phosphates, this sector alone can grow more than the overall population growth rate.
- The sector contributes indirectly to the income potential from exploiting phosphate reserves. The rural economy provides the demand for fertilizer, while at the same time creating production increases through fertilizer application. Initiatives needed to stimulate and complement phosphate use include better seeds, storage and marketing for agricultural production, greater rural access to credit for all farm and non-farm activities, improved natural resources management, and, in general, strengthened enabling conditions in the rural economy.
- Finally, the agriculture/rural development sector is the bridge between economic growth and long-term development. Gold mining, for example, can contribute up to 17% to GDP in five years, but reserves are only sufficient for 15 years of production. Investment of a portion of these proceeds in strengthening rural production can transform a medium term windfall into a long term income stream, while also spreading economic benefits more widely. The two decades of investments in the "enabling conditions" (by GON, USAID and others) leave Niger poised to take full advantage of the exogenous sources of growth (gold, fertilizer) which have now become available.

Therefore, while Niger has significant potential for growth, USAID's strategy can secure that potential, increase growth rates and help channel GON revenues from mining activity into sustainable growth. We conclude that, even without USAID assistance, the commercial development of gold and phosphate will proceed. Some US technical

assistance on phosphate production may be useful. Therefore, USAID's comparative advantage remains in continuing its emphasis on SO2 and SO3.

UNITED STATES GOVERNMENT
M E M O R A N D U M

DATE: November 13, 1995
TO: Sidi M. Iddal, Acting SO2 Team Leader
FROM: George R. Thompson, SO2 Team Leader
SUBJECT: Comments on Rural Production Sector Assessment

Preface: The majority of the comments below are critical (hopefully constructively), i.e. meant to improve the quality of the final report. However, I want to preface these with an overall comment that this is a useful report already, that it will not sit on the shelf. It will have a significant impact on our program and increase our capacity to obtain the results we are targeting in SO2, as well as helping us modify the our targets to be more realistic and valuable.

We are impressed with the knowledge and expertise of the team members that is demonstrated in this valuable tool and appreciate their efforts to help us achieve our strategic objective.

General:

The first point is the Title. I believe the title should be - Rural Production Sector Assessment. It fits what is in it better.

The report also needs a lot of editing, formatting and completing (lots of parts labeled "to be completed/expanded etc."). Someone at Barents/KPMG should be ashamed of turning in even a draft that is so sloppy. I am not one for form over substance, but there was enough missing to make it difficult to come to conclusions on some important points, e.g. without Annex E how can I judge if the model used is valid?

The Conclusions and Recommendations at the end should be expanded to provide the CCP's integration and resolution of the different sections' conclusions and recommendations, especially those which seem to conflict: e.g. USAID should be catalyst for production increase technologies such as phosphate (ag production section), but should leave technical innovation work to other donors (microenterprise section). Such an expanded Conclusion and Recommendation Section would provide a bit more backup to the executive summary.

There should be more general conclusions and recommendations on two important points: Women and Civil Society. The Terms of reference is specific on these two points and they were raised at the various briefings the team gave.

How, if possible, do we get at least 50% of the benefits of our program to women? If not possible, how do we optimize their participation. The Financial Sector review covered this point adequately, but the other sections did not and the executive summary barely mentioned women or civil society.

The annex on civil society could be easily integrated into the text of several sections. The civil society expert's comments on this draft should be carefully integrated into the final document.

Section by Section:

Executive Summary: On page 7, the discussion of Marketing Boards seems to look at the past experience and use rules of thumbs to disparage the idea of private marketing mechanisms. The idea must be examined in more depth to determine if it is sound or not. Bankers have stated that it would take a marketing mechanism similar to the cotton companies in Mali, Burkina, and Côte d'Ivoire to really increase rural sector lending in the way that the section of the assessment on Financial Services leads us to believe is necessary.

On the other hand taking the taboo issue of using tariffs as a means of improving marketing is the kind of open mindedness which makes this report so valuable to us.

Macroeconomic Issues: The importance of livestock is noted which will impact on the issue of savings, i.e. often stated fact that investing in livestock, was not really mobilizing savings. We need to take a closer look at this.

Under Niger's Bretton Woods Agreements, page 36, though Niger may still be in a stand-by arrangement, it isn't active. This section should emphasize that if Niger does not enter into an ESAF, WE (and most other donors) ARE OUT OF HERE! It is absolutely critical to our program.

Ag Production Mgmt:

In the Overview on page 37, are you saying that the wise use of all geological resources are absolutely necessary to have sustainable agricultural growth? Following on page 38 it should read GON and donors, ngos and private sector should address constraints listed in Annex A...

On page 44 it was noted that "'necessity' may also be 'the mother

of adoption'" This notion is critical to the continuation of the development aid in Niger! The fact that the Nigeriens have their backs to the wall, makes real development possible now when it was less feasible before. They had to hit bottom, and I believe they have hit it. It is also the reason why development is more apt to succeed here than in more naturally endowed areas such as some of the countries in southern and central Africa.

I recommend expanding on this point in this section and including the idea in the beginning of the executive summary.

On page 45, second line, the government is succeeding, not "attempting" to curb bribes. Then "However, these abuses, esp. in the regional context, are still...

On page 50, footnote 26, cotton company in west Africa is a good example of what you are trying to say.

Middle of page 52, earthen works are often wonderful successes, e.g. Burkina's small dams.

Page 53, if ground nuts are considered a woman's crop, is this a way to increase women in development?

And on IPM, recommend a full environmental assessment for SO2. We need one to recommend exploitation of Park W's phosphate anyway. Let's do it now.

On phosphate, do we have a production package for millet, sorghum, cowpeas, peanuts, etc that is cost effective and financially viable assuming credit is available at 18-24%? Or is this another study requirement?

On page 59, the third paragraph is difficult to understand. Expand a bit.

Output Marketing:

On page 73 re: end of subsidies, there is another option: Nigeriens must either find another source, or pay the market rate for fertilizers.

I did not see the private marketing mechanism (board?) mentioned except in executive summary. Did I miss it?

MSE & SME Development:

On page 92, report discounts women as millers due to lack of technical and mgmt skills. So...is this not a training Opportunity to increase size of women's enterprises? We could even bring the one woman miller in Maradi into the school as woman miller teacher...

On Skins and Hides subsector, I expected to see something on artisanal leatherworkers.

I've got to be convinced that the Guichet Unique is completely useless. Did the MAPS Phase II survey really say that the requirements of the *guichets uniques* are greater than the export licenses before? Please check again.

On page 109, issue of individually owned MSEs seems to be covered by the fact that the collectives, coops or women's groups who get loans, actually re-lend funds directly to individuals. It's not unlike requirements for co-signers on loans.

On page 118, Conclusion and 119 Recommendation 2: I'm not convinced that we should leave appropriate technology to the other donors. It is too important to be assumed. ATI has a proposal on the table already and unless the other donors do more on ag processing, I think we will need to be involved, if only to get the other donors tied to the organizations which have the ideas.

Agricultural and Rural Enterprise Credit:

Partially missing footnotes was very aggravating in this section.

On page 130, to say that only WOCCU is committed to achieving full financial self-sufficiency gives the wrong impression, and may be like the author shooting himself in the foot. All are trying to attain "operating" financial self-sufficiency. And Clusa is trying for full self-sufficiency while still using subsidized funds if available. To say they might not be available some day, and charge more is not applying the author's own principle that DFIs should charge what they need to make a profit. They plan on doing just that.

On page 131, end of second para, the WOCCU/USAID subsidy should continue until the central federation can also support training costs and expansion.

In several places, the report implies that Livestock investments are somehow bad. Given the importance of livestock to the economy of Niger, this should be explained.

Literacy requirement should be emphasized in Exec Sum.

On page 140 the comparison to Mali should include the all important system of marketing cotton which provides a de facto guarantee for all banks. This is why promotion of a private Niébé/Peanuts/Cotton/etc marketing board(s) may be an all important activity to attain SO2.

On page 145, it should be noted that the vast majority of the

increase in women's participation in the CLUSA program was not due to increase interest rate, but to the development of a targeted program for women only: The Women's groups which now outnumber men's and mixed co-ops.

On page 153, the idea that we compromise and condone high subsidy programs anywhere in Niger is understandable, but not necessary. If there are areas where an argument can be made that the people are so destitute that it does not pay to build sustainable institutions, we should only encourage people to migrate.

On page 154, it is not true that CLUSA is clueless as to what they need to charge. They have a different opinion of what they should charge. This report does not yet prove who is right (missing Annex E might help).

Also BRK is a likely success. It is in trouble now but the author of the report already states elsewhere that he believes it will pull through, based on adjustments made by CARE based on their own evaluations and audits of their own project.

USAID must be very careful not to screw up a good project by taking too large a role in operations. Semi annual audits are not feasible from an accounting point of view and especially by USAID. Annual internal audits by the NGOs are the way to go. USAID's role with NGOs should be to require results before we continue funding, not micro-manage. The NGOs will be the ones who decide what is needed to attain the results. USAID will decide which NGOs merit grants based on results attained.

This is not to say we can not demand internal controls in grants, and provide Technical Assistance as appropriate to address all of this report's recommendations.

On page 160, replace the word coerce with one less onerous. Again, audits for NGOs should be part of there SOP. We can do a project with a contractor and have more control.

On page 161, integration of different aspects of the USAID/Niger program, does not mean integration of management. We plan on concentrating by locality, keeping management independent for different SOs and Crosscutting themes.

MEMORANDUM

Date: December 6, 1995

From: David Miller

To: Curt Nissly

Subject: Review of "Economic Analysis of Sustainable
Increases in Agriculture' Production: Linkages
Between Strategic Objectives 2 and 3" DRAFT October
1995

Overall comments:

1) First off, let me say that, although it may not be clear how much this document contributes to the goals of the assessment to which it is an annex, it generally fills the requirements of its scope of work with regard to the first three points (the economic analysis of specific technologies). The fourth through seventh points of the SOW, those with regard to policy issues, are addressed much less adequately.

2) Probably the worst theme of misinformation and the greatest weakness in policy analysis in this document relates to tenure. ASDG II is not working "closely and effectively with the Rural Code seeking to promote the establishment of additional Commission Foncières..." First, (and of least importance) the Rural Code does not exist. (The Permanent Secretariat for the Rural Code -SPCR- exists; the Principes D'Orientation for the Rural Code exist; and, in some people's heads the Rural Code Process exists.) But not the Rural Code.

Second, while ASDG II is working closely with the SPCR, we are not working with them to establish CF. Though we have contributed to a training session for the members of a CF, and it is possible that the counterpart funds from one or more of our tranches will support the establishment of a CF or two, we are not committed to this activity. In fact, if either Kjell or Tabor had talked to us more, they would have been told that we are in the process of pulling back from our support to the Rural Code process. (I mentioned this to Tabor, but he took no heed.) The Mission's SP, presumably examined for this study, makes no mention of CF, and this is intentional.

Have the authors really considered this issue? Or did they just accept the most obvious thing around, and decide to push it? Do they have a workable model for Commissions Foncières? (Because, at present no one else does.) Can they present a reasonable argument for how they would resolve tenure issues? (Because at present no one else can.)

Granted, tenure is an issue, but the Mission is

reconsidering the RC process, and primary among our concerns is the number of issues surrounding the creation of the CF. (It is surprising that as much emphasis is put on the CF, given the recommendation to conduct a recurrent cost study; the cost of these things being one of several killer problems haunting them)

Much can be done to address tenure issues outside of the RC process, but the report addresses none of them. Some policy related activities improving tenure issues may relate to the country's various decentralization activities, which are not addressed in the report. This is a serious drawback, and reflects the technocratic/extensionist orientation of the document

3) Techo-extension centric approach: The report assumes that USAID will and should take a classic techno-extension approach to NRM development in Niger. This is not our approach, nor that of other donors in Niger, nor that of GON (see comments concerning the "Principes Directeurs" below.) Nor is it the approach of AID Washington, either. Where do democratization, participation, NGOs, and decentralization fit into this study? Where is community empowerment? What effect will decentralization have? How will NGOs be used? The report presents a program of supporting "agents extending interventions." Is that what we are doing here? (see McGahuey's comments on the assessment for further elaboration.)

4) I have my questions too about the simplistic assumptions of the economic analysis; that you can reduce all constraints to rural producer adoption to "risk" and that you can get them to shop by offering a 30% discount rate. It takes more than an awareness of technologies with a high rate of return to investment for a farmer to change. However, I enjoyed reading the elaborate exercise; though the results may be dubious, it serves to raise questions, particularly when comparing different technologies.

Specific Notes:

p2 at top myriad [of] constraints (there are several types like this, I won't note them all.)

p2 first full paragraph name the document ("Principes Directeurs" here if that's what you are talking about.)

p2 sentence about DPM doesn't mean or add anything

p2 middle paragraph, second to last line. I'd put the word "directly" at the end of the sentence.

p2 last paragraph, first sentence. There have been concrete results from all these ongoing efforts, though the effect of policy reform efforts on the behavior of rural producers have not been measured. (This paragraph in general is a scramble of unclear comments)

p3 first paragraph. Progress last year wasn't so much better than in previous years, we just cleared two tranches then, culminating work over several years. Tranch IIA, by the way, has been satisfied, at least in the eyes of the GON, USAID has yet to confirm.

p3 first paragraph after the bullets

"combing in the minds of some" who are the some, and what is the relevance of this comment? This should be clearly presented, if it is to be brought up, not of-hand.

What is "SO3" in this paragraph? Are the authors referring to the Strategic Plan? This is not clear. Not only is the source of the figures unclear "language refers primarily to forestry 3 to 1 over agriculture..." (what are you talking about?) but this sort of thing does not lend itself to quantitative analysis, please. A proper analysis of the document would be easily conducted.

I would also disagree with the conclusion. Our Results Framework does not emphasize forestry over agriculture, or agriculture over livestock. (Since I don't know what document they use for their analysis, I won't continue my argument. It is clear enough in the Strategic Plan.) I might note though, that in the development of our SP we were required to respond to the Agency's guidelines, where there is a strong emphasis on the environment. The fact that this study is challenged to examine production issues does not grant leeway to overlook the complicated environmental issues involved. Nowhere does the document present upfront this aspect of agricultural development in Niger.

The last line is not clear, does not follow.

Second full paragraph:

Note here the emphasis on the Principes Directeurs, the process that must "gather much stronger momentum" Where are these taken into consideration in the recommendations of the report? Where does the report talk about participation, decentralization, NGOs, or community management of resources? Where does it talk about food security (also part of SO3, not mentioned in the report)? If the authors took their own advise seriously, they would have had much different recommendations, ones that support current donor and GON consensus concerning where we must go. (Note, the PDirecteurs are not only an official document, but were adopted as law - executive order? -- in Ordonnance no 92-030. "Report" is in any case, the wrong word.)

Last sentence on page 3, first partial sentence on page 4

What does this have to do with the rest of the paragraph, and what does it mean, with regard to DANIDA. With regard to USAID's support, as I have said, it is wrong.

page 5 first full paragraph expansion of surface area cultivated provokes conflicts among a wide range of actors, not just farmers and herders

page 8 2.1 Agriculture

This is their discussion of agriculture? Where is the discussion of "management to increase production and reduce variability?" Where is the discussion of agriculture? This is a discussion of some technical aspects of fertilizer use in Niger. It is the argument that is taken up in the larger report, and polished up as a silver bullet. Given this, one sentence kind of worries me: "the extent of Tahoua rock phosphate reserve has not been studied nor has the range in quality of harvested phosphate nodules." THIS IS OUR SILVER BULLET?

page 9 2.2 is the beginning of an analysis, where do we go with it? How does this analysis support the implication earlier on that we don't do enough in the livestock sector (and how are we to do more in the livestock sector if we are exploring phosphate in Tahoua?) Any recommendations, or do we just leave it at that?

page 11 first sentence. Focus on areas with little conflict? Many people would argue just the opposite. Where there is the pressure, there is the demand for change. What about the theory of induced innovation? (Of course, that wouldn't fit with the classic extension approach taken here, where rural producers are passive recipients.)

page 12 "Charrettes" is not a word in English

page 15 Tables should have notes explaining them, for faster reading. Some items in some of the tables are not explained well, or not at all.

page 23 What is a "mission estimate?"

page 44 What does it mean to say that increased agricultural production will "have little meaning"?

5.2.1 Read Hopkins again, her conclusions do not support the Rural Code process.

2/2

November 27, 1995 Comments of Glenn Rogers, REDSO/WCA on
October 23, 1995 DRAFT REPORT:
USAID/NIGER ECONOMIC REFORM AND MICROENTERPRISE PROGRAM

Based on the the Niger Rural Sector Assessment Terms of Reference included in their October 23 draft report, I see three questions they were to answer in the assessment:

1. **Assess possibility of sustainable increases in agricultural production and its impact on potential economic growth.**
 - a. Assess Niger's basic biophysical potential for increased agricultural production based on land area estimates
 - b. Analyze potential under current policy environment for generalizing NRM practices that increase agric. production
 1. Provide specific examples of application of these NRM practices
 2. Conduct profitability analysis of NRM practices most likely to be applied.

2. **Identify policy changes (macro economic and other) necessary to motivate potential economic growth in Niger's rural sector**
 - a. Review the work currently being conducted by the GON and the donor agencies regarding the necessary policy changes, and identify essential policy gaps to be filled.

3. **Provide recommendations for rural sector growth strategy stressing the necessary linkages between SO2 and SO3.**

OVERALL OBSERVATIONS

1. The report is in VERY rough draft and sections are confusing with seemingly contradictory statements.

2. There are many redundant sections of the report and not enough material to justify its current length. The report would be easier to read if it was half as long. Presenting all the "Financial Markets 101" material in one place (or Annex) would reduce duplication.

3. It doesn't appear that the team read or referenced the July 8, 1995 summary report prepared by REDSO as a "Preliminary Impact Assessment of NEPRP". This was discussed with the team leader when I briefed the team in August during the first days of their TDY. The REDSO report's conclusions do not support what the assessment came up with regarding benefits of re-imposing export taxes.

4. I think the report might be clearer if the sections were re-organized around fewer main sections, perhaps related to the three key questions identified in the SOW.

DETAILED COMMENTS RELATED TO EACH OF THE KEY QUESTIONS

The following are detailed comments by major theme or what appeared to be major issues as I read through the report. I realize that the report is in very rough draft so I may have misinterpreted what the team meant to say.

The Assessment draws several recommendations/conclusions. I was able to identify the following key conclusions on the three questions to be answered.

1. Potential agricultural and related economic growth. (Exhibit 4, p1)

Niger will achieve an economic growth rate higher than 3..3% over the next two to five years without USAID assistance. Increased production of gold at Liptako is alone projected to generate an additional \$185 in GDP or 17% growth in GDP by the year 2000. However, only \$16 million in additional rural income is expected from gold mining.

The potential increases in crop production are estimated to be \$109 million with \$71 million coming from increased fertilizer use, \$23 million from improved water harvesting, and \$15 million from improved marketing based on better information, storage, and private seed production. This is a 39% increase over the 1993 levels, directly accounting for a 9.25% growth in GDP. In 1994 official estimates of growth in the agricultural sector were around 8% to 8.5% [p133].

Economic growth directly related to this increase in tradable agricultural output is divided into two components. The first is an increase of \$42 million in non-tradable goods and services due to agricultural growth multiplier linkages assuming a growth multiplier value of 1.4 for the increase in crop output. The second is an increase of \$39 million in non-tradable goods and services due to an increase in the multiplier from 1.4 to 1.5. This increase in the agricultural growth multiplier is expected as a result of the shift in relative prices of tradable and non-tradable goods and services following devaluation of the CFA currency. This projects a total increase of \$81 million in "related economic growth".

In summary, the direct and indirect growth in GDP based on increased crop production represents a 17% growth in GDP during the reference period. This is equivalent to the increased GDP from gold mining that is expected to last 15 years, roughly the same length of time as the uranium boom years. Given that the nominal exchange rate between the CFA and the Naira was roughly the same in 1995 as in 1993, the effect of devaluation may be overestimated. However, the fact that anglophone and francophone currencies throughout West Africa have been devalued relative to the rest of the world means there are significant new opportunities for agricultural import substitution.

2. Identify policy changes (macro economic and other) necessary to motivate potential economic growth in Niger's rural sector. I was able to identify a total of eight possible policy changes mentioned at different places in the paper. These are:

- a. Flexible tariffs (export taxes) to protect Nigeriens against the frequent devaluations of the Nigerian Naira.

Table No.3 on page 19 of the draft report shows that agricultural production tripled by 1990 after "flexible" export tariffs were removed in 1987. When the equivalent of high export taxes were reimposed between 1990 and 1993 (illegal payments on road transport) agricultural output fell to roughly the 1988 levels. Based on this experience this policy proposal would be a disaster for Niger, potentially totally offsetting any gains from the initiatives to improve marketing identified above. Export market diversification focusing on other CFA countries in both central and west Africa would be a better policy prescription to address volatility in the Naira exchange rate.

- b. Macro-economic policy should be used to identify multiplier impacts of rural sector growth based on fertilizer development, FCFA devaluation, and other SO2 support activities (presumably referring to increased access to financial services and markets).

The stated objective is to influence the public investment budget or perhaps evaluate the desirability of moving to a more flexible exchange rate policy. PASPE, the EAGER Project supported RESEAU of Francophone economists, or other analytical support mechanisms could be used to accomplish this objective. Couldn't this be accomplished with project assistance rather than non-project assistance? The report should identify potential uses of NPA for policy reform related to or coming out of these analyses. What are the costs of implementing reforms to ensure phosphate fertilizer production and delivery? This could be an initial estimate for set of NPA needs.

- c. Reform of national seed policy and seed subsector.

Presumably this reform would be worth substantially less than the \$15 million in annual increased crop production coming from improved marketing interventions. The paper should try to identify the present value of seed sector reform in Niger and the costs of implementing this reform as a first estimate of the range of NPA needs.

- d. Suggested management actions required to improve output markets (storage practices and business plan development) are not sufficiently linked to proposed policy changes that USAID could support. Is this only TA to private sector actors? Perhaps there are entry barriers for "business services" firms that could be removed as a policy reform. The report is too vague as to whether this a policy area or not.

- e. Is it proposed on p33 that reform of donor and GON projects with high subsidy levels be considered a "policy reform" of the GON to improve price signals received by producers? How would such a policy reform be approached?

- f. (p34) Rationalize the levels of authorized customs fees and road taxes and eliminate informal customs fees and road taxes. Is this a proposal for a second round of what was done under the NEPRP? I am surprised that the estimates of payments on page 34 and statements on page 45 and 59 are not compared to those reported in the July 1995 NEPRP Preliminary Impact Evaluation completed by REDSO and

discussed with the Assessment Team in August. There is not even any mention of this earlier USAID analysis of this issue in Niger.

g. (p34) Eliminate tariffs on fertilizer imports is proposed as a policy reform on page 34. On page 72 the report states that the price of fertilizer in Niger will rise in two years when subsidy to Nigerian farmers ends. The statements here imply it will not be affordable without subsidy. Are these statements on page 34 and page 72 linked?

h. USAID's resources are better spent concentrating on policy constraints as opposed to firm-level financial and management constraints. Other donors are addressing these constraints. [p116] On page 115 the report concludes that this related MSE sector growth can be accelerated most effectively by expanding access to financial services. Can the various statements on this be pulled together in the report?

3. Provide recommendations for rural sector growth strategy stressing the necessary linkages between SO2 and SO3.

The major recommendations need to be consistent throughout the paper. As indicated by the quotes below there seem to be five key areas or conclusions for this SO2 mentioned, but I was confused by what appear to be contradictory statements.

a. Is USAID's strategy to concentrate on financial services a high return investment?

p117: MSU study on informal sector: surveyed MSEs listed the lack of finance as their second most severe problem after the general lack of demand, well ahead of problems of technology and policy environment

p.10: USAID can best promote MSE growth by providing continued assistance in developing sustainable institutions to deliver financial services.

p37: main recommendation for agricultural production increases is to support phosphate fertilization for grain crops.

p81: the lack of a national seed policy is the primary obstacle to a functioning input market in Niger.

p.65: Credit is the major constraint to fertilizer use among small farmers

p.74: Credit alone is not enough: need output market structure and input markets lack reliable seed and fertilizer sources. To impact agricultural productivity in rural areas, USAID must, in collaboration with other donors, widen its current credit driven strategy in assisting agric. marketing

p.78: USAID should offer technical expertise and other resources to improve storage and conservation practices of cowpeas, onion, and maize.

p73: "the Ministry of Plan publishes a 150 page directory of donor involvement in

agricultural input and output marketing” Does this suggest that other donors are taking care of input and output marketing as well as any USAID initiative could hope to do, so we can focus on financial services?

b. Are there strong synergistic linkages between SO1, SO2, and SO3?

p58: "USAID's SO3 is dependent on quick development of a Rural Code that encourages investing in NRM practices; this is an unlikely combination". Does this matter for SO1 and SO2?

Is there important spatial variation across district commissions in land tenure constraints to increased production? If so does this imply that areas where these constraints are less binding should be targeted by USAID for SO2 interventions?

p153: Donors need to agree to target high subsidy programs to geographically poor areas and the most economically viable areas receive support for sustainable institutions. Are these geographic overlaps and target areas correlated with target populations across SOs?

Page 59 reports that SO3 is focused on conservation, especially forestry not agriculture, and for this reason SO2 and SO3 are weakly linked. Does this imply that USAID should more strongly link these two SOs or should one of the SOs be dropped?

Will SO2 interventions increase opportunities for literate women and decrease the need for child labor in activities such as livestock raising due to the availability of alternative savings mechanisms? Is this reduction in the economic benefit of children and the increase in return on women's non-child raising activities significant enough to have an effect on fertility rates? ie is SO2 more strongly linked with SO1 than SO3?

Currently fertility rates in Niger appear to be constrained by low income levels, based on my interpretation of DHS data. When I look at the DHS data it says we should expect that as incomes rise, holding other things constant, that the achieved family size would increase. Is the relatively rapid growth in rural incomes in the absence of other changes going to offset any contributions of SO1 activities to reduce fertility? Or is the way in which incomes will grow under SO2 initiatives helping to reduce fertility rates?

On page 52 the report says "increasing yields per ha can increase labor use efficiency and potentially will release time and land for cash crop cultivation". Page 52 says that additional weeding may be needed if fertilizers are applied. Is this release of labor time, increased returns to labor, and potential increased demand for child labor expected to increase or decrease fertility or childrens' attendance at school?

Are SO2 initiatives to replace or promote the cereal bank initiatives under DPM?

On page 52 the report says "IPM, improved markets (undefined), and secondary road networks will help farmers increase food security more than cereal banks." However, on page 59 the report says "mitigation is essential for economic growth in Niger and it supports the goals of SO2 and SO3....activities could include credit, FOOD STORAGE,

food processing, and phosphate fertilization" On page 78 it is proposed that "SO2 should offer technical expertise and other resources to improve storage and conservation practices of cowpeas, onion, and maize....and provide expertise in storage of cereals"

p132: What is the rate of return on livestock as a savings mechanism? Is there a savings deposit rate of return that would reduce livestock numbers and improve herd offtake? Would SO2 in this way contribute to SO3 objectives?

c. What is the evidence on price sensitivity of demand and supply of funds?

p138: "demand of loan funds is sensitive to interest rates" but "demand for loans are relatively insensitive to price"

p138: "the ability for investors to shift to more profitable activities as interest rates rise" This seems to imply that low interest rates makes investors abandon high return activities.

p139: "At the end of the drought savings were withdrawn and reinvested as the returns to livestock production rose" but "this suggests that savers are highly insensitive to interest rates"

p161: the supply of investment capital is very sensitive to returns...but not evidence that demand for loans is sensitive to interest rates.

d. How do we operationally define access, use, and reach for financial services?

p8: only 2% of the population have access to credit

p155: Today less than 2% of the population of Niger receives financial services from formal or semi-formal institutions.

p157: the only way to realize AID/Niger targets by 2002 is...expanding services to reach 10% of the Nigerien population in the next decade

p132: Less than five percent of Nigeriens has access to formal or semi-formal financial services and less than two percent to loans through those institutions. Only the informal sector reaches a signif. % of Nigeriens.

e. Is there too little credit being offered or are there too few business investment opportunities being provided to lenders? Assessment team needs to help the reader put together the following statements spread throughout the report on different pages.

p155: At the same time that insufficient funds are available to finance economic growth, there is a large surplus of savings...in the informal sector largely invested in livestock but close to \$200 million is kept in cash

p10: Strong depositor demand for a safe, accessible savings account.

p13: Formal financial institutions are likely to return a large portion of their assets to depositors in an effort to downsize...

p9: Mechanisms to analyze MSE risks and deliver credit are virtually non-existent.
p158: The most significant constraints to increased investment in SMEs is the lack of viable economic activities to finance. Much of the lack of bankable activities is due to public sector obstacles to the creation and operation of formal sector enterprises.

p34: USAID should provide lenders with technical assistance for preparing business loans.

p34: Unless entrepreneurs develop their own business plans they may not understand the business.

p13: rural sector access to formal-sector liquidity is best achieved using semi-formal sector intermediaries

p12: women's activities are profitable, they are able to pay the full cost of obtaining financial services, and they are more likely to have access to credit when it is provided at full cost rather than at subsidized rates.

p131: The 1995 study of rural financial institutions in Niger found money-keepers offering both short and long term savings programs for their savers.

p13: What is now needed is to merge the WOCCU (deposit services for savers) with SICR type brokering of funds from formal sector institutions. Is your description in paragraph five on page 151 of the Saé Saboua case of using CLUSA/SICR to access bank loans a model to build on? Very interesting how well the market works.

p141: this section on estimated supply of savings in Niger was interesting and well written, but could be shortened.

- **There are some statements that sound unbelievable or lack a clear logic.**

p.70: "In 1982 Niger was one of the largest produce (pineapples, green beans, mangos, chili peppers) exporters to France, shipping 12,000 tonnes." This is the first time I have ever heard that Niger is a major pineapple exporter to Europe.

p71: "Abidjan is a market largely untargeted by Niger's exporters"

Onion exporters focus on Abidjan. It is not an unknown market. What does this statement really mean?

p8: "loan agreements that depend on personal relationships and the eventual profitability of business endeavors...transform lenders into a blend of creditor and quasi-equity holders, can pose management problems for MSEs and erode owner equity even when profits are high." This sounds like a wonderful flexible interest rate lending approach that spreads risk and makes more investments possible. The 1989 paper by Christopher Udry reviews this type of financial market arrangement in Nigeria. I quote him in my paper "Evaluating Financial Sector Development Linkages to Economic Growth" that I prepared on your behalf for the USAID Economists Workshop.

p81: Section on Linkages Between Micro-Enterprises and Other Sectors of the Economy

might find my USAID economist paper useful

p8: "potential growth impact of the FCFA devaluation is FCFA 1.3 bl. However, the text does not mention that the nominal Naira/FCFA exchange rate in early 1995 was the same as in 1993. How are we to expect this big a growth impact?"

p13: "barter transactions plus the highly personal manner in which credit is allocated in the informal sector preclude resource allocation based on expected rates of return." I find this hard to believe and I don't follow the logic.

p19: Table No 3 1988 elevage et de la peche should be 26%

p31: "current irrigation systems are difficult to manage partly due to the small size of farm plots" This statement is not supported in the assessment report. Evidence from Mauritania [see Rogers 1993 article in the edited volume by Tad Park given to the assessment team] suggests that it is the number of farmers that must work together that causes low yields on small perimeters. A 10 ha irrigated area with land allocation per farmer of 0.2 ha is likely to have lower yields because 50 farmers have to make decisions together which is much more difficult than when 20 farmers each with 0.5 ha plots have to make decisions jointly for the same land area. The reason for low yields could be the number of farmers making decisions together rather than the plot size. Holding number of collaborating farmers constant, larger plots will likely result in lower labor intensity and thus a lower rate of return on capital. This may end up constraining investment in irrigated agriculture.

p58: "Tahoua rock phosphate...is bulkier than other fertilizers but the higher transport cost will help keep it within Niger." Are we trying to limit exports?

- p79: the fifth paragraph which talks about high margins on onion marketing does not provide evidence that improved market news and information on the radio would reduce these margins in favor of producers. Much of this margin is taken up by other transaction costs. A simple budget analysis of marketing margins is needed to justify this statement.

p118: There is a lengthy discussion about the lack of sectoral mobility for labor and limited interest of artisans in training the general public in their crafts. This section should at least mention the caste system in Niger related to many of these craft activities as one constraint on entry into these sectors.

p137: first full paragraph on interest rates and relaxing of interest rates is confused and doesn't get any point across. A lot of this financial markets basic explanation text could be consolidated into one Annex.

p152: "Donors have budgeted 35 billion FCFA for semi-formal financial institution development".

With four million SME potential participants this is nine thousand FCFA for every potential participant in the country. Does this support the need for USAID SO2?

p160: Donor coordination should set standards so banks do not get donors to compete against each other to offer banks higher and higher levels of guarantees. (does this suggest that there is already too much support to the financial sector?)

p32: Shouldn't media info efforts be linked to private sector initiatives such as that of REUTERS?

Review of Draft Report "USAID/Niger Economic Reform and Micro enterprise Program"

Mike McGahuey, AFR/SD/PSGE

General Comments

The report provides good information and some good analysis. However, I think that the report missed addressing the major questions and issues. And, several very good ideas—such as widespread use of phosphorus, are marginalized by framing them as stand alone, magic-bullet prescriptions instead as important components of a system. Finally, progress by SO2 and SO3 in establishing enabling conditions for broad-based use of more productive, less-degrading practices is largely ignored. In sum, the following two main questions are inadequately addressed: (a) Does Niger have potential for substantial growth in the rural sector and, if so, (b) has the Mission program been on track?

1. The report did not adequately address the question of whether or not Niger has the potential for growth in the agriculture sector. In particular, the report did not fully address the production potential. There are estimates for single inputs like phosphorus, but these are treated in isolation of a general development process.
2. With respect to production (SO3), this report is a proposal, not an assessment. Rather than assess the potential by addressing the above questions, the report designed a program based on a single-dimensional prescription—more use of phosphorus. Was this what the team was asked to do? (A focus on phosphorus is necessary, but hardly sufficient to increase production. And, if phosphorus, or any other input, is to be successfully promoted by somebody, that somebody needs to ensure that this investment has the highest return and lowest risk. History shows that dealing with phosphorus in isolation of other inputs: Senegal tried narrow prescriptions in the early 1970s which was abandoned by government and farmers alike in the 1980s. Farmers went back to a systems approach to production. See a 1984 report by Dancette et. al.)
3. The sections on production fail to take into account the SO3 focus on identifying and establishing the enabling conditions for broad-based adoption of more productive and less degrading practices. The paper assesses SO3 from a narrow technology prism by stating that SO3 focusses more on conservation practices rather than production practices. SO3, from this perspective is "practice-neutral." The intent of SO3 is to expose farmers to a wide array of production practices and then to empower them to act on their decisions. It is not to establish a prescription for each zone based on narrow biophysical criteria—farmers have a habit of making their own choice, but empowered, more knowledgeable farmers have a wider range of options for investing. The basis for the SO3 focus on conditions rather than on technical prescriptions is fifteen years of learning. These lessons made it clear that many farmers will invest in more productive and sustainable practices if incentives are sufficient, risks sufficiently low and constraints reduced. These lessons also made it clear that farmers, once empowered and more knowledgeable about the options, often make production decisions that outsiders would not expect. The point is that trying to mandate a particular mandate produces marginal returns. It is more productive to develop demonstration sites, empower people, and let them make their own

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decisions. In my mind, one of the options that would be used more widely would be phosphorus, but it would be used as part of a system.

4. The paper disregards the leadership by Niger and by the Mission in identifying and establishing the enabling conditions over the last ten years. Niger has made substantial progress over the last ten years on a number of fronts including the transition from a military to democratically-elected government, changes in the rural code that authorize rural communities to manage natural resources on village lands, steps to establish systems to resolve land disputes and confer greater tenure security, the legalization of self-determined cooperatives, reduction in transport transaction costs, and the orientation of GON agencies toward outreach and away from regulation. This leadership is an important contribution to development progress in the subregion as well as to the rest of Africa. Since Niger is ahead of others in addressing these serious issues, the lessons produced have application beyond Niger's borders. (In some respects, the issues that Niger must face today because of the burgeoning people-to-resource ratio are those which others will be facing in the future. There is no reason to pay for these lessons over and over.)

5. The paper disregards the increase in number of farmers who have invested in more productive, less-degrading practices over the last ten years. As we speak, farmers and communities are investing capital and labor in soil and moisture conservation and soil enriching measures. There is no precise report on the number of people who have adopted better practices but numbers from Mardi, Badagisheri, Majjia, and communities engaging in natural forest management schemes are illustrative. (The following are estimates of how farmers and communities are investing: about 10,000 ha under farmer-managed natural regeneration in the Maradi/Aguie region; about 3,000 ha have been treated with water-harvesting practices in the Badagisheri area; about 7,000 ha are protected by windbreaks in the Majjia Valley; and, 225,000 ha are under community-managed natural forest management for production and sale of fuelwood. A significance of these examples is that they provide insights into what to do to promote broader intensification. These cases also show that farmers base their investment decisions on an array of criteria. Consequently, programs should focus on empowering people to make choices and to capitalize on those choices; programs should avoid supporting narrow prescriptions.

6. The idea that wider use of Niger phosphate would catalyze broader use of other production and conservation practices is not supported in field observations and literature. These sources indicate that investments in higher-priced inputs follow investments in measures to reduce soil and water loss. From a farmer's perspective, establishing an environment to increase fertilizer-use efficiency (FUE) is a first step. This suggests that a winning strategy for the extension of any capital inputs would be to identify those farmers who have already invested in soil and water-conserving measures and work with them. They may be more likely to use inputs, and the efficiency of those inputs would probably be higher which would produce a more effective demonstration for their colleagues.

7. The report should decouple gold and phosphorus. This suggestion oversimplifies and distracts from the real constraint to intensification: lack of broad-based enabling conditions. Capital, using evidence in the report, is not the constraint to intensification. The report estimates a high level of liquidity in the Niger economy. The issue that the assessment should have focussed

on is "Why are the majority of Niger farmers and entrepreneurs not investing these funds into more intensive agriculture (including use of phosphorus)?" In addressing this issue, the assessment should have asked three additional questions: "Where are people intensifying?"; "What distinguishes those who invest in more intensive production and those who do not? (i.e., the enabling conditions)"; and, "What are SO2 and SO3 doing to establish the enabling conditions?"

As noted above, tens of thousands of hectares in Niger have come under more intensive management by farmers and communities during the last five to ten years. As per analyses in preparation for programs under SO2 and SO3, a list of candidate "enabling conditions" would include devolution of authority, greater security of resource tenure, increased access to markets, increased access to capital, increased knowledge about management options, increased skills at the household and community level to manage enterprises, etc. The report noted most of these, but it failed to note that the Mission's programs have made substantial progress in testing and establishing these conditions over the last ten years. It does not assess whether the Mission is on the right path or not.

(The assessment should refer to experiences with phosphorus in Senegal. Senegal processes phosphorus but exports the vast majority with little being purchased by its own farmers—even though the soils are seriously deficient in phosphorus. The problem in Senegal, as in Niger, is not availability so much as want of enabling conditions.)

Recommendations for Assessment

1. **Build on what works.** As we speak, farmers are investing in more intensive production practices. In Niger they are building water-harvesting and anti-erosion structures, establishing windbreaks, managing field trees, managing natural regeneration of forests, applying mineral fertilizer, applying pesticides, establishing pole plantations, and managing manure. A couple of lessons emerge from these. First, studies in Burkina indicate that farmers start with measures to stabilize the physical and chemical environment and then move to more expensive and risky inputs. For inputs such as fertilizer (including phosphorus), this makes ultimate sense: by reducing erosion and maximizing soil moisture, farmers increase fertilizer-use efficiency. Secondly, farmers use an array of criteria for selecting production practices. Consequently, programs should not focus resources on a narrow prescription. (Bob should have a very good handle on what people are doing and why.)

2. **Maintain a focus on the identification, establishment, and validation of "the Enabling Conditions for Broad-based Use of Better Practices."** The biggest bang for the buck comes from contributing to the empowerment of farmers and communities to make choices and to capitalize on those choices. This has been the basis for SO3 since its inception.

b:\nigerast

Comments on:

USAID/Niger Economic Reform
and
Microenterprise Program

John Schamper
REDSO/PSD
December 14, 1995

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I. TREATMENT OF INTERNATIONAL TRADE IN THE ASSESSMENT

1.10 In general, the treatment of international trade in the assessment represents the weakest portion of the document. There are numerous assertions founded on inadequate data, and in some cases, outmoded, dubious, and discarded economic theory. For example, in one case an argument for trade protection is advanced with no more theoretical justification than a curious mathematical theorem published in 1942 (P. 27, para 1), which is itself inconsistent in its policy implications, and the weight of a speaker's argument to a protectionist-minded audience in the United States (P. 27, para 3). The author advances the case for managed trade based on a "negative proof" argument ("Economists have never proved that free trade is better than managed trade." (P. 27, para 1)); of course, this argument represents a logical failure - the negative of something can never be proven (such as, "prove you didn't rob a bank last week").

1.20 Aside from failure in logic and absence of theoretical base, there are several compelling reasons the trade portion of the Assessment absolutely must be drastically revised. Trade policies advocated in the Assessment, if followed by USAID/Niger, would put the USAID/Niger program at variance with both Agency policy and trade policies for Niger being advocated by the Bretton Woods institutions. In addition, application of trade policies advocated in the assessment would run directly contrary to policy advice provided to the Government of Niger under the USAID-funded National Economic Policy Reform Project (NPRP) (683-0259); also work done under the NPRP, and the last evaluation of NPRP, has shown application of the export taxation policies administratively infeasible and costly in terms of lost export markets.

1.21 The authors of the assessment advocate a trade strategy based on implementation of variable taxes on exports and imports. Development theorists, worldwide, are now convinced that there are new policies which encourage economic development more than those open borders to trade. Because it qualifies for special and preferential treatment as an LDC, Niger probably would not encounter difficulties with the International Trade Organization (which it intends to join, according to the IMF Policy Framework paper) under the GATT agreement by implementing a system of variable levies (which are basically proscribed under GATT rules). Implementing variable levies would run directly counter to structural adjustment policies being advocated by the International Monetary Fund and the IBRD. Policy prescriptions advocated in the assessment, if followed by USAID/Niger, would put the Mission in direct conflict with the IBRD and IMF as regards trade policy for Niger.

1.22 Considerable analytical work has been done under the USAID-financed Niger Economic Reform Project (683-0259) which has shown the negative effects of export taxes and other measures restraining international trade on the economic development of Niger. Indeed, removal of export taxes and other barriers to exports has been a condition precedent to certain disbursements under NPRP. Presumably, if USAID/Niger followed trade policies advocated in the assessment, it would reverse its position vis-a-vis the Government of Niger as regards the economic effects of export taxes, in spite of the faulty theoretical base noted above, and its own experience with application of export taxes in Niger.

1.23 Part of USAID/Niger's work on export taxes shows that they are administratively infeasible because of weak Government of Niger administrative capabilities. The Mission has found that, consequently, export taxes serve only to further corruption, and generally discourage exports. Nothing has occurred during recent years which has improved the administrative capabilities of the Government of Niger. Consequently, by advocating export taxes, the Assessment would have the Mission advocating policies to reduce economic growth. The idea of export controls could be

discarded on grounds of administratively infeasibility alone. On P. 29 of the Assessment, the authors appear to argue that the "flexible tariff" could be applied to the formal sector exclusively; this would, however, create a whole new set of definitional and administrative problems, and more room for corruption.

Effect of Nigeria

1.30 The authors correctly perceive that instability in Nigeria's economic policies have negative effects in Niger. However, their analysis of how to deal with these problems is seriously faulted by logical inconsistency, lack of data, and unsupported assertions. Consequently, policies advocated in the Assessment are seriously flawed, and the Assessment neglects to outline policies and programs which would be positively beneficial for economic growth.

1.31 Given that Nigeria's economy is more than ten times as large as that of Niger, and that the two countries share a common mostly uncontrollable border of over 1000 km, economic and trade policies followed in Nigeria will have a major impact in Niger. The Assessment is unbalanced in its approach to the "Nigeria problem," concentrating on problems to the exclusion of opportunities. The proximity of the enormous Nigerian market offers numerous economic and trade opportunities for Niger, as well as certain kinds of problems, which can be classified in the areas of economic, trade and financial policies followed by the Government of Nigeria. The Assessment in its blind advocacy of protectionist trade policies, fails to distinguish between these problems and to offer differentiated solutions. Negative Nigerian policy influences could be further elaborated as: (a) inconsistency of policy; (2) protectionist policies followed by the Government of Nigeria; and (3) maintenance of the Nigerian Naira as an inconvertible "controlled" currency. While not an official policy of the Government of Nigeria, a fourth problem could be added to the list - that of endemic, pervading corruption in Nigeria, which affects all business and trade relations between the two countries.

1.32 Economic policies of the Government of Nigeria have long been inconsistent, and consequently do not offer a basis for planning in a much smaller neighboring economy such as that of Niger. While Niger can do little to affect the inconsistency of policy in Nigeria, it can affect the flexibility of its own policies. There are several implications, which are not noted in the Assessment. Also Niger can work to diversify its markets. Another is that policies and strategies in Niger should have maximum flexibility. For example, Nigerien traders may well develop an export market in Nigeria for a given product, only to find that product "banned" by the Government of Nigeria for export. There is a premium for diversification of markets and the ability to develop alternative products, for internal consumption or export, in this situation. Also, Niger has no interest in assisting the Government of Nigeria to apply inconsistent policies. For this reason, the Government of Niger should do all that it can to maintain fluid trade in its border areas with Nigeria, as opposed to setting up export controls and variable taxes managed by a "panel of experts." Most trade is already through informal channels, which are little influenced by inconsistent Government of Nigeria policies, at least over any significant length of time; the Government of Niger should positively encourage it.

1.33 Part of the problem for Niger's trade with Nigeria results from plainly protectionist policies sometimes followed by the latter. For example, several years ago, Nigeria embarked on an ill-advised policy of "food self-sufficiency," which, in effect, banned a number of Nigerien products from the country's markets. While informal trade assured a certain level of exports, Niger was nonetheless adversely affected. While the pursuit of protectionist policies in Nigeria creates victims, in an economic welfare sense, among both consumers and producers in both countries, protectionist

policies, such as variable import and export taxes, by the Government of Niger, as advocated by the authors of the assessment, would only compound the problem. In a certain sense, there is no "solution," since trade protectionism inevitably causes damage to consumer and producer welfare. However, policies such as diversification and ability to rapidly change agricultural product lines could serve to limit damage, and these are not outlined in the Assessment. Indeed, much of the damage limitation available to Niger from inconsistent and protectionist policies by Nigeria derives from the fact that a high proportion of Niger's exports to Nigeria are contraband. Policies such as export taxes, advocated in the Assessment, would serve to formalize this trade, and render it more susceptible to shocks resulting from protectionist and inconsistent policies in Nigeria.

1.34 The status of Nigeria's currency, the Naira, poses certain problems for Niger. In theory, the Naira is a blocked, inconvertible currency, the value of which is fixed by the Central Bank of Nigeria. Since Niger has a very small economy compared to that of Nigeria, and consequently the official value of the Naira can have major destabilizing effects in Niger, to the extent that official value of the Naira applies to trade between the two countries. The Assessment report correctly notes that most trade between the two countries is on informal markets, but fails to provide an appreciation of implications of this fact for trade between the two countries. While the assessment notes the repeated devaluations of the Naira since the mid-1980s, and describes the effects as destabilizing, the report offers no data on parallel market values of the Naira during the period, even those it was these that "drove" most trade during the period. It is quite possible that parallel market values were more stable than official values during the period, and that the case of the destabilizing effect of the Naira is weak.

The value of Nigeria's Naira, being determined by the Central Bank of Nigeria, is generally at a level in excess of that available on parallel markets. One effect of the overvaluation of a currency is to subsidize imports. Consequently, many imported goods in Nigeria are priced lower than they would be if the Naira were priced on an open market. In addition, a large, but unknown proportion of goods imported into Nigeria are contraband, further reducing the general price level of imports in Nigeria. Also, Government of Nigeria policy is to subsidize the prices of certain important commodities, fuel and fertilizer being prime examples. Niger, as a country, can maximize its benefits from these subsidies, paid by Nigeria, by maintaining policies in favor of fluid, informal trade along its extensive border with Nigeria. Such policies would be in direct contradiction of the "variable import and export levies" advocated by the authors of the Assessment. While it is not inconceivable that someday the Government of Nigeria will achieve coherent policies, which would limit the ability of Niger to benefit from these subsidies, there is no reason Niger should not benefit from these windfalls while they are available. Niger should, however, use the time these windfalls are available to strengthen its own economy by making appropriate investments, particularly in those areas where it has a long term comparative economic advantage such as livestock and production of certain food crops.

The assessment cites several times (P. 7, para 3) a study suggesting that Niger lost CFA 13 billion (\$26 million) in export revenues due to devaluation of the Naira by 37.7 percent between 1985 and 1989. This estimate should be viewed with extreme caution. Firstly, no evidence is offered of what happened with parallel exchange rates during that period, even though this data was readily available in Niamey. Secondly, the late 1980s were also a period in when an ever greater proportion of Niger's agricultural exports were going through informal channels. Consequently, official statistics are misleading as an indicator of export activity for that period.

1.35 The presence of widespread, pervading, and oppressive corruption in Nigeria, when added to inconsistent and incoherent policies by the Government of Nigeria, has important implications for the conduct of trade between the two countries. Notably, policy problems and corruption limit the options available for facilitating trade. For example, the absence of these problems, one could imagine export finance facilities and formal trade organizations which could result in a more efficient technical organization of trade. However, the Government of Nigeria lacks credibility, and there is a lack of trust in any agreements it might make, and especially in the application of any regulations by its civil service, all of which serve to preclude these possibilities. Consequently, agricultural trade between the two countries is best left on an informal basis.

Should Niger Be Part of the CFA Zone?

1.36 One could question whether Niger "should" be part of the CFA Monetary Zone. Given Niger's geographic location, and the size of its economy relative to that of Nigeria, a strong case could be made that it would be in the best interest of Niger to have a currency closely tied to that of its largest Neighbor, Nigeria. (As a digression, it would be difficult to imagine Canada, with a much smaller economy, tying its currency to Germany, as opposed closely following monetary policies in the United States, or for Belgium to link its currency to United States instead of Germany.) However, belonging to the CFA zone carries certain advantages for Niger. It's largest trading partner outside of Africa is France. It also has trade relations with neighboring CFA countries. Niger has minimal ability to implement the issuance and management of a national currency. A blocked, inconvertible currency for Niger would be an administrative nightmare, and the resulting increase in corruption would probably cause great damage to the economy at all levels. Since Niger can do little to affect the official parity of the CFA vis-a-vis the Naira, the alternative, damage limiting policy would be to pursue policies which encourage a maximum of price flexibility. Indeed, it is likely that present informal markets, through which most trade already moves, already provide a maximum of price flexibility. The Government of Niger could pursue policies to encourage price flexibility where it presently does not exist. This would be a strategy to limit the damage in Niger caused by instability in the Naira, rather than cause additional damage as would the protectionist measures as advocated by the authors of the Assessment.

II. MINERAL-BASED STRATEGIES IN THE ASSESSMENT

2.10 In general, sections of the Assessment which deal with the potential for mineral development and enhanced Government of Niger revenues from mineral development portray an unrealistic scenario for mineral development, and a high level of speculation by the authors. There are major problems in the presentation for exploitation of phosphates, and fertilizer development, as regards trade, and extension of fertilizer use in Niger. Consequently, the treatment of minerals in the Assessment provides little that is useful in defining strategic interventions by USAID.

Phosphates and Fertilizer

2.20 As regards fertilizer, the report correctly notes the problem of depletion of soil nutrients in Niger and recommends that an evaluation of phosphate reserves in Niger has not been made, and advocates that one be undertaken. Given policy reform by the Government of Niger in the area of mining law, it may indeed be propitious to undertake such an evaluation of reserves. However, knowledge of the physical characteristics of phosphate reserves is only a very small part of the problem in looking at solutions for problems of soil depletion in Niger.

2.21 Even if phosphate reserves in Niger were proven extensive, this would not necessarily imply: (a) that they can be economically mined on a commercial basis at the present time, either for export or for the domestic market (which would greatly depend on world market conditions, and on the cost, f.o.b. of supplying the world market from Nigerian reserves); or (b) that the lowest cost alternative for developing fertilizer use in Niger over the horizon, of, say 20 years, would be exploitation of domestic phosphate reserves. While supply of phosphate from domestic reserves may indeed be a viable alternative, a great deal of analysis would have to be done to establish that fact. Without such analysis, and, indeed, even knowing the extent of domestic reserves, a fertilizer strategy based on exploitation of domestic reserves is pure speculation.

The Effect of Nigeria on Fertilizer Markets

2.22 The assessment report notes that most fertilizer presently used in Niger is from contraband border trade with Nigeria. In effect, Nigerian farmers benefit from part of the present fertilizer subsidy accorded by the Government of Nigeria to Nigerian farmers, the other part of the "subsidy" on this fertilizer being captured contraband traders. The report also notes that fertilizer subsidies in Nigeria are scheduled to be eliminated in a few years time. Two implications are worthy of note: (a) if the development of domestic fertilizer production in Niger is problematic given capital costs, limitations of market size, energy costs, and fertilizer market development costs, financially profitable development is likely impossible if subsidized fertilizer is readily available from contraband trade; and (b) as regards removal of fertilizer subsidies in Nigeria, given Nigeria's record of inconsistent and incoherent economic policies, caution is urged: subsidies may well be in-place for some time. The Assessment does not provide adequate consideration of the effect of Nigerian fertilizer markets development of fertilizer use in Niger.

Putting the subsidy argument aside, the proximity, and its extensive natural gas reserves, has important implications for the development of fertilizer fabrication in Niger. Compared to Niger, Nigeria represents a huge market. Unit costs for fertilizer fabrication and distribution in such a market have the potential of being far lower than in a country such as Niger. To the extent that fertilizer fabrication is energy intensive, Nigeria has the advantage of far lower energy costs, even with energy prices at world market rates, than Niger. The authors of the assessment give no attention to these considerations. Indeed a thorough analysis might well indicate that the best economic use of Nigerian phosphate is export to Nigeria for fertilizer fabrication, with Niger subsequently importing the fertilizer it needed.

Strategy for Development of Fertilizer Use in Niger

2.23 The authors give little consideration to realities which have been observed worldwide in development of fertilizer use. They appear to believe that extensive use of chemical fertilizers on dryland cereal crops is feasible over the near term. On the contrary, fertilizer use, worldwide, has developed initially on high value crops. In Niger, this would imply initial development on irrigated crops and on a limited set of high value dryland crops. Little consideration is given to the formidable tasks of developing fertilizer distribution and to propagating fertilizer use through extension to farmers. The report notes that Tahoua phosphate is presently used in the form of a raw powder by farmers. However these are farmers in proximity to the reserves, who have land with soil susceptible to being improved by raw phosphate (which represents by no means all arable land in Niger). In short, the authors of the assessment do not even provide the basis for the outline of a fertilizer

development strategy, and by overemphasizing the importance of phosphate reserves (extent unknown) in Niger, may be misleading in a cursory reading of the document.

Final Note on Fertilizer and Other Agricultural Inputs

2.24 The authors of the assessment reference a world bank study which concluded that use of improved seed could raise Nigerien grain production by 20 percent. While that figure may indeed be accurate, there is also 20 or 30 years of failure in seed production and distribution schemes in Niger. The authors correctly perceive that privatization of seed production and distribution is a potential solution, but they neglect to note that the privatization alternative may also critically depend on trade, at least for certain seed lines. Generally, lowest cost seed production occurs in intensive agriculture, i.e., high use of inputs such as fertilizer, and often in combination with irrigation. Niger is a vast country having relatively poor soils, marginal rainfall and, in most parts of the country, high cost water. It could well be the case that many seed lines could be more economically produced elsewhere, probably in Nigeria. Indeed, the best alternatives for Niger for both seeds and fertilizer may be in privatization of distribution channels, and to the extent feasible, in extension, and in procurement of most product lines through international trade. There is a high probability that the most the Government of Niger could do to promote use of improved seed would be to incorporate improved seed lines in a national seed catalog, and assure that supplies sold under various labels represent the label. This could eliminate any bias in production and procurement of seed supplies in-country as opposed to international trade.

With their single-minded advocacy of a fertilizer development strategy based on use of domestic phosphate reserves, the authors of the Assessment risk advocacy of a policy that would damage the economics of Nigerien agriculture by imposing high costs for domestic fertilizer when imports were cheaper, and by limiting choices available to producers, for many of whom the domestic product is not appropriate. Further costs to the Nigerien economy would be imposed by trying to police contraband fertilizer trade with Nigeria. Such policies could serve to further impoverish Niger's rural population.

Gold Production

2.30 Gold production in West Africa dates from Roman times when it already constituted an important element in trans Sahara trade. In modern times production has remained largely artisanal, with Ghana (until 1956, the "Gold Coast") accounting for most industrial production in the region. Recent years have seen an upsurge of interest in industrial production as African governments have reformed their policies on mineral production. Also, improved techniques for leaching gold from low yielding and marginal ores such as those in Niger have increased the economic interest in these deposits. At the present time, there are firm plans for new industrial gold production in Ghana, Burkina Faso, Mali and Niger, with some industrial production currently underway in Mali.

2.31 The authors of the Assessment foresee up to 10 industrial surface mines for Niger, which would yield a net revenue in 10 years time of 370 million dollars, which compares with 1993 uranium revenues to 94 million dollars, and which would increase Nigerien GDP by 17 percent. However, the Assessment reports that plans for industrial gold production are at an advanced stage at only one site, Liptako-Gourma, where the Assessment also reports 20,000 artisanal miners are presently engaged in gold mining. No information is provided in the Assessment as to whether industrial

production will displace the 20,000 artisanal miners. This is a major failing. If there is displacement of the 20,000 artisanal miners, the effects of industrial production at the Liptako-Gourma site on national GDP are overestimated. The effects on Government of Niger tax revenues may still be positive, since the Government of Niger could successfully tax an international mining company, but does not have the administrative ability to tax 20,000 artisanal miners. If the 20,000 artisanal miners are displaced, there could also be significant social effects. If immediate families of artisanal miners are included, the livelihood of about 100,000 people could be affected.

2.32 There is no history of successful industrial gold production in Niger. Consequently, the economics of industrial production in Niger must be considered more speculative than those of production in Ghana, or South Africa, where industrial production based on low yielding ores has been successfully undertaken for generations. In general, new technologies for leaching gold from ore produced from surface mines require lower capital investment, which would favor production in an economically and politically unstable environment such as Niger. There are significant environmental problems with surface mining and leaching operations, including pollution of surface and ground water.

2.33 As of December 1995, one foreign company, the Royal Star Resources (Canadian) has signed an agreement with the Government of Niger to exploit a gold mine. The company committed itself to an investment of approximately \$1 million U.S. over a period of four years to develop a mine in the Liptako-Gourma region. The first actual production of gold will begin in 1997. Three other companies (2 Canadian and 1 Kuwaiti) have signed agreements with the Government of Niger to prospect for gold in the same region. However, these agreements commit the companies only to a \$600 yearly fee for three years. The same agreements are renewable for up to 9 years. The Government of Niger is examining a total of 18 applications for gold exploration licenses.

2.33 Uncertainty as to whether industrial gold production will displace existing artisanal production, and over the viability of industrial production itself, limits the ability to use gold production as a basis for planning economic development in Niger. A more likely scenario is that one or two of the more promising surface mining sites will initially be exploited, with significant additional investment in gold production occurring if production at those sites proves profitable. Given various investment and production lags, exploitation at the 10 sites identified in the Assessment would be a long ways away, probably in the neighborhood of a generation, or 20 years, which is far beyond the planning period for USAID interventions in Niger.

Gold and Phosphate Strategy

2.34 The authors of the Assessment identify the translation of revenues from gold production into investments in soil fertility, via exploitation of phosphate reserves, as a strategy for sustainable economic growth in Niger. Since Niger has clear problems for agricultural sustainability due to depletion of soil nutrients, and since surplus revenues from gold production are not sustainable since mining would deplete reserves (estimated at 15 years in the Assessment), the possibility of such a strategy to promote sustainable agriculture is attractive. However, given present uncertainties over the extent of phosphate reserves, the economics of fertilizer production and distribution for Niger, the profitability of gold mining, and the extent of gold reserves, the possibility of such a strategy cannot be used as a basis for planning, particularly for USAID interventions which will be carried out in the next 10 years.

Hydrocarbon Production (not covered in the Assessment)

2.40 Production of hydrocarbons may represent a significant opportunity in mineral production for Niger along with that of phosphates, uranium, and gold. Following the Assessment, in early December 1995, a consortium composed of the French company Elf, and the U.S. company, Exxon announced its intention to invest \$60 million in oil exploration activities in southeastern Niger (Lake Chad basin). Oil has already been found in commercial quantities in Chad side of the basin, which also includes northeastern Nigeria. Indications of significant hydrocarbon reserves have also been reported in northeastern Niger, near the border with Libya.

2.41 The possibility of significant contribution by hydrocarbons to Niger's GDP should be viewed with extreme caution. Rents associated with oil production are highly sensitive to the costs of delivering oil to the world market. For that reason, for example, royalties on Alaskan oil production, on a unit basis, are far lower than those on oil produced in the "lower 48." The definition of "commercial quantity" of oil reserves is itself variable. Generally speaking, in the hydrocarbon industry, "commercial quantity" is defined as a quantity that can be profitably produced. For Niger, the quantity of oil that must be produced from a single well to be considered "commercial," in connection with the Elf-Chevron exploration, is reported at 50,000 barrels, far higher than for many other parts of the world. Other considerations should lead to caution in evaluating the "oil option" for Niger. The supposedly "commercial quantities" of oil in neighboring Chad were discovered over 5 years ago. The "protocol d'accord" for a pipeline to carry the oil to world markets via Cameroon was signed only a few months ago. The "protocol d'accord" does not itself carry any commitment to actually build or finance the pipeline. Once the pipeline is built and oil production in Chad commences, which could be some years, significant revenues would still likely be some years away, since oil production and marketing agreements generally allow the international company to recover its investment costs up-front. Given that basic exploration in Niger is at least 5 years behind that of Chad, it is likely that, even if commercial quantities are found, that significant revenues to the Government of Niger are at least 10 years off. Only the sudden discovery of extremely rich reserves would change these facts, and lead to an accelerated development of oil production.

A knowledgeable observer of oil exploration activity in the Lake Chad Basin reports a figure of \$4 billion from oil industry sources for "all-in" costs of developing deposits. "All-in" costs would include exploration, well drilling, and construction of the pipeline and pumping facilities. Since there have been no reports of the oil industry making any firm commitments for financing development at this level, and since the oil industry would recover its costs up-front, the high development costs would delay any significant oil revenues for Niger to at least 10 years in the future.

Uranium Production

2.50 Uranium was the basis for a mini-boom which occurred in Niger during the mid-1970s and early 1980s. The uranium boom in Niger is itself instructive on the dangers of basing economic development on mineral production. High oil prices in the 1970s and early 1980s, and expansion in the nuclear power industry, led to development of uranium reserves north of Agadez in Niger. According to the Assessment, uranium contributed \$170 million to GDP in 1987, and 91.7 million in 1993. The development of low cost uranium production in Australia and other countries, the collapse of new construction of the nuclear power plants, particularly in North America, the presence of high above ground stocks (yellowcake), led to a steep decline in world uranium prices. Many observers date profound disequilibria in Niger's economy from the "uranium boom," since the Government

created various structures which would become unsustainable in the absence of a high level of mining revenues.

2.51 Uranium production in Niger would almost certainly have ended entirely were it not for the willingness of the French Government, and its consortium partners (Germany, Italy, and Spain) to subsidize it. Prices applied to Nigerien uranium are determined through negotiated agreement between the governments of Niger and the consortium, not by world market conditions, and these price are far above world market levels. The French Government, the most influential partner in the consortium, is willing to subsidize Nigerien uranium production as part of its overall strategy for energy security, to protect French interest in the region, to provide support to the Government of Niger, and to subsidize the main company involved in uranium mining, COGEMA, itself part of the parastatal French electric company, EDF. While uranium production in Niger is thus protected from world market conditions, there is no imaginable similar protection would occur in the future for gold, phosphate, and oil production, which would have to rely on world markets.

2.52 Evidently, Niger could benefit from a marked improvement in world uranium markets, but such an improvement is unlikely. While above ground stocks of yellowcake are in decline, low cost producing countries with extensive reserves, such as Australia, have entered the market. Also, there appears to be small likelihood of any vast expansion in nuclear power, which would improve demand conditions in the market, during the foreseeable future.

Summary: Contribution of Mining to National GDP the Next 10 Years

2.60 It is unlikely that Niger will benefit from any substantial increase in mining revenues during the next 10 years. Oil production, if any, will take at least that long to come on-stream; no marked improvement in uranium revenues is likely to occur. There may be a modest net accretion in national income from gold production, but full exploitation of reserves would exceed a 10-year horizon. Modest expansion of phosphate mining could occur, but with reserves unproven, economics uncertain, and marketing and distribution requiring time to be developed, large scale expansion in economic activity from the phosphate sector is also unlikely.

III. DECENTRALIZED FINANCIAL INSTITUTIONS

3.10 In general, sections of the assessment dealing with Decentralized Financial Institutions (DFIs) are qualitatively superior to other sections of the report. However, a number of improvements could be made.

Credit Subsidies

3.11 On the question of credit subsidies, the Assessment appears "preachy." Given that USAID policy has now long been avoidance of subsidized credit, the report is "preaching to the converted" and needless space is used. In its present form, the Assessment could also mislead USAID management and possibly complicate relations with other donors in Niger, by its simplistic approach to credit subsidies. While, as noted in the Assessment, obtaining agreement among donors on abolition of credit subsidies would be a worthy undertaking, two complicating situations that could arise are not addressed in the Assessment. The first of these is arises from uncertainties when DFIs are created in less developed countries, and the second from the introduction of new technologies.

3.12 When a DFI is created in a LDC its ultimate costs structure is largely unknown. While its cost of capital can be accurately estimated, its other costs, which may be more important than the costs of capital, such as administrative costs, loan loss allowances, etc., remain uncertain. Thus, in a dynamic situation, the presence or absence of credit subsidy may not be evident. A single minded approach to convincing other donors to abolish "subsidized credit" would encounter obstacles from this source of uncertainty.

3.13 A second source of complication is associated with the introduction of new technology. Even private firms sometimes provide subsidized credit to convince customers to accept a new product. The approach can be beneficial since the presence of subsidized credit for a new technology may be critical in obtaining the level of buyer acceptance required to make the new technology sustainable. Once again, the single minded approach to abolishing credit subsidies could complicate relations between the Mission and other donors when the latter are involved in the diffusion of new technologies which they may want to encourage via subsidized credit.

3.14 An alternative strategy is suggested to the Mission under which agreement would be sought with other donors over abolition of credit subsidies by mature DFIs lending for established technologies. This policy could provide unqualified benefits without complicating relationships between USAID and other donors.

The Market for DFIs

3.20 The Assessment could provide a more realistic model for establishing a target in capturing rural savings in DFIs. The Assessment does provide a macro level estimate of rural savings, and notes that most rural savings presently is invested in livestock. However, even under the most favorable assumptions for development of DFIs, all rural savings will not be channeled in DFIs. People have well established habits for investing in livestock. Portfolio theory suggests that, in all events, and at the macro level, savers will diversify their holdings among DFIs, livestock, and other productive investments. The Assessment would be strengthened by advancing a realistic target figure for capturing rural savings in DFIs.

Economic Benefits of DFIs

3.30 In general, sections describing the economic benefits from DFIs need additional work. Two approaches, not mutually exclusive, are possible in estimating benefits. One approach would be in estimating the economic return of investments financed by DFIs. The other, necessarily more complicated, would attempt to measure change in behavior as a result of DFIs. Under this latter approach, one would recognize that individuals make different economic decisions when they have secure financial assets, and are willing to accept higher levels of risk. This would be a necessarily synthetic approach, using models of household behavior.

VI. DEVELOPMENT OF USAID STRATEGY IN THE ASSESSMENT

4.10 With its heavy emphasis on the possible development of mining activities, and the linkage of gold mining to development of phosphate reserves and soil improvement, the Assessment gives the appearance of economic growth in Niger critically depending on development of mining activities. As noted above, substantially increased mining revenues for Niger are highly speculative, and to the extent they are probable, will occur only beyond a 10-year planning horizon. The Assessment

should support the strategy for USAID interventions regardless of the outcome of speculation over mining revenues. It basically fails to do so.

4.11 Sections of the Assessment dealing with income that may be derived from activities financed by Decentralized Financial Institutions (DFIs) need to be strengthened. This could be done using data from farm and micro-enterprise modeling and dynamic assumptions. The Assessment also completely neglects public benefits, not capturable privately, from investments in water and soil conservation which would improve the sustainability of Nigerien agriculture.

4.20 On page 60 of the Assessment the reader finds, "Niger is very rich in studies and concept papers about constraints and impact of its agricultural marketing system. In fact, Niger is far, too rich in agricultural marketing and commodity subsector studies. If only half of what was spent for studies was used to address particular constraints, rural enterprises would be far greater contributors to domestic productivity than they are now." However, one also finds in the document that, " a policy reform project has absolutely the highest priority for USAID funding." There is also emphasis in the document on the fact that, "micro-enterprises operate outside the policy environment." On the one hand, there is the impression that more policy studies are useless, and on the other, that a policy project should be funded before anything else, and, at another point one is left wondering if policy studies are supportive of a micro-enterprise based strategy . The result is that strategy implications for USAID are incoherent.

4.21 If a great deal of resources have been invested in policy work in Niger, without effect, as implied on P. 60 of the Assessment, and these resources would have been better deployed elsewhere, the conclusion would not be to give policy studies the highest priority as stated. A more logical conclusion might be that the previous approach in effecting policy reform had been unsuccessful, and that a new approach is needed. Indeed, such an approach could be the strengthening of grass roots institutions, such as DFIs, to create pressure to effect policy reform, but the authors of the Assessment neglect this possibility.

4.22 The Assessment also makes the point that micro-enterprises and informal businesses do indeed operate outside the policy environment, which leaves the reader wondering whether a policy project would be supportive of a micro-enterprise-based development strategy. The document is deficient in describing ways improved policies could benefit micro-enterprises, such as influencing the level of prosperity, or lack thereof, of their overall operating environment and by facilitating the transfer of micro-enterprises into the formal sector when they outgrow the informal framework.

4.23 Given the level of USAID resources, and its range of involvement in sectors of direct concern to economic growth, an intermediate strategy is here proposed for USAID/Niger. Within the overall area of policy reform in Niger, and in consideration of USAID's limited range of involvement in economic growth, a strategy for policy reform based on obtaining a better environment for DFIs and entry conditions for micro-enterprise to the formal sector would seem to have the highest priority. In addition, the Mission should complement policy work financed by Bretton Woods institutions especially in areas where field presence is important.

V. Annex C: Economic Analysis of Sustainable Increases in in Agricultural Production: Linkages between Strategic Objectives 2 and 3

5.0 In general, this section represents a very artificial type of analysis based on farm modeling using what is sometimes called an "economic engineering" approach not incorporating dynamic assumptions, and dealing with only a small number of the set of constraints which ultimately affect outcomes. For example, there is no incorporation of price elasticities associated with postulated increases in agricultural production. Nor is there any treatment of investment expenditures which would be implied if interventions were to occur at projected levels. For example, according to the analysis on page 53, during year 10, it would be necessary to transport 500 20-ton truck loads of phosphates per day, and 262 loads of urea. If one assumed that about two-thirds of these trucks would be passing through Niamey, this would imply about one 20 ton truck of fertilizer transiting the city every minute, day and night. Given that there is down time for trucks, and that servicing many locations would require round trips in excess of one day, a truck park well in excess of 1000 20-ton trucks would be necessary, which have an investment cost well in excess of \$100 million.

Other implied investments of similar magnitude would be in the areas of fertilizer mining and production, marketing of agricultural products, etc. It would not be difficult to work up an investment bill in the billions of dollars, and this would be without addressing critical constraints in the areas of trained personnel, marketing, etc.

5.1 The Mission is encouraged to set aside this type of artificial analysis at the earliest opportunity. The authors of the Annex have outlined some interesting technical possibilities for application in which realistic constraints do not apply. However broad scale application is totally unrealistic. Elements of the technical programs outlined in the Annex need to be integrated into existing programs in full view of applicable behavioral, financial and technical constraints.

VI. RECOMMENDATIONS TO THE MISSION

6.0 **On Fertilizer:** The Mission doesn't need more trials to "prove that fertilizer works." A safe assumption is that appropriate fertilizer will "work" for different locations in Niger. The sections of the Assessment that pertain to fertilizer do imply a crying need for work to be done on the question of "What is the best way to increase the use of appropriate fertilizers in Niger?" This is a question which should be approached without pre-conceptions about the answer. For example, the answer could be a very limited use of raw phosphate powders with most phosphate mined being exported to Nigeria for fabrication into whole fertilizers, and a portion being returned to Niger. Phosphate reserves do need to be surveyed, along with other mineral potential in Niger, and USAID should encourage such work. A good starting point would be a forum between the Government of Niger and donors to agree on the conduct and financing of a mineral survey for phosphates, to be followed by an economic analysis of the best way to exploit the reserves, if they proved commercially exploitable. This would include an analysis of the international trade aspects of phosphate and fertilizer production. Another piece of work that needs to be done is creating a realistic model for expansion of fertilizer use in Niger. As noted above, the likely result of such a model would be the initial development of fertilizer on high value and irrigated crops, with generalized use on cereals coming much later.

6.1 **On Seeds:** Niger has seen over 20 years of failure with existing structures for seed replication, multiplication, and distribution. Recommendations in the Assessment would serve to further entrench

failed structures, and make reform more difficult. A new approach is needed under which Niger would privatized distributions structures, and anticipate the import of seeds when they can be more efficiently produced elsewhere.

6.2 Other Agricultural Inputs: Niebe, Cowpeas, and peanuts, if one excludes irrigated areas, appear as the best high value food crop alternatives for Nigerien farmers. These crops are also important for women. There are numerous references in the Assessment to pest problems, which greatly reduce yield, with these crops. The Mission should actively pursue strategy for pest management, which would include use of herbicides/insecticides where necessary. Since much labor is required in the harvesting and processing of these crops, a parallel program of technology improvement would be appropriate, and quite possibly represent a profitable lending line for DFIs.

6.3 The BRK Bank: USAID has invested considerable resources in this institution over the years. It is one of the few long standing micro-lending institutions in Niger, and has built up a cadre of trained micro-lending officers. Problems, as outlined in the internal audit, and the "programme de redressment," are serious and numerous. However, management has given every indication it is willing to tackle the problems in a serious manner. The Mission should set a realistic period, perhaps about 2 years, in which the institution could become a true mutual bank specializing in micro-lending, and continue support through that period, after which the institution would be sustainable.

6.4 The CLUSA/SICR Project: This project, while long-standing, appears to lack vision and direction. The adequacy of CLUSA input in providing vision and direction needs to be closely examined. Project management appears uncertain over what form the institutions should eventually acquire. There appear to be surprising institutional weaknesses for a mature project, such as lack of trained personnel. At the same time CLUSA/SICR is performing a crucial financial intermediation role between the formal financial sector and agricultural producers, via their cooperatives. This link should be expanded and strengthened. CLUSA/SICR should be encouraged to submit a detailed "Business Development Plan," in which the describes the vision of the organization, as well as its future development plans. It appears that a strictly co-operative bank, in which cooperative institutions, but not individuals, would be members, would be the best type of organization. Such an institution could further develop financial intermediation role between the formal and informal banking sectors, since, presumably, it would have access to financial markets. The current failure of banks to serve the rural sector was highlighted in the Assessment.

6.50 The WOCCU Project: This is by far the most promising USAID-financed activity for DFIs, and should be fully supported. Expansion in credit unions has been extremely rapid. WOCCU management has a solid program with high customer acceptance filling a definite need in the community. Several recommendations are:

(a) "Success breeds success, and failure breeds failure" Interviews with WOCCU management revealed the need for credit union development to proceed at a deliberate pace. Groups have to be organized, people trained, a certain level of monitoring maintained, etc. A reckless pace of credit union expansion would result in these systems breaking down, to the detriment of the now strong reputation of the credit union movement. If the Mission wishes to promote a pace of credit union development which would overstretch existing management structures, alternatives for new structures should be examined. It might make sense, for example, to have an "Western Division," and an "Eastern Division" of the credit union organization.

(b) **Set a well founded target for capturing savings in credit unions:** The credit union movement is national, as opposed to local in the case of the BRK, and sectoral in the case of CLUSA. Economic and financial modeling under realistic assumptions could yield a "target level" of savings for capture by credit unions. Such a model would necessarily rely to a large extent on portfolio theory according to which spread their savings across a range of assets. The capture of a realistic level of national savings in DFIs would be a worthy goal for USAID/Niger, and establishing the level would provide a ready benchmark for progress.

6.60 Mineral Revenue: Within a ten year planning horizon, these should be seen as speculative. The attitude of USAID should be to "do the right thing whether or not this-or-that possibility of mineral wealth proves out." Also, there is another element which has not yet been considered in the event of increased mineral revenues: all indications from political developments within Niger during the last several years are that a good part of the surplus from any additional mineral revenue would be captured by the Government of Niger to pay its own civil servants. The idea of translating increased mineral revenues into sustainable agriculture via increased use of fertilizer is an excellent one, but it has to be pursued realistically. Hopefully, within some time frame, increased revenues from minerals, uranium, phosphate, oil, or gold, will be available. In the meantime, the base for sustainable agriculture should be created via realistic programs and policies in conservation, agricultural extension, rural finance, international trade, etc. Furthermore, the base that is established should be expandable whether or not resource flows from expanded mineral production are available.

6.70 Conjugate efforts with the IBRD and IMF: During the first week of December, apparently the Mission received an informal invitation to assist the Bretton Woods institutions with fiscal policy reform. It is difficult to imagine long term progress for Niger unless this area is adequately addressed. With its present depressed level of revenues, the Government of Niger cannot build and maintain the essential productive infrastructure that would be required to sustain a higher level of growth. Given that uranium revenues are likely to remain depressed, and that future revenues from other mining activity are speculative, the need is urgent for the Government of Niger to build an adequate revenue base. Collaborating with the Bretton Woods institutions in this area would permit the Mission to focus its policy resources in a area absolutely critical to Niger's future.

With the limited policy resources available to the Mission, it appears that a policy reform/dialogue strategy based on, (a) collaborating with the IBRD/IMF on public revenue, (b) improving the policy framework for DFIs, and (c) improving the environment for MSEs, particularly for graduation into the formal sector, would be more than sufficient.

6.80 Take a positive, outward looking attitude with respect to trade (and look at Nigeria as presenting both opportunities and problems): The most serious failing in the Assessment is in its inward "closed economy" approach. While the Assessment would overtly (mis) lead the Mission in the direction of export taxes, it would less overtly lead the Mission toward "closed economy" solutions in areas such as fertilizer, seeds and agricultural inputs. "Closed economy" solutions are now seen as the prescription for economic failure, worldwide. Within this context, fertilizer development, and seed production and distribution, if done on a "closed economy" model could impose high costs on Nigerien agriculture and impede its development. On the export side, rapid expansion of urban population in coastal West Africa will likely lead to strong regional demand in agricultural commodities which can be supplied from the Sahel. Niger should be positioned to take advantage of these rapidly growing markets.

6.90 **More attention to value added in the agricultural sector:** Aside from increasing crop production via a very hypothetical increase in use of phosphate, the Assessment does little to identify value-added opportunities in the agricultural sector. For example, following the collapse of the parastatal hide tanning operation, control, grading and selection of Nigerien hides has apparently been abandoned, and unprocessed hides are exported to a market in Kano Nigeria. This is the lowest value-added alternative for Nigerien hides. Possibilities of value added in the tanning process, and of more lucrative markets in Europe, are foregone. Another striking example is Niebe. Production packages which would include a few purchased inputs, could greatly increase the productivity of this crop. Women are heavily involved in the production, harvesting and marketing of the crop, so gender effects would be salutatory.

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January 19, 1996

**Summary of USAID/Niger
and SO Team's Comments on first Draft of
Niger Rural Production Sector Assessment**

The majority of the comments below are critical (hopefully constructively), i.e. meant to improve the quality of the next draft. However, I want to preface these with an overall comment that this is a useful report already, that it will not sit on the shelf. It will have a significant impact on our program and increase our capacity to obtain the results we are targeting in SO2, as well as helping us modify our targets to be more realistic and valuable. We are impressed with the knowledge and expertise of the team members that is demonstrated in this valuable tool and appreciate their efforts to help us achieve our strategic objective.

The following comments are preliminary to receipt of a reviewable draft in acceptable form. USAID/Niger cannot accept the report submitted as a reviewable draft for the reasons discussed later in this comment summary and in the attachments.

It behooves P-M to provided the appropriate skills needed to produced an acceptable draft that is well formatted, well edited, and provides an overall conclusion and recommendation section which resolves conflicts and presents a coherent assessment backed up by analyses in the rest of the report. Regarding the additional 20 person days of effort which are to be added: In lieu of the 10 days for the COP and 10 for the Financial Specialist, they should be used to fund the services of whatever types of professionals are necessary to prepare a final report based on our comments for an acceptable draft, please contact the RCO in Abidjan about any changes you suggest.

Summary of the reviewer comments follows which should provide a basis for BARENTS/KPMG to provide the USAID/Niger an acceptable draft for review and comment. Item I below includes points common to several reviewers and a summary of comments by USAID/REDSO's Ag and Program Economists. Other Items are summaries of individual or group comments which the Mission feels will be useful to the team in developing an acceptable draft for further review. Detailed comments of each are attached to this summary.

I. CONSENSUS COMMENTS.

1. The report might be better titled: **"The Rural Production Sector Assessment.**

2. The document is not complete. Formatting errors make it difficult to read. The document is a first cut, and must go through at least one more draft before review.

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3. The document can be reduced in size while still adding a lot of substance because there is significant repetition. Plus a significant portion of the technical analyses could be placed in annexes.

4. The document responds poorly to the statement-of-work and does not provide in a general way one of the most important points of the statement of work and the approved outline. The validity of USAID/Niger's "VISION", as expressed in our Strategic plan, is not adequately addressed. In several places our strategy is supported, but the overall tone of the report seems to say we are off course thereby seeming to rewrite our strategy which took two years to produce and was based on twenty years experience. Though this may not be the intent, several reviewers got that impression.

5. Many points in the statement-of-work are not covered or insufficiently covered. In other cases, the analysis that is provided is faulty. For example, the document does not cover gender issues except for a few sentences in two or three chapters. This was a major part of SO2's framework (Result 2.4) and was highlighted in both the SOW and in more than one review meeting. Related to this, the document completely ignores civil society except in an Annex which is never even referred to in the main text. It also does not provide an outright assessment backed up by analyses of the rural production capacity as a consequence of USAID/Niger's Strategy Plan. It seems to make the point that a different strategy is needed for growth, while still backing our strategy from time to time. In the areas of Ag Production, Marketing and Macroeconomics, the analyses do not hold up to reviews by AFR/SD/PSGE or our regional economists (see below and attached comments) and go against much of what USAID has been successfully implementing throughout the World (see comments below and attached).

6. The document has several more inconsistencies, e.g. USAID should be catalyst for production increase technologies such as phosphate (ag production section), but should leave technical innovation work to other donors (microenterprise section); much work has to go into a consolidation of various sections before the document can be finalized.

7. Report recommends involvement in too many areas for USAID's financing capabilities. Recommendations are "all over the map." Implications for USAID policy and activities are unclear. According to the SOW, this assessment should "determine key constraints and the means of overcoming them", but only "to achieve SO2," not the entire strategy, nor economic growth in general. The report simply has to "appraise the growth potential". We believe this is done in Annex C, which then goes on to resolve the development problem in Niger. The team overstepped its mandate and did not have enough time to develop

such an overall plan properly. We are planning several other studies to develop the directions in which this report should lead us for SO 2.

8. Data needs to be analyzed and presented in a prioritized framework which is based upon the approved framework in USAID/Niger's Strategic Plan. Again this is accomplished to varying degrees in each chapter, but is nowhere consolidated even in the Executive Summary. This issue could be addressed by a thorough editing and reducing the size of the individual sections and expanding significantly the Conclusions and Recommendations section to consolidate findings and resolve conflicts focusing on two questions: 1) What the growth potential for the rural sector is; and 2) what USAID/Niger can do in the context of Strategic Objective No 2, Results 2.1 through 2.5 with available resources. This section would only have to provide the minimum of analytic background for a more succinct executive summary. Again detailed analyses should still be provided, but they should be provided in the individual chapters and/or annexes.

9. There is no basis in theory or practice for the export controls advocated in the document. Export controls would also run contrary to previous policy advice given to the Government of Niger, and against the spirit and obligations of the Structural Adjustment Program. In general, the authors of the document use an outdated "closed" economy approach, which has failed in developing countries all over the world. The problem of agricultural inputs, including seed and fertilizer, needs to be approached using an "open economy" model.

10. With respect to minerals and mineral revenue, the document is speculative. Both phosphate and gold reserves are unproven, and the economics of gold mining in Niger uncertain. Even if gold revenues are forthcoming, substantial revenue would accrue only after a 5 to 10-year horizon...through our Strategic Plan we intend to reach our targets within 7 years. Moreover, there is no mechanism which would channel gold revenues into investments in soil fertility. Though minerals will be very important to the future of Niger, the key for USAID is our Strategic Plan. Most of this analysis should be in annex.

11. The single input approach of relying solely on increased phosphate use for growth in agricultural production will not work, and has been shown not to work elsewhere (Senegal). We cannot agree with the conclusion that "Niger's growth prospects are critically linked to...gold and phosphate" (Exec Sum page 5). Insufficient attention is given to the conditioning environment for input use. Increased use of phosphates must be done within a system. Moreover, the suggested approach is "top down" which is not the way we're working with farmer-clients these days. We neither can agree with the logic in the conclusion at the bottom of page 58: "SO2 and SO3 will not

be achieved unless there is a substantial increase in agricultural production." In fact, the evidence we have and that the report's model provides leads to the inverse which was and is the basic premises of our Strategic Plan: Increases in ag production will not be achieved unless SO2 and SO3 are achieved. The fertilizer problem is being dealt with right now, albeit inefficiently, by the informal sector. We are making a small contribution to alleviating this problem with our CLUSA credit program as well as the many NGO programs under SO3. What is needed to overcome the problem is expansion and extension of what we are now doing...i.e. SO2 and SO3.

12. Report should highlight even more in the Executive Summary, the supply constraints analysis in Annex C, referring to a new consolidated Conclusions and Recommendations which in turn refers to a summary analysis in a new Chapter on Agricultural Production Management through Drought Cycles which takes these comments into consideration, leaving most analyses in the Annex.

13. Report did not adequately address role of rural credit in economic growth of the rural sector. After the "headline" re: economic growth potential, the impact of credit on economic growth should be a major focus of the report. Though its importance was noted several places, it was often hidden away in various sections...e.g. annex C recommendation number 5, re: conclusion 1.

14. Assessment introduction says that USAID/W reviews of the strategy included suggestion that USAID in Niger focus exclusively on SO #1 (population and health). This is not correct. Reviewers, posed the prospects of dropping SO2 and concentrating on SO #1 and environmental conservation (SO #3). Briefings in Niger (e.g. with the Ambassador) notwithstanding, the USAID/W review context should be accurate. (IRG's suggested executive summary format, likewise, reflect the misunderstanding begun in the first draft executive summary).

II. COMMENTS BY AFR/SD/PSGE (details attached)

1. Issues

1) Report is inadequate in addressing production potential. Estimating production potential from a single technology such as phosphates is not a sufficient analysis.

2) The report is more a proposal than an assessment. The single dimensional prescription of more phosphates is invalid, and doesn't work, as proven in the case of Senegal.

3) Phosphates solution must be seen in a systems

context in which farmers make their own decisions. Development work should widen the choices available to farmers, who, empowered, would make their own decisions from a wider range of choices.

4) The Assessment does not take into account leadership by the Mission in improving the enabling environment over the last 10 years, such as changes in the rural code, land tenure, cooperative law, reduction in regulation, and to reduce transportation costs.

5) The Assessment does not take into account the increased number of farmers who have invested in more productive, less degrading practices over the last 10 years.

6) The idea that wider use of Niger phosphate would catalyze broader use of other production and conservation practices is not supported in field observations and literature.

7) Decouple gold and phosphates. The Assessment itself estimates that liquidity is already high in the Niger economy. Capital is not the constraint. The focus should be on the reasons economic agents are not making investments.

2. Recommendations for Assessment

1) Build on what works: farmers are already making investments in intensive agriculture and conservation. Build on what they're doing already.

2) Focus on the improving the enabling environment, and expanding the range of choices available to farmers. The main body of the report flies in the face of our collective learning over the last 15 years, mainly due to the treatment of phosphates in isolation of other practices.

III. COMMENTS BY REDSO Social Scientist

1. Terms of reference are insufficiently completed, with focus on points #6 and #8. Not touching on most points is at the origin of most of the problems.

2. Macro-analysis section of the Assessment is too speculative, and rural section too focussed on finance. Agricultural production and marketing sectors insufficiently assessed. Rural finance section lacks a review of activities financed and analysis of their profitability.

3. There is an insufficient empirical basis for centering a strategy around gold and phosphate.

4. Phosphate powder works well only on acidic soil, and no evidence is offered of the proportion of acidic soils in Niger. Adoption timetable and adoption problems minimized. More research and economic analysis are needed to determine the extent to which rock phosphate can be a decisive growth factor in Niger.

5. The report does not properly rank constraints in the enabling environment, such as transportation, etc., relative to financial constraints.

6. Demand for seed is a derived demand, and depends on conditions for grain marketing, and these are not addressed.

7. There are no convincing arguments in favor of export taxes.

8. Marketing cooperatives should be examined as an alternative to local marketing boards for large scale functions.

9. No information is provided on USAID's comparative advantage relative to other donors.

10. The Assessment apparently counts on the GON and USAID to directly implement the proposed strategies, as opposed to effecting their implementation through private sector incentives.

11. Assumption in Assessment of little technical knowledge of farmers (P. 6) is incorrect.

12. The report is poorly written, lacks adequate titles and sub titles, repetitious, and lack of synthesis and coordination.

IV. COMMENTS BY SO 2 TEAM LEADER (details attached)

1. Need for "integration and resolution" of the different sections' conclusions and recommendations.

2. Need for a mechanism for commercialization of agro-pastoral products more than the macro trade issue of tariffs. Niger needs something like a private version of the cotton companies in other Sahelian states but for niébé, onions, and animal products to really increase formal bankers investments in the rural production.

3. Page 4 - the "guichet unique" itself was a reform instrument, and arguments in the assessment for its abolition are unconvincing. "Guichet unique" implementation may be poor, but we also suspect the authors of the Assessment may be barking up the wrong tree here, i.e., abolishing the "guichet unique" may mean going back to old systems for various administrative approvals, which were even more cumbersome.

V. COMMENTS BY IRG (details attached)

These comments are actually an attempt to give the team an example of how the structure of the executive summary could be improved to address more directly the questions of AFR/SD.

VI. COMMENTS BY USAID/NIGER/NRMA (details attached)

Comments center on the treatment of land tenure in the Assessment. Did the team members working on this issue understand what we were doing well enough to comment on it. Several perception and factual errors are noted.

Comments also on the implications of the Assessment in favor of the "techo-extension centric approach," and generally, the treatment (or lack thereof) of the enabling environment. There is an extremely important question of "approach" here, i.e., "empowerment" for our clients and partners means they should be able to choose, while the phosphates single technology approach looks like a top-down solution.

In the last page of these comments exception is taken to the solution offered by local phosphates, noting the fact that reserves are unproven.

VII. COMMENTS OF EXPANDED SO TEAM

Though the expanded SO Team had only the executive summary to review they shared most of the concerns of section I. above, Consensus Comments. They noted that the basis for some of the assertions in the report was not evident...e.g. 13 million fcfa in impact from the devaluation of the Fcfa vs the naira may not hold at all given the fact that the naira was devalued de facto to the same level as the Fcfa within a year of the fcfa devaluation.

The economic analysis should follow the lead of the IMF/WB Structural Adjustment program. For example, recommending export taxes or increasing tariffs is not practical for a government which must follow the SAP conditionalities to survive.

VIII. COMMENTS OF KOKARI, the Banking intermediary for cooperatives managed by CLUSA. (details attached)

This cooperative was disturbed by the derogatory statements made about them in the report when none of the team had visited them. Their attached letter contradicts several points made about conflicts between SICR and KOKARI, the qualifications of their agents, the question of salary, and the payment of bonuses to

agents in Tahoua. We expect that the team will verify the statements made on these issues in response to the attached letter. A copy of the translation of the executive summary will also be attached.

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We realize that there is still an enormous task involved in addressing all of these comments in order to provide an acceptable draft for review by our Strategic Objective Teams. We hope that the effort will provide us with a sound basis for future efforts to develop activities and programs which will contribute to the achievement of our Strategic Objectives 2 and 3.

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