

Exchanges between Ethiopia, Malawi and Sierra Leone on hand pumps maintenance

Inter Aide and its local partners are developing in 6 countries including Ethiopia, Malawi and Sierra Leone approaches to encourage regular maintenance and ownership of systems by the communities. Each approach is specific to the context.

A workshop held in December 2012 was the opportunity to learn and exchange from each other on methods and tools. A specific focus was made on the maintenance of hand pumps. The 1st week was spent in Ethiopia with Yembeh, Assistant WASH Program manager, who came from Sierra Leone; then the 2nd week was spent in Malawi, where Yembeh, Akalu, WaSH program manager from Ethiopia, and Gedewon the WaSH Coordinator of our partner RCBDI, visited the projects with John, director of our partner BASEDA and its branch for the south TIMMS represented by its coordinator Teddy, and Laurent, Inter Aide's Program manager.

Current approaches

Malawi

Inter Aide installed or rehabilitated wells and boreholes equipped with Afridev hand pumps for almost 10 years. Gradually services for maintenance are scaled up by Inter Aide and BASEDA in 10 districts, covering almost 780 000 beneficiaries:

- A network of almost 200 pumps technicians supervising 50 to 100 pumps each and providing a service of repair and of quarterly maintenance
- A network of around 100 shops who can supply the villages of this 10 districts with Afridev spare parts

Sierra Leone

Inter Aide is recently operating in wells-boreholes construction and rehabilitation. A bunch of different hand pump technologies has been sprayed in the country by various emergencies organizations, challenging the burden of supply and access to spare parts.

Since 4 years, a dozen of hand pump technicians are covering the maintenance of the approximate number of 700 systems in the district of Bombali.

- They provide repair service and annual check-up
- Communities are sensitized to organize themselves in order to collect fund and contact technicians for annual pump check-up

Ethiopia

Since 20 years, Inter Aide is constructing gravity systems in the South Region (nearly 1000 gravity fed schemes up to now in almost 12 woredas*). The challenge is to establish a sustainable mechanisms for their maintenance. RCBDI and Inter Aide are trying to set up a good ground in 3 - 4 woredas:

- Creating and supporting a network of technicians who can provide services for technical maintenance operations for a cluster of communities (capacity building of local contractors for more complex interventions)
- Building the capacities of the referent government body: Woreda* Water Mine and Energy office (WWMEO) and their experts to set up a routine diagnosis in order to prevent breakdowns and costly repairs.
- Supporting the establishment of a spare part chain and stores managed by WWMEO

*equivalent to district

Results of this exchange

⇒ The project managers discovered different hand pump technologies and specificities

Yembeh, from Sierra Leone explained the principle of **India Mark pumps** to the Ethiopian team.

A practical training is done during an intervention for a repair with Ethiopian Institutional representatives (expert of Woreda Water Office)



In Malawi, the whole team watched an intervention by an Area Mechanics and was able then to understand the working principle of **Afridev hand pumps**



⇒ Getting new ideas from each other

Opportunity for Malawi to receive additional advise for an evaluation of network rehabilitation

- In addition to the questions of hand pump maintenance, we took the time for a quick field visit of a wide gravity system not fully functional and for which lots of questions are pending.

The team in Malawi appreciated to receive suggestions to understand better the process of this system and to identify which points are to clarify in particular.



Visit of a gravity system and exchange of advices



Opportunity for Ethiopia to identify how to integrate hand pump in their maintenance projects

- Collecting more detailed information on hand pumps (identifying locations, recurrent problems encountered...)
- Building capacities of woreda water office experts (trainings on hand pump maintenance, equipment with adequate tools (clamps...))
- Supporting spare parts stores (providing management and follow up tools, improving stock and organization, reinforcing refill and supply chain...)



WVO tools for HP maintenance



Tool created after Yembeh's recommendations

⇒ Brainstorming on maintenance aspects and visits of concrete examples

- Developing spare part supply:
 - visit of hand pump spare part shops in Malawi
 - visit of spare part stores in Woreda Water Mine and Energy Offices in Ethiopia (Damot Sore hand pump spare parts shop – Kindo Koysha gravity systems parts shop)



Private shops in Malawi



Afridev and India Mark spare parts stores of Ethiopian WWMEO

- Developing a service of maintenance operators:
Exchange of ideas concerning network of hand pumps technicians



Area Mechanics in Malawi explaining his activity

⇒ In a process of promoting national staff, Yembeh from Sierra Leone, learned and got examples from his colleagues in Ethiopia where all head of projects are Ethiopian

- Opportunity to practice his presentation skills during explanations of the project he is following and India Mark working principle
- Get general advices from the Ethiopian team on project management
- Get different view on maintenance projects through visit of various context and approaches
- Extend his knowledge on gravity schemes (visit of infrastructures, technical explanation on design and construction implementation)



Visit of a spring catchment and discussions with Asrat (Ethiopian PM) on the design of gravity schemes