



## Paradigm shift in rural water supply programme

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RURAL COMMUNITIES IN the Republic of Zambia have been suffering from droughts which had caused severe damages to crops as well as sources of drinking water for the rural population several times. As support for drought preparedness of these communities, the Department of Water Affairs (DWA), Ministry of Energy and Water Development in Zambia has implemented rural water supply projects with the assistance of external donor agencies. Data and information presented here were collected during the participation of the writers in the Project for the Rural Water Supply and the Southern Province Water Supply Project.

Roles and responsibilities of actors over rural water supply have changed in the process of implementation of these interventions by DWA with correlation with economic, political, and social conditions in the country. Among such changes, adoption of the National Water Policy in 1994 can be considered as a landmark in the water and sanitation sector to lead a shift in paradigm in terms of management of rural water supply.

Examining two rural water supply projects as cases, this paper mainly deals with issues of transition and growth of the community-based operation and maintenance system before and after adoption of the National Water Policy and the WASHE (Water, Sanitation and Health Education) concept in Zambia. This comparative study focuses on the roles of the village water committees, which have gradually evolved from the groups for maintenance of water supply facilities to those for policy/decision making in improvement of their living conditions. Secondly, changes in support system by the local administrations and approaches of interventions by the external agencies are examined.

### Case studies of two rural water supply projects

The Project for the Rural Water Supply Development and the Southern Province Water Supply Project, funded by the Government of Japan, have common objectives to increase the water coverage rate and to realise the provision of safe water in a sustainable manner for residents who have been experiencing severe drought for a long time. The former had six target districts in Provinces of Lusaka, Central and Copperbelt to rehabilitate 160 existing boreholes as well as construct 220 new boreholes with handpumps from 1991 to 1995. The target area of the project was the strategic area for the promotion of agricultural development in the country while the water coverage in the rural part of the same was 24% at the time of the feasibility study in 1991.

While 95% of the population in the area earns a living from agriculture, most of them were small-scale farmers producing a few cash crops. The project's main components consisted of; a) drilling boreholes as water sources and equipping handpumps, b) rehabilitating existing borehole water facilities with handpumps, c) procurement of equipment for construction works and activities for capacity building of the communities, d) technology transfer on management of hydrogeological surveys and drilling of boreholes.

Since the target communities were located near the provincial headquarters, the project was expected to have positive impacts by restraining a mass influx of the population into urban areas and to promote settlement of farmers in the rural part. Among these communities, some were requesting new facilities due to breakdown of handpumps even if the water source had no problem. In consideration of this situation at the sites, the project had a component to repair and/or replace pumping devices. The concrete appurtenances were also improved to secure a sanitary environment around the water facility.

Following the above project, the Government of Zambia requested the Government of Japan for assistance for mitigation of damages from the drought caused in 1991-92 in Southern Province. In response to this request, the Japan International Co-operation (JICA) conducted a feasibility study. The Southern Province Water Supply Project was executed from 1997 to 1999 in all districts (i.e. 8 districts and 1 city) in the province in order to construct 220 new boreholes with handpumps. During the feasibility study, many cases were found where the existing handpump water facilities were not in use due to breakdown or a reduced water table. The project had the same components as the previous one, apart from the rehabilitation of existing water facilities.

### Adoption of the National Water Policy and the WASHE concept

The principle of community participation under the decentralisation is now applied for the rural water supply and sanitation (RWSS) sector in many countries. In the case of Zambia, the RWSS projects were planned and implemented by the central administrations until the beginning of the 1990's. However, in the situation where many ministries were involved in the sector without clear demarcation of responsibilities, it was difficult to integrate their policies due to a lack of co-ordination of authorities and their roles.

Aiming to run the implementation system efficiently, the National Water Policy was adopted in 1994. The Policy states principles of re-organisation of sub-sectors including water resource development, urban and rural water supply and sanitation. Regarding the RWSS programme, the Policy emphasises the need to ensure a community-based approach through forming water committees and their capacity building together with developing a cost recovery approach so that the positive impact of the programme can be sustainable.

Furthermore, a “software” component called WASHE has been applied in the RWSS programmes since the mid-1990s as the nationwide strategy to achieve the basic principles stated in the National Water Policy. The concept implies an integrated improvement of the environment of water and sanitation through promoting hygiene education. Based on this policy and concept, communities are considered to have responsibilities for management of the whole process of implementation of the water supply and sanitation programmes. The WASHE approach is to re-organise and strengthen the institutional framework of the actors from community to national level in the process to plan, implement, monitor and evaluate the programmes with collaboration between the communities and the administration.

### **Operation and maintenance system of the projects with community participation**

When we consider the two rural water supply projects selected as the case studies herein, differences can be found in terms of roles and responsibilities of the village water committees as well as approaches to facilitate participation of communities in the projects. Both projects regarded the target communities as the primary actors to have responsibility for maintenance and repair of the handpumps. However, DWA as the implementation agency of the project was required to handle wider tasks in the Rural Water Supply Development Project compared with those in the Southern Province Water Supply Project. The former planned and commenced its implementation stage before adoption of the National Water Policy and the WASHE concept, supported to improve operation and maintenance systems by providing handpump maintenance tools and training members of the village water committees organised through sensitisation activities by DWA.

While the communities managed the daily maintenance of facilities voluntarily, support by DWA was indispensable especially in repairing major breakdown of the handpump and provision of necessary logistics on such occasions. This means the district offices of DWA directly implemented support for the communities to form the water committees and to manage the water facilities after completion of the project.

Interventions concerning the capacity building of the communities focused on the technical aspect such as operation and maintenance of water facilities, with limited approaches from sanitation and hygiene education.

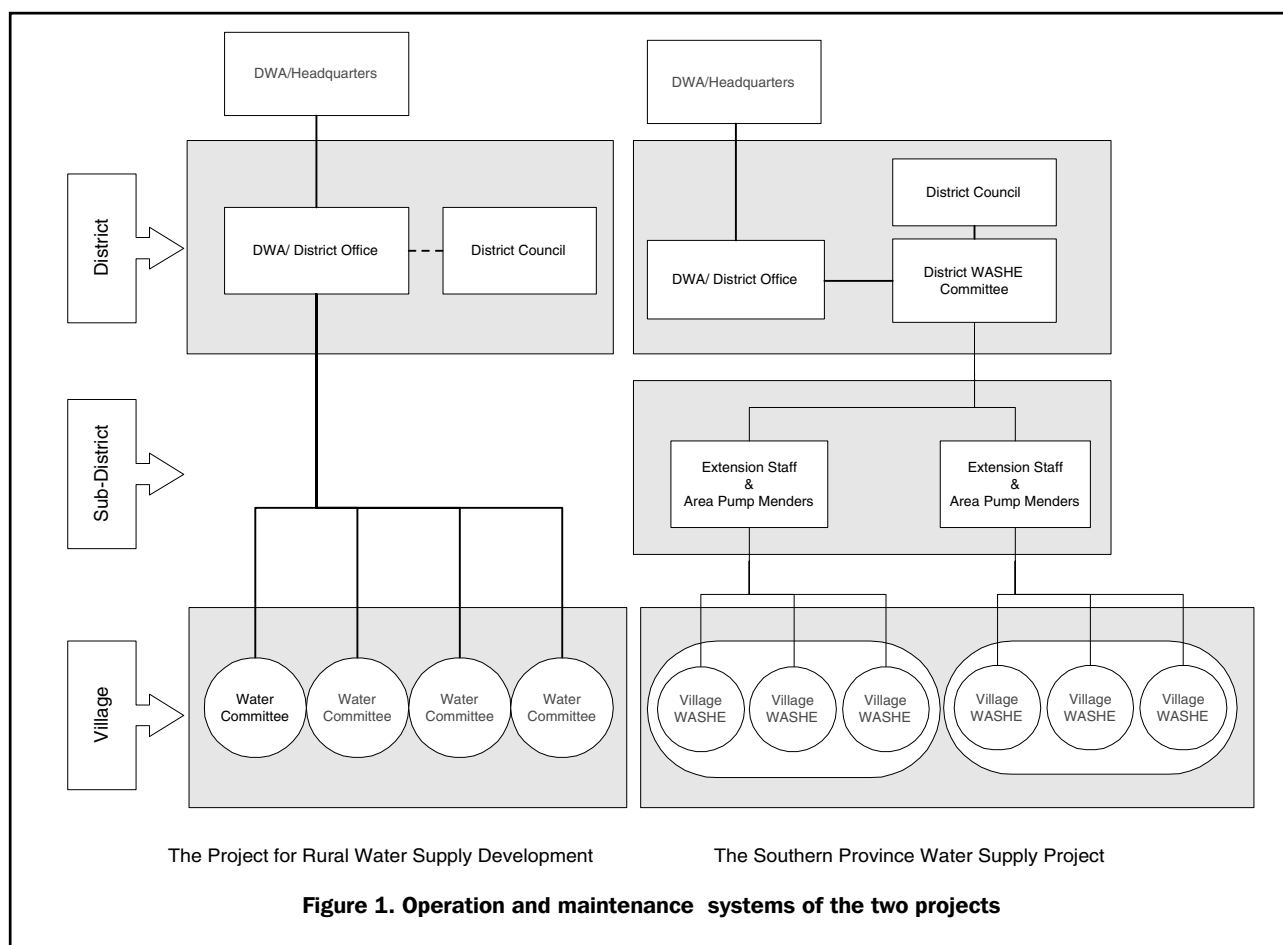
On the other hand, the Southern Province Water Supply Project was introduced a community-based approach more positively from the planning stage in the light of basic policies applied in the National Water Policy and the WASHE concept. The project tried to mainstream the target communities while enhancing the involvement of local administrations.

The WASHE Programme was incorporated into the project with collaboration from other donor agencies in order to strengthen institutional capacity of the District WASHE Committees (D-WASHE) which facilitated the RWSS programmes in each district. Members of the committee consist of district staff of line ministries that work closely in water, sanitation and hygiene education. The Programme included formation of the D-WASHE committees and training of trainers for construction and repair of water supply and sanitation facilities.

At village level, the Village WASHE Committee (V-WASHE) was organised at each water point to manage their water facilities. Each committee was composed of a chairperson, vice-chairperson, secretary, treasurer, and caretakers. Attention was paid to equal the gender balance within the committee by appointing women as more than half the membership. The V-WASHEs have the role not only to maintain handpumps and clean the surroundings but also to facilitate fund-raising for the maintenance and improvement of hygienic behaviour by community members. Besides these functions, the V-WASHEs with other community members were involved in the selection of candidate sites for water facilities and construction of appurtenances consisting of an apron, drainage and soak pit, based on the understanding that the communities themselves have the ownership on the facilities.

The key actors of the operation and maintenance system in this project are at the sub-district level. Line ministries of the RWSS usually get the extension staff stationed at the sub-district level to provide public services to communities. For instance, the Environmental Health Technicians, teachers, community development officers and agriculture officers are based in their catchment areas as the unit of provision of services. The staff were trained by the trainer in D-WASHE to directly facilitate the community sensitisation, formation of the V-WASHEs and hygiene education.

In addition to these officers, private persons were also appointed to equip skills and knowledge to support communities in development of the community-based organisation as well as repair of handpumps. Especially, the Area Pump Menders (APMs) were trained to provide technical services to construct/ repair water and sanitation facilities with remuneration from the communities. Arrangements for the operation and maintenance system of the two projects are shown in Figure 1.



### Lessons learnt

- In case where DWA was responsible for the provision of technical support to the communities, in terms of maintenance and repair of handpumps directly, both DWA and the communities had constraints to satisfy the need to sustain the water facilities. Due to the large distance between the district centres and the villages, DWA required reliable transportation and adequate staff to monitor and supervise the condition of water facilities located in the entire district. Meanwhile, the communities had to wait for the staff of DWA to visit their villages when they had a breakdown of the facilities. They otherwise needed to travel to the district centres to request for repair.
- Utilisation of the personnel at the sub-district level changed the role of the administrations at district level, including DWA, from the implementer of the project to the facilitator and supervisor of the entire project in the light of the entire policy of the RWSS in the district. This change resulted in facilitation of community participation from the planning stage of the project, expecting the communities to manage the entire process of implementation with co-operation from the administration.
- The V-WASHEs are the principle actors who facilitate the decision making regarding improvement and management of water and sanitation conditions at the community level.

- Well-defined monitoring systems and communication flow among district, sub-district, and village level would support the community-based management system efficiently.

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