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EXPERIENCES

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Installation of Maintenance Services for Points of Access to Water in Rural Zones

(Example of Maintenance of Manual Pumps in Malawi)



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Summary

In Malawi, Inter Aide has set up a network for maintenance of replacement parts, involving distributors and artisan repairmen. A whole micro-economy is developing, little by little, and, for a minimum cost, allows continuity of access to water sources for rural communities.

Objectives :

The lack of maintenance of hydraulic works is very often a factor in limiting access to water for rural communities in developing countries. This lack of maintenance is most often due to two principal reasons :

1. Reduced or inexistant access to replacement parts.
2. Lack of technical competence of the management committees or the absence of manpower resources.

In order to handle these deficiencies, Inter Aide has set up maintenance services for the points of access to water in Malawi.

Methodology :

In Malawi, the access to a protected water source is, on average, 70% (based on one pump for 250 users) and more than 80% of the pumps are of the same type (manual pumps like the Afridev, which only requires simple but regular maintenance). These two factors facilitate the installation and the continuity of maintenance services.



The approach consists of proposing two services to rural communities in their vicinity :

1. Access to replacement parts for pumps in rural shops.
2. The presence of local artisans specialized in the maintenance of hydraulic works.



Shop selling replacement parts.



In Malawi, more than 80% of pumps are the same type (Afridev manual pumps).



Result demonstrated on site : the rate of functioning works is more than 80%.

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Shops for Replacement Parts (basic principles developed by Inter Aide in Malawi) :

- Existing and popular rural Shops to whom Inter Aide proposes the sale of replacement parts for pumps (by contract).
- Distance between the shops in the zone served: Distance travelled by the communities to get to the local markets.
- Start-up supply of a stock of replacement parts and training of shop managers (in technique and inventory management).
- Supply for the shops through an intermediary Depot. Ideally, this Depot should be situated where the shops get their supplies of the other items they sell. (Supply of the shops will be progressively automated through the involvement of institutions from the private sector and/or local NGO's).
- Recognition of the shops by the Regional Water Services and Rural Community Information (billboards, leaflets, awareness campaigns).

Local Artisans (base principles developed by Inter Aide in Malawi) :

- Identification of technicians and mechanics currently active in the targeted zones.
- Zone of operation of the artisans : from 60 to 90 work sites, on average, within a radius of 10 to 15kms.
- Technical and operational training of the artisans. Supply of a tool kit and a bicycle.
- Training the local artisans to train the management committees, at the water access points, how to make simple repairs (i.e. replace worn parts).
- Repair services for the water access points and technical training of the committees financed by the beneficiary communities.
- Recognition of the Local Artisans by the Regional Water Services and Rural Community Information (billboards, leaflets, awareness campaigns).

Results :

The follow-up of the results should take two directions:

- The permanent availability of replacement parts in the shops (especially worn parts).
- The number of repairs on work sites and technical training accomplished by the local artisans.

In Malawi, in the zones where the shops have replacement parts for pumps and where the local artisans are known and recognized by the rural communities (after 2 or 3 years of activity), the rate of functioning works is over 80%. The sale of replacement parts covers over 80% of projected maintenance needs (based on the recommendations by the manufacturers of the pumps).

Sources :

Information available on
www.interaide.org
www.rwsn.ch/documentation/skatdocumentation