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**ACCESS TO SANITATION AND SAFE WATER:  
GLOBAL PARTNERSHIPS AND LOCAL ACTIONS**

## **Community Based Management for Sustainable Water Supply in Malawi**

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*Poor management of water and sanitation resources are impediments to achieving the Millennium Development Goals (MDGs). MDG targets met with high breakdown rate of water points will be meaningless. Much as coverage of safe water is estimated at 72% in Malawi, nearly 30% are not functional at any given time. Community based management (CBM) approach is the answer to achieve sustained beneficial outcomes. This paper aims to provide water professionals with knowledge on how CBM works from Malawi's own experience using Mpira/Balaka Piped Water Supply Scheme as a case example. Experience-Sharing Workshops, earlier analyses documented by the Government of Malawi, other recent publications supplemented by author's own personal experience informed the study. Engaging the communities in all stages of the development project is seen as practical solution to meet meaningful MDG targets especially in the developing world. In conclusion, CBM works very well and has multiplier effect on rural development.*

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### **Introduction**

Low coverage of safe water supply, poor hygiene practices and deepening poverty impact negatively on the lives of people especially in the rural areas in the developing world including Malawi. The low water supply, sanitation and hygiene situation in Malawi is one of the key contributors to the high Under Five Mortality Rate (U5MR) which is 133/1,000 live births, 116/1,00 in urban and 164/1,000 in rural according to DHS Survey (2004). Inadequate access to safe water and improved sanitation also affects the lives of People Living with HIV and AIDS (PLWHAs) who need safe water and improved sanitation at all times to prolong their lives.

Improvement and sustenance of water supply and sanitation (WSS) coverage is clearly one strategy of fighting poverty and achieving goals within the Malawi Growth and Development Strategy (MGDS). The Government of Malawi (GoM) through the Ministry of Irrigation and Water Development (MoIWD) accelerated the provision of safe water sources and improved sanitation through a number of programmes to cover urban and rural water supply and sanitation, water quality, monitoring and environmental protection since 1994 when coverage was less than 60%. NGOs and development partners such as NORAD, GTZ, JICA, CIDA, the World Bank, UNICEF and EU provided support and safe water coverage is now estimated at about 72% and approximately 46% for improved sanitation. However, nearly 30% of the water points are not functional at any given time. This is worrisome if achievement of the MDG targets and full coverage by 2015 and 2025 respectively will be meaningful. The meaningful coverage will have to have all points functional every time.

Realising that communities that simply receive a water point and play a minor or symbolic role in implementation understandably do not feel a sense of ownership of the project, the Government of Malawi adopted a Community Based Management (CBM) approach in early 1990s for sustainability. The approach aims to fully empower communities to take the leading role in the project planning, implementation, operation and maintenance. The process involved the development of tools (guidelines, training packages and manuals), capacity building activities at different levels and regular follow up, participatory monitoring and evaluation activities. In the past, community involvement meant the local people providing local labour to dig trenches, laying of pipelines and providing local materials for piped water supply schemes without taking part in decision making processes (Glennie, 1983 p. 11).

Today, nearly 10 piped water supply schemes are being managed by the local people themselves through well established community management structures in the form of either Trusts or Cooperative Societies. Case examples include Nkhamanga, Dwambazi, Didi, Mvumoni, Liphangwi, Phalombe Major, Phalombe

Minor, Migowi, Mpira/Balaka, Didi and Mvumoni schemes. Over 90% of boreholes fitted with handpumps have some form of community management structures to operate and maintain them. The present policy direction is to have all water supply schemes run autonomously with minimal support from outside and establish an effective area mechanics and spare parts distribution system.

The main objective of this paper is to share knowledge on practical ways in which communities can be brought about to take the leading role in the access to sanitation and safe water based on experiences and practices using Mpira/Balaka Piped Water Supply Scheme as a case example. It combines the concepts, approaches and principles.

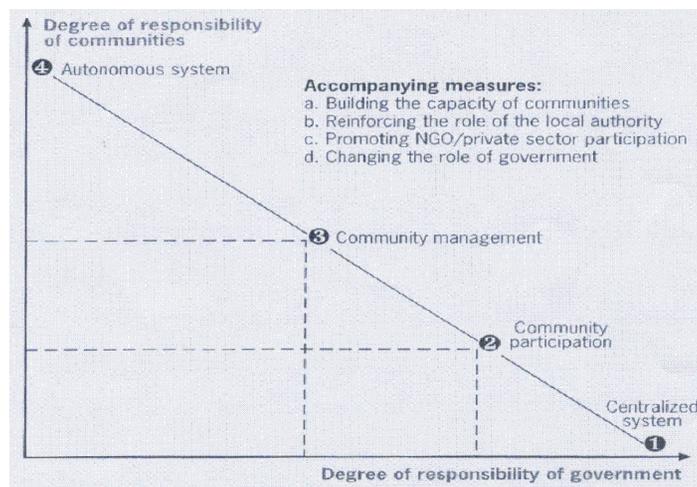
**Community-based management (CBM) concept**

CBM is a management system that enables a community to take charge and ownership of their water supply and sanitation systems using community’s own human, material and financial resources, in partnership with other supporting agencies, especially government but including NGOS and private sector. The process encourages Demand Responsive Approach (DRA), mass sensitisation, motivation and mobilisation, formation of management structures (committees), involvement of community members, community-focused variety of capacity building, and gender equality activities.

The common stages of CBM are: 1) Initial mobilisation and planning- sensitisation & ownership agreement, advisory committee & management approach; 2) Full mobilisation & implementation- community level facilitation & water point construction, formation and training of committees, caretakers, area mechanics, local operators or repair teams; and 3) consolidation- beginning of O&M by communities & mentoring process, hiring staff for scheme operation and maintenance paid from the scheme collections, work towards legal status – registration. These stages will create locally autonomous water and sanitation systems with limited degree of responsibility of government as depicted in Fig.1 below.

**Mpira/Balaka piped water supply scheme case study**

Mpira/Balaka Rural Piped Water Scheme is the largest gravity fed water scheme in Malawi and probably one of the largest rural scheme in Africa. It was constructed between 1987 and 1992 and supplies water to Balaka District, and parts of Ntcheu, Mangochi, and Neno Districts. The scheme was designed to serve 300,000 people but it serves a population of over 500,000 people now. The source of water for Mpira/Balaka Scheme is Mpira Dam with a reservoir capacity of 3.72 million cubic metres. The total catchment area of the Mpira Dam is 42 km<sup>2</sup> of which Mvai Forest Reserve covers 21.5 km<sup>2</sup>. The scheme has a major treatment plant and two other minor plants located at the dam and at Golong’ozzi. It has over 1,600 kilometers of pipeline, 42 storage tanks distributed throughout the entire Scheme area serving over 2500 communal tap points and Balaka Township. The performance of the scheme deteriorated early 2000 due to a number of factors and challenges including technical, managerial, and lack of maintenance and rehabilitation.



**Figure 1. Successful Community Managed Water and Sanitation system**

Source: COMWASH, November, 2006

In the Dam/Reservoir area, the major problems affecting its optimum operation included reduced capacity due to siltation, non-functioning of some intakes, leaking of valve chambers, and presence of heavy algae growth in the reservoir (Ministry of Water Development, July 2005). The slow sand filters in the Treatment Works area could not handle the algae and the fine colloidal materials that were present in the raw water, resulting in frequent clogging, hence the failure of the treatment system. It forced the scheme to use chemicals as alternative measure, which proved costly. The Distribution Network covering the pipelines and storage tanks were subjected to theft and vandalism. This affected the flow of water to other communities. Most of the scheme facilities were not in good condition due to lack of maintenance since community management structures had collapsed. Other factors constituted shortage of scheme staff especially at Technical Assistant level, inadequate financial resources, non-availability of transport and equipment facilities and general problems of coordination and communication.

In view of the problems above, the Ministry of Irrigation and Water Development (MIWD) decided to revamp the project to serve the community better and also in the understanding that it was the main source of water supply to a fast growing Balaka Township.

The MIWD commissioned a Situational Analysis Survey from May to July 2005 in order to establish the major problems affecting the performance of the Scheme from the Catchment area, the Dam/Reservoir, the Treatment works through the Distribution Network. The survey recommended, inter alia, the need to develop a proper scheme management structure with intensive community based management activities to ensure that the scheme sustains itself. As a case study, Mpira/Balaka Water Supply Scheme is towards autonomous management through the following CBM approach used in the project:

- (a) Mobilisation Stage: The whole process started with community mobilization. The Survey Team that comprised officials from the Ministry, District Assemblies and the Traditional Chiefs addressed the District Assemblies officials including the chiefs and village leaders on the findings and their input. A tentative implementation plan was drafted which outlined the resources needed and community sensitization programme. The Extension Workers (EWs) from line government ministries gathered primary data from the community at a full village meeting held during an initial visit. At this point, EWs verified whether Village Health and Water Committees (VHWCs) or Water Point Committees (WPCs) exist, are functioning and gender balanced, and whether community contributions to repair the taps were done.
- (b) Planning Stage: Extension Workers went back to the community to carry out a Participatory Rural Appraisal (PRA) in the areas of water, hygiene and sanitation together with the selected members from the village. This process lasted between 10 – 15 days per each Extension Worker Team (EWT). Before moving to a next community, each EWT organized a 1 day feedback session to the community on the findings. The communities participated in decision making on the next steps, potential costs and roles and responsibilities in the project including size and composition of water committees, selection of tap point sites. At this stage, communities guided by the extension workers democratically elected or revived a village health and water committee (VHWC) or water point committee (WPC) at a full village meeting. Training of VHWC and/or WPC in workshop 1 took place covering basic aspects of the project, their roles and responsibilities and preparation of Facility Management Plan (FMP). Within a period of 2 months all 2,500 water point committees were reactivated and briefed on the project.
- (c) Construction Stage: At this stage, user- communities were involved in construction/rehabilitation activities (digging, drilling, pipe laying, civil works etc). WPCs underwent training in Workshop 2 on technical aspects of the project. WPCs, in turn monitored the construction/rehabilitation activities. The works were usually completed within 4 to 12 months depending on the requirement. During implementation, hygiene and sanitation promotion activities also scaled up. However, the demand for supply of materials overwhelmingly increased, which the government did not cope with.
- (d) Operation and Maintenance Stage: Here WPCs were trained on Workshop 3 on operation and maintenance procedures. The Extension Worker Teams (EWTs) intensified monitoring visits. On average, EWTs were visiting the sites under construction/rehabilitation on a monthly basis to monitor progress. EWTs also organized quarterly review meetings with the community and gave support and advice on the operation and maintenance of the scheme where necessary.

At present, the scheme has set up a Trust to manage the scheme and registration process has reached advanced stage. As a Trust, it will have autonomy to manage the water scheme, with users paying the full costs of operation and maintenance so that the scheme sustains itself. People surrounding the dam have embarked on income generating activities such as bee keeping and fish farming. They have established community policing to apprehend the encroachers of the catchment area. Every year they plant trees in the catchment area during the rainy season and planted 3000 seedlings in the last rainy season on their own.

### **Lessons/Discussion**

Strong and effective decentralization structures play a crucial role in community management and implementation of community water and sanitation activities. Therefore, it is necessary to strengthen the structures through the District Assemblies by providing the necessary support, for a project to be successful. For sustainability of the water supply systems, there is need for comprehensive community sensitization meetings before the construction/rehabilitation of the scheme is carried out. Traditional leaders should be made aware of their responsibilities and be encouraged to support the Trusts, especially in the collection of water tariffs. Establishment of community based structures that helps project implementation instills confidence in the community that they can handle some of the development issues without requiring a day to day support from the government or other development agencies. Community empowerment improves efficiency in service delivery in a limited human resource setting as the user-communities take on more tasks and responsibilities. This kind of cost-sharing will promote economic growth and development in the developing nations.

### **Conclusion**

Community based management approach has worked well in Malawi. Many communities are willing to run the schemes on their own through trusts or water user authorities. It is recommended that the process should always build on experience and ideas of the community to achieve successful community ownership to manage the safe water sources. Change agents should act as catalysts to empower communities. The communities will feel proud of their achievements and, in turn, build confidence to tackle other development projects for economic growth and poverty reduction. In conclusion, benefits of CBM extend beyond water use, thus, need to scale up in the developing world particularly in the rural areas.

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