

**USAID WA-WASH TRIPLE-S COST, PERFORMANCE AND REGULATION OF SMALL SCALE POTABLE WATER NETWORKS: STUDY OF SIMPLIFIED PIPED WATER SYSTEMS IN THE SAHEL REGION OF BURKINA FASO**

**EXECUTIVE SUMMARY**

Through the decentralization process, water supply, sanitation and hygiene services among other services were transferred from the Burkina Faso central government to the municipalities. The USAID West Africa Water Supply, Sanitation, and Hygiene (USAID WA-WASH) Program through IRC, supported municipalities to evaluate the performance of simplified piped water systems using the Triple-s (sustainable services at scale) analytical framework in the Sahel region of Burkina Faso. The framework evaluated the performance of simplified piped water systems in terms of quality of water services delivered and projected costs of construction and operations of water points. The evaluation of the level of service compares the services delivered to the expected services in terms of quantity, water quality, and accessibility according to five globally accepted levels. The levels of service include: (1) no service; (2) substandard service; (3) basic service; (4) intermediate service, and (5) high level service. At the level of no service, people access water from insecure or unimproved sources, or sources that are too distant, time-consuming or have poor water quality. At sub-standard service, people access a service that is an improvement on having no service at all, but that fails to meet the basic standard on one or more criteria. Basic service allows access to a minimum of 20 liters per capita of acceptable quality water from an improved source, spending no more than 30 minutes per day to collect water. Intermediate service allows people to access a minimum of 40 liters per capita per day of acceptable quality water from an improved source, spending no more than 30 minutes per day to collect water and high service provides access to access a minimum of 60 liters per capita of high-quality water on demand.

The findings of this study showed that the simplified piped systems deliver a high level of service as compared to hand-pumps which deliver services at the basic level. The investment costs of simplified piped systems varied between 82.7 million FCFA and 154 million FCFA and recurrent costs vary between 1.7 million FCFA and 7.9 million FCFA in the Sahel region. These costs depend on the type of energy used for pumping water, either solar or fuel energy. Solar powered piped systems have high investment costs but lower maintenance costs as compared to fuel powered piped systems. In addition, solar powered piped systems last longer than fuel powered piped systems.

Sustainability of water services depends on the implementation of clear regulations which ensure that the services rendered conform to the expected services. There are two types of regulations, price cap regulation, and the cost of services regulation. In the price cap regulation, the price ceilings are set and are not negotiable during the contract period. The price is set based on estimated costs of the level of expected service. This underscores the need to have reliable cost estimates to reduce monopolization and set a price that is in line with the scale of service. In the cost of service regulation, prices and costs are adjustable throughout the contract period to ensure a given level of service. Profits are calculated per cubic meter of water supplied and are constant irrespective of the investment costs and therefore there is no profit incentive for the operator. The choice of mode of regulation depends on how well developed is the sector and the capacities of the regulator. However, both modes of regulation seek to reduce monopoly by setting a price ceiling and by setting profits per cubic meter of water sold.

In Burkina Faso, monitoring of water distribution is not adequate. Municipalities use price cap mode of regulation whereby ceiling prices are set, maintenance costs and all other risks are borne by service providers. The service providers risk going bankrupt if the estimated maintenance costs are higher than the profits made. Monitoring and evaluation of the long-term service costs is equally important in calculating the charges at the beginning of contracts with service providers and to achieve the level of service expected without compromising the profits from the services. Furthermore, the municipalities do not track the quality of service delivered. The capacities to verify that services rendered are consistent with expected services are inadequate. This is especially challenged by the lack of basic data on demand making it difficult to monitor provision of services. The lack of support costs to municipalities also hinders monitoring of water services. Moreover, monitoring is done by the office of the regional directorate of water services which is limited by the great distances to water sources and users.

Recommendations to strengthen the capacities of municipalities to facilitate monitoring of the different cost components and to improve the quality of water services include: (1) specification of different levels of cost depending on the energy source and the size of the simplified piped water system; (2) distinguishing maintenance costs for water service providers and for farmers; (3) calculation of the reference values for the operating expenses of the simplified piped water systems; and (4) monitoring of costs at the national level to integrate support costs and determining strategic regulation modes and access to water.

The Triple-S analytical framework underscores the development of a mode of access to water that has the lowest long-term costs and highest level of service. The regional directorate of water services formulated reference cost values for investment, operation; and rehabilitation of simplified piped systems. Based on the values, municipalities should set prices that allow recovery of operating and rehabilitation costs considering the context in each village. In addition, the municipalities should conduct regular monitoring of expenditures of water users associations as they are at the forefront of the regulatory functions of the municipality.

*The full report is available (in French) upon request via our website. For more details about our program activities and other reports please visit <http://wawash.fiu.edu/>.*

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