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ICR Review

Operations Evaluation Department

Report Number : ICRR11270

1. Project Data:		Date Posted : 08/20/2002		
PROJ ID : P001994			Appraisal	Actual
Project Name : Pilot Private Irrig		Project Costs (US$M)	6.8	5.22
Country : Niger		Loan/Credit (US$M)	6.6	5.0
Sector(s): Board: RDV - Irrigation and drainage (85%), Micro- and SME finance (15%)		Cofinancing (US$M)		
L/C Number : C2707; CP634				
		Board Approval (FY)		95
Partners involved :		Closing Date	06/30/2000	12/31/2001

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2. Project Objectives and Components

a. Objectives

The objectives were to assist Niger test and evaluate methodologies consisting of :

1. Local capacity building to promote private sector development in the irrigation sector .
2. Improved low-cost technologies for small-scale private irrigation.
3. Improved rural financial intermediation through cooperative savings and credit schemes .
4. Erosion control works and monitoring of replenishable shallow aquifers to ensure environmental sustainability .

The project goals were technology testing, evaluation and local capacity building through private sector development .

The Private Pilot Irrigation Project (PPIP) was to support the development goal of improved rural well being, by increasing small-farmer productivity and incomes. The development impact would result from widespread adoption of simple, low-cost mechanized and manual irrigation technologies, with supporting services provided by the private sector.

b. Components

Total project costs at completion were $5.22 million:

1. Private Project Management Agency - ANPIP (34%.)
2. Small-scale mechanized agriculture (16%.)
3. Manual Irrigation (19%.)
4. Environmental Protection (4%.)
5. Savings and credit schemes (10%.)
6. Project Preparation Fund Refinancing (11%.)
7. Studies and Audit (5%.)

c. Comments on Project Cost, Financing and Dates

An innovative feature of the project was that it focused on demand creation, technical support and institution building - not financing physical investments. This was not the original intention, but the weak fiscal position of the government delayed project implementation, which was initiated only after agreement that the financing of irrigation infrastructure (75% of the originally envisaged IDA credit) would be dropped. Thus, apart from demonstration equipment and administrative hardware (buildings, vehicles, training equipment) whose cost was embedded in service charges, this was largely a software project with the services comprising about 90% of costs.

3. Achievement of Relevant Objectives:

With some delay, the project achieved most of its major objectives, falling short of SAR targets in some cases, but exceeding them in others. By component: -

1. **Private Project Management Agency** (the implementer was the NGO, ANPIP, an association of private irrigators with private legal status) - delivery of services through contract management and introduction of demand -driven services were institutionalized, and processes accepted as transparent and efficient . ANPIP grew to 19 decentralized committees representing 13,500 farmers. Nearly 1600 economic interest groups were established. ANPIP included private agents and professionals, and the agency has an implementation capacity which has enabled it to execute two other donor projects . Achievement of targets for assisting farmers prepare

projects and secure land tenure was disappointing and largely due to lack of demand . Achievement was satisfactory.

2. **Small-Scale Mechanized Irrigation Technologies** - this was successful and both training and adoption exceeded SAR targets. Local capacities and choices increased, with more than 1,300 farmers (including 303 women) purchasing equipment and applying new techniques without direct financial assistance from PPIP . Testing of alternative pumpsets has contributed to improvement of the technology and the objectives were satisfactorily achieved.
3. **Improved Manual Irrigation Technologies** - 10 different water source , 13 manual water lifting and 7 distribution technologies were tested and the most cost-effective ones promoted. More craftsmen were trained than anticipated, while over 1100 farmers acquired pumps from their own resources and a limited number of loans from cooperative banks. Pumps are now produced in Niger and costs have been reduced . Achievement was satisfactory.
4. **Environmental Protection** - this component was unsuccessful and of questionable sustainability . Little knowledge was acquired about aquifer capacity and environmental impacts, which will become more important as irrigation intensifies in project areas. Unsatisfactory.
5. **Savings and Loan Schemes** - 27 schemes were created (45% of target) and there are over 8,000 members. The operations have been managed prudently and the low percentage of loans made available for irrigation does not imply that the financial services being supplied are inappropriate . The credit unions mobilize savings and make loans, using a cooperative model that has been well-tested in Francophone Africa, but may not be the appropriate vehicle for longer term investment credit for pump purchases . Achievement is only moderately satisfactory as the targets were only partially achieved and cost per member quite high (almost as much as the savings mobilized) for what was not really a pilot operation (there are already established cooperative banks in Niger using essentially the same methodology.)

All components were eventually implemented by contracted NGOs or a private consulting company (component 5). In two cases (due to unsatisfactory environment and extension performance), government agencies were replaced by NGOs after midterm review (MTR.) Surveys conducted by a Monitoring and Evaluation Unit, established after MTR in 1999, showed manual technologies had increased the areas cultivated by 63% and yields for onion and sweet pepper by 30%. In total it was estimated that 1,100 ha were additionally put in use by both technologies (manual 500 ha, mechanized 600 ha.) Financial analyses of pumpset purchase indicate high financial rates of return to adopters.

4. Significant Outcomes/Impacts:

1. The project was a new approach to irrigation relying on the NGO and private sectors . Unlike many government agency-implemented programs, PPIP respected procurement procedures, hired competent personnel and transparently followed recruitment procedures. If the trend is confirmed by the follow-on project, Government may be obliged to redefine the role and objectives of its own irrigation institutions .
2. The project introduced the treadle pump, which was practically unknown in Niger, large scale propagation of the tubular borehole, submerged pumps and irrigation via buried pipes . The technologies are simple, low-cost and most can be manufactured by local artisans, some trained by the project .
3. Task team leadership was decentralized to the field, reducing substantially project activity delays .
4. Preparation of the second phase project, although delayed with respect to original scheduling, was advanced to minimize the transition period between pilot and investment phases .

5. Significant Shortcomings (including non-compliance with safeguard policies):

1. The original objectives were inadequately articulated and M&E only addressed seriously after the MTR .
2. Failure of the environmental monitoring component is of concern since a follow-on project has already been approved. Although NIger's large irrigation potential is far from being fully utilized, new development is likely to be accompanied by greatly increased fertilizer run-off, and eventually some water stress.

6. Ratings:	ICR	OED Review	Reason for Disagreement /Comments
Outcome:	Satisfactory	Satisfactory	
Institutional Dev .:	Modest	Substantial	(a) peformance of the private sector irrigation management agency was rated *highly satisfactory* ; (b) training and institutionalization objectives were achieved; and (c) manual and mechanized small scale irrigation technology was tested, promoted and adopted.
Sustainability :	Likely	Likely	
Bank Performance :	Satisfactory	Satisfactory	
Borrower Perf .:	Satisfactory	Satisfactory	
Quality of ICR :		Satisfactory	

NOTE: ICR rating values flagged with ' * ' don't comply with OP/BP 13.55, but are listed for completeness.

7. Lessons of Broad Applicability:

1. PPIP demonstrates that a private structure such as ANPIP can be a competent and efficient manager of a development project, financed with public resources, and that the private sector has the skills and capacities to make the appropriate supply responses
2. The PPIP approach appears to be a viable alternative to costly and unsustainable publicly managed programs .
3. The adoption rate and use of new irrigation technologies driven by demand, are a demonstration of the viability of new strategies for increasing food security and rural incomes .
4. Designing an agency (e.g. ANPIP) as a private entity may protect it from Government bureaucratic controls and the pressures of political patronage.
5. A complementary water resources management strategy for the country was supportive of the project objectives.
6. A savings led approach to rural financial intermediation (i.e. assisting beneficiaries to save their own equity contribution first) can be more effective than just giving grants so as to reach physical implementation targets more rapidly.

8. Assessment Recommended? ● Yes ○ No

Why? This was a highly innovative approach and deserves to be independently evaluated . The project incorporates a demand-led strategy (that has made the adaptors more responsible for the pace of implementation .) It is an alternative to traditional government grants, which reduce the sense of ownership and are often unsustainable. The mechanisms used for financing, and the social status of adopters, needs to be more carefully studied. If technology purchase was primarily financed from own-savings (and hence constituted euqity) supplemented by commercial loans, this is a most impressive achievement . On the other hand, it may be that the adopters have been the beneficiaries of some other grant financing for the balance .

9. Comments on Quality of ICR:

Satisfactory, but there are inconsistencies in the Annex cost tables .