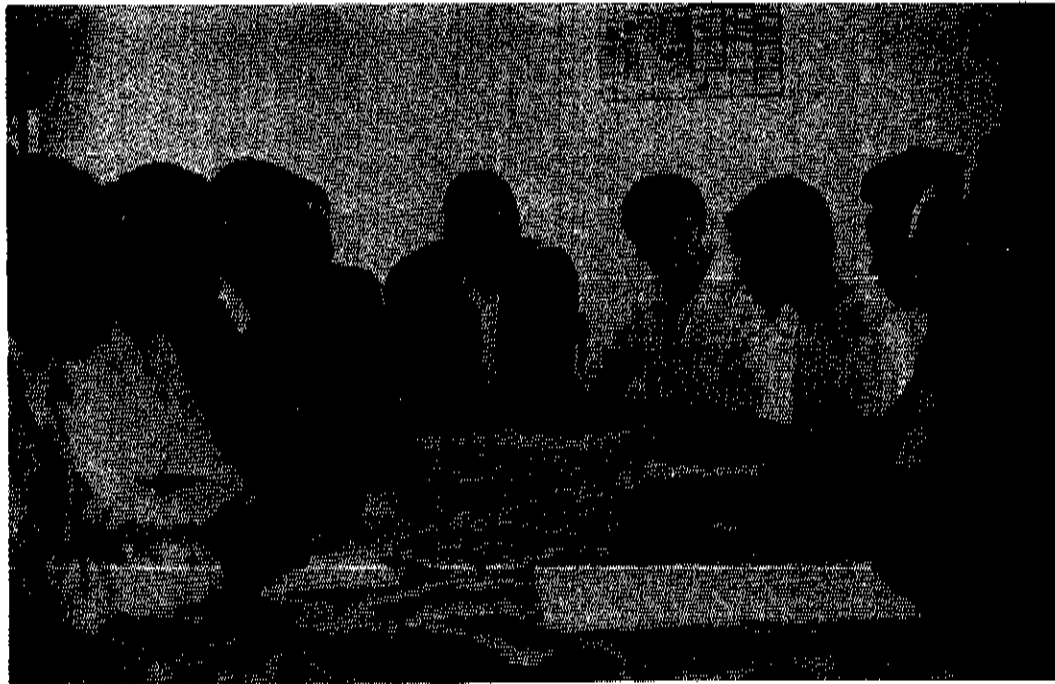




**Water
Technology**

CSIR

COMMUNITY-BASED MANAGEMENT OF WATER SUPPLY SERVICES



**Compiled by Baby Mogane-Ramahotswa
and Dave Still**

**CSIR
DIVISION OF WATER TECHNOLOGY**

Water Care Programme

**GUIDE TO COMMUNITY-BASED
MANAGEMENT OF
WATER SUPPLY SERVICES**

by

**Baby Mogane-Ramahotswa
and
Dave Still**

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1. INTRODUCTION

One of the most important aspects for sustainability of water supply is the ability of the community to manage its own scheme. Unlike urban settlements, institutional arrangements for rural water supply are rudimentary. Over the past decade, the accent of most development experts was on community *participation* and less so on community *management* of the schemes. Indeed, community participation provides what McCommon et al (1990:9) calls an *enabling environment* required for community management. Without proper organizational structures, even those projects which have registered effective community participation have no hope of sustainability. Therefore institutional frameworks are vital for the allocation of responsibility, authority and control of the system.

This guide discusses existing institutional structures in developing areas, the functions of the water committee, simple bookkeeping and financial management, operation and maintenance, health education as well as the importance of public relations. This document does not claim to deal with all the problems related to the management of water supply. All it does is to provide guidelines based mainly on field experience as well as on literature in water supply and sanitation.

2. EXISTING INSTITUTIONAL FRAMEWORK IN DEVELOPING AREAS

Generally in developing areas (informal settlements and rural) we find one or all of the following structures:

2.1 Tribal Authorities and Traditional Leaders

In most South African rural areas there are tribal authorities in the form of a chief and his councillors/indunas/ditona. Tribal authorities are legal entities representing communities at the local and central government levels. These leaders play the most important role of running all community affairs, co-ordinating development activities and settling disputes among community members. At the outset, the chief/inkosi/kgosi must be involved in need identification and planning for all developments taking place in the community. Even if he may not actively get involved in the project due to other commitments, his blessing must be elicited.

2.2 District Development Councils

All development activities including water supply, electrification, roads and community gardens are co-ordinated by Development Councils. These councils are normally constituted by both the professional and business people in the districts. The councils work hand in glove with tribal authorities to identify, prioritize, plan and execute development projects. It is always essential for these bodies not to overstep the authority of the local traditional leaders.

2.3 Residents' Associations/Organizations

The recent opening up of political activity in South Africa has led to the mushrooming of alternative community structures which are geared at addressing developmental issues in developing areas. These structures, which are mainly constituted by the younger generation, have spearheaded several initiatives and urged the involvement of the government in addressing community development. In some cases, residents' organizations have been accused of overstepping the authority of traditional leaders. However, experience has shown that through proper consultations and negotiations, all leaders manage to cooperate in order to achieve success in development projects.

2.4 Government extension workers

In spite of the fact that the community should take charge of their water supply, it is essential that the government extension workers support the projects. In South Africa, we normally find the Departments of Health and Agriculture's representatives in the villages. These people can play a major role in community development and thus efforts must be made to involve them as much as possible. Besides, they have the resources to support communities both technically and administratively. Also, the government is available to oversee the sustainability of projects when the technical support group withdraws from the area.

2.5 Communities

To a large extent, the capacity of a community to improve and manage their water supply scheme depends on previous experience with other development projects. For some communities cooperation and support for changes is more easily elicited than for others. Therefore, patience, empathy and motivation should be exercised to get all the community's participation in the water project. Maximum participation at all levels is therefore important in the planning and execution of the project.

In short, co-operation of all abovementioned structures to form a water committee is essential.

3. THE WATER COMMITTEE

Despite the fact that all the abovementioned structures are involved in community development issues, including water supply, it is essential that an independent body be established to deal specifically with the management of water supply.

This body could ideally be in the form of an elected committee representing all levels of the community. The water committee plays the most important role of mobilizing or motivating the community, applying for funding of the project, supporting technical and other community development groups whenever they are in the areas and reporting to the chief/authorities about progress and new developments. Details of the functions of the Water Committee and its constitution are outlined in the following section.

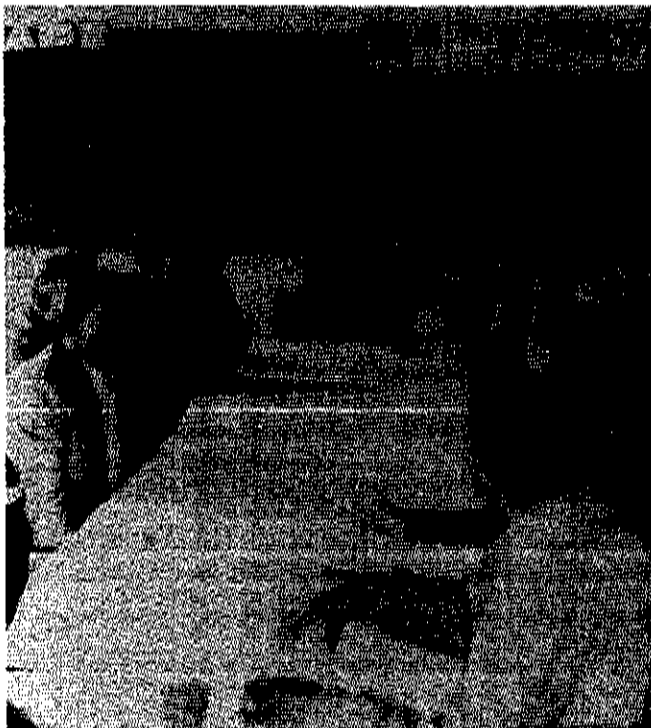
3.1 Functions of a Water Committee

A water project has three phases: preparation, implementation and administration. The functions of the water committee change as the project moves from phase to phase, and are discussed accordingly in the ensuing section.

3.1.1 Phase 1: Preparation for Project

This is the most crucial phase in which a solid foundation for the sustainable management of a water supply project can be laid. At the outset, the committee should:

- Undertake a simple need assessment study to ensure that the intended beneficiaries/villagers are in favour of the project (see appendix for a sample of relevant questions to be asked). Need assessment could be done either in groups, community meetings or individual households interviews.
- Define their objectives and goals regarding the water quality, quantity, distribution or level of services (e.g. standpipes or house connections), and possible expansion of services in future.
- Educate and motivate the community to achieve their goals. Elicit the community's willingness to invest in capital and running costs.
- Solicit technical support to obtain costs for various project alternatives.
- Effectively raise funds from both within and outside the community (possibly with logistical support from an outside agency). See Appendix 2 for aspects that need consideration when making an application for funding.
- Decide on disciplinary measures to be taken against those who default in payments and labour contribution.



WATER COMMITTEE MEETING

- Draw up contracts with the community, with the technical support group and with funding organizations/sponsors.
- Decide on concessionary measures to be taken for the aged and the poor families who may not be able to afford both the capital and running costs.
- Set up tariff schedules and mechanisms for collection.
- Keep financial records of all transactions.



PROJECT IMPLEMENTATION

3.1.2 Phase 2: Project Construction/Implementation

This is also a crucial phase in terms of management functions of the Water Committee. During this phase, the Committee should:

- Convene meetings to motivate and jointly organize labour contribution and collection of money and, also decide on disciplinary measures to be taken against defaulters within the community.
- Undertake planning and scheduling of construction, ordering and storing materials, and soliciting technical support.
- Together with the technical support group finalize the design, especially the location of taps in consultation with the community.
- Select one or two people for training in operation and maintenance of the scheme.
- Keep financial records of all transactions to date and exercise accountability to all parties involved in the project.
- The committee should maintain sound communication and human relations with its own community, neighbouring communities, government extension workers, technical support group and sponsors.

3.1.3 Phase 3: Administration

This is the most crucial phase in which both the technical support group and the sponsors gradually withdraw from the community. Therefore, the committee should be well prepared to continue

with responsibility of managing the scheme with minimal back-up support of the government employees. At this stage, the committee should:

- See to an appropriate water quality monitoring system.
- Institute a supervision strategy for operation and maintenance.
- Plan for future extension/expansion of the system.
- Keep financial records of all transactions and maintain an appropriate fee collection mechanism.
- Exercise disciplinary measures against defaulters and vandals.
- Maintain healthy and sound communications both within and outside the community.

3.2 Constitution of a Water Project

It is a well-known fact that every successful organization or establishment has a set of rules and policies to govern its operations. Therefore, it is of crucial importance for a Water Committee to also establish its own set of rules and to guide members during the course of project implementation. Moreover, for some sponsors a constitution is a prerequisite in considering sponsorship of projects. An example of a constitution is thus:

3.2.1 Name

For example, the project will be known as Intutuko or Tswelopele Water Project.

3.2.2 Area of operation

This should describe the geographical area, be it a tribal authority, regional or local government in which the project will be operational.

3.2.3 Aims and Objectives

Aims and objectives of the project should be clearly stipulated. For example, one of the objectives of the project in this case would be the improvement and provision of water supply and sanitation as a means of promoting the health and well-being of a community.

3.2.4 Membership

Eligibility of membership to the project should be clearly stated. For example, membership shall be open to all community members of a particular tribal authority.

3.2.5 The Water Committee

The affairs of the project will be administered and managed by a democratically elected committee which is the decision and policy-making body. The inclusion of women on this Water Committee has been found to enhance the likelihood of project success, because women are so central to the welfare of any community.

The key offices on the committee are those of the chairman, secretary and treasurer. Additional members should ensure an adequately broad

representation of the community. The number should however not be too large as this will decrease the committee's ability to get things done.

It is also important to state the period for which the Water Committee will hold office. For developing communities with few leaders, it might be advantageous for office bearers to hold their positions for at least three years. Vacancies occurring during the period of the Water Committee's operation can be filled by co-option of paid up members who will hold office until the next election.

The new committee should be elected at the last Annual General Meeting of the agreed upon period.

3.2.6 Functions and Powers of the Water Committee

• The Chairman and Vice Chairman

The Chairman's duties are:

- To convene and preside at all meetings of the project and in his absence the vice-chairman should act in his seat.
- To inform members of the community well in advance about the date, time and venue of the meeting.
- To draw up an agenda of each item to be discussed at the meeting (the secretary and other members should help him in this task).
- To open meetings, introduce matters to be discussed and give everyone a chance to speak or contribute whilst leading the discussion until conclusions and decisions are reached.
- To make rulings on procedural matters of urgency and such rulings will be deemed final.
- To ensure that all decisions made are being carried out by members of the Water Committee and community.

• The Treasurer

The treasurer's duties are to look after all financial matters of the project that include:

- Keeping a record of the names of the people or families who contribute towards the capital and recurrent cost of the scheme.
- Keeping books of income and expenditure.
- Receiving all monies and depositing them in a bank decided upon by the committee whose signatories shall be the treasurer, the chairman and the secretary.
- Authorization of payment for services or materials.
- Submission of regular figures/statements.

• The Secretary and Vice Secretary

All correspondence and written work are the duties of the secretary and include:

- Keeping a proper record of all the meetings in the minute book.
- Writing letters and keeping correspondence for



SECRETARY TAKING MINUTES

the committee. Noting the names of people or families who contribute labour during implementation of the scheme and those who do not.

- In his/her absence, the vice-secretary or treasurer to undertake all duties of the secretary.

Additional Members

Despite the fact that additional members have no specific tasks to perform, they do however play an important role in the committee. Their functions include:

- Active participation in committee meetings in terms of offering advice to other members and contributing new ideas.
- To assist the treasurer with fee collection for both the capital and running costs of the scheme in their respective areas or regions.
- Assist in organizing voluntary or in-kind donation of labour and skills from community members in their regions.

Co-Opted and Ex-Officio Members

This category may consist of government extension workers, professional or business people or any other person in a community who may have a particular contribution to make to the schemes.

3.2.7 Convening of meetings

- Depending on the needs, committee meetings may be held once a month to report on progress made and to plan action for the future.
- Upon instruction of the Water Committee, the secretary will distribute notices and agendas of the meeting to all members.
- The Water Committee has full powers to call a special meeting as it may deem necessary.
- The Annual General meeting will be held as soon

as possible after the end of the financial year which will for example be from 1 April each year to 31 March of the following year.

3.2.8 Contributions

- Members are liable for contribution of a amount to be fixed by a general community meeting to cover in part the capital costs of the scheme.
- Joint efforts will be pursued by all community members in contributing labour by way of digging trenches, laying pipes, collecting and bringing local materials and in rendering whatever assistance that would be deemed necessary to the project.
- Members are liable for the contribution of an amount to be fixed from time to time by the Water Committee towards the operation and maintenance of the scheme.

3.2.9 Training

Should the need arise for training of key members of the committee on management and administration of the project, it will be done either on-site through workshops or by sending members to an institution capable of offering such services at the committee's expense.

3.2.10 Amendments

No addition(s), alterations(s) or amendment(s) to the constitution will be passed unless approved by two-thirds of the members present at any general or special meeting.

3.2.11 Dissolution

The project may be dissolved by a special resolution adopted by at least two-thirds of the members. If upon dissolution of the project there remain any assets whatsoever after the payment of all its debts and liabilities, such assets may be sold to other projects having similar objectives, as may be decided upon by members at the general meeting at which it was decided to dissolve the project.

4. FINANCIAL MANAGEMENT AND BOOKKEEPING

In spite of the fact that the financial management of the project is entrusted to the treasurer, and that the latter's functions have already been stipulated in the previous section it is essential to expand on how these funds could be best managed. Other committee members also need to have some skills in financial management seeing that they are also involved in collecting public funds.

Furthermore, should the treasurer vacate his position, it will be easier for the committee to replace him if they have kept abreast of financial matters. For best management, it is of crucial importance for all committee members to understand the rationale or reasons for cost recovery which include:

- The requirement for sustainability and continuity of services.
- The need for replacement, expansion or extension of the project or services, for example, household connections and quality improvements.
- Raising community awareness and appreciation of the value of drinking water and sanitation.
- The need to distinguish between responsibilities of user community and the water supply agencies.
- Lastly, the community develops a sense of ownership, responsibility and pride in the projects wherein they have contributed in-kind or financially (Wang et al, 1988:10).

Five most important points to remember when dealing with public funds as indicated in MB Consulting (1987:32) are as follows:

- Collect money from everybody according to the rules agreed upon by the community.
- Keep petty cash in a safe place.
- Use money for community water supply purposes only, in ways which are known to everybody.
- Record income and expenditure regularly.
- Report to the community from time to time on how much money has been used, and how much remains.

In cases of big schemes, the Water Committee could devolve responsibility for collection of revenue to community members for example, tap committees or spring associations could be formed to oversee collection of funds and operation and maintenance of scheme at local levels. For piped water supply, a coupon system whereby members of a community purchase coupons from the treasurer and/or neighbouring shops which entitle them to a number of 25 litre containers of water, could be introduced. The Committee could employ attendants to administer the supply at drawing points as is done in the Valley of a Thousand Hills near Durban. This system is reported to work smoothly without defaulting payment (Mann, 1985:39).

4.1 Income and expenditure

- **Income may arise from:**
 - Community's contributions to capital and running costs
 - Donations from sponsors - be they private companies, parastatals or government
 - Fundraising functions such as football matches, film shows, bazaars, etc.
 - Community's payment of running costs or services
 - Fines arising from penalties for vandalism or non-contribution of in-kind labour during construction.
 - Membership fees from people who moved into the village-newcomers and newly married couples from the village.
 - Special collection of money for purposes such as an official opening ceremony of the scheme.

- **Expenditure may arise from:**
 - Monthly purchases of diesel.
 - Transport to and from town for purposes of village water supply, for example, banking, withdrawals, etc.
 - Purchases of stationery and other administration books.
 - Wage payment for the water minder or pump attendant.
 - Purchases of spare parts such as taps, pipes, washers and payment of skilled technician to make repairs which may be too difficult for the water minder.
 - Repayment of loan taken during construction of the scheme. **REMEMBER - this is a contract you might have entered into with the agency concerned.**

4.2 Requirements for basic Bookkeeping

Bookkeeping simply means keeping records of all the money received, spent and the balance thereof. The following will appear in the book:

- **Income:** All the money received either through membership contributions, subscriptions, donations, fundraising bazaars etc.
- **Expenditure:** All the money that is spent on the project to purchase diesel, spare parts, hire labour, pay the water minder, pay for transport etc.
- **Balance:** This reflects the amount of money that is left in the bank at at given time.

The rationale for bookkeeping includes:

- The fact that the money belongs to members and not the committee, chairman or treasurer. Therefore, all members have the right to know what happens to the money.
- The money must be used responsibly. Record keeping helps us to know how much money we have and how much is still needed. The money must be used properly.
- The money must be safe. It is very important that the organization's money is not lost or stolen. The best way to keep money safe is in the bank. However, petty cash for day-to-day use could be kept with the treasurer (Human Awareness Programme:3).

For simple record keeping and collection of revenue from the user community, it is suggested that the committee allocate responsibilities to all its members according to areas or regions. The easiest way of keeping records is to have the following books:

4.2.1 Household Register

This should be a foolscap size notebook with a hard cover wherein names of all affiliated families are entered. This book can also be used to record monthly payments on contributions towards the capital costs of the scheme. For ease of reference, it is suggested that this book be kept by the treasurer.

Depending on the amount required to cover the capital costs, it is suggested that the committee decide on a period upon which members should have paid up the total amount required. In setting up the period, the committee should bear in mind the economically disadvantaged families who may not be able to afford a lump sum payment over a one or two month period. In that case then, columns should be drawn and monthly contributions entered next to names of all families. A register will look like this:

FAMILY NAME	MONTHLY CONTRIBUTIONS												TOTAL	
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
Dlangamela	R10			R10	R10	R10	R10	R10	R10	R10	R10	R10	R10	R100
Nala	R50				R50									R100
Mosi	R100													R100
Mangala	R50	R50												R100
TOTAL														

TABLE 1: HOUSEHOLD REGISTER

NB. Should the Committee decide to collect the money over a period of three months, then it is not necessary to draw twelve month columns but only the required months.

It is also important for the committee to consider making concessions for the very poor and pensioners who are willing to cooperate in whatever manner but have financial constraints. Instead of paying the full amount, the poor should be asked for one third thereof or may be exempted from payment of capital costs. Also, the business and professional elite of the community could be requested to pay slightly more in order to subsidize the disadvantaged families. All possibilities should be explored, and whatever decision taken, the community should be made aware, or rather be given a chance to give their views.

4.2.2 Regional or area notebook

This need not be a hard cover but an ordinary foolscap or A4 size notebook wherein area representatives of the committee note in names and contributions of all families in their respective areas. The same recording format as the household register may be followed but it is not essential. This book may be divided into two parts to record the capital and running costs separately.

Area representatives should submit this information and money to the treasurer who in turn will record it in the household register. Upon payment of money, the treasurer should immediately issue receipts.

4.2.3 Receipt Book

In modern life, people demand receipts as proof of an amount paid. Receipts are also an important reflection of the amount of money received by the treasurer. In view of the fact that some rural communities are often required to contribute towards both the capital and running costs of the scheme, it is advisable that two receipt books be kept to record payment of these aspects separately. This is done in order to avoid confusion regarding payments. However, one receipt book would suf-

fice for those communities who only have to pay for the running costs. Always ensure that duplicates are kept in the receipt book.

A receipt book looks like this:

No. 373	1992.02.26	R	c
Received from :	J.M. Mokoena	10	00
Ontvang van :			
the sum of :	Ten	Rand/	
die som van :	Nil	Cent	
		Sent	
For/Vir :	Operation and maintenance		
With thanks/Met dank			

TABLE 2: A RECEIPT BOOK

No. 374	1992.02.20	R	c
Received from :	Gabedisa Hlophe	10	00
Ontvang van :			
the sum of :	Twenty	Rand/	
die som van :		Cent	
		Sent	
For/Vir :	Running Costs		
With thanks/Met dank			

4.2.4 Daily Cash Record Book

In this book, also a foolscap/A4 size with hard cover, income, expenditure and savings are recorded on a daily basis. The treasurer should record the money he receives - **INCOME**, the money which is spent - **EXPENSES** and the money put in the bank - **SAVINGS**.

money in the bank rather than keeping it at home. This trend gained momentum with the introduction of burial societies, women's clubs, etc. during the late seventies. Hence, there is no longer a need for community motivation to take their monies to the bank. There are three options available for saving community funds namely:

INCOME					EXPENDITURE			
DATE	NAME	PURPOSE	AMOUNT IN		DATE	PURPOSE	AMOUNT IN	
			R	c			R	c
4-1-92	Melindi	Capital costs	20	00	2-2-92	Water minder	40	00
15-1-92	Mantsepa	Capital costs	20	00		Transport	5	00
15-1-92	Cobesekhulu	Capital costs	30	00		Diesel	20	00
17-1-92	Mamega	Capital costs	15	00		TOTAL	65	00
19-2-92	Buzika	Capital costs	20	00		BALANCE	50	00
		TOTAL INCOME	115	00				

TABLE 3: INCOME AND EXPENDITURE CASH RECORD BOOK

Note: For all above expenses, there should be proof of payment in the form of a receipt or whatever document signed by the provider of services. Invoices must also be kept to provide information about what was purchased.

The Committee should check this book regularly to see the total amount which is in the treasury or spent. This book could also be used to record fines arising from defaulters or cash payment or contribution of voluntary labour during construction of the scheme.

4.2.5 Savings/Trust/Cheque/Account

Fortunately, most developing communities in South Africa are already accustomed to the idea of saving

- An ordinary Bank Savings Account
- Trust Account with local Magistrate.
- A current or cheque book account.

Depending on the proximity, the Committee may choose to utilize any of these facilities. In the first two cases, three signatories would be required for withdrawals of money, whereas only two signatories are required in the case of a current account. Besides, with a current account there is no need for signatories to make the trip to the bank each time they need money as they can purchase goods directly. This can make a great difference to the ease with which a project can be administered, but more trust is required. There should be valid reasons for any withdrawals being made. A cheque looks like this:

0551
25-03-95
First National Bank
Eerste Nasionale Bank
R 40.00
ZENZELE WATER COMMITTEE
0551 1 250545 1001584353 28

Whatever transactions take place, the bank teller will always keep a record of the amount deposited or withdrawn from the book.

4.3 Disciplinary Measures against defaulters

Each and every community has people who deviate from the norm. It does not matter how high the morale of the community may be, some always try to lead others astray. However, circumstances that may lead to taking disciplinary action against defaulters include:

- Uncooperative members of the community in contributing labour as well as the nominal amount of money agreed upon to cover capital costs of the scheme. Some people in rural villages believe in tangibles. Therefore, this category of people would remain suspicious and negative during the inception of the scheme. However, as soon as they start realizing the benefit of an improved water supply, they decide to join the scheme. In that case then, it is suggested that the Committee decide on an amount to be paid to cover the capital and manpower days employed during construction of the scheme as penalty. In order to be fair to community members who have always been cooperative, it is also suggested that the amount charged be slightly higher.
- Families who may contribute towards labour on an irregular basis without valid reasons or giving excuses. These people should be made to pay penalties, otherwise they will influence faithful workers to also become lazy.
- People who, due to regular employment, may be unable to physically assist with labour during construction, yet do not provide substitutes. The Committee should decide on an amount to be paid by these members. It is suggested that this money be used to either pay nominal fees to those working on the scheme or buy them some refreshments in order to boost their morale.
- People who default in payment of the running or recurrent costs of the scheme. It is suggested that the committee approach these people and persuade them to pay, failing which these people could be taken to the induna/tona, civic association/residents organization or the inkosi/Kgosi for disciplinary measures. Another mechanism may be to cut off their water supply and use social pressure to get them to pay. Whatever disciplinary measures are taken, is up to the Committee to decide.
- Vandalism of the scheme either by children or opposing factions within the community. The Committee should decide on disciplinary action to be taken against the culprits. Fines should definitely be imposed against anybody who damages or vandalizes the scheme intentionally.
Alternatively, the committee could bring the opposing groups together and let them resolve the matter amicably.

5. OPERATION AND MAINTENANCE

Operation and maintenance are the most important elements for sustainable development of water supply schemes. Many water supply projects fail due to negligent of these aspects. It is therefore essential that schemes be always kept operational and properly maintained.

We will now turn to a brief discussion of the most crucial elements of operation and maintenance of constructed schemes as follows:

5.1 What needs to be operated and maintained?

- **Equipment:** All hardware such as pumps, filters, valves and pipes are subject to wear and tear and should be monitored and serviced before problems become serious. To ensure that this is done the Water Minder should observe a routine of regular daily, weekly and monthly checks. On a daily basis the pump and the disinfection apparatus will be checked. On a weekly basis the filter might be checked. On a monthly basis all valves in the system might be checked, and so on.
- **Water quality:** The quality of the water being supplied by the system should regularly be checked. Break-downs in the working of filters or disinfection apparatus will be immediately apparent in the deterioration of the water quality.
- **Water quantity:** If there are complaints from any members of the community that insufficient water is reaching their waterpoint, then the cause of the problem should be found and rectified.
- **Disposal of wastewater:** Stagnant pools of wastewater accumulated around standposts is a serious health hazard and it is the Water Minder's job to ensure that drainage around standpipes is maintained.

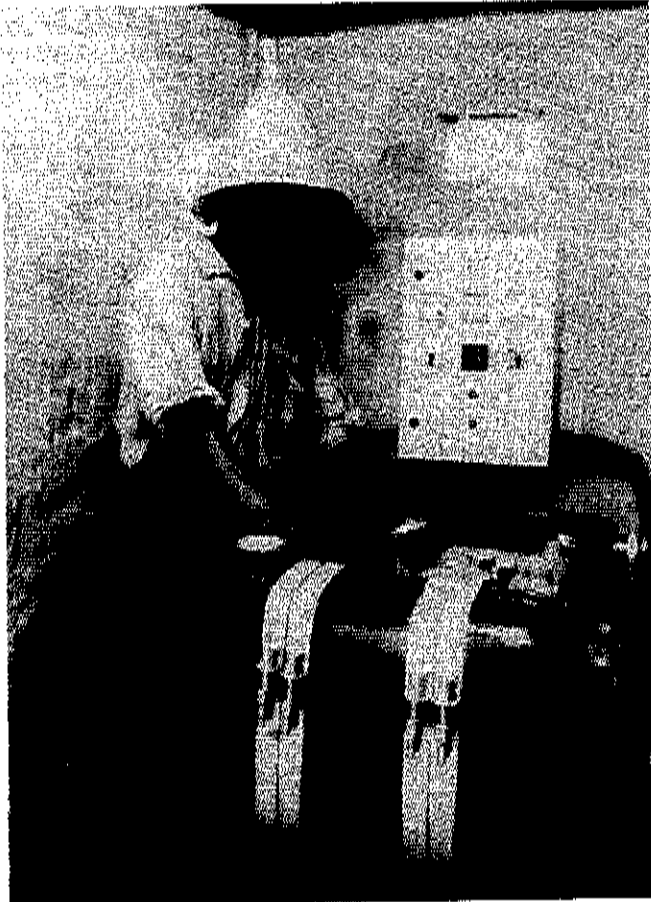
5.2 Who is responsible for operation and maintenance?

5.2.1 Water Minder

- It is important to have a reliable Water Minder to undertake the following tasks:
- Take care of the engine, oil it regularly, buy spare parts when necessary, and report to the Water Committee if there are serious problems.
- Report major faults to the Committee.
- The Water Minder must switch the engine on and off whenever water must be pumped, and check or inspect the condition of the machinery each time.
- Both the Committee and Water Minder must make necessary arrangements for someone to get money from the treasurer each month to purchase diesel for the engine.

It is very important that the committee arrange payment of the Water Minder. In fact, the Committee must draw up a contract with the Minder for his payment. Whatever amount is given to the minder it will encourage him to do his work better. Payment of the Water Minder should come from monthly payments towards operation and maintenance or running costs.

Another important aspect to consider is training of the Water Minder. This training can either be done on-site or he can be sent to an appropriate institution for training. Normally, only basic training on water treatment, operation and minor repairs of the engine is required.



WATER MINDER AT WORK

5.2.2 Water Committee

The Water Committee's functions in operation and maintenance are thus:

- Workout a strategy of paying the Water Minder's monthly wages.
- Check and supervise the Minder's work on a regular basis.
- Ensure that the community looks after the system and report breakdowns.
- Contact outside bodies for special technical assistance in case of the system's breakdown.

5.2.3 Community

As end-users, the community could also play an important role in the operation and maintenance of the scheme. For example, through the appointment of tap guardians, which may be members of households closest to the tap, faults and breakdowns can be promptly reported to the Water Minder/Committee. In so doing, the community members develop an increased sense of ownership, responsibility and pride in the scheme.

6. PARTICIPATORY HEALTH EDUCATION

To maximize the health benefits of improved water supply, the committee should ensure that health and hygiene education is undertaken in the community. This would enhance the community's understanding, awareness and appreciation of improved services. The committee could elicit the assistance of local health workers who have a sound track record in community health education. Health education should be directed at all levels of the community, particularly women.



GROUP DISCUSSION USING VISUALS

Efforts should be made to promote participatory education rather than the traditional academic one-way education. In other words, facilitators/educators should avoid a "telling" and adopt a "selling" approach. There is also great scope for what Chambers (1983:201) calls reversal learning of indigenous knowledge from the community. Likewise, the committee should sit, ask and listen to what the community knows about health. The need to curb environmental pollution and health hazards through proper sanitary facilities, washing slabs, cattle drinking troughs, proper drainage, protection of water and food, proper disposal of solid wastes and washing hands and facilities should be emphasized during the education campaigns. Water and health education flipchart is available on request. (Produced by Amatikulu Resource Centre).

Participatory education could include dramatic presentations, games, audio-visuals, group discussions and interpersonal communication. The CSIR has used this approach with great success in rural areas.



DRAMATIC PRESENTATION OF WATER RELATED DISEASES BY COMMUNITY

7. PUBLIC RELATIONS

Effective public relations is essential for sustainability of a water supply project. Basic requirements for public relations include:

- **Accountability:** The Committee should always be accountable to the community and outside bodies in order to maintain a good working relationship. For example, the Committee should report regularly about the financial circumstances and should let those interested in checking the financial situation of the project feel free to ask for the books. In this way, the people will develop trust and thus support the Committee wholeheartedly.
- **Communication:** It is also important for the Committee to maintain sound communication with the community and outside bodies such as the neighbouring community, funding organizations, technical support groups and the government. For example, the Committee should give regular feedback to the sponsors who may support their initiatives in future.
- **Adherence to constitution:** Efforts must be made to always adhere to the constitution, otherwise the Committee will lack direction.

8. CONCLUSIONS

To a great extent, past project failures could be attributed to the lack of community-based management of water supply schemes. It has been established over the past decade that appropriate technology and community participation alone cannot lead to sustainable projects. Through participatory training, the community could be empowered to achieve full management capacity. However, the external agency should avoid imposition of management systems and merely create an environment conducive for the community to run their own scheme.

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APPENDIX A

INFORMATION NEEDED

The Water Committee may elect to conduct a need assessment study in any suitable manner ranging from community meetings, in-depth interviews etc. Therefore, it is not necessary to formalize the study.

The range of data needed for water supply and sanitation programmes may include the following:

Bio-demographical information

- An understanding of village organizational structures and identification of disadvantaged groups.
- Family composition and size (e.g. nuclear or extended families). Establish how many adults and children there are in the family.

Water sources, usage and attitudes

- Available sources and purpose of use for each household (e.g. drinking, cooking, laundry, bathing, animals, home, garden).
- Quantity and quality
- Distance and time to fetch water
- Seasonal variations in water source
- Drawers of water (e.g. women, children)
- Preferred water sources for related activities (e.g. laundry, animal drinking, bathing).
- Perceptions of community needs
- Local beliefs and attitudes related to water sources.

Health aspects

- Morbidity and mortality rate (especially among children under the age of five)
- Existing water related/washed diseases.
- Major health problems in the country and seasonal variations.

Technological affordability and willingness to contribute

- Heads of households and major contributors to upkeep of families
- Means of subsistence or major occupations
- Preferred spending patterns and ability to contribute money
- Borrowing and savings customs
- Seasonal employment
- Payment for water.

Technological alternatives

- Local skills, capabilities and traditional alternatives
- Preferred technological improvements
- Availability of skilled and unskilled labour
- Local availability of materials for construction.

Excreta disposal and relationship between method and health

- Existing defecation practices (noting important differences between religions, men, woman, in-laws and children)
- Personal hygiene habits, cleansing materials and practices
- Important taboos, beliefs, related locations, sharing etc.

Community involvement and participation

- Community and family level leadership in decision-making
- Major local political or social factions which might affect participation
- Extent of interest and participation in water, sanitation and other development activities.
- Important characteristics that would determine acceptability and influence of outsiders working in the area
- Priority given to improvement of water supply and sanitation in relation to other priority needs in the community.

APPENDIX B

APPLICATION FOR SPONSORSHIP

1. TITLE: NAME OF THE ORGANIZATION OR PROJECT

2. ADDRESS AND TELEPHONE NUMBER

3. BACKGROUND AND GENERAL MOTIVATION

- 3.1 Location of community
- 3.2 How your organization or project started
- 3.3 Reasons for its establishment
- 3.4 Number of families who will benefit from the project
- 3.5 Statistics of water related diseases in the area (if any)
- 3.6 The type of water sources for drinking, distance to water sources and average time spent to collect water.

4. SPECIFIC AIMS AND OBJECTIVES OF THE PROJECT (ENCLOSE/REFER TO THE CONSTITUTION IF AVAILABLE).

5. PROJECT PLAN

- 5.1 Intended commencement date and duration of the project
- 5.2 Community's contribution (in-kind and/or money)
- 5.3 Professional advice and administrative support agencies (External Agencies to support the project technically if any).
- 5.4 Government support of the project (if any).

6. BUDGET

Break the amount of money needed into items, for example:

Ferrocement tanks	= R10 000
Pipes	= R15 000
Skilled labour	= R10 000
Cement and aggregates	= R10 000
Design and Project Management	= <u>R15 000</u>
TOTAL	= R60 000

7. CONCLUSION

N.B. A well written and detailed proposal often attracts substantial sponsorship for the project.