Nigeria: the National Fadama Development Project

The objectives of this loan (1993-1999) of US$67.5 million were to build on the achievements of some of the Northern agricultural development projects (ADPs) in developing small-scale irrigation through the extraction of shallow groundwater with low-cost petrol-driven pumps. By making agricultural production less dependent on erratic rainfall, farmers' incomes were expected to be raised and food security augmented. The project objectives were to assist the Borrower to: (i) construct about 50,000 tubewells for small-scale irrigation; (ii) simplify drilling technology for the tubewells; (iii) construct fadama infrastructure; (iv) organize farmers for irrigation management, cost recovery and to have better access to credit, marketing and other services; (v) carry out aquifer studies; (vi) monitor and upgrade irrigation technologies; and (vii) complete a full environmental assessment of the environmental and social impact of future fadama development.

Impact on the ground

- Although 54,177 pumps were procured as against the target of 50,000 pumps, only 61 percent of the target had been distributed to the farmers, either because of non-payment of the initial deposit or because the wells had not been constructed. Cumulatively, some 153,926 ha were cropped during the lifetime of the project. Although only 60 percent of the target hectarage of 50,000 ha was irrigated using the complete tubewell-pump package, the project's overall impact on farmer incomes and poverty reduction was satisfactory, with an Economic Rate of Return of 40 percent.

- The simplification of well drilling technology was one of the project's major achievements. Engineers of the Federal Agricultural Coordinating Unit (FACU) improved on the jetting process for washbore construction while trials by some ADPs led to the reduction of the size of the screen and pipe for the well without lowering performance. Training in washboring techniques led to farmers constructing washbores for other farmers.

- The fadama infrastructure component helped to increase the area under fadama, to improve access to fadama farms, and enhance the handling of fadama produce. The road construction target was increased to 825 km and 87 percent of this target was achieved. About 94 percent of the facilities for storage and marketing were constructed, while the spillway and the main canals of the Watari irrigation Scheme were constructed to bring 678 ha under irrigation. Ninety four percent of the targeted storage and marketing facilities was also delivered.

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• About 9,239 Fadama Users Associations – 138 percent of the target – were set up. Some of them were assisted to obtain credit from commercial banks. The loans recovery from the FUAs was initially poor in some of the core states, but averaged 71 percent at the close of the project.

• Aquifer studies to determine the priority areas for fadama development were conducted in all the core states as a condition for participation in the project.

• A network of 150 special observation wells, 50 hydrological stations and 30 meteorological stations was established to monitor fadama development. The Planning, Monitoring and Evaluation departments of the ADPs conducted baseline studies and some impact studies while the Agricultural Projects Monitoring and Evaluation Unit regularly prepared progress reports. Working in conjunction with a technology development project, the increased cropping intensity and production stability as a result of assured irrigation has improved the welfare of fadama farmers.

Lessons learned

• Strong beneficiary involvement in project design and implementation reinforces a sense of ownership, including responsibility for the maintenance of infrastructural facilities.

• Farmers want greater flexibility in project design to allow them to select appropriate components, such as having only the pump where surface water is available.

• Greater involvement of the private sector, local government councils and NGOs in project implementation increases the chances of sustainability.

• To ensure commitment, participating units need to meet key eligibility criteria before they are allowed to participate in the project.

• A strategic division of responsibilities is essential for optimal implementation – the FUAs should be responsible for the procurement of their wells and pumps directly from the suppliers, while the ADPs should focus more on the provision of technical and extension advice, further training of the FUAs, credit liaison and monitoring support.

• The procurement system needs intensive attention – the lack of this will compromise satisfactory project outcomes.

• Future project design needs to more comprehensively consider downstream linkages, such as storage, processing and marketing.

A follow-up project

The lessons of the project are being factored into the design of the Second Fadama Development Project which is currently under preparation, with special attention to:

• The improvement of rural infrastructure, to increase access to essential social services, input and output markets.

• Increasing the access of rural entrepreneurs to sustainable financial services to build their asset base and expand their enterprises, as a step out of poverty.

• Enhancing the institutional capacity of government, the private sector and economic interest groups to deliver demand-driven advisory services, and generally to put the rural entrepreneurs in the driver’s seat of development.

• Monitoring and mitigation of negative environmental and social impacts of the project (including conflicts over resource use), and promoting integrated ecosystem management.

This Infobrief was largely excerpted from Implementation Completion Report no. 19730. The Task Team Leader was Sidi Jammeh, Senior Economist, Africa Region, World Bank. For more information, e-mail Sjammeh@worldbank.org

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