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Madagascar: Rural Water Supply and Sanitation Project

The main objective of the project (PAEPAR), with a credit of US$ 17.3 million equivalent, was to improve the capacity of the government, communities and the private sector to expand sustainable and cost-effective coverage in eater supply and sanitation (WSS). The project components were Policy and Legal Framework, WSS Sector Capacity Building and Institutional Development, and Community-based WSS Services; the last component had 2 sub-components, i.e. Community Needs Assessment, Education and Support, and Extension of RWSS Services. The project was implemented over the period 1998-2005.

The project design built on successful experiences in the country and the region. For the gravity schemes, it replicated the experience of NGOs already active in the sector; for the hand pump schemes, it sourced the experience of a Unicef project.

Impact on the ground

- The government has successfully developed the legal, institutional and policy framework to support its rural water supply strategy (developed with the assistance of the project) to scale up investment in the years ahead.
- A new Water Law was adopted in 19999 and all related by-laws by 2004. in 2005, the government endorsed the national WSS program Program National d'Acces a l'Eau Potable et a l'Assainissement – PNAEPA) aimed at reaching the MDG for the water and sanitation sector
- The project has raised awareness of the benefits and high demand for safe water – as of mid-2005, more than 3,000 requests for water points were pending at the Directorate of Water and Sanitation (DEA). This is a remarkable figure for a sector that has been historically neglected and underfunded.
- The government has also developed, with the assistance of the project, a number of tools to facilitate a smooth transition from a pilot project to a programmatic and budget support approach. Total financing for the RWSS national program increased from US$10.6 million in 2004 to $ 14.6 million in 2005 (of which about 40% was provided from internal resources). This permitted the provision of safe water to about 148,000 people in 2004 and 222,000 people in 2005, compared to less than 50,000 people served in 2001.
- Two new RWSS projects based on the model developed under the project were launched in 2005 – the AfDB finances them for a total amount of $100 million equivalent.
- The government has successfully tested, with the support of communities, NGOs and the private sector, the

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service delivery arrangements to expand sustainable and cost-effective water supply.

- More water systems than originally planned were built and about 400,000 people (compared to 280,000 targeted at appraisal) have access to safe water through the construction of 627 boreholes with hand pumps and 320 gravity schemes.
- An innovative delivery mechanism for developing water services in small towns was tested by the project. This provided about 50% (about $10 per capita) to local governments of the financing needed to build the systems or expand the service. Private operators and communities/local government provide the remaining 50% and sign a medium-term leasing contract for the water service. By the end of the project, 18 contracts were signed, 4 systems were completed and 6 were under construction. It is estimated that 115,000 people will have access to safe water when all the 24 small town piped systems are completed.
- A survey taken some 3 years after works completion found that all the 200 concerned communities were managing their water systems in a satisfactory manner with the support of the village caretakers trained by the project and that spare parts were available at local small distributors supported by the project. All the gravity piped water systems and over 95% of the hand pumps were properly functioning at the time of the survey. Some 320 water committees which collect user charges to replenish the village treasury have been trained by the 2 NGOs coordinating implementation.
- The average cost per capita is $36 per borehole equipped with a hand pump and $19 per gravity piped system – these are low compared to similar projects in Africa. For boreholes, communities contributed about $270 – mainly in labor - towards the total construction cost of $8,300 per borehole; for gravity systems costing an average of $15,000, communities contributed an average of $3,800 – in both cash and through labor.
- Sector delivery capacity has increased from less than 100 to about 300 new gravity systems per year (8 new NGOs had emerged during the project) and to about 350 boreholes per year s international drilling companies are currently strengthening their capacity in Madagascar.
- The impact survey referred to earlier found that : the distance for fetching water has decreased from about 3 km to less than 500 m; the average time spent on fetching water has been reduced by 40 minutes per trip; water consumption has almost doubled, from an average of 9lpcd to 17 lcpd; while the following cannot be attributed solely to the RWSS, waterborne diseases have been reduced (cholera by 100%, bilharzia by 43% and diarrhea by 8% - these data were collected from 28 Health Centers located in the project area, and covers the period 20002-2004; the cost of medication has been reduced by 37%, equivalent to about $9 per household per year.
- The project successfully tested the promotion of household latrines and set up the framework for developing a large-scale hand washing campaign supported by a Public Private Partnership for Hand Washing with Soap Initiative, launched by the government in 2002.
- Vegetable gardens have been developed around most water points and these generate an average revenue of about $20 per household per year.
- Information, Education and Communication (IEC) will continue to be an important tool for the dissemination of appropriate practices – DEA plans to expand current IEC activities to cover the entire country and has budgeted $ 300,000 per year for that purpose.

Lessons learned

- Professional NGOs can be instrumental in supporting rural communities to formulate the project, keep capital costs low and for providing assistance to communities after the facilities have been built, thus improving the sustainability of assets.
- Rural communities can contribute significantly towards the capital costs of the project, mostly in kind, as well as 100% of O&M cash costs.
- Economies of scale can be achieved by grouping construction activities to be carried out in small rural communities under large multi-year umbrella contracts.
- It is necessary to include sanitation and improved hygiene behavior in the design of a rural WSS project from the very beginning.

- Hand washing with soap should be part of any RWSS national strategy as it is key to reducing the risk of contracting intestinal diseases, and consequently improving health outcomes.
- Regular water quality testing and measures to improve and maintain drinking water quality, especially bacteriological standards, are necessary and must be closely monitored.
- A pilot project is a good instrument to help design sector development policy, build institutional sector capacity, test service delivery mechanisms and strengthen sector coordination.

This Inforbrief has been excerpted from Implementation Completion Report No. 34060. For more information, please e-mail Christophe Prevost, Senior Water and Sanitation Specialist, at Cprevost@worldbank.org.

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