

# Microfinance for Rural Piped Water Services in Kenya

Using an Output-based Aid Approach for Leveraging and Increasing Sustainability

by Meera Mehta and Kameel Virjee



The water sector in Kenya, especially in rural areas, has suffered from significant constraints in the availability of finance. Government resources have been limited and non-governmental organizations (NGOs) and faith-based charities have to some degree filled the financing gap. However, this finance suffers from a lack of coordination and predictability. With the newly set up Water Services Trust Fund (WSTF), donor resources have increased and focus on reaching the poorest. As a result, local community-based organizations (CBOs) have generally developed water supply systems using their own internal resources and available grants; often this extends the development period of a project to over five years. Many CBOs are interested in commercial loans to expedite the financing of their infrastructure as demonstrated by the comprehensive field assessments by government and other agencies, such as the Athi Water Services Board (a public asset holding company), K-Rep Bank (a microfinance bank) and the World Bank's Water and Sanitation Program.

Donor funds focus on new projects or those that have completely collapsed as it is easier to show resultant "impacts" of new infrastructure. Thus, there are minimal incentives for existing small projects

to invest in maintenance and business expansion through capital investments. These trends exist against a backdrop of sector reforms that seek to increase the autonomy of water providers.

The Kenyan financial sector has seen increasing levels of liquidity resulting from reduced domestic borrowing by the government. Local finance institutions are investigating the introduction of more innovative financial products to expand their portfolios and diversify their assets. Kenya has a well-developed microfinance sub-sector that has expressed interest in the water sector as it fits well with its mandate to serve the poor. Mehta and Virjee (2003) have noted that the water sector provides an entry point for local finance institutions to develop expertise in infrastructure lending.

The confluence of these factors makes Kenya an ideal context for the development of innovative credit-based finance products for community-managed small piped water systems. This paper describes a pilot project which uses an output-based aid (OBA) approach to leverage co-financing from a private commercial microfinance bank (K-Rep Bank Ltd) to increase the sustainability of CBO owned and managed small piped water systems.

## The pilot project

The design of the pilot project in Kenya has been facilitated by the Water and Sanitation Program's office in Kenya, and is supported through additional financial assistance from the Public Private Infrastructure Advisory Facility (PPIAF) and Global Partnership for Output-based Aid (GPOBA). Full operational details can be found in K-Rep Bank (2007).

The pilot project is designed to minimize the need for grant finance in the development of infrastructure and to be scalable in the Kenyan sector context. In designing the microfinance pilot project a number of constraints to the introduction of commercially priced debt finance were considered:

- ▶ Finance institutions in Kenya have had very little exposure to “project finance” in the water sector. They have either been exposed to balance sheet lending to corporate clients or to microfinance lending to group-based commercial activities
- ▶ Despite the liquidity in the financial market, prevailing tenors and interest rates pose affordability constraints for potential borrowers to meet the minimum investment requirements.
- ▶ Potential projects often lack traditional collateral sources, which necessitates collateralization of cash flows and more stringent loan appraisals to ensure adequate risk management.

The pilot project has been designed to address these constraints in lending to small water projects: the OBA capital subsidy helps to address affordability constraints and technical assistance provides support to the communities and K-Rep Bank. The capital subsidy is paid only upon the delivery of pre-determined and agreed outputs resulting in two major benefits:

- ▶ The subsidy reduces the total loan sizes and ensures debt service remains affordable.
- ▶ The subsidy and the linked project development support provide better risk management from the lender's perspective.
- ▶ As the subsidy is only realized upon the delivery of outputs incentives for project completion and subsequent performance are increased.

### Institutional and financing arrangements

Figure 1 shows a simple institutional schematic of the OBA pilot project. The borrower is the small piped water project, a legal entity, owned by its members and registered under the Societies Act by the Auditor General. In most of the pilot's sub-projects, the small water project will also be the operator of the service, though the possibility of contracting out operations will be also explored in the future. It will be the responsibility of the water project to make debt service payments to the microfinance institution (MFI), namely K-Rep Bank.

Figure 1. Institutional arrangements

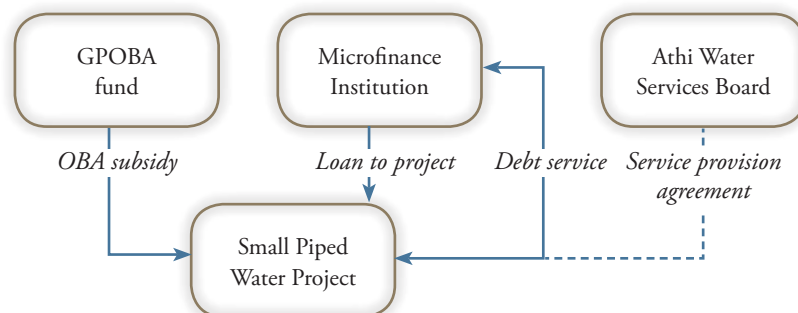


Table 1. Financing arrangements

Organization	During construction	After 'outputs' achieved
Community contribution	20%	20%
K-Rep Bank loan	80%	40%
OBA subsidy	0%	40%
Total	100%	100%

The Kenyan Water Act of 2002 requires that the small water project sign a Service Provision Agreement (SPA) with the Water Services Board (WSB) in whose jurisdiction it falls. The scope of the pilot project is confined to the areas surrounding Nairobi – within the jurisdiction of the Athi Water Services Board (AWSB). The SPA functions as the primary regulatory tool governing the performance of the small water project and specifies both performance standards and tariff levels for the project. AWSB will also chair a project procurement committee to support procurement decisions by the community water projects.

The introduction of an OBA subsidy requires that the project be initially pre-financed using other sources of funds. Within the pilot project this will be through K-Rep Bank and the community project's own resources. After the release of the subsidy, the MFI remains responsible for collecting the remainder of the loan. Prior to the subsidy release, the loan amounts to 80% of the total investment and reduces to about 40% upon successful delivery of the outputs. Figure 2 shows the financing arrangement using the OBA subsidy.

### Defining and measuring outputs

The outputs are defined for each sub-project as follows:

- *Change in the service coverage* – changes in the service coverage will primarily be in the form of increased number of service connections, either at the household level or at the community

level, where coverage will be measured by the increased numbers of shared connections. This increase will reflect equity concerns as the new investments will benefit those without the service rather than only increasing the level of service for those already connected.

- *Change in revenues collected* – the investments will also alleviate supply constraints through increased quantity of water supply. In addition, efficiency improvements through reduction in non-revenue water are envisaged. As the improved service levels and efficiencies are difficult to measure directly the total revenue collected will be used as proxy.

Each community project will itself define the level of outputs it plans to achieve and this will be built into its loan agreement with the K-Rep Bank. Output verification will be done by an independent Project Audit Consultant. This auditor will perform a baseline assessment of the small water project and then visit the project during post-implementation phases to verify output levels. Approval of the verification report will trigger the release of the capital subsidy.

### The sub-project cycle

The Water Services Trust Fund in Kenya has developed a Community Project Cycle (CPC) that emphasizes the use of a demand responsive approach (DRA). While carefully maintaining the DRA emphasis, this generic rural water supply sub-project cycle is adapted in the Pilot Project to include the assessments and appraisals required to ensure financial viability, debt service capacity and

risk mitigation. Figure 3 shows the modified sub-project cycle. The assessments are supported by a support organization and cover a number of critical elements related to: management capacity; technical design and proposals; and financial viability using reasonable projections after the new investments have been made.

The community project will use these assessments to submit a loan application to K-Rep Bank for an independent appraisal. The MFI ensures familiarity with the project applications by providing inputs during the assessment phase.

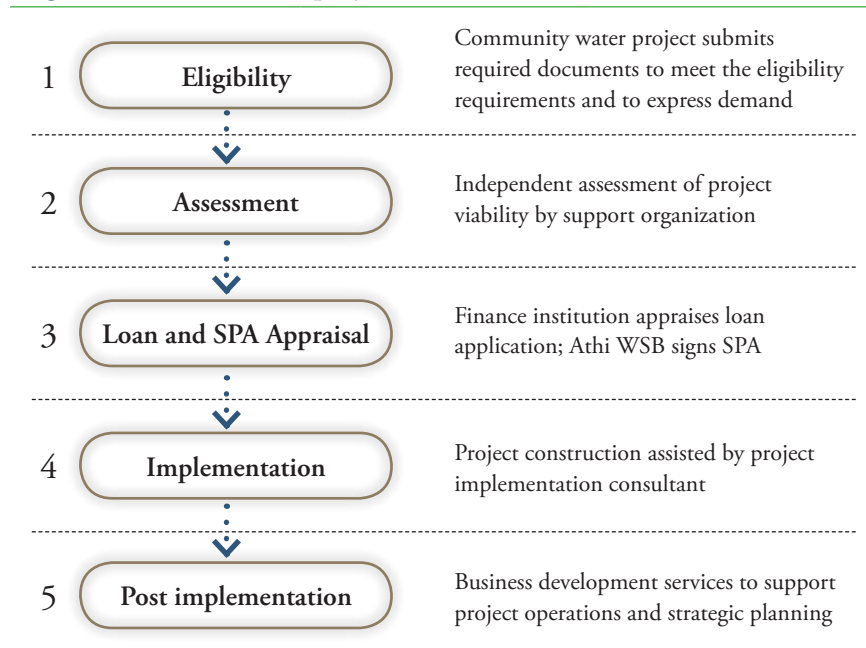
The other critical departure from traditional sub-project cycles is during the post-implementation phase. The pilot provides for a one-time payment to the Water Project for the procurement of a project implementation consultant (PIC) to support both the implementation and post-implementation phases. The PIC provides construction project management services and support to management efficiency-linked improvements during operational phases. The approach for post-implementation support is a key factor in attaining long-term sustainability and is discussed further below.

## Supporting transactions

Transaction support is critical in developing and institutionalizing this pilot project. The role of the support organization increases the technical knowledge and expertise available and makes it easier for the finance institution to obtain a credit appraisal. Central to the assessment process are credit assessment tools developed by the Water and Sanitation Program with PPIAF assistance, which have been adapted for use in the Pilot Project's Operations Manual. These allow for a systematic assessment of key risk dimensions. Ultimately, the finance institution will use weighting models to score the different risk elements and will determine the overall risk associated with the project. Such credit scoring models can only arise from sufficient transaction experience. Thus the detailed assessment of the pilot sub-projects is critical for the finance institutions to begin to develop sector-specific knowledge. Over time, as transaction costs reduce, the MFI would be able to absorb these in their interest spreads.

The role played by the project implementation consultant during the post-implementation stage

Figure 3. Modified sub-project cycle



is critical. This includes business development services (BDS) to small water projects or, to put it more correctly, the small water enterprises (Mehta et al., 2006).

Many projects do not have the capacity – and given their scale, cannot justify the permanent acquisition of capacity – to perform detailed technical and financial audits of their performance. Over time, the development of a commercial BDS sector specifically supporting small water enterprises would be one way of providing these services on demand. Similar systems exist in developed countries, such as the United States, where small water systems subscribe to maintenance support services that provide on-demand repair services and system audits. The creation of such a sector requires that there be sufficient demand for services and that a number of demand drivers exist. For instance, the regulatory reporting requirements should stimulate the demand for information on system performance. The reporting requirements of the finance institution that provides loans will also promote this demand. Ultimately however, the demand will only be sustainable when the BDS start to provide information and services to the managers of the community water project in order to enhance value through increased revenues and customer satisfaction.

In addition, the development of comprehensive information systems makes system operations more transparent and increases accountability of the management to members and customers.

## Scaling up and the way forward

The pilot project described here has considerable potential for being scaled up in Kenya and for replication in other countries. The pilot project size of approximately 21 sub-projects with a total investment of 2 million US dollars will provide a sufficient pool for lesson learning.

Within the country, the national social fund for water, the Water Services Trust Fund (WSTF), could develop a specialized grant window that provides a fast track partial OBA subsidy linked to mobilization of domestic commercial resources. This would result in a reduction in the total grant finance required to achieve national targets. In addition, and more importantly, it will improve incentives for better performance by small water project owners and managers, and reduce the risk of poor asset management. This risk would be further reduced by promoting a viable BDS sector.

A number of lessons are emerging from the Kenyan experience:

- ▶ *The need for a project incubator* – as financiers are wary of totally new sectors so there is the need for a credible facilitator partner to develop background information for local finance institutions and to ensure “hand-holding” for the initial period. This process is not simply a data collection exercise but requires that the finance institutions be involved in guiding the development of relevant information to inform the credit appraisal process. It is important that the MFI views this phase as product development for a future business line in its own portfolio.
- ▶ *The need for simple tools for credit assessment* – given the high transaction costs, simple credit assessment tools are required to control costs and systematize project assessments. This has the added benefit of leading to the development of specialized lending products based on key indicators deemed as critical for creditworthiness by lenders.
- ▶ *The need for a conducive enabling environment* – a number of wider sector issues will influence the viability and scaling up of such transactions. Most critical is the potential market size in a given country or region as that will determine the possibility of a viable business line for the finance institutions. This affects their decision to allocate sufficient resources to build

internal capacity. The potential market size will be influenced by macro factors, such as the regulatory framework, the levels of donor funding and a policy and financing framework in the country that provides “financing space” for domestic finance institutions and does not “crowd out” the demand for commercial finance from water projects from ad-hoc grant funding.

In summary, the Kenya Pilot Project combines a number of innovations: use of microfinance to leverage commercial resources; an output-based aid structure to ensure appropriate incentives; and the development of a market for business development services to increase sustainability of small water projects. The lessons from this pilot project will be valid in all those countries where there are reasonably good domestic microfinance institutions and some level of community entrepreneurship in running and managing small water projects. To develop similar

approaches, the governments will also need to focus on an enabling sector policy and financing framework.

## References

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