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Community participation in rural water supply

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SUMMARY

Few rural communities in the developing world can have experienced such profound changes as have occurred in Ethiopia since the revolution in 1974. The economy of the country is still based on agriculture but the former feudal structure has been transformed by sweeping land reform which put the means of production more in the hands of peasant farmers. Coupled with this development were radical changes in local government, with up to 25,000 Peasant Associations being formed. With the formation of other mass organizations, the rural population is now highly politicized.

The Government, following a Marxist-Leninist line, has always stressed the involvement of the community in their own development. This has included the development of rural water supplies. Ethiopia has been pre-eminent in the region in establishing a Community Participation Promotion Service within the agency responsible for the maintenance of rural water services.

However, a recent survey in the Southern Region found that 30% of rural waterpoints were not functioning, and that only half of the communities with improved water supplies had a water committee to manage improved water systems (ref.1).

This paper focuses on the situation in the Southern Region and will seek to explain why many rural water supply systems have not been sustainable, despite the emphasis that the government places on community involvement. Measures now being implemented to increase sustainability through more active and pragmatic community participation and through the use of appropriate technology will also be discussed.

INTRODUCTION

Ethiopia is on the UN list of Least Developed Countries and is still one of the poorest in Africa. The economy has been adversely affected by the ongoing civil war in the north and a drastic fall in the price of coffee, the major foreign exchange earner.

Yet Ethiopia has vast water resources, and has been described as "The Water Tower of Africa". Every day millions of gallons of water flow off the Ethiopian Highlands into neighbouring countries. And yet at the end

of the International Drinking Water and Sanitation Decade only 11% (ref.2) of the country's 40 million rural dwellers (ref.3) had access to an improved water supply, and only 5% (ref.2) enjoyed improved sanitation services.

The task of providing safe water to Ethiopia's 50 million (ref.3) inhabitants is the responsibility of the Water Resources Commission. Under the WRC are the Ethiopian Water Works Construction Authority (EWWCA) and the Water Supply and Sewerage Authority (WSSA), established in 1981 to operate and maintain both urban and rural water supplies.

However, according to WSSA's guidelines, rural communities themselves are responsible for operating and maintaining their own systems (ref.4).

To help communities achieve this aim, the Community Participation Promotion Service was set up by EWWCA in 1984. Guidelines were drawn up for the formation of Water Committees which explained how communities were to manage their own water systems with government assistance.

Non-Government Organizations too are providing rural water supplies. Up to 70 NGO's are involved. They have invested 120 million birr (US\$60 million; March 1991) in the sector over the last five years (ref.5); double the amount invested by government, and have served an estimated 4 million people; eight per cent of the population. But in spite of the government's emphasis on community participation in managing rural water supplies and the considerable investment by NGO's, a survey in 1988 in the Southern Region, found that 30% of rural waterpoints were non-functioning and about half the communities served did not have a water committee (ref.1).

Why was this so?

There are several reasons which this paper will explore. This will be followed by an analysis of the steps being taken which have been designed to make rural water systems more community-managed and sustainable.

1. Inventory of Waterpoints. WSSA S.Region 1988. (An internal report)
2. First National Handpump Workshop. Water Resources Commission. December 1989. (report)
3. Population Census, Central Statistics Authority; Government of Ethiopia, 1989.
4. Guidelines for Rural Water Supply, WSSA, 1982. (Internal document).
5. NGO WATSAN Contribution in Ethiopia, UNICEF, 1991. (A report)

THE SOUTHERN REGION

The Southern Region comprises five Administrative Regions. It is two thirds the size of France with a population of six million (ref.3). The majority are Oromingna, the largest ethnic group in Ethiopia.

The climate is defined by a wet season from June to August with a dry period to February when the short rains (belg) occur, followed by another dry period until the main rains. The northern part of the region enjoys an annual rainfall of 800-1000mm while the southern half has half that amount and has been subject to serious droughts in recent years.

Compared to other parts of Africa, the northern part of the region is well served by traditional sources. Indeed, one of the reasons why some communities have neglected their improved water supplies is that they have comparatively easy access to traditional sources.

RURAL WATER SUPPLIES

Since 1976, the Canadian International Development Agency has assisted the WRC in providing rural water supplies in the Southern Region. For the first ten years the emphasis was on providing new water supply schemes through EWWCA.

Approximately 1215 Waterpoints had been constructed by all agencies to the end of 1988, serving an estimated 600,000 people (Ref.1), or 10% of the population. But the emphasis up to 1988 was target-oriented construction of new water systems with far less emphasis given to maintenance. In 1987 CIDA decided to fund technical assistance to the Community Participation Promotion Service (CPPS) of WSSA.

NON-GOVERNMENT ORGANIZATIONS

Following the devastating 1983-4 drought, a plethora of NGO's started work in Ethiopia. Twenty NGO's are now operating in the rural water and sanitation sector in the Southern Region. Their projects are usually more grass-roots with a greater degree of community involvement than the governments' water projects.

When construction is complete, NGO's are supposed to hand over systems to WSSA for maintenance, but most agencies have not done so.

THE PROBLEMS

Like most government agencies in centrally planned economies, the Ethiopian Water Works Construction Authority (EWWCA) are target oriented and have adopted a predominantly engineering approach to water supply provision. In the early 1980's, community participation was conspicuous by

its absence. Construction was not, therefore, demand driven, although theoretically requests for improved water supplies came from awraja offices, frequently the local Peasant Association or kebele was not consulted.

Consequently some water systems were constructed in communities that did not actually need them. In some cases boreholes were drilled close to perennial rivers, and the people never adopted the new system. However, there was a big effort made to supply the new villagized villages with water.

Community Participation

The CPPS was launched to promote a greater degree of beneficiary involvement in constructing rural water systems. But in the early days this was merely a way of mobilizing cheap community labour to dig trenches for pipelines and to provide local building materials. The community did not have any power to make decisions affecting the planning, construction, operation or maintenance of its water system. Even after the CPPS was transferred to WSSA in 1986 this continued to be the case. The situation was compounded because the CPPS was underfunded and under-resourced, so CP work was always done after the fact. Because construction raced ahead of the social component, the CPPS found itself attempting to form water committees several months or even years after the system was built. In some cases the system had broken down, so it was not surprising that some water committees were not effective and soon became dormant. Today the CPPS in the Southern Region has only six CP Assistants to cover a vast region of considerable ethnic diversity.

Hardware

Another problem with so many agencies working in the water sector has been a burgeoning in the variety of hardware installed to pump water. There are over 20 types of motorized pump and ten different handpumps in the region (ref.1). This has created a maintenance headache for WSSA. Obtaining spare parts from 15 different countries has proved very difficult and expensive. Few NGO's bothered to order adequate spare parts when they installed their diverse equipment.

The type of hardware installed up to now has not been user-friendly. In the Southern Region, for example, there are over 400 Moyno handpumps. These need 21 different tools to remove the pumping element and there are no less than 12 wearing parts. None of these can be replaced by a village caretaker. Even trained mechanics find difficulty maintaining this high-tech pump. Replacing the seals on an India Mark II, the most common handpump in Ethiopia, (ref.5) is also impossible for a caretaker without special lifting gear.

Maintenance

Maintaining pumping equipment has never been a priority for bilateral agencies or NGO's. Up until recently the name of the game has been to instal as many new pumps as possible with an eye on impressing the constituency back home. Showing happy Africans merrily pumping water from a shiny new handpump has a certain appeal when used to generate funds in the west. But statistics show that in Africa, up to 40% of pumps are not functioning (ref.2). Yet some agencies are still hooked on making yet more unsustainable holes in the ground to fulfill their headoffice targets. Government agencies like WSSA have also neglected maintenance. A few pump operators and fewer handpump caretakers have been trained; but they have not been equipped with tools, which is akin to sending a soldier into battle without a gun. Village operators are told to change the oil at regular intervals but are not given spanners to remove the oil plug or spare filters.

PROVIDING SOLUTIONS

A number of steps have been taken both by the WRC, CIDA and various NGO's to resolve these problems.

The Demonstration Project

In 1988, as part of a redirection process, CIDA agreed to fund a Demonstration Project to show that beneficiaries of new water/sanitation systems could be actively involved in the planning, construction, operation and maintenance of water and sanitation systems. This concept had been recommended by a World Bank consultant in 1987.

So preliminary Rapid Rural Appraisals were done on 24 communities in the Gedeo Awraja of Sidamo of which 16 were selected according to criteria defined by WSSA and the Ministry of Health who are jointly implementing the project.

All these communities were villagized in the mid 1980's. Some were among the last to be villagized as this policy ceased about two years ago. The villagization policy, embarked upon by the Dergue during the Ogaden war in the late 1970's, was never popular as it forcibly removed farming families far from their farms into regimented rows of tukuls, often lacking water and health facilities.

Following the 1990 "Mixed Economy" speech by President Mengistu Haile Mariam, in which it was announced that rural cooperatives could democratically disband, many of the more recently villagized villages did exactly that, with up to 80% of the population returning to their former farms (ref.7).

Six of the demonstration sites were thus affected so replacements were found. Communities have now stabilized.

A detailed socio-economic baseline survey was carried out which yielded useful data on water use and collection habits, the prevalence and use of latrines, and common diseases.

One of the criteria for evaluating the success of the project will be the amount of water used, as it has been shown in previous studies that an increase in the quantity of water used has a direct bearing on community health (ref.8).

Initial findings show that per capita consumption is about ten litres per day where the source is under one kilometre away, dropping to 6-7 litres per day when water is over 1.5km away. (These figures are a long way short of the WHO standard minimum of 27 litres/capita/day.)

Regarding sanitation, 90% of households surveyed had individual pit latrines dug during villagization. However, about 20% of these were not in use because they are full and new ones have not been dug.

The overwhelming need expressed by respondents was for improved water supplies and health facilities respectively. The need for improved latrines came low on the list of priorities. However, as part of the project, the MoH plans to construct individual Ventilated Improved Pit Latrines in three villages. In the other villages the construction of latrines made with local materials like bamboo is being encouraged.

Health Education

The MoH has launched a health education program in the demonstration sites. This consists of an initial campaign designed for mass audiences whereby a village meeting is held at which broad water/health issues are presented. In the evening a series of films are shown with commentaries in Orominya. This program is designed to raise general awareness on the importance of safe water and the benefits of improved hygienic practices related to water use.

To complement this campaign, Community Health Agents are being recruited. These volunteers receive three months training by MoH staff, mainly on primary health care issues, before returning to their communities to conduct on-going health education aimed at specific groups like women and older children.

But in the past CHA's have not been very active. This is because they are supposed to receive a stipend from the Peasant Association, but in reality this seldom happens. Therefore, methods of motivating CHA's are being explored. These include the possibility of paying them a small salary from the money contributed to maintain handpumps. Another possibility is that they be given extra land to farm by the PA Executive Committee.

7. WOOD M. Report on Devillagization, June 1990. (Unpublished report).

8. CAIRNCROSS S. et al Evaluation of Rural Water Projects in Lesotho. 1980. (a report)

Water/Health Committees

Before construction starts, the CPP Assistants facilitate the formation of Water/Health Committees in each community. The concept of forming separate water and health committees has been revised to amalgamate the two entities.

Committees are formed through the PA who call a mass meeting at which the CPPA outlines the benefits of an improved water supply. The rationale and functions of the committee are also explained.

Candidates are then nominated and a democratic election is held. However, the PA chairman, the most powerful local official, is usually coopted as chairman of the committee as without his involvement the committee would not have the power to take decisions affecting the whole community. The secretary of the committee is usually the CHA. Two committee members are women; one is usually the head of the local Revolutionary Ethiopian Womens Association.

The CPPA explains to the committee members what their job descriptions entail.

WSSA-Community Agreement

Before construction starts, the committee signs a formal agreement with WSSA. This spells out in detail the obligations of WSSA in providing the system and the responsibilities of the community in the construction and management of the system once it is built.

The agreement has a cost recovery clause which, in the case of handpumps, recommends that each household contribute 25 cents per month into a maintenance fund. Assuming an average of 50 households per handpump, the 25 cents will generate 150 birr (US\$75) per year. As Afridev pump parts cost only 20 birr per year, this will leave a surplus of 130 birr. It is planned to use some of this surplus to remunerate Community Health Assistants.

The agreement also calls on the committee to select a pump operator or handpump caretakers who are then trained in the field by WSSA.

Handpumps

On the Demonstration Project, Afridev-type handpumps are being installed. Some of these have been imported while others have been made locally in WSSA's Research and Development workshop. Afridevs were chosen as they are capable of being maintained at village level by women caretakers. Some women caretakers have already been trained and given tools.

But the issue of spare parts has not yet been resolved. One suggestion is that spare parts kits be sold by WSSA to the local Service Cooperatives which would keep them until required.

Many NGO's in the Southern Region are also opting for Afridevs which is becoming the standard handpump in this region.

CONCLUDING REMARKS

Although the Demonstration Project is still in its early stages, certain elements are already being implemented on a wider basis. All new community water systems being built by EWWCA in the Southern Region, now have to have a Water/Health Committee in place and the WSSA-Community Agreement signed before any construction can start.

This order of precedence is not without its problems, however. The construction authority, EWWCA, still has its targets to meet, so pressure is being put on the Community Participation Service to do the necessary front end work. But the CPPS is still understaffed and under-resourced to cover such a huge region. Requests have been made to transfer CP assistants from northern regions which are not now operational.

There are also problems in holding mass meetings in rural areas which have been subject to recruitment campaigns in which youths are taken for military service. People are sometimes reluctant to come to meetings for this reason.

Following a series of quarterly workshops organised by WSSA to which all NGO's are invited, many of these organizations are now creating their own community participation departments or are strengthening the social side of their operations. The Catholic Mission, Norwegian Church Aid and Oxfam already have CP departments to carry out front-end work. The bilateral agencies too are realising the need to maximize community involvement if water systems are to become more sustainable.

Meanwhile the political structure in the rural areas of Ethiopia is gradually changing as a result of the official abandoning of some of the more hardline Marxist principles. Producers Cooperatives have virtually all disbanded with former communally farmed land being divided among members to farm on their own account. Also, the power of Peasant Association officials in some areas is decreasing. Unpopular officials are being voted out and former traditional community leadership structures (shimaghille) are beginning to re-emerge. The war in the north is exacting a heavy toll on the rest of the country in both financial and human resources. How far these events will affect investment if rural water supply remains to be seen, but the government budget for construction and maintenance has been frozen for the past year.

But the bottom line is that if the people themselves are allowed to decide on their own development priorities and are given the opportunity to get really involved in managing local infrastructure, then the sustainability and availability of that infrastructure will be greatly increased.