

Institutional Maintenance: The Case of Handpump Technology Projects in Rural Malawi

Design Outreach is tackling the water problem in developing countries by using innovative technology, social entrepreneurship, and collaboration.

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Abstract:

Purpose: The so-called Village Level Operations & Maintenance (VLOM) handpump technology or boreholes has emerged as a means to provide safe drinking water for low-income countries, particularly the rural sub-Saharan region. Project beneficiaries through their local governing institutions or committees are summoned to maintain the handpumps once the project investor leaves the scene. However handpump projects' environment include political, cultural as well as economic challenges. UNICEF/WHO asserts that 35-45% of such assets are deemed non-functional even in the early years of their productive life cycle. This study uses a critical realist stanza to evaluate the extent to which local institutions are able to inspect, maintain and replace the aging handpump assets.

Design/approach: Data collection was done using a case study from nine operational and non-operational handpumps. Multiple data collection was used; triangulating secondary data (observations & documents) and primary data (36 Individual Case Interviews and 2 Focus Groups) in Nkhoma and Bvumbwe rural areas of Malawi.

Findings: Although some local committees take the initiative to inspect, repair and maintain the assets, the scope of maintenance management is mainly limited to preventative and management of fast wearing spare parts. Capital maintenance particularly for 'dry boreholes' and replacement of the aging assets was a challenge in both the Nkhoma and Bvumbwe, study areas.

Dr. Beatrice Chisenga, a native Malawian, earned her Ph.D. with research in micro-insurance for hand pump sustainability in her home country. Dr. Chisenga has 10+ years of experience working at managerial positions, providing technical support, in international development projects in Malawi including Safe Motherhood, Save the Children and CARE International. Recently Dr. Chisenga has joined the Design Outreach team as the African Field Director working to secure a new supply chain and distribution system starting in Malawi.

