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DELIVERING WATER, SANITATION AND HYGIENE SERVICES
IN AN UNCERTAIN ENVIRONMENT

Sustainable management of water systems in Halaba Special Woreda, Ethiopia

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Access to improved drinking water in Halaba Special Woreda, Ethiopia was 43.5% in 2011. Its 280,000 residents are highly dependent on water from 40 regularly malfunctioning deep boreholes. In collaboration with stakeholders, People in Need has implemented a sustainable water systems management project in the woreda. The project seeks to address the underlying causes of persistently poor access to safe water through participatory capacity development activities. Preliminary results indicate reduced water scheme malfunction times, better links between stakeholders increased decision transparency, and improved efficiency and effectiveness of management processes. Several lessons learned and challenges have been identified including: a need for strong responsibility ownership amongst stakeholders; regulatory clarity regarding the legal status WASHCOs; and better understanding of local perspectives and financial factors. Overall, the project's focus on improved access to safe water through better management rather than water supply investments has shown to be both cost effective and efficient.

Introduction

Ethiopia ranks amongst the lowest countries in world in terms of access to safe drinking water. According to the Joint Monitoring Programme (2012) only 44% of its fast growing population has access to improved drinking water source. Halaba Special Woreda , located in Southern Nations and Nationalities, and People's Region is a representative example of this situation (woreda is the third level administrative unit, consisting of kebeles). According to woreda water officials, only 43.2% of its population had access to improved drinking water as of 2011. The water table in the woreda is deep, varying between 97 and 360m (Habtamu and Deneke 2008).

As a result, its 280,000 residents depend on 40 deep boreholes for access to safe water. Unprotected water sources include water ponds and rivers, which are heavily microbiologically contaminated. The woreda is highly drought prone. During dry season most of the surface water sources are unavailable and people depend on the boreholes and occasionally water trucking. Several of the boreholes are, however, frequently non-functional at any given time further reducing access to safe water supplies. At the start of the project, in 2011, approximately 25% of all boreholes were non-functional at any moment. Therefore, a large number of woreda residents either used unprotected surface water sources or travelled long distances to more crowded boreholes on regular basis. Thus, they were putting additional stress on the functional boreholes and their regular users.

Water scheme management system

Boreholes in Halaba are primarily managed and operated at the community level by local Water, Sanitation and Hygiene Committees (WASHCOs) with support from government officials. The institutional arrangement is designated by federal and regional regulations (FDRE 2011). WASHCOs are established at kebele level (kebele is the smallest administration unit). Members of the community elect its members and they work on voluntary basis. WASHCOs are given responsibility to ensure general operation and functionality of water schemes, to collect and administrate income from water sales, cover operational costs

(diesel, electricity, salaries), and basic maintenance of the system. Woreda Water Office employs experts are generally responsible for construction of new schemes, the more complex maintenance needs, trainings of WASHCOs, and monitoring of the system.

The Regional Water Office is responsible for overall management of the system and it also supports maintenance costs beyond the Woreda's budget. Finally, Non-Governmental Organisations are often involved at different levels of the management system to fill gaps. Traditionally their involvement typically occurs when the government has insufficient funds to rehabilitate non-functional water schemes or expand coverage to communities who lack access to safe drinking water.

Project design

People in Need (PIN), a Czech based international NGO, has been working in Ethiopia in the relief and development sector since 2003. Water, hygiene and sanitation (WASH) is one of the PIN's priority sectors in Ethiopia. PIN has been working in Halaba Special Woreda since 2004 in response to several droughts. Long-term poor access to drinking water, however, has remained persistent. In 2011, PIN began a three-year development project funded by the Czech Development Agency titled, *Sustainable management of water resources in Halaba Special Woreda*. The project aims to improve the water management system in Halaba with the goal of improving sustained access to safe water supplies by ensuring that a greater percentage of boreholes are functional a greater percentage of the time. This is being accomplished through establishing better links between stakeholders and strengthening the administrative, technical, and financial capacities of those responsible for management.

The initial assessment process for the project identified several issues associated with reduced efficacy of the water management system:

- Poor communications and ambiguous division of responsibilities between stakeholders including the community, WASHCOs, kebele and woreda officials, and regional water officials;
- Lack of resources to effectively manage water schemes at the woreda level including finances, technical equipment, transportation, administrative equipment, and management skills;
- Poor financial accountancy systems in place to manage the water schemes.

In close consultation with woreda and regional water officials, the intervention was designed to clarify and reinforce the current management system at several levels:

- Establish clear links and divisions of responsibility between stakeholders (the community, officials, and WASHCOs);
- Build the capacity of water officials in the several ways: improve administrative, monitoring, evaluation, and training processes; fill equipment gaps to support better M&E systems; and apply new capabilities through joint maintenance of several boreholes;
- Build the capacity of WASHCOs in administrative, financial, technical, and participatory processes through an iterative learning process.

Implementation and preliminary results

The project activities have been implemented through a highly participatory approach since April 2011 and the project is currently in its final year. The project has so far contributed to rapid increase in capacity to manage water schemes both by WASHCOs and government stakeholders.

Woreda Water Office has been equipped with maintenance tools, spare parts and transportation means to increase their technical capacity and mobility. Moreover, several technical and maintenance trainings have been provided to woreda officials based on guidelines developed by Hawassa University and Netherlands Development Organisation. The woreda experts have participated in several joint borehole rehabilitations as well as minor repairs.

Increasingly, responsibilities are also being delegated to the Woreda Water Office in terms of M&E and training. Water management is gradually improving through needs based trainings, regular monitoring by project staff and frequent feedback to stakeholders. An enhanced monitoring system was established at the wodera level consisting of an excel database, provided with information from routine reporting and meetings between WASHCOs and officials. This equipped the woreda office to react more quickly to malfunctioning water systems.

Significant efforts have gone into increasing community participation and building the capacities of WASHCOs in order to improve their responsiveness and efficacy. In the first stage, 10 model water schemes

were chosen to pilot the approach, which is currently being scaled up to all 40 water schemes. Based on the feedback from communities the time of malfunctioning water schemes has been reduced radically, compared to the pre-project period. Moreover, during the last year WASHCOs were conducted repairs of two generator related issues without intervention from the woreda, demonstrating that they are now able to solve minor maintenance issues.

A recent cost benefit analysis carried out in the 10 model water schemes showed that the WASHCOs have on average 23,000 ETB (=970 EUR) positive balances on their bank accounts, since the beginning of the project. The total amount of money collected by tap attendance was 897,000 ETB (=37,830 EUR) and total expenses on operation and maintenance of the water schemes 664,000 ETB (=28,000 EUR). Although there were some cases of mismanagement of funds and water losses recorded, the new system has clearly increased transparency, efficiency and effectiveness of the system.

Lessons learned and challenges in achieving sustainability

To date, several lessons learned and challenges have already been identified. Their identification has both added value to the project and also benefit future program design.

Cooperation with the Woreda and Regional Water Office has, so far, exceeded expectations. The project's focus on improved access to safe water *through* better management *rather* than water supply investment has shown to be both cost effective and efficient. Moreover, there has been great benefit to exposing water officials to this essential insight, because during start-up officials were initially quite sceptical of an approach *not* focussed on borehole construction. Regular joint monitoring and networking of WASHCOs and water officials was recognized to be very effective in achieving greater water scheme functionality. Specially, it helped to ensure that non-functional schemes were restored more rapidly because income collection and reduced financial mismanagement has led to more funds available for minor repairs, woreda technicians became aware more quickly of equipment failures, and woreda technicians had improved logistical means to restore water scheme functionalities. One notable issue remains the high turnover rate of woreda officials, which reduces the long-term efficacy of capacity-building efforts.

So far, rapid progress in developing the effectiveness of WASHCOs has been made. In many instances, one or several members have to be replaced due to reports of corruption and mismanagement. By implementing a participatory selection and monitoring processes, WASHCOs have become more responsive and beholden to the needs of the communities they serve. To date, however, the legal status of WASHCOs remains vague which affects the ownership they take over spending funds on repairs. According to the recently endorsed National WASH Implementation Framework (FDRE 2011) the WASHCOs should be supported to become legal entities, but their status remains ambiguous. More definitive regulations would ensure clearer division of responsibilities between WASHCOs and woreda and regional officials and lead to more efficient decision-making and responsiveness. The WASCHOs legalisation process is, however, being constrained by institutions benefiting from the current system's ambiguity.

Moreover, it is debatable whether the WASHCOs in general consisting of low educated non-professional community people working on voluntary basis can in long term sustain capacity to manage relatively highly technologically, administratively and financially demanding water schemes. We have to question if the structure of the current management system is appropriate for possible capacities of the community people. During an experience sharing visit to neighbouring woreda a different approach of water scheme management was analysed. The other system employed a professional female managed association that is responsible for financial, operational and administrative obligations of all water schemes in the woreda. Long-term outcomes of this system have indicated better performance and bringing this system to scale should be considered.

Financial issues remain a major impediment to improved functionality of water schemes. The deep boreholes in Halaba are highly expensive to both construct and maintain. Monitoring data suggests 75% of the money collected for water sales go directly to operations and basic maintenance. This indicates a substantial cost recovery deficit that must be covered by regional and federal budgets. However, budgets remain insufficient to cover the high cost and rate of equipment failures in Halaba. Furthermore, technical mismanagement of equipment by WASHCOs results in significantly shortened lifespans of expensive generators and submersible pumps. Monitoring data has also shown that residents of Halaba do not choose to pay for the potable water provided by boreholes year-round, instead relying on free surface and pond water during the rainy season. Similar behavioural variation has been highlighted in a recently published research with focus on local perspectives on water security in Ethiopia (Dessalegn et al 2013). The main

factors affecting water source selections were shown to depend on convenience, quality, cost, and reliability of a source as well as season and changing demands on household labour (ibid.).

Actions recommended for ensuring improved financial sustainability of the schemes include: better technical support by qualified experts; budgeting across government levels that better reflects the true cost of sustainably supplying safe water to Halaba; necessity to include community perspectives in early stages of project planning; and efforts to increase demand to better understand their willingness to pay for safe drinking water in the community.

Conclusion

PIN's on-going efforts in Halaba Special Woreda have contributed to rapid improvements in sustainable access to safe water through enhanced management practices and increased community participation. All stakeholders have embraced this unique approach because of its participatory methodology, the strong emphasis on establishing better links between responsible parties, and strengthening key management practices. The preliminary results indicate: increased transparency of management decisions; and enhanced administrative, financial, and technical efficiency. Moreover, community report on improved response times to water scheme malfunctions. During the final year of the project it is expected to scale up the project on all water schemes in the woreda and fully handover the system onto local stakeholders. It is also expected that resilience of woreda residents towards recurrently failing water access will be increased.

Several lessons learned and challenges have been identified to date, which contribute to the project's success and improved future efforts. These include a need for strong responsibility ownership of the project amongst all stakeholders; regulatory clarity regarding the legal status WASHCOs; reconsideration of appropriateness of the local management structure; and a better understanding and inclusion of financial and cost factors and local perspectives into program design. Approaches to improving access to safe drinking water must look beyond the development of supply. Doing so can result in more cost effective solutions that yield better results in the long-term. Perhaps most importantly, the project's focus on improved access to safe water *through* better management *rather* than water supply investment has shown to be both cost effective and efficient.

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