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Rural water scheme maintenance capacity assessment in South Ari

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This is an assessment conducted in South Ari Woreda to identify the main challenges of the woreda's rural water scheme maintenance and point out the main interventions needed to strengthen the maintenance services. The assessment used different methods of data collection including a review of documents and key informant interviews at woreda and kebele levels.

The findings show that the South Ari Woreda Water, Mines and Energy Office manages 192 water supply schemes, mostly utilising low-cost technologies that require regular follow-up. While these schemes are relatively easy to maintain, caretakers need proper training and incentives to ensure their commitment. Refresher training has been lacking since 2019, and the woreda water office doesn't monitor caretakers' status or needs. The water scheme maintenance enterprise has become unprofitable due to a lack of support from woreda job creation and water offices and the lack of immediate profit. Without adequate technical staff, regular caretaker training, and solutions to the enterprise's challenges, it's impossible to meet maintenance requirements and ensure the sustainability of these water schemes, especially given the topographic challenges of the South Ari woreda.

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Abbreviations

AFD	Action for Development
SWS	Sustainable WASH systems
TVET	Technical and Vocational Education Training
WASH	Water Sanitation and Hygiene
WASHCO	WASH Committee
WUA	Water User Associations

Introduction

South Ari Woreda/ District is one of focus woredas of IRC WASH Ethiopia. From 2017 to 2022, IRC had been supporting South Ari Woreda in strengthening rural water supply maintenance as one of its core activities under USAID Sustainable WASH systems (SWS) learning partnerships, and since 2022 the support has been focused on strengthening woreda WASH systems. During the SWS project, IRC WASH supported caretakers to conduct preventive maintenance, and WASH Committees (WASHCOs)/Water User Associations (WUAs), and Federations to undertake management of water schemes based on the regional WASHCO guidelines. This included documentation of maintenance requests and responses, keeping a record of users, bills and expenditures and regular written communication with the woreda water office. This support contributed significantly to the successes mentioned in the SWS closeout final report¹.

The non functionality rate of water supply facilities in South Ari Woreda in March 2023 was 32%. This was 40% during the 2017 baseline assessment. The figure is much higher than the national target of reducing non-functionality below 7% by 2030. The inadequate number of maintenance technicians in the woreda water office, lack of skilled and committed caretakers at the scheme level, and lack of prioritising maintenance by caretakers due to lack of incentive and follow up from the woreda water office are some of the main reasons for the high non functionality rate. IRC WASH has been advocating for professionalisation of water supply services including maintenance and spare parts supply since the baseline. The woreda has established micro-enterprises to engage in construction, maintenance and spare part supply, but the enterprises have not been fully functional.

Objectives

The main objective of this assessment is to identify the capacity gap of rural water scheme maintenance and draw recommendations for sustainable maintenance services.

The assessment questions are:

- What are the capacity gaps of stakeholders supporting maintenance services at South Ari Woreda?
- What are the reasons for the non-functionality of water schemes in the woreda?
- What are the main interventions needed to strengthen maintenance services?

Methodology

The assessment used different methods of data collection including a review of documents and key informant interviews at woreda and kebele levels.

The document review includes review of the SWS project closeout report, water user associations and caretakers' capacity building training report and woreda water office reports.

¹ <https://www.ircwash.org/resources/final-report-action-research-strengthen-monitoring-infrastructure-management-and-planning>

The key informant interviews were conducted with maintenance technicians from the woreda water, mines and energy office, members of the maintenance micro-enterprise, and selected kebele federations, water users associations and caretakers. The interviews were based on a prepared questionnaire.

Findings of the assessment:

Stakeholders supporting maintenance

The main actors supporting maintenance of water schemes in South Ari Woreda are caretakers,

the woreda water, mines and energy office, South Omo zone water department, the regional water bureau and NGOs like Red Cross Society, Action for Development (AFD), World Vision, and South Omo Development Association. Gazer Town Water Utility also supports maintenance activities when requested by the woreda water, mines and energy office. The South Omo Zone Water Department and the regional water bureau support in major maintenance (rehabilitation of wells, and maintenance of pumps, generators and switchboards), the woreda water, mines and energy office undertake minor maintenance and caretakers are responsible for preventive maintenances.

The woreda water, mines and energy office has only two technicians to support 192 water supply schemes in 28 rural kebeles and 3 small towns. To address this challenge, the office collaborated with partners such as IRC WASH, UNICEF, World Vision and AFD to train caretakers. The trainings were targeted to enable caretakers to undertake timely preventive and some minor maintenance and report major maintenance issues to the woreda water, mines and energy office. However, caretakers were unable to prioritise preventive maintenance, due to lack of commitment, incentive, follow up, and support from the woreda water, mines and energy office.

IRC WASH supported the establishment of a maintenance and spare part supply micro-enterprise, but the enterprise has not started operation, though some members are providing maintenance services on a call basis. The woreda water, mine and energy office pays per diem and transport for the services as there are no agreed tariffs. Recently, IRC WASH has supported the development of mutually agreed maintenance tariff guideline.



Maya Reda, chair of the South Ari water scheme maintenance private micro-enterprise, is an active member of the enterprise. He maintained over 15 water schemes in 2022, communicating with the woreda water office, WASHCOs and caretakers. Maya said that if the woreda and partners provide the enterprise with the opportunity for maintenance, the enterprise has the capacity to undertake preventive, minor, and some major maintenance, especially on shallow and hand-dug wells. He added that not all enterprise members have the capacity to remove all accessories and reinstall them, but he personally does.

Enterprises working on WASH

The South Ari Woreda Job Creation, Small and Micro Enterprise Office has established 146 enterprises until the end of 2022. These enterprises are mainly engaged in agriculture, construction, and service sectors. Among the 146 enterprises, only three are working in the WASH sector (water supply and sanitation marketing), which accounts for 2% of the total enterprises in the woreda. Out of the three enterprises, one is engaged in sanitation marketing, while the other two (Okmi Water Work Association and Adey Maintenance Service Enterprise) are working on water supply infrastructure construction and water schemes maintenance as well as spare part supply services.

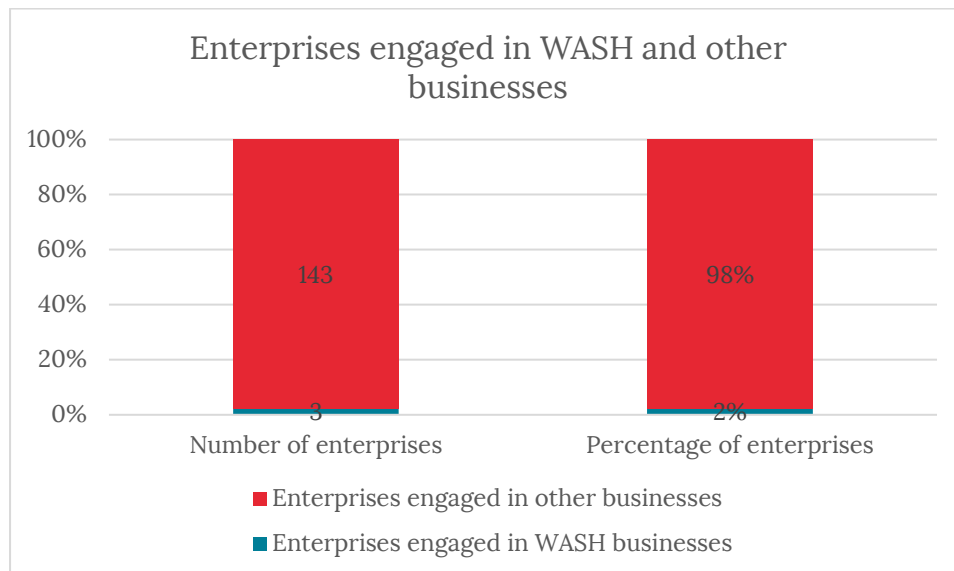


Figure 1: Comparison of enterprises engaged in WASH and other businesses in South Ari Woreda

Status of enterprises working on water

Adey Maintenance Service enterprise was established in 2020 with the objective of engaging in water schemes maintenance and spare part supply services to the South Ari, Baka Dawla and Woba Ari Woredas. The enterprise has five members including technical and vocational education training (TVET) graduates and artisans. However, the enterprises are not fully operational to date because of;

- Some members have an unrelated educational background and lack of knowledge on water supply technologies.
- Most of the members are new TVET graduates and with no hands on experience
- lack of working space/shade which was promised by the woreda job creation office is not provided yet
- lack of commitment by some members due to high profit expectations
- lack of initial capital, struggling to get a loan from Omo Micro Finance
- lack of support from the woreda water, mines and energy office
- lack of capital to procure maintenance hand tools and spare parts.

Status of caretakers

In 2019, training was provided to 134 caretakers from 67 water schemes. This accounts for 35% of the 192 water schemes. Caretakers on the remaining 65% of the water schemes might have received training during the commissioning of their water systems. Except for capacity building refresher training for Meitser and Woset Kebele caretakers in July 2020 with the support of AFD, there has been no refresher training organised since 2019. Adamu Shichi, Shishir Kebele's Fakater on spot spring caretaker, reflected about the capacity building training he participated in 2019.

“The training took place a long time ago and there were too many trainees. It was not enough to understand the basics of maintenance and did not address topics of on-spot springs, but it was about preventive and minor maintenance of hand dug and shallow wells. Currently, we are not in a position to undertake maintenance activities for our on-spot spring”

According to the woreda water, mines and energy office, currently, none of the caretakers are conducting minor maintenances. But as part of WASHCO, they mobilise the user community to fence the schemes, clean the surroundings, and advise users not to wash clothes and their bodies near to the water facilities.

According to the office, caretakers have gaps in:

- differentiating components of water supply scheme
- identifying spare parts needed
- identifying pipe size and material
- operating maintenance hand tools
- maintaining hand tools referring to training materials provided during training, as most of them are illiterate
- commitment.

Status of sanitation enterprise

There is only one micro-enterprise engaged in the sanitation business in the woreda. The enterprise manufactures concrete slabs and installs plastic slabs at the price fixed by the woreda health office. Some partners pay for the cost of slabs directly to the enterprise to supply and install for selected pro-poor households free of charge.

Challenges to sustain water supply schemes

The woreda has a shortage of budget to support caretakers and enterprises. There is no regular capacity building/refresher training for caretakers and WASHCOs/WUAs. Since caretakers do not have incentives, follow up support from the woreda and commitment, they do not prioritise preventive maintenance. Most of the trained caretakers have resigned and have not been replaced.

The water scheme maintenance enterprise is not fully operational due to lack of support on entrepreneurship training, working space, setting maintenance tariffs, access to loan, and linking the enterprises with WASHCOs/WUAs. Some reasons for the lack of support to maintenance

enterprise include lack of capacity at woreda level (only few maintenance technicians, logistics, and budget). There is also a misconception by few that the transfer of maintenance role to caretakers and enterprises is considered as a loss of incentive; perceive maintenance service providers as competitors. The kebele administration does not support WASHCOs/WUAs and federations on tariff collection and coordinating the community participation.

Since caretakers and WASHCOs/WUAs are not undertaking preventive maintenances, the government and stakeholders are spending huge resources on the expensive major maintenance.

Conclusion

Currently, South Ari Woreda Water, Mines and Energy office manages 192 different water supply schemes. Most of the schemes use low cost technologies (low cost springs and hand-dug wells) that need regular follow-up. The low technology schemes are relatively easy to manage and maintain by caretakers, if they can get proper training, incentives in the form of regular refresher training, certification and regular support and supervision can increase the commitment of caretakers.

There has been no refresher training since 2019 except for training caretakers on 34% of the water schemes. The woreda water office does not monitor caretakers i.e., those who resigned, who are actively providing maintenance services, and who need refresher training.

The water scheme maintenance enterprise lost trust in the profitability of the business because of;

- ✓ Weak enabling environment; limited support beyond establishing the enterprise by woreda job creation and water offices (lack of providing working space, facilitation of loan, technical and entrepreneurship capacity building training and linking with the WASHCOs/WUAs) and
- ✓ lack of immediate profit that was expected after the establishment of the enterprise.

Generally, without the required number of technical staff from the woreda water office, regular capacity building training for caretakers, and solutions to the challenges of water scheme maintenance enterprise, it is not possible for the woreda to meet the maintenance requirement and ensure sustainability of 192 water schemes, given the topographic challenge of the South Ari woreda.

Recommendations

To ensure sustainability of water supply service in the South Ari Woreda:

- The role of the woreda water office needs to be more on maintenance service regulation than providing direct maintenance services.
- The woreda water office needs to be fully staffed and all the 192 water schemes need to have at least two caretakers each.

- The woreda water office should regularly monitor the performance of caretakers and strengthen them as required. There should be regular refresher training for caretakers on scheme management and maintenance.
- The woreda water office must facilitate discussions with the woreda job creation office to resolve issues related to the enterprise loans and working space. IRC local staff in Jinka need to closely support the process and facilitate discussions between the three parties to resolve the challenges.
- Strong scheme management should be put in place by capacitating WASHCOs/WUAs and federations. If strong management is in place, good relationships can be established with the enterprises, caretakers, and woreda water office for immediate maintenance support.
- Training sessions for caretakers, WASHCO/WUAs and federations should take into consideration educational background and scheme type. The size of the trainees should also be as small as possible to ensure thorough understanding.

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