

# Professionalising maintenance of boreholes with hand pumps in Burkina Faso : exploring new approaches

RC Burkina Faso looked into management models that would permanently reduce the number and length of breakdowns of boreholes with hand pumps in rural Burkina Faso.

*This study is part of USAID's WA-WASH programme*

Following observations made in a previous blog post, IRC Burkina Faso looked into management models that would permanently reduce the number and length of breakdowns of boreholes with hand pumps in rural Burkina Faso. We investigated ways of professionalising the use and maintenance of boreholes with hand pumps, while looking for innovative solutions that improve the way in which this infrastructure is maintained, while being adapted to the local context. Such solutions will involve transferring responsibility for maintenance of hand pumps to the local private sector. IRC Burkina Faso therefore funded an exploratory study to learn more about the operating costs and benefits in terms of infrastructure condition, and ultimately in terms of water provision to users. This study was carried out by a local private provider, Faso-Hydro, which is currently operating small piped water schemes in the Sahel region.

## Provider commitments

Three scenarios for professionalising the maintenance of boreholes with hand pumps were analysed. All three scenarios required certain preconditions to be met, such as higher infrastructure functionality (meaning that restoration work was necessary in advance) and the inclusion of additional training for existing local mechanics. All three scenarios would oblige the provider to:

- Reduce the number of breakdowns;
- Use new spare parts to carry out repairs;
- Reduce service outages to less than 24 hours;
- Test water quality regularly.

Roles and responsibilities of municipalities, as defined by the Reform of water service management in rural areas, were also evaluated and recommendations were drawn up as to the potential for changing the role of the provider to be an intermediary between Water Users' Associations and the local authority.

## Scenarios integrating real costs data

The cost of providing a water service includes repair and maintenance, salaries, a profit margin, and fixed and variable costs. These items were drawn from the experience of Faso-Hydro and national standards. On this basis, the following scenarios were created:

Table 1. Summary of financial scenarios for improved maintenance of boreholes with hand pumps

| Figures in USD (2013)   | Scenario 1    | Scenario 2    | Scenario 3    |
|---|---------------|---------------|---------------|
| Contribution to payment of district technician and costs of the District Water and Sanitation Committee | 10            | 18            | 11            |
| Provisions for major repairs (borehole, superstructure etc.)  | 0             | 153           | 153           |
| Water managers salaries (currently working on a volunteer base)   | 0             | 267           | 0             |
| Misc. costs from WUAs (communications, transport)   | 0             | 170           | 0             |
| Replacement of hand pump spare parts with full warranty   | 51            | 94            | 70            |
| Initial contribution for hand pump rehabilitation   | 10            | 18            | 11            |
| Initial contribution for a new borehole   | 10            | 18            | 11            |
| Margin on variable costs  | 71            | 158           | 114           |
| Total incompressible costs of the operator (including mechanics)  | 18167         |               |               |
| <b>Total /year</b>  | <b>18 318</b> | <b>19 063</b> | <b>18 537</b> |
| Minimum number of hand pumps to achieve profitability   | 256           | 115           | 160           |
| Annual cost/household   | 5             | 28            | 13            |

Scenario 1 relies on the Government's financial regulations (as defined by the Reform documentation). Scenario 2 includes all operating costs (e.g. maintenance and repair, local mechanics who currently work on a voluntary basis and contributions to rehabilitation), while scenario 3 only includes maintenance and repair. The results show a large gap between current pricing (2500 CFA francs/year/household) and the actual costs of a service (14,000 CFA francs/year/household). To bridge this gap, a subsidy system can be designed.

## Limited interest

Considering the size of the two areas we studied, there needs to be co-operation between municipalities (also known as intercommunality) if any of these three scenarios are to be financially viable. Some questions still remain: how and who will guarantee that the preconditions are met? How long should such a contract last? The stakeholders will eventually have to address these questions. Nevertheless, IRC Burkina Faso believes that professionalising repair and maintenance could have a real impact on the quality and sustainability of water provision in rural areas.

This analysis was presented to the relevant municipal stakeholders (e.g. mayors, regional authorities, maintenance professionals) and to a group of national stakeholders at an information-sharing workshop, which took place in July 2014 in Ouagadougou. Reactions were lukewarm at best and there was only tentative interest in the idea of increasing the presence and role of a private provider in managing services. It is important that IRC and its partners improve their advocacy in order to understand why there is so much hesitation and how to overcome this obstacle.