



arche noVa
Initiative for People in Need



German
Toilet
Organization

ECT WASH — Lessons Learned

Implement Concrete Measures Adapted to the Local Context to Ensure Universal Access to Safe Water (Rehabilitation of Water Supply System)

Country
ETHIOPIA

Organisation
OWDA

Duration
JULY TO OCTOBER
2024



BACKGROUND

The rehabilitation of the solar-powered water supply system in Luqdhare Village, located in the Kelafo district of Ethiopia's Shabelle Zone, represents a critical intervention aimed at improving access to clean and safe water in a region facing significant water scarcity challenges. The project, implemented by the Ogaden Welfare and Development Association (OWDA) as the partner of arche noVa (AN), targeted multiple community concerns, including poor water quality, dangerous water-fetching practices, and inadequate infrastructure.

This project is part of the ECT WASH programme, that supports the practical implementation of WASH-related global commitments by advancing universal access to clean water and sanitation, promoting inclusive and climate-sensitive approaches, and strengthening preparedness, early warning, and anticipatory action in disaster and climate-affected areas.

The rehabilitated system now provides safe water to 3,850 people, including women, children, and marginalized groups, who were previously reliant on the Shabelle River, a source frequently contaminated with algae and prone to seasonal fluctuations.

Several factors contributed to the project's success, including the use of solar energy for the water system. Solar power proved to be sustainable and environmentally friendly, providing long-term benefits with low maintenance costs. The underground pump house was crucial for ensuring the system's durability. Community participation was also vital, as local input helped tailor the system to their needs and fostered acceptance. Involving the local population, especially marginalized groups, in planning, design, and implementation ensures sustainable outcomes. Prioritizing the inclusion of vulnerable groups, such as people with disabilities, ensures equitable benefits for all.

KEY CHALLENGES AND LESSONS LEARNED

Weather-related challenges, including heavy rains and floods, caused delays and complicated material transportation, extending the project timeline. Therefore, future projects should incorporate buffer time and flexible schedules to account for such unpredictable conditions. The steep terrain and remote location of Luqdhare Village further hindered transportation, requiring better local infrastructure, like off-road vehicles. Employing local labor with knowledge of the area could also help expedite logistics and reduce reliance on external resources.

Internally, a key challenge was aligning the pump with the river's fluctuating water levels to ensure system efficiency. Proper technical expertise and detailed engineering

assessments are crucial, especially when environmental factors impact infrastructure. Additionally, the district water office faced capacity limitations, worsened by leadership transitions, affecting project progress. It is then, strengthening local capacity through training and investing in long-term technical resources is essential for continuity. Furthermore, safety concerns were significant, as women and children faced crocodile attacks while fetching water. The solar-powered system eliminated this danger by reducing the need for river crossings. Hence, water access closer to communities minimizes safety risks and the time spent on water collection. Ensuring safety in water projects is critical, particularly in high-risk areas.

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RECOMMENDATIONS

Several recommendations for future projects have emerged from the experiences in Luqdhare, as follows:

- Sustainability should be a top priority, with renewable energy solutions like solar power offering cost-effective and environmentally friendly long-term solutions.
- Building local capacity through training and empowerment will help communities manage and maintain infrastructure independently, fostering resilience.
- Future projects should also prioritize inclusivity by ensuring the needs of vulnerable groups, such as people with disabilities, the elderly, and women, are considered.
- Climate-sensitive approaches are also essential, with projects designed to withstand weather disruptions like floods and droughts. Long-term monitoring and support are crucial to ensure the continued functionality of the system.

Future projects should prioritize infrastructure resilience to environmental stresses like floods, storms, and extreme heat, with protective measures to ensure long-term effectiveness. Flexible timelines and contingency plans are necessary to address weather-related delays, ensuring smoother execution. Continuous monitoring and support after implementation are vital to maintain system functionality. A clear strategy for ongoing maintenance will help avoid system failures over time. Incorporating these factors will improve project sustainability and long-term success.