



17th WEDC Conference  
Infrastructure, environment,  
water and people  
Nairobi, Kenya 1991

NGOs, women and community water

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### Introduction

Water is a basic requirement for human as well as animal and plant life. People need water for drinking, preparing food and for sanitary purposes. In Africa and many other parts of the third world, there is a manifest lack of access to clean potable water with a consequent deleterious effect on community and individual health. The World Health Organisation (WHO) in 1980 estimated that 30,000 people were dying everyday from diseases attributable to lack of good water and sanitation and over 70% of the world's rural populations lacked access to safe water supply.

The need for safe water for domestic use was recognised in the plan of Action of the United Nations Mar del Plata Water Conference (1977) and motivated the launching of the International Drinking Water Supply and Sanitation Decade (1980-90).

Figures available show that in the first half of this decade (by 1985) significant progress was made in improving the access of third world people to safe water (see Table 1 below).

From these figures, it was clear that progress made in Africa was not as good as in other regions. Hence it is clear that the decade target of full coverage was not going to be met. It is estimated that half the population would remain uncovered at the end of the century. (Ref. 1).

The plight of the rural dweller can be seen from this table above and the following figures. In 1985, 870 million people lived in urban areas, while 116 billion people lived in the rural areas yet approximately, 22% of urban dwellers were uncovered while the corresponding figures for rural households was 64% (Ref. 2).

Thus, inspite of the fact that the past 30 years have seen great efforts in the area of water resources development, with the construction of water projects of large magnitude, there is still under-provision of water for domestic use. Sadly, inspite of the vast amount of money channeled into such schemes, the people, particularly the rural ones, have not been able to get the projected benefits because of the plague of broken down and badly functioning facilities. Project maintenance has been a continual problem

Table 1 Water Supply Coverage 1980-1983.

Region	Rural		Population served				Urban		Population served			
	Total Population (millions)	1983	1980		1983		Total Population (Millions)	1980	1980		1983	
	1980	1983	Mills	%	Mills	%	1980	1983	Mills	%	Mills	%
Africa	334	356	76	22	103	29	135	160	89	66	91	57
Asia/Pacific	1064	1109	277	26	488	44	428	493	278	65	330	67
Latin America	124	126	52	42	62	49	234	254	183	78	216	85

Source: Report of The Secretary General of the United Nations to The Economic and Social Council of the UN General Assembly - Progress in the Attainment of the Goals of the International Drinking Water Supply and Sanitation Decade A/40/108 March, 1985.

in water provision schemes and a major cause of their unsustainability.

Nevertheless, the problems surrounding lack of water have reached a critical state and taking into account population growth, it is clear that there will be greater need for new water supply projects in the future. These projects must be environmentally sound and sustainable.

#### **Obstacles to Sustainable Water Resource Development.**

In Africa, the major obstacles to sustainable water resource development must be poverty and dependence. Poverty has resulted in a situation where governments are confronted with short-term problems such as malnutrition and disease, high infant mortality, illiteracy and chronic unemployment. Faced with these problems governments and countries manifest the obstacles listed by the World Bank as (1) fragmented sector policies due to competition for donor funding. (2) weak or non-existent institutions and inadequate co-ordination among sector agencies (3) lack of adequately trained and motivated manpower (4) use of inappropriate technologies, generally provided by donor agencies; lack of knowledge of lower-cost technologies; (5) lack of community involvement, fostered by donor planning of "assistance", (6) inadequate operation and maintenance, attendant upon lack of local knowledge and community involvement; (7) problems of resource mobilization and utilization - compliance with donor requirements.

Many systems for supplying communities with water, built with foreign aid, lie abandoned all over Africa because they simply cannot be maintained. A fundamental change of approach was called for which could involve the community in the management of their water supply. This is recognised in the following statement:

"lasting health and economic benefits for the rural and urban-fringe populations e.g. Africa can be achieved through increased community management of water supply and sanitation systems based on proven low-cost technologies."

Source: All Africa Seminar On Low-Cost Rural Water Supply, Abijan, Cote D'Ivoire, Oct. 1986.

#### **Solutions**

##### **New CMS Systems**

It is now recognised that successful water supply programmes must contain technology and institutional/organisational support elements. This will ensure that each community recognises the benefits of the improved supply, can afford to maintain the equipment as well as having the necessary skills, spare parts and other materials to sustain it.

This approach calls for community involvement in design, implementation and financing of planned improvement. It also provides for the selection of technology based on the resources available within the community and maximum involvement of local industries in the supply of services and materials needed in the construction and maintenance of water supply technology. Implicit in this new approach is the ownership of the means of producing water by the community (i.e. privatization of water supply) and the maintenance at community level of this means of production. This is a concept which has been labelled village level operation and maintenance (VLOM) (Ref. 3).

There is evidence now from various countries that schemes developed by the community stand the greatest chance of being maintained in working condition. But the success of any such scheme will be based on the selection of appropriate technology to meet (1) financial resources (2) physical resources and (3) organisational resources. These resource issues have in many cases been the cause of failure of many community water systems in the past. A case in point is the introduction of diesel pumping in rural Nigeria. In this project, deep drilled wells were equipped with submersible electric pump, a diesel generator to pump the water into a storage tank, typically holding one day's supply of water only.

The diesel generators were housed in small buildings guarded against theft and vandalism, by hired security men. These were augmented by operators who were responsible for operating the generator and preventing water wastage by the community. Major repairs and maintenance were carried out centrally by government agents. This meant long delays and increased costs of maintenance. Communities were unable to find personnel to carry out the repairs needed. Furthermore, because community involvement

was minimal, communities were only to supply diesel for running the pumps, there was no motivation for them to ensure their continued functioning.

Clearly, assessment of organisational resources at national and community level was inadequate in this case. As such, the decisions reached on the duties of each group were inappropriate. It has become clear that reliance on national organisations for maintenance support placed logistic burdens on central government which it was unable to meet over the long term. Over the long term, self reliance at the community level is a more workable alternative.

A reported successful example of village/community level management of hand-pump based water supplies comes from Burkina Faso and was modelled on principles developed by experts of the A C P and EEC at their consultative meeting in Bamako (Mali) (1979) - i.e. the transfer of responsibility for operation and maintenance of water points to users. The aim of this particular project was to set up a system entirely independent of outside support (Ref. 4).

Community participation in this project began with the direct involvement of communities in deciding which technology to use. The community had to select between dug wells without handpumps and drilled or dug wells with handpumps. Then, the community was involved in selecting well sites as well as collecting contributions to finance the superstructures. Finally, the community members met the cost of hand pump installation and maintenance. The water scheme was theirs.

#### **The Role of NGO's in Community Water Supply**

Most communities in developing countries need to be assisted in the construction and maintenance of water supply schemes. The different possible arrangements for water resource management have varying capabilities and limitations. The best technology for any given circumstance will depend on the prevailing situation. Sustainability based on community resources is a vital design parameter if rural water supply is to expand without being a continual drain on scarce financial and human resources. Thus in deciding on the first step, communities must be assisted through an assessment of the resource demands of each technology option

and compare these with the resources available to the community.

Given the shortage of skilled manpower in developing countries, it would be extremely difficult for them to provide this kind of service to the numerous communities. This is therefore an area in which assistance from Non-governmental and non-profit organisations may ensure the provision of community water supply.

**Providing Organisational Assistance.** NGO's assistance to the community should begin with the evaluation of organisational capacity. In some communities there are already self-help groups, co-operatives etc which are evidence of organisational experience. These groups, where they exist, should be assessed in terms of leadership, level of education and skill. Suitable organisations can be adapted through training and skills improvement for the purpose of running the community water system.

In communities, where there are not such organisations these would have to be created. NGO's are in an ideal position to assist in this process and may help the community by teaching the rules and advantages of co-operative formation.

**Assisting Communities to Access Additional Resources.** One of the major difficulties which rural communities have is lack of access to the resources needed for their development. Because of distance from cities, illiteracy and lack of means of listening to radio broadcasts, rural communities are not aware of the possibilities for assistance which are available to them. The establishment of self-help groups, cooperatives etc is a step towards bridging this information gap. Once NGO's have assisted in groups, these groups can be registered with government agencies so that they can be supplied with information. NGO's can also link these groups up with agencies responsible for providing funds for rural development and credit.

**Assisting in the Determining of Infrastructure Requirements.** There are many technology options in rural water supply schemes each of which gives a different level of services. These range from improvement of existing traditional sources such as cisterns and rain water jars to drilled deep wells with pumps. There are many technical issues which have to be taken into account such as

physical characteristics of the aquifers, the level of service required by the community - the amount of water required per day, the costs associated with the various choices and the benefits. All these must be calculated so that communities can decide the best level of service which they are willing to pay for. This kind of information can only be provided by experts which are in short supply in developing countries. It is therefore suggested that NGO's provide expertise in this regard.

NGO's must in collaboration with communities, establish the demand for water supplies. In previous water supply schemes, External agencies and government planners have often determined water demand and then applied some predetermined quota to set the number of water points required. This meant that the community's needs were not taken into consideration and their sense of ownership and satisfaction with the water scheme was non-existent. The result has been failure of water schemes which the world can not afford.

In the case of community Handpump water supply in Burkina Faso mentioned above, the weak point proved to be the supply and distribution of imported spare parts. Here again it is possible that NGO's can help communities to purchase directly spares to set up their own stocks, provided the communities are willing and able to bear the costs.

**Enhancing Access to Training.** It is clear that community members have to be trained if they are to carry out maintenance of their water supply scheme. Having assessed the skills of members of a group to be used in the water schemes, individuals who can be trained must be identified. Then missing community skills can be created through programmes implemented before and during construction.

Qualified trainers from the implementing agency (NGO's) supported by representatives of the manufacturers should take advantage of community interest in project activities to organise demonstration and training sessions.

#### **The Role of Women.**

In African and other societies, women have traditionally been responsible for supplying their family water needs. The inaccessibility of water has meant that women have had to trek for miles searching for

water. In some cases the time spent stretches to hours, which could have been spent in some income generating activity.

Clearly, women have more to gain from improved water supply and are therefore more motivated to ensure its continued provision. Advantage should be taken of this. Women must be trained to maintain the equipment. Womens groups and co-operatives have been found to be very useful in improving the living conditions of women and children and should be utilized in ensuring continuous improved water supply.

Many women in traditional rural societies are already highly skilled in arts and crafts and could easily be taught to dismantle and lubricate pumps or replace worn parts. The added income which improved water supply would generate by liberating the women to pursue their income generating activities will ensure their continued motivation.

With the problem of out-migration of men from the rural areas and the consequent abandonment of women as family heads, it is now more than ever necessary that women be provided with the skills needed to ensure the health of their families. One way in which this can be achieved is through women's ownership and maintenance of the community's water supply. This will also help to prevent the mass movement of communities which has been partly responsible for the refugee problems currently plaguing Africa.

Finally, it has been said that by educating a woman, you educate an entire community. This is clearly true. A woman who is trained to operate a machine will train her children to assist her, thus ensuring the spread of skills. By this means the number of training sessions needed is over the years diminished and the continuity of services maintained. This must be the cheapest way of ensuring sustainability of Community water schemes.

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