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SmartLessons

real experiences, real development

Improving Rural Water Service in Rwanda with Public-Private Partnerships

In 2004, a field review commissioned by the World Bank found that half of the piped rural water supply systems in Rwanda were nonfunctional due to poor management and poor cost recovery. In response, the government shifted to a public-private partnership (PPP) management model. As of 2010, 235 rural water supply systems—28 percent of the 847 systems in the country—are managed under PPPs serving 1 million people. This SmartLesson shares what the World Bank and Water and Sanitation Program (WSP) learned in support of Rwanda's remarkable progress, including using best practices to make the case for reform; fostering ownership, simplicity, and flexibility of design; using peer-to-peer learning; and evaluating factors for success.

Background

In the 1990s, the rural water supply and sanitation (RWSS) sector in Rwanda faced many challenges stemming from top-down programming of investments, high per capita investment costs for system construction, poor cost recovery, and low sustainability. Furthermore, the sector's infrastructure suffered from considerable destruction during the period of civil war and the 1994 genocide. Demands of postwar reconstruction placed immediate emergency relief ahead of longer-term sustainability considerations.

In 1998, the government of Rwanda embarked on a decentralized, participatory approach to development to ensure participation of the local population in the decision-making process to foster reconstruction, reconciliation, and community reintegration.

At the same time, the rural water supply sector developed a new strategy based on four key elements: (i) formulating a demand-responsive approach through which communities could choose a preferred service level based on their willingness to pay, contribute to a portion of investment costs, and pay in full the operation



Rwanda landscape and Lac Kivu (Credit: Simon Nduyie)

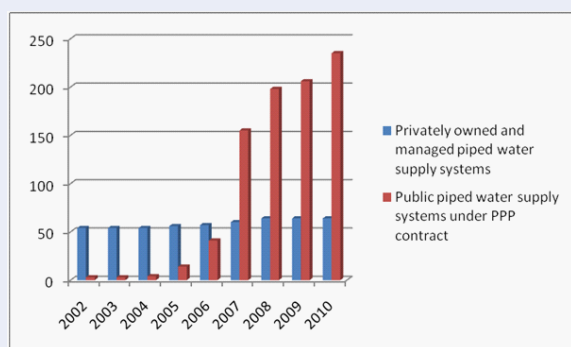
and maintenance costs of their facilities; (ii) decentralizing planning and management of services at the district level; (iii) supporting the private sector as the provider of all works, goods, and services; and (iv) redeploying the public sector as facilitator, with the Ministry of Water providing assistance and support to the district authorities and water users' associations.

The World Bank has supported the government of Rwanda's rural water supply sector strategy through a combination of loans with a sector investment rural water supply and sanitation project¹ and a series of development policy lending operations with a poverty reduction support credit/grant from 2004 onward,² comprising specific policy measures to support rural water and sanitation sector reforms. The WSP has provided technical assistance to support donor coordination and capacity building for private operators from 2006 onward.

Since then, the rural water sector has made outstanding progress and successfully scaled up investment and reforms. Rwanda is on track to achieve the Millennium Development Goal³ and should achieve its target to increase access to potable water from 40 percent of the population in 2002 to 85 percent in 2015. In 2009, 74 percent of the rural people have access to a safe drinking water source. The number of functioning rural water supply systems has also increased from 50 percent in 2004 to 85 percent in 2009.

These results were achieved by effectively moving the sector away from a projects approach to a sector-wide approach (SWAP) led by the government with the elaboration of a medium-term expenditure framework (MTEF),⁴ enhanced donor coordination, sector expenditure reviews, and an annual sector review with the participation of all stakeholders, as well as by implementing a successful decentralized approach to service delivery with the districts fully in charge. Sector service delivery capacity has improved, with an additional 600,000 people getting improved water service each year since 2005, against fewer than 60,000 in

Graph 1: Number of Privately Managed Rural Piped Water Supply Systems



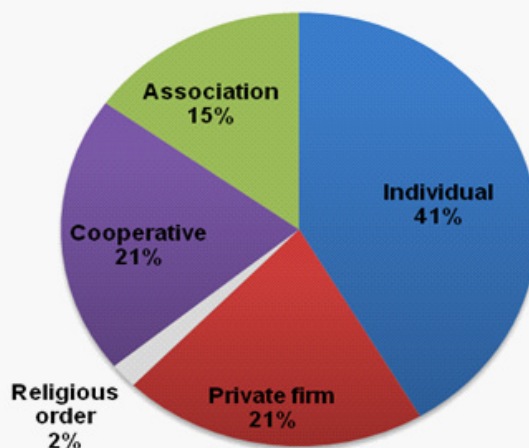
1 RWSS Project, \$20 million (2001–2007).

2 First PRSC/G: \$65 million(2004); Second PRSG: \$55 million (2005); Third PRSG: \$50 million (2006); Fourth PRSG: \$70 million (2008); Fifth PRSG: \$80 million (2009).

3 The goal: to provide 85 percent of the population with access to potable water and 66 percent with access to hygienic sanitation by 2015.

4 The MTEF is annual, rolling three year-expenditure planning. It sets out the medium-term expenditure priorities and hard budget constraints against which sector plans can be developed and refined. MTEF also contains outputs and outcome criteria for the purpose of performance monitoring.

Chart 1: Diversity of operator types



2002. Sector expenditures have increased tenfold to \$32 million from 2006 onward, with a continuous increase both in domestic funding and fiscal transfer to the districts.

The introduction of PPPs to improve the operations of piped rural water supply systems has been an unprecedented success. As of June 2010, 65 PPP contracts have been signed for 235 public systems serving about 1 million people. The systems under PPP contract serve an average of 5,000 people, and a few systems serve more than 100,000 people. The network length varies from 6.5 km to 491 km. About 80 percent of these systems are gravity-fed systems, and 20 percent are pumping systems. Ninety-five percent of the people are served by public stand posts, and 5 percent have a household connection. Moreover, 64 systems are owned and managed by private institutions, including parishes, monasteries, hospitals, and factories, which serve about 100,000 people.

Lessons Learned

1) Use best practices and analytical work to make the case.

Tailoring the PPP approach to rural water supply systems was not initially part of the government's or the World Bank's strategy. The initial approach was clearly to have community-based organizations manage their systems. The idea grew from a field visit in 2003 when the project team had the opportunity to visit three districts⁵ in the province of Byumba (now part of the North Province). The districts in Byumba had decided to tap into the financial and technical capacity of the private sector by contracting out the operation and maintenance of their water supply schemes to local private operators. The field visit marked a turning point in the way piped water supply systems would be managed in Rwanda. Private-sector participation seemed like a remote possibility, but these districts had already done it.

5 The districts of Rebero, Mulindi, and Bungwe.



Water kiosk (Credit: Han Sueur)

In 2004, the World Bank RWSS project conducted field review of community management in the country and of the experience with private operators in the three districts of the Byumba province. The findings were discussed at the Medium Term Review of the World Bank project in May 2004. The review found that, for the community-managed systems, about 50 percent of the piped systems were nonfunctional due to the absence of performance incentives (volunteer status), the users unwillingness to pay, mismanagement of funds, and technical weaknesses. Conversely, local private operators, which were placed in challenging situations (some of them were managing costly pumping systems) had overcome these issues and were even able to self-finance system rehabilitation. The World Bank agreed on an action plan aimed at testing and supporting a wider PPP approach for the operation of water facilities.

A few weeks later, the Minister of Water⁶ visited the three districts of Byumba to learn about the private-sector approach and to determine whether to make this a national program. At that time, about 50 percent of the sector investment budget was dedicated to rehabilitation works. The systems in Byumba highlighted the potential of using private-sector participation to help make public expenditures more efficient by reducing the burden of maintenance and rehabilitation costs and to expand services to more people. As is typical in Rwanda, once a decision is made, implementation follows.

2) Promote ownership, simplicity, and flexibility in the design.

Even though it recognized some weaknesses and risks, the Ministry of Water decided to use the experience and approaches developed by the three districts of Byumba Province as the basic model. These privately run systems were better managed than the community-based systems. People now had access to reliable services⁷ at an affordable

⁶ Prof. Dr. Munyanganzi Bikoro, former Minister of State in charge of Water and Natural Resources, Ministry of Infrastructure.

⁷ The impact study and the operators' reports showed that water users are consuming 8.5 liters per capita per day (lpcd) at the spring catchments and 13 lpcd at the stand posts of the gravity-fed piped systems. Users with private connections consume 20 lpcd.



People fetching potable water at a stand post. (Credit: Alain Morel)

price,⁸ and districts were receiving a substantial fee from the operators to add to their budget. The decision to use the experience of these districts to move to scale was critical in the development of PPPs in supplying rural water in Rwanda, because people accepted it as a locally developed approach that could be implemented locally.

Each district developed contracts with very simple terms for potential operators with a minimum set of qualifications based on the contracts used by Byumba Province. Given the limited experience of operators and the districts, the contracts were a cross between management contracts where the operators are responsible only for the water supply operation and lease contracts where the operators have to assume some investments and commercial risks for the systems they manage. The length of contracts was quite short in comparison to conventional international standards, but this was a necessary compromise, given the lack of data and the uncertainty of demand and willingness to pay in the market.

The selection criteria for the operator generally took into account the price of water, the fee paid by the operator to the district, and the quality and reliability of the technical



Woman fetching potable water at a stand post. (Credit: Simon Ndujyie)

⁸ The water rates range from FRW 2.5 (gravity-fed systems) to FRW 15 (pumping systems) per container of 20 liters (equivalent to US\$0.25 to US\$1.40/m³). Users with private connections pay FRW185 to FRW600/m³. The districts keep a list of vulnerable households (widows, poor single-parent households), who get free access to water points.



Water is paid on a volumetric basis the equivalent to US\$0.25 to US\$1.40/m³ (Credit: Hawkey, courtesy of Photoshare)

proposal. The Rwanda Utilities Regulatory Agency (RURA) endorsed this approach because of the diverse local contexts and of the uncertainty of demand for services.

While most of the operators did not have specific experience in managing water supply services, they all had an entrepreneurial spirit supported by basic business acumen. Their diverse backgrounds included former civil servants, local businessmen, small cooperatives, and informal associations of local residents. One third of the operators were women.

The selection criteria had to be flexible in such a nascent market, and it was not a process that could occur overnight. As the PPPs have gained momentum in Rwanda and market information has become more available, more robust private operators have entered the business, and the contracting and oversight processes have evolved and are more sophisticated.

3) Use peer-to-peer learning to disseminate knowledge and lessons.



Water treatment plant (Credit: Simon Nduyiye)

Box 1: Fixing Target Stimulated Actions and Results:

A series of *poverty reduction strategy grants* (PRSG) supported the government of Rwanda's PPP policy in the rural water sector, through policy dialogue and policy measures, including prior actions. The prior action of the second PRSG supported the Ministry of Water in developing guidelines to assist districts in contracting with private operators and to have at least one contract signed in each of the four pilot provinces by September 2005. The prior action of the third PRSG was to have 10 percent of rural water systems managed by local private operators by September 2006. A target of 20 percent of rural water systems managed by local private operators by November 2007 was included in the fourth PRSG. All three policy measures were achieved.

Although decentralization brought new opportunities, it also came with significant challenges due to the lack of technical capacity of local governments and local service providers. The project helped bridge these gaps by adopting a peer-to-peer learning approach to disseminate the concept of PPPs. We also took a learning-by-doing approach to improving contracting process and management practices.

The project facilitated 10 exposure visits to Byumba for about 75 district representatives during 2004 and 2005. In addition, one national workshop in 2004 and several regional training workshops in 2005 and 2006 were organized to exchange early PPP experiences. Participants included districts, private operators, nongovernmental organizations (NGOs), and regulatory agency and donor representatives. The rule was that only people who had been active in implementing the PPPs in Rwanda would become the trainers. No external consultants have been involved. This approach helped the government gain buy-in from all the sector stakeholders.

4) An enabling environment determines the feasibility and likelihood of success for PPPs.

In Rwanda, the enabling environment was definitely favorable for improving rural water operations. The government was committed to reform and willing to lead the processes of change. The legal environment was shaped to support private-sector participation in the delivery of water services. The Water Law allowed various options for managing a rural water supply service, either through municipal management or delegation to a water users' association or a private operator. The rural population was already accustomed to paying for operation and maintenance costs for improved water sources. The decentralization policy, which allocated full responsibility in infrastructure planning and service delivery and financial and human resources⁹ to the district, along with the election of district mayors, established the adequate framework and the legitimacy of the district authorities to shift the management of water facilities to PPPs.

⁹ 30 percent of budget expenditures are decentralized from national level to district level. In addition, the civil service reform allowed redeploying the staff of the central government to the districts.

Conclusion

The operational record of the PPPs is relatively short as most of the contracts were signed in 2006–2007. The experience of the first contracts has been positive. The operators and the districts have been able to overcome unforeseen problems and to adjust, as needed, the contract terms with some external support. Recent assessment of the rural water PPPs¹⁰ that have been implemented revealed that the majority of the customers interviewed declared themselves satisfied by the service provided and the quality of water distributed. However, there are still a number of issues that need to be addressed such as the regulatory oversight of PPP arrangements, including selection criteria, contract management, compliance monitoring, accounting practices, and tariffs.

A key issue for the success of the PPPs is to ensure financial viability by setting appropriate

tariffs and regulating the amount and usage of the fees collected by the districts. Viable water tariffs in rural areas tend to be relatively high, particularly in pumped systems. This poses a challenge for rural households and encourages the use of alternative, unsafe sources of water supply. Options to achieve cost recovery while keeping tariffs affordable include professionalizing service management, selecting appropriate technologies, grouping individual schemes, and targeting subsidies.

Furthermore, the government needs to focus on ensuring the sustainability, reliability, and affordability of these services, and the wider issues of managing and protecting scarce water resources. Evidence from developed and developing countries shows that it is not so much a question of who manages the services, but how the service and the assets are managed and how long the service provider is technically and financially supported.



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¹⁰ Rwanda-Analysis of the delegated management of rural water supply system- HydroConseil & GeoTop- Final Report 2009.