

What does it take to support community management of water supplies?
This book is for those who are in charge of facilitating community management of water supplies. It provides guidelines and food for thought for managers and decision-makers who want to improve the performance of their organisation and make sure that water supply services in place keep working. It answers such questions as: what kind of support do communities require? How can this support be provided? What are the organisational conditions we need to put in place? What tools can we use? Who should be involved? What does it demand from support organisations and the communities? In other words: what does it take to support community management of water supplies.

"(...) the document is a very important tool for decision-makers and for all other water sector stakeholders. It presents a whole range of issues concerning community management of water supply services in a way that is very easy to read." Ivone Amaral - Head Rural Water Department, Gov. of Mozambique

"This is a good book because it addresses most of the issues that field staff present to managers but that are hardly taken seriously. Also, it presents experiences from different countries and organisations, which could stimulate others to rethink what is going on in their organisations." Andrew Tayong – Director, WSMC, Cameroon

'How to Support Community Management of Water Supplies: guidelines for managers' is part of a series of IRC publications on community water supply management:

- 'Keep It Working: a field manual to support community management of rural water supplies';
- 'Six videos on community water supply management from six different countries: Nepal, Pakistan, Guatemala, Colombia, Cameroon and Kenya';
- 'The Seventh Video on Community Water Supply Management': a compilation of six country videos and an appeal to decision-makers to support rural communities in their efforts to manage their water supplies;
- A 'State of the Art' on community management

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How to Support Community Management of Water Supplies



How to Support Community Management of Water Supplies

Guidelines for managers



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How to Support Community Management of Water Supplies

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Abstract

Community management of rural water supplies is widely considered to be a worthwhile management option. However, we know that communities cannot do this on their own. We know that community management should not be an excuse for governments at national, district or even local level to abandon their responsibilities for the sustainability of rural water supplies. For community management to be a feasible and sustainable management option, communities need to operate in an environment that is supportive. National governments need to ensure that a conducive legal framework is in place, that, for example, provides security for the investments that communities make and that allows communities to develop and enforce by-laws. At more decentralised levels of regional or local governments communities must know about and have access to support from government structures themselves as well as through non-governmental organisations (NGOs) or private operators.

Communities may need technical support where technical requirements for system maintenance or upgrading go beyond their capacities. They may need help to build up their managerial capacities, for example, to help them perform financial duties related to system management or to deal with conflicts within the community or with neighbouring communities. These support functions require a supportive but not overbearing attitude at all levels. However, a good attitude alone is not enough. It has to go hand in hand with the necessary skills and with a community that is well informed about support opportunities. Managers of support agencies play a crucial role in bringing this about and this book is designed to be of help to these managers.

To put community management in a context, this document first looks at some general trends and movements in the sector. It then looks at practice as it presents it to us at the community level and at the level of the supporting agency. Each chapter illustrates the issue being discussed with field experiences and ends with hints to help the manager to transform theory into practice.

Key-words: community management, rural water supply, institutional framework, monitoring, planning

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How to Support Community Management of Water Supplies

Guidelines for managers

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Table of contents

Executive summary	9
Acknowledgements	13
Introduction	15
Structure of the book	18
Who is this book for?	19
Other material and services available on Community Management	20
Part 1 The context	21
1 Addressing the challenge of water for all through sector reform: decentralisation, private sector participation and community management	23
1.1 Decentralisation	23
Tips for the Manager and the Support Organisation	26
Food for Thought	27
1.2 Private sector participation and community management	28
Tips for the Manager and the Support Organisation	32
Food for Thought	33
Example 1 District planning guidelines for community management	35
Example 2 Contents and characteristics of a national water law	36
2 Opportunities for co-ordination and co-operation among agencies	39
2.1 Understanding the context and roles of different support agencies	39
2.1.1 Government agencies	40
2.1.2 Multilateral and bilateral agencies	40
2.1.3 Non Governmental Organisations (NGOs)	42
Tips for the Manager and the Support Organisation	43
Food for Thought	44
2.2 Multidisciplinary approaches and partnerships	45
Tips for the Manager and the Support Organisation	47
Food for Thought	48
Example 3 NGO responsibilities and obligations	49
Example 4 Division of responsibilities of the different stakeholders in Ghana	49
3 Creating a supportive organisational environment	53
3.1 Process approaches	53
Tips for the Manager and the Support Organisation	54
Food for Thought	55
3.2 From provider to facilitator	55
Tips for the Manager and the Support Organisation	57
Food for Thought	57



3.3 Human resources and capacity building	58
Tips for the Manager and the Support Organisation	60
Food for Thought	62
Example 5 Performance Discussion Format	63
Part 2 Practice	65
4 Key issues at community level	67
4.1 What is a community?	67
Tips for the Manager and the Support Organisation	68
Food for Thought	69
4.2 Sustainability of the system and its management	69
Tips for the Manager and the Support Organisation	71
4.3 Equity and gender	71
Tips for the Manager and the Support Organisation	73
Food for Thought	74
4.4 Leadership	74
Tips for the Manager and the Support Organisation	75
Food for Thought	76
4.5 Ownership and management arrangements	77
Tips for the Manager and the Support Organisation	79
Food for Thought	80
4.6 Cost recovery	80
4.6.1 Financial responsibilities: 'Who should cover which costs?'	82
4.6.2 Maximising willingness and ability to pay	83
4.6.3 Setting an appropriate and equitable tariff structure	86
4.6.4 Organising access to alternative financial sources for unexpected or large expenses	87
Tips for the Manager and the Support Organisation	88
Food for Thought	91
4.7 Technical aspects	91
Tips for the Manager and the Support Organisation	93
Food for Thought	94
5 Collection and use of information	97
5.1 Baseline information	97
5.2 Monitoring	99
5.2.1 Who monitors what?	99
5.2.2 Selecting monitoring indicators	100
Tips for the Manager and the Support Organisation	104
Food for Thought	105
5.3 Evaluation	106
Tips for the Manager and the Support Organisation	107

5.4 Information management	107
5.5 Methodologies for information collection, storage and analysis	109
5.5.1 Participatory Rural Appraisal (PRA)	109
5.5.2 Methodology for Participatory Assessment (MPA)	110
5.5.3 Strengths, Weaknesses, Opportunities and Threats (SWOT) - Analysis	111
5.5.4 Geographic Information Systems (GIS)	112
5.5.5 Bayesian Network (BN)	114
5.5.6 Objective Oriented Project Planning (OOPP)	116
Tips for the Manager and the Support Organisation	118
6 Planning and financing support to communities	121
6.1 Information feeds into planning	121
6.2 Who does what, when, how and with what resources?	123
Tips for the Manager and the Support Organisation	124
6.3 Planning for communication and dissemination	124
Tips for the Manager and the Support Organisation	126
6.4 Financial implications of supporting communities	127
Tips for the Manager and the Support Organisation	129
The way forward	131
Addresses of project partners	132
References and further reading	135
List of abbreviations/acronyms	141
Information about IRC	143



Executive Summary

Many water supply projects and programmes are implemented with the intention of preparing communities to manage their own water supplies. Communities are involved in the planning and implementation of the water supply system and trained in operation and maintenance in order to increase the long-term sustainability of their system. The problem is that often the focus is mainly or only on preparing the community, without considering the long-term support tasks of government or non-government agencies. This publication focuses on the role of managers of support agencies and how they can support communities in their endeavour to manage and thus sustain their water supply systems.

The book starts with an introduction, explaining what the book is about, its structure, and for whom it is meant. Part I then sets the context by discussing trends and movements in the water supply and sanitation sector that influence the thinking about and operation of community management. Part II looks at the realities in the field as well as in the manager's office to see what he or she might be able to do to give community management a better chance.

Decentralisation and private sector participation are two important trends in the sector that have a major impact on community management and on the role of support agencies. Decentralisation refers to the delegation of rule setting and management to lower tiers. This leads to more decision making power and better flexibility at lower, more local, government levels. This in turn should allow the more local government levels to be more responsive to the needs of communities who wish to manage their water supply system. Private sector participation covers varying degrees of involvement of the private sector with the management of a water supply system. Communities do not need to master all the skills required to manage a system themselves, but may ask a private operator to carry out some tasks under their control. Support agencies need to help communities to deal with the private sector and to ensure that they have access to mediation services should conflicts arise over the quality, price or timeliness of services.

Management options range from community management, with or without the involvement of the private sector, to full privatisation of services. The extent to which the private sector becomes involved depends on factors such as the management capacity of local government and communities, the willingness and ability to pay for their services and the presence of sufficient economic possibilities for entrepreneurs.

Communities may in principle have access to support from different agencies; governmental, non-governmental or private. Co-ordination and co-operation among support agencies is necessary to avoid overlapping and contradictory approaches to communities and to achieve coherent and complementary programmes so that support

is available to all. Agency managers have a major role to play in bringing this about. Rather than waiting for 'the other' to start a process of co-ordination and co-operation, they should be proactive in bringing about clarity on the roles and responsibilities of the various agencies. The need for a multi-disciplinary approach can be addressed through co-ordination and co-operation within one's own organisation, but also through contact with other support agencies.

Apart from looking at the institutional environment, there is also a need to look at the organisation itself and at how its operations could be strengthened to equip it for its support role. Providing long-term support for communities means that the organisation has to move away from merely implementing short-term and time bound projects.

The management of water systems is an ongoing and long term process and the challenge for support agencies is to be aware of this and to be prepared regularly to adapt their support to processes taking place in communities. Such processes are difficult to predict and require flexibility and the ability to adapt procedures and working methods.

The government and other support agencies have to move from the role of provider to that of facilitator. We have heard this phrase many times over the last decade and it is again repeated in this book. Governments in particular should not have the task of physically providing water supply systems. There are plenty of other agencies who can help communities who want to put a system in place. Government institutions have to play a facilitating role by bringing about conditions that help communities to get good services, both when the system is being established and when it needs managing. Necessary conditions include the presence of sufficient management capacity at community level, the availability of technical support, a legal framework to enforce decisions made at community level and a mediation service in case of conflicts.

One of the challenges for support agencies is to build up the capacities of their own staff to play a facilitating role. The quality of human resources in support agencies is the most important factor that determines success or failure in working with communities on developing their management capacities. This requires a good plan to be in place that indicates how you will ensure that staff remains on top of skills they need and what you will do to retain optimal working conditions.

We often tend to think of communities as homogenous entities, which would facilitate community management. However, reality is much more complex. Huge differences may exist among people due to a variety of factors, many of them rooted in the socio-economic structures of a community. Culture, religion, gender or economic interests can divide communities and hamper efforts to successfully manage their water supply systems. You will have to make sure that your staff can be supportive in making these factors manageable. Being supportive does not simply mean opening a box of participatory tools. Your staff first need to understand the community's social and

economic relations, its leadership and its cultural or religious contexts. They must be aware of the different sectoral interests, and be able to use methods and tools in flexible ways. They also need mediation and negotiation skills in order to help communities to explore opportunities for community management and to find their own best way to go about it. They require an understanding of different management options, ranging from management and maintenance by members of the community to contracting out certain tasks to a private enterprise.

The issue of cost recovery merits separate attention. Only a combination of ability and willingness to pay can lead to an agreed level of cost recovery and this is not always easily brought about. Ability and willingness to pay are influenced by the transparent means of handling money by a water committee, the presence of an equitable and fair tariff structure, the presence of alternative and cheaper water sources, satisfaction with the existing service levels, people's incomes and a range of other factors.

Communities need information from committees to decide on payment tariffs. Committees need information from support agencies about options for upgrading the system and about the financial and managerial consequences. Support agencies need information to assess the degree of support needed and to plan staff inputs. The challenge is to organise information collection and sharing effectively and efficiently. We often collect too much information, and may use the wrong indicators and the wrong information sources, which leaves us with useless information and sometimes with decisions based on wrong information.

Information can be collected for baseline, monitoring or evaluation purposes. In all cases information serves to give direction to future, improved activities and in all cases it requires management: analysis, storage and being made accessible to those who need it. Staff needs to be trained in methodologies to collect, store and analyse information.

To put good intentions into practice, the work of the support agency needs to be planned and financed. Information feeds into this planning process and decisions have to be taken about who does what, when and how. We emphasise planning that is interactive (with communities and with other stakeholders), iterative (developed over time) and oriented towards results. We also consider resource requirements and allocation. Decisions and communication about whether resources will come from general tax money, from direct payment for services or from a combination of the two will have to be communicated to the public.



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Introduction

What this book is about

Community management is a much discussed phenomenon and is considered by many to be a viable management option for rural areas. A key characteristic of community management is that users in communities have the prime responsibility for managing their water supplies. However, local management of most water supply systems will always require some external support and institutions have the responsibility to provide such support. Communities cannot be left on their own. Although community management is a reality in many countries (IRC 2002), effective community management, i.e. community management that indeed leads to sustainable systems, is still an exception. Support for communities may take many forms and this book is about the role managers of support organisations play in identifying support requirements and in ensuring that support is organised. This book provides experiences, food for thought and tips on how this intermediate level can support communities wanting to manage their system in order to keep it working. The intermediate level includes decentralised government agencies, associations of water providers, water committees and non governmental organisations (NGOs).

The idea for this book comes from four years of participatory action research, which was designed to find out more about the role of communities in the management of their water supplies. A total of 22 communities in six countries were involved in the study. These communities had been left on their own after the water supply facilities were constructed and handed over. Operation and maintenance arrangements were put in place and some basic training in book keeping was provided. However, management is more than operation and maintenance and all too soon communities started to face a range of difficulties and limitations. These came to the surface through the action research, so we are now able to provide some answers to questions such as: What kind of 'after construction' support do communities require? How can this support be provided? What are the organisational conditions we need to put in place to provide support? What tools can we use? Who should be involved? What can happen in the process? What does it demand from support agencies and the communities? We have found much of our thinking confirmed in documents produced by others.

The book discusses a number of key issues that support agencies should consider when working with communities towards sustained access to improved water supply. Whereas we do feel that approaches applied during system construction or project implementation phases are important, the emphasis of this document is much more on the structural long term relationship between support agencies and water users after actual construction. The focus is on rural areas because the applied research the book builds on was carried out in rural communities.

Community management and its challenges

Community management is the management option whereby communities, rather than government institutions or the private sector, have control over the management of their water supplies. The actual responsibility for the management lies ideally with a representative group of community people, often referred to as a water committee, chosen to take up this task. Although this group may opt for the involvement of local caretakers or small entrepreneurs, the committee remains in charge of ensuring a sustainable service and is accountable to the community at large. Supporting community management means taking into account that communities are made up of men, women and children of different socio-economic and cultural backgrounds, with sometimes conflicting interests and ideas.

Community management can only work if water committees receive support when they require this. However, usually the story is as follows: external support agencies, such as bi-lateral donors, multi-lateral organisations and development banks, assist governments in providing water supply systems for communities. Community members are asked to participate in the construction and trained to maintain the system. Once construction is completed the support agency and government staff 'hand over' the system to the community and go off, saying that the community should from now on manage the system. Often too little thought is given to putting in place the conditions for sustained community management. We all know what the results are: many systems break down and communities are back to square one in their efforts to achieve a sufficient supply of good quality water.

The 'Community-oriented stepwise approach' of HELVETAS-Nepal reflects much of the state of the art of community management today. The approach consists of 25 steps for achieving what HELVETAS calls self-reliant drinking water supply in two years. It is based on community ownership, participatory tools, integration of technical and social aspects as well as gender and equity awareness. There is a follow up visit 6 months after the construction work is finished (step 23) when a multi-disciplinary team visits the project and suggests improvements. There is a 'final follow-up' (step 25) two years after the start of the operation and maintenance phase. Partnerships with local authorities and governmental line agencies are in theory a key feature in the implementation of the whole programme. However, in practice, a common understanding with the governmental authorities could not be reached concerning the programme and it was therefore decided not to opt for partnerships with district authorities. (Leermakers 2000).

Many of the reasons for not involving government agencies are well known: lengthy bureaucratic procedures with a lot of red tape, insufficient capacity, lack of motivation, etc., but we have to address these rather than ignore them if we want our efforts and resources put into promoting community management to have an impact. Communities cannot be left on their own once the water supply scheme is in operation. Management institutions in communities and rules and regulations for management are

often too fragile to stand completely on their own feet after construction and training. Conflicts in the community may arise, community institutions may not be able to handle pressure on the system due to population growth or illegal water connections and trained people may leave the community. All kinds of other things may also put the management system in danger. At such times, communities require support and the permanent (government) agencies or private sector initiatives such as associations of water committees or water providers are best placed to provide this support.

Scaling up in time and space

Sustaining the process of promoting community management involves action at various levels and can be an intensive and time-consuming exercise. It is not easy, when community management practices are disseminated or adopted, to ensure that the external support role is sufficiently acknowledged. To date, almost all experience with community management comes from case studies or small 'pilot' projects. These often have the time and resources to take a slow and flexible approach. However, because of the limited time horizon of the pilots, there is little (documented) experience as to how communities are supported once projects are 'finished' and the communities are left on their own. Support for community management therefore requires 'scaling up in time' to address the need to support water supply management as a sustainable long-term service. In addition, pilot projects do not have a wide scale impact and a large number of rural communities are left unserved. Therefore, there is also a need for 'scaling up in space': that is institutionalising support mechanisms for community management, as clarified or developed through pilot projects, so these mechanisms become feasible at regional or national scale. The question is then: how to make community management a reality not just for a few communities but for the many?

Conditions for community management

A whole decade of experimenting with the concept of community management has shown us that if community management is to work, a number of conditions have to be put in place (IRC 2001b; IRC 2002):

- ownership of the water source and system and the delegation of responsibilities need to be clearly stated and backed by legal arrangements;
- communities need sufficient information to make good decisions, for example about service levels, how tariffs are to be set, how payments will be made, where money will be kept, what maintenance schedules are to be developed or when a choice has to be made to repair or replace something;
- communities need to know how certain management tasks can be delegated, for example to a water committee or a private operator, how to monitor them and how to set up rules to ensure transparency;
- communities need easy access to technical and managerial support and to spare parts for maintenance and repair;
- communities need to know how to deal with different interests and conflicts among themselves, for example when some people are better able to pay a certain tariff

than others, when the protection of a water source requires someone to give up part of his or her land or when a neighbouring community wants to use the same source.

Active work is needed to put these conditions into place. National governments, the intermediate level and their staff working with communities as well as communities themselves all have their role to play.

Structure of the book

This document is meant as a reference guide on specific managerial issues. However, we believe that each and every community requires its own tailor-made support, which takes into account the local socio-economic, political, cultural, physical and environmental realities. This book provides ideas, some guiding principles, tips and examples that can serve as a basis for developing context specific support. It does not provide a blueprint.

Contextual issues and practice

The book is divided into two parts: Part I looks at contextual issues rooted in the latest developments of the water sector and provides the framework and background in relation to supporting community management. Part II focuses on more practical aspects related to promoting and supporting community management.

Each chapter and subchapter starts with a brief introduction explaining the topic and the main challenges for managers of support institutions that are permanently available to communities. Most subchapters provide some tips and checklists for managers, indicating what they can do to address the issue, as well as illustrative short stories that are meant as food for thought, describing field experiences from different regions in the world. Most 'food for thought' has been collected through personal communication and is therefore not provided with references. In a few instances we have added more elaborate examples. You can use the table of contents to detect field experiences that might be of specific interest to you.

A few words of caution

Some of the problems described in the text may require national shifts of policy, or major social changes (for example in gender awareness/ politics). Here we have to be realistic and acknowledge that there are limitations to what support institutions and their managers can do. Moreover, structural support for community managed systems needs government leadership. It is only the government who can write and implement the policies and legislation needed to allow a favourable institutional environment to develop. Another word of caution: while we do not underestimate the importance of sanitation, we only address this to the extent it has a bearing on the management of water supplies. Management for sustainable sanitation would merit a separate publication.

Who is this book for?

This book is for people working in support institutions, who have management and decision-making responsibility in relation to the provision of sustainable rural water supply services. In many developing countries this support is provided through time-limited projects, often supported by outside funding and advisors, and concentrates on the planning and construction phases and on building capacity for operation and maintenance. This book is for those in charge of facilitating community management of water supplies, which in the long run requires structural long-term support through training in issues beyond operation and maintenance, and through continued access to technical, financial and institutional advice. The institutions that can provide this support can be of various nature: district offices or government departments, local governments, non-governmental organisations or private sector agencies. Even when they exist these institutions do not provide the support that communities need. Often they do not have the right capacities or resources and suffer from low levels of staff motivation. This book should help managers to improve the support performance of their organisations, even though we understand that governments are not always supportive and economise on resources for public services.

The prime users of this book are, therefore, managers of support organisations that are available to communities. However, staff of time-limited projects and programmes involved in planning and implementing water supply systems can gain from this book a clear understanding of the need to involve the permanent institutions, including the private sector, and to prepare the ground for long term support. Those involved in strengthening capacities of the permanent institutions can obtain clear indications as to where priorities have to be set.

Thus, the book addresses a whole range of managers and decision-makers of water supply or support institutions that are in one way or another involved in supporting communities:

- managers and heads of departments in district offices involved in water supply;
- local government staff;
- managers and co-ordinators of non-governmental organisations;
- managers and team-leaders of time-bound programmes and projects working in the water supply sector;
- private sector service providers;
- trainers and advisors who work on building capacities at the intermediate levels.

The specific roles and responsibilities of these institutions determine how they will use the book; for example as a reference guide or as a training manual.

Other material and services available on community management

This book is part of the material on community management being disseminated by IRC and its partners. You can use this document in combination with other material and services:

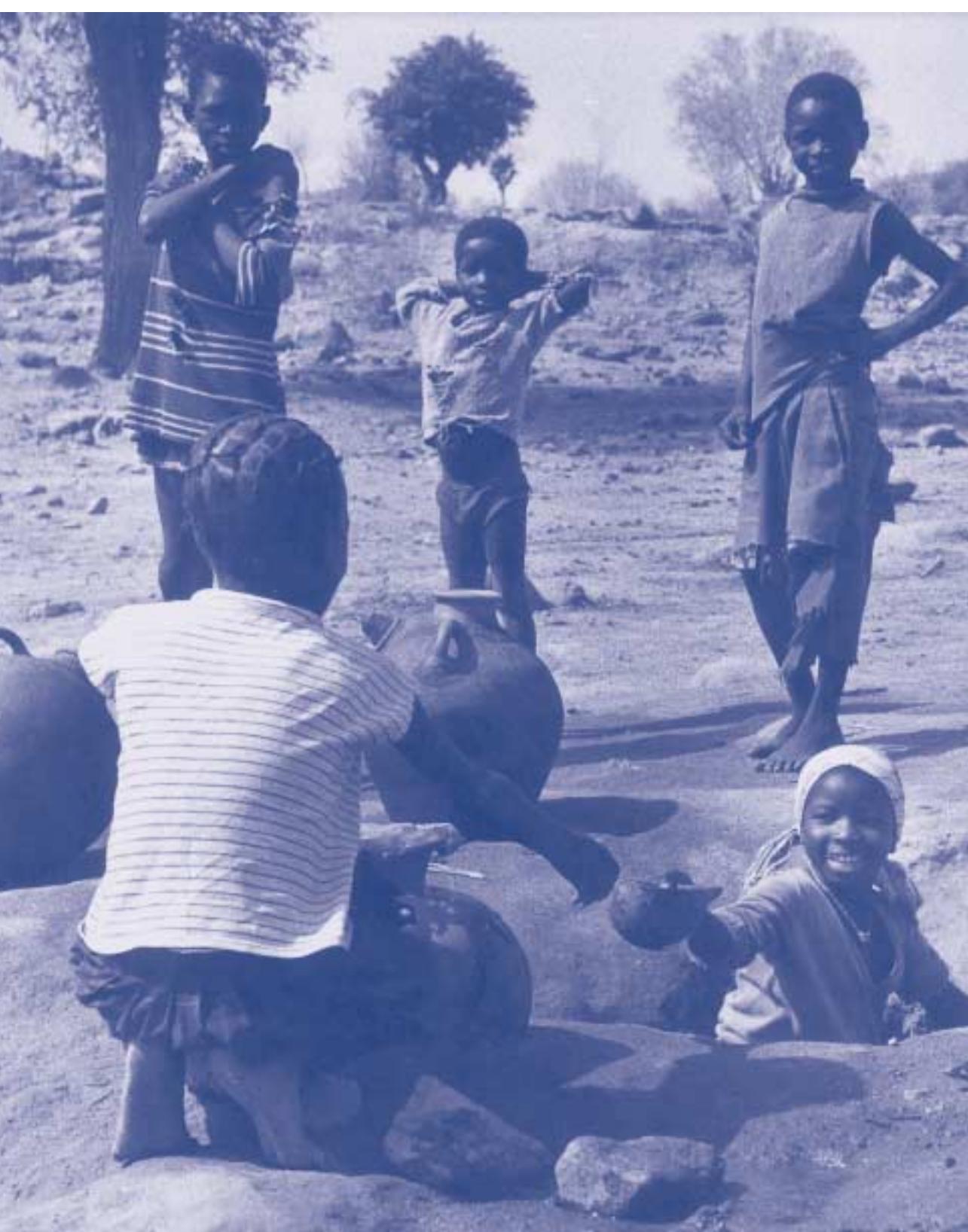
- 'Keep it Working' - a field manual to support community management of rural water supplies;
- an advocacy leaflet for policy makers/politicians (forthcoming in 2002);
- several videos on community management (six country specific and one global);
- training courses for field workers;
- a book on the community management concept and its future viability (forthcoming in 2003);
- a workshop for managers and programme directors 'Community Water Supply Management: the way forward';
- A web site on community management – go to <http://www irc nl> and let it guide you to the appropriate page.

In the text frequent reference is in particular made to 'Keep it Working', which provides some very practical ideas and tools for use by field workers at the community level.

There is of course a close link with what managers can do in terms of facilitating community level work. Both books stem from a vision of support for processes at the community level through facilitation and information. To obtain more information on these materials, you may visit IRC's web site, contact IRC directly or contact the research partner closest to you. You will find contact addresses in the back of this book.

Part I

The Context



1 Addressing the challenge of water for all through sector reform: decentralisation, private sector participation and community management

To meet the needs of the people who still are without a reliable water supply service, many countries are undertaking sector reform: a co-ordinated series of structural changes to provide better water and sanitation services to more people. The major aspects of sector reform are decentralisation, private sector participation and community management. When implemented these involve fundamental changes in the way the various actors in the sector work together. Through sector reform countries try to address the sad reality that in spite of all efforts, the absolute number of people without improved water supply and sanitation services remained practically the same in the last 10 years. The majority of the people without services are those living in rural or peri-urban communities (WHO/UNICEF 2000).

There is also a trend in many countries to encourage rural communities to manage their own water supply schemes with the support from local governments. This complies with government policies to decentralise to give local governments more responsibilities and aim at greater efficiency, effectiveness and sustainability of public services. These decentralisation policies are based on the assumption that local governments can better respond to the needs of the population and to the support requirements of rural communities who are managing their water supplies.

Sector reform also gives a more prominent role to the private sector. There are not so many incentives for big private companies to expand their activities into rural areas. Nevertheless, in these areas there are still opportunities for local entrepreneurs and small enterprises that can help communities in their efforts to manage their water supplies.

As a result of the introduction of community management, support organisations, of which decentralised government is the major constituent, have to adapt their operations. On the one hand the supportive role requires long-term commitment towards communities that have been lucky enough to get access to improved water supply systems, but who will at times seek support to keep the systems working. On the other hand governmental support institutions need to monitor the performance of NGOs and the private sector when they are implementing new schemes, and must also feed information upwards to more central levels of government to persuade them to adapt their policies and regulatory frameworks to the realities of community life.

1.1 Decentralisation

A large number of countries are today implementing decentralisation policies, which have a direct impact on the water sector. These policies, as part of a sector reform,

emerged from the need to overcome the severe limitations of centralised planning and management of water supply facilities that led to unsustainable services, because the necessary support services were not in place. Decentralisation can be described as "the dispersion or distribution of functions and powers; specifically: the delegation of power from a central authority to regional and local authorities." (Merriam-Webster)

It is expected that the adoption of decentralisation policies in developing countries will contribute to reducing over-concentration of power, authority and resources at the level of central government. This will allow closer contact between local government and communities and a better representation of various political, religious, ethnic and tribal groups in the decision-making process. With an increased exchange of information and a greater equity in the allocation of resources, the aim is increased efficiency, effectiveness and sustainability of water services.

The decentralisation process also implies a transfer of responsibilities and/or activities from national to district departments, local government, communities and other actors such as NGOs and the private sector. While very few communities in the world are able to sustain their water services in a completely autonomous way, the most common forms of community management involve some sort of external support by these organisations.

Table 1 The division of responsibilities among national, regional, district and community level.

Level	Responsibilities
Higher (National/State)	<ul style="list-style-type: none"> • Establishment of policies • Formulation of strategies, guidelines and standards • Legislation • Management of national funds and general financial control • Accounting (to members of Parliament and others) • Inter-departmental co-ordination • Donor co-ordination
Intermediate (Regional/Provincial/District) ¹	<ul style="list-style-type: none"> • National monitoring and evaluation • Planning and execution of programmes • Resources support (financial, human) • Capacity building and training • Implementation • Monitoring post-implementation results and corrective actions • Financial and quality control
Lower (Community)	<ul style="list-style-type: none"> • Back-up and support for communities • Co-ordination of water resources management • Planning and implementation of community projects • Service and process management • Monitoring service and process • Co-ordination with other communities

The decentralisation from national to local governments and other support agencies has major implications, at all levels including the community, because there is a change in the responsibilities and tasks to be performed by the different levels. In theory, the institutional implications of such a process are obvious, but in practice, they vary from one country to another (Wegelin-Schuringa 1998). Table 1 shows the possible responsibilities of different institutional levels.

This is a useful way to present the different responsibilities at the different levels once the appropriate powers have been decentralised. The challenge is to seek which levels are best equipped for which responsibilities and how the levels can support each other. In reality the division of responsibilities will be adapted to the existing water supply technology. For instance, a small community can manage a well on its own without major problems, while rapidly expanding communities that are dependent on a dam and a water treatment plant may require external support.

A major consequence of decentralisation is that it increases the financial, operational, technical and managerial responsibilities at local level, which local governments and communities sometimes do not have the capacity to meet. The process will therefore require strong capacity building measures at the level of support institutions (regional and district) and at local levels, and a different way to allocate resources.

Because of the institutional complexity, decentralisation processes by themselves don't necessarily improve water services. When there are several agencies with different but sometimes overlapping responsibilities and decision-making powers and at the same time there is a lack of clarity or co-ordination of activities, it may be difficult to improve the situation. The confusion and inefficiency due to overlapping responsibilities and lack of co-ordination that existed at the national level, does not automatically disappear with decentralisation.

As indicated in table 1, regulatory initiatives, through national level policies and legislation, are needed to provide a clear and consistent set of rules and responsibilities under which water services can be provided in a decentralised environment. Policy and legislation development includes:

- defining service standards;
- developing a framework for setting tariffs (assuming that specific rules and regulations can be and indeed are elaborated at community level);
- developing water quality standards;
- setting rules for contracting services;
- defining tasks, responsibilities and decision-making mandates.

1 See the end of the chapter for an example of planning guidelines at district level in Zambia for community management under decentralisation policy.

The challenge for the national level is to produce and implement effective policies and legislation² without reverting to a centralised decision-making process. There should be room for the district and local level to have a say in policy and regulation development. These decentralised levels have most hands-on experience related, for example, to water resources management, potential conflicts and local payment systems. A good analysis of national water policies and institutional frameworks and an assessment of strengths and weaknesses at the different levels are needed. Stakeholder consultations are also needed to make all the various actors responsible and accountable.

Final responsibility for the production of legislation lies with the national government, but several agencies can become involved in the preparatory work, each from their own perspective. This has some advantages because it promotes discussion and debate and avoids one group dominating the process. It also creates the transparency necessary to reveal contradictory legislation or a lack of co-ordination between the agencies, which may lead to rules being abused. "Perhaps the most important conclusion in the area of regulation is to proceed slowly and with a light touch. Going from a complete absence of regulation to a highly regulated system is unlikely to work, if for no other reason then the cost required to implement it." (Fragano et al. 2001:135).

Tips for the Manager and the Support Organisation

- Ensure that activities are co-ordinated and that information on decentralisation policies and legislation flows between different support organisations and different levels. Data has to be made available, and you must ensure that people know the rules and legislation, especially where it affects their roles and responsibilities. Support organisations can play an important role in the continuous dissemination of information that is needed. At the support level, you also have to feed information back to the national level about the effectiveness of regulations put into place.
- You need to clarify the implications of decentralisation for your organisation in terms of staff responsibilities and capacities. You need to act on these implications so that your organisation performs in line with the new roles and responsibilities.
- Develop partnerships between local agencies and communities. Partnerships should not be endless discussions between support agencies and communities. Partnerships should be based on clear divisions and understanding of roles and responsibilities. Effective frameworks and platforms, preferably existing ones, are needed to negotiate and inform each other. (See chapter 2.2 for multidisciplinary approaches and partnerships)

² See end of the chapter for further notes on the content and characteristics of a National Water Law.

Food for Thought

In **Tanzania**, it became very clear that decentralisation without accompanying measures can have negative results. Before decentralisation there was a centralised technical department with regional branches that could do some work to help communities with their water systems. It was very limited but it existed.

After decentralisation all the tasks at central level were reduced, on the assumption that district level departments would take them over. But there were no trained staff yet and no resources at district level to do that work. As a result, technical support services to the communities collapsed.

In the Masvingo Province, in **Zimbabwe**, before decentralisation, the District Development Fund (DDF) was responsible for the rural water supply. The DDF was a classic centralised organisation which had very clear terms of reference on how it was supposed to operate the service, which basically consisted of drilling boreholes and giving them to the communities. It was extremely difficult to provide after-construction-support to the communities because, even if they wanted to do so, the district and the provincial level did not have any autonomy to make those decisions.

As part of decentralisation, the District Council became the responsible for domestic water supply. At the same time a big donor financed a large capacity building programme at district level. The District Council now had the flexibility to promote small-scale irrigation for a vegetable garden if there was extra water available. This is a good example on how decentralisation increased the flexibility of the institutions in the support given to the communities after the construction/implementation phase.

Even when decentralisation is well planned, it can lead to the creation of unnecessary parallel structures if there is not enough flexibility in the policies and the system.

In the early 90s, in **Zambia**, water sector reform was very well organised and included an inter-sectoral committee where different stakeholders would sit together to plan and implement their policies in a co-ordinated way.

All levels of decision-making were involved and everyone knew their responsibilities. But there were some interesting situations: at district level everyone was aware that communities were using water not only for drinking purposes but also for productive uses: vegetable gardens, livestock, brewery, etc. But the donors, who were also involved in the planning phase, imposed the condition that their money could only be used for drinking water and not for other activities. As an example, funds were not allowed to pay cement for building the troughs for the cattle. The district veterinary department was caught in a dilemma: follow the new policies or serve the needs of the community? In the end they decided, and managed through a separate planning structure, to channel money from their ministry to build cattle troughs.

1.2 Private Sector Participation and Community Management

In the context of sector reform, the participation of the private sector has been recognised as a way of making water supply services more efficient and cost-effective. Private sector participation ranges from the involvement of small local entrepreneurs to full privatisation of public services, often by large commercial companies. This implies that the role of the community also ranges from commissioning parts of the management work to small, local entrepreneurs to simply paying for water services in a fully privatised situation.

The aim of private sector involvement and community management is to relieve government structures from too heavy a burden with regard to ensuring sustainable water supply services. Under community management of rural water supplies, communities have control over and make decisions with respect to the organisation of the management of their water supplies. It takes into account that communities are groups of men, women and children of different socio-economic and cultural backgrounds, with common, but also conflicting interests and ideas. The decision-making body is, ideally, a representative group of community people, often referred to as a water committee, chosen to take up this task. The goal of community management is improving the reliability and sustainability of water supply systems, as well as reducing long-term investment and operation costs both for support agencies and communities.

Community management does not mean that, where communities are in charge of and responsible for their systems, they have to take care of everything by themselves. Communities can involve the private sector by contracting local entrepreneurs for operation and maintenance tasks or even to manage the whole water supply service. The point is that it is the community that takes the decisions of who to contract, for how long, etc. Usually water supply management will be done by a mix of community groups, private sector or other support agencies. Such a mix usually develops over time, while the government creates the necessary conditions for it to flourish.

Community management entails much more than community participation, because it focuses on the decision-making power that communities have over the water supply services for which they hold or share responsibility: communities are in control. However, management by the community will only work if the community is satisfied with the levels of service and if it has sufficient autonomy, decision-making powers and capacities. Ownership of source and system does not necessarily have to lie with the community. However, ownership has to be clarified and the implications for financial and operation and maintenance responsibilities of (not) being the owners have to be spelled out.

The concept of community management came into being through an understanding that under the old centralised system water supply systems were not sustainable and the capacity of government was usually too limited to do much about it. For the systems to

be more or less sustainable, communities had to do certain things themselves. Initially it was felt that community participation during planning and implementation of a system would ensure sustainability. Community participation would lead to a sense of ownership and hence willingness to manage the system after handing over.

Although this logic does make sense, it does not fill the gap between 'willingness to manage' and 'capacity to manage'. As well as providing training, policies and support structures need to be put in place to make community management a cost-effective option to offer to unserved communities in a sustainable manner.

The table on page 30 gives an overview of different possible degrees of community participation, from a low level of responsibility to a high level of community commitment and responsibilities in decision-making, which we call community management (adapted from Brikké 2000).

Although empowerment and greater self-reliance are given as reasons for encouraging community management, community involvement in water supply projects is often seen as a way to recover or reduce costs for the government. For many implementing agencies community management is a way to increase the life time of a system. On the other hand, community management does not mean that communities must take care of everything or pay the full costs. The idea of partnership allows scope for shared responsibilities between the State, support agencies, private sector and the community. The functions to be performed and paid by local management organisations can thus vary considerably, depending on an agreed division of responsibilities.

There is no straightforward answer to questions about where and when management by the community is the most preferred and feasible option. However a number of situations can be listed in which the alternatives to community management are limited and therefore it may be the most suitable choice to make. Community management may be the most appropriate way to manage water supplies when:

- communities live in remote or peripheral areas where access is difficult due to distance or physical obstacles (mountains, rivers, swamps, etc.);
- local government services and/or other support agencies do not have the capacity, interest or resources;
- markets for private sector services are poorly developed or of small size.

Communities have low purchasing power to pay for external management services. Governments and other agencies will only be interested in supporting communities if they perceive community management to be beneficial. One direct benefit, which will mainly be felt at the operational level, is that when management of the water supply is the responsibility of the community, the burden to the agency of maintenance and repairs is reduced. However, other costs will arise, such as costs for training or mediation. In Cameroon even the mere delegation of O&M tasks to the community, brings down costs for the agency considerably. The communities are remote from the

Table 2 Possible degrees of community participation

	Participation as 'cost sharing'	Participation done as a 'contractual arrangement'	Responsibility in 'decision-making'
Community's role	<ul style="list-style-type: none"> Contribution in cash or in kind towards O&M 	<ul style="list-style-type: none"> Volunteers in committees Volunteers as caretakers Commitment by leaders 	<ul style="list-style-type: none"> Community fully in charge with possible subsidies for capital investments and part of the running costs
Community's involvement	<ul style="list-style-type: none"> Only some community members 	<ul style="list-style-type: none"> Not all community members 	<ul style="list-style-type: none"> All community members, including women and the poorest, through a representative body
Role of "outsiders"	<ul style="list-style-type: none"> Management Decide on contribution level 	<ul style="list-style-type: none"> Develop ideas and contract 	<ul style="list-style-type: none"> Facilitation and advice
Aim/Benefit	<ul style="list-style-type: none"> Lower cost Cost recovery 	<ul style="list-style-type: none"> Minimal local management infrastructure (local leadership, local committee, local maintenance volunteer) 	<ul style="list-style-type: none"> Genuine commitment and support from whole community through participatory community education Involvement in decision-making from the start
Assumptions	<ul style="list-style-type: none"> Contributions indicate the service is valued and shows community commitment 	<ul style="list-style-type: none"> Legitimises the project Local management capacity is in place or can be organised 	<ul style="list-style-type: none"> Long-term benefits Increased use and sustainability justify high initial investment (staff, time, costs)
Limitations	<ul style="list-style-type: none"> Commitment only from some, not all involved: e.g. women, the poorest System is rejected if major break downs occur 	<ul style="list-style-type: none"> Not all villagers may be involved in decision-making Contracts not fully understood Selection of committees and caretakers can be too hasty Willingness to pay can be poor over time because people don't feel involved 	<ul style="list-style-type: none"> Requires highly trained and motivated staff at all levels Difficult, time consuming and expensive in the short term Requires a long-term support structure

agency office, making it impractical for the agency staff to monitor the functioning of these systems effectively and efficiently. The cost of agency staff doing O&M is high and very few agencies or government, if any, are capable of bearing this cost.

For example, if a member of the agency staff has to go and replace a faulty tap, the costs will be:

- Daily Subsistence Allowance at 15,000 CFA (1US\$ = 763 CFA) per day;
- Transport of fuel at 5,000CFA;
- Cost of tap at 6,000 CFA.

Making a total of 26,000CFA (34US\$) for the agency to change the tap.

When done by a member of the community it will cost the agency:

- Transport of fuel at 2,000CFA;
- Cost of tap at 6,000 CFA.

Making a total of 8000CFA (10.5US\$).

In other words, the agency cost is 3.25 times higher than the community cost without even considering the salary costs. (This example does not take into account the costs to a community that pays a caretaker or puts in voluntary labour and hence pays opportunity costs; nor does it take into account the salary costs for the agency staff.)

Another benefit of community management is that, provided support is accessible, the system will be more reliable. This in turn will lead to an increased willingness to pay for the service. The community's confidence and problem-solving capacities increase and that can also benefit development activities in other sectors.

At a higher level, the district government can better cope with limited staff because there is less pressure and the funds that would otherwise have been used for operation and maintenance can now be used to extend and restore existing supplies or to assist unserved communities to develop new supplies.

There are costs to public agencies in supporting community management. Working towards the establishment of community management capacity and providing the required support is complex and the demand on the agencies' human and financial resources is not always predictable. In addition community management can be felt as a threat if staff fears it will lose power, status and influence.

Under community management, people tend to delegate certain tasks or get services from others whenever that seems to be more convenient and cost effective than doing it themselves. Community management implies that communities are responsible for running their water supply: general management, organisational matters, operation and maintenance, spare parts supply, cost recovery, environmental management, expansion and replacement work, etc. However, communities may agree to delegate certain tasks

for the provision of services to community-based organisations, non-governmental organisations or small private entrepreneurs. Through their water committees, communities can enter into contracts that can be associated with operation and maintenance, revenue collection, system extension or rehabilitation. The private sector support to the communities ranges from the village plumber to international pump manufacturers, and can include individuals (mechanics, plumbers, blacksmiths, accountants, administrators), small businesses (building contractors, plumbing contractors, suppliers of technical goods) or even larger contractors (civil engineering, drilling, construction engineering, pump manufacturers).

Smaller communities are more likely to undertake management tasks themselves. However, when local water sources are scarce or not of good enough quality, water may have to be brought in from other sources. Many of these sources are far away or very deep and they might serve several communities. The management of multi-village systems is more complex when compared to single-community schemes, because of their size, their technical appearance and the potential for conflicting interests among the communities. Still, many communities have proved that they can effectively manage multi-village systems through water user associations, who often find it attractive to involve the private sector.

Whatever communities or their water committees choose to do, they require ongoing back up support; financial, technical or legal. Suitable strategies and frameworks need to be developed at the national level to ensure that support organisations at the lower level respond to community needs. To be effective, it is important that such strategies and frameworks are developed in close collaboration with communities and through the organisations working most closely with them. Flexible strategies need to be devised to strengthen community management capacities and to allow them to develop at an appropriate pace. (See chapter 3 for more details on creating a supportive organisational environment).

Tips for the Manager and the Support Organisation

- Keep an overview of how many communities in your working area require most urgently your support (for example in terms of technical assistance, financial resources for system upgrading, training, mediation). If those data are not yet available you may have to send field workers around to identify what type of support is most needed. They may use a checklist on which they can indicate:
 - name of the village;
 - type of water supply system;
 - men's and women's satisfaction with the system;
 - past problems with the system;



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- present problems with the system;
- management skills and arrangements in place;
- management skills and arrangements that are missing.

This type of information will allow you to assess the (human) resources and training events required to ensure proper system management.

- Promote the participation of local NGOs and small private firms (formal and informal) in the provision of support services. After identifying the main gaps and needs in the region, action can be taken by putting communities in contact with organisations or individuals to show that there is a market for a certain skill or equipment. Some examples are the provision of spare parts, technical assistance for repairs, training on administrative and financial issues for the water treasurer or administrator. Incentives can be given for the initial installation costs providing the space for a shop or some tools for the reparations. Again make sure that information flows, that communities can make informed decisions and know what is involved in certain choices for service levels or taking up management tasks.
- Be a facilitator when communities or a local entrepreneur want to make major capital investments in a rehabilitation project through contractors. Hiring contractors involves a whole range of managerial activities that the support agency can help with, including learning from experiences from other communities, formulating terms of reference, formulating contracts, identifying and selecting contractors based on tenders, negotiating and signing contracts, planning and co-ordinating the work of contractors and monitoring. You can also assist by putting communities in contact with other communities that have experience with contracting, by providing sample contract formats and by providing training in all aspects of contracting contractors.

Food for Thought

"My basic position is that services such as water supply and sanitation should be provided by democratically elected local government in ideal situations. It is only because such systems do not exist or do not adequately function that we have to find other models. I therefore think that the energy and resources which are put into establishing alternative processes such as community management may be better directed at an attempt to 'normalise' the situation through the establishment of proper governance systems. The question arises as to what is the difference between properly functioning democratic local government and community management. However, this is not an ideal world and I would be the first to agree that properly functioning democratic local government is rare. In circumstances where properly functioning local

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government does not exist and where attempts to establish adequate local government are likely to meet with failure for economic and political reasons, I would agree that community management is the next best solution." (Len Abrams, personal communication)

In one municipality of **Guatemala**, Aguacatan, there are seven rural communities that, while sharing the same pipeline, each manage their own water supply system, whereby they involve the private sector. Each community has its water committee, and the 7 water committees are represented in the association that manages the whole system: APAGUA. The responsibilities of the association are to set the rules for the water system, operation and maintenance, tariff setting and billing. The association runs on a cost-recovery basis. When financial resources are needed for some major investments the association gets credit from financial institutions. When they need a reforestation programme they form partnerships with other local governmental institutions. When they have to improve the financial management they contract a consultant and so on. They are now planning other development projects for the communities and they have been invited by ministries to present their experience to other national institutions and managers in the water sector. They provide support (mainly capacity building) to neighbouring communities, and have many co-operation agreements with other local institutions because they took the initiative to work together with them. They are still fighting for their association to be given legal status.

Berege, a village in eastern **Tanzania** is an example of a water supply scheme which is managed by a private stakeholder with the consent of the community and the local government. Massinga, the private stakeholder, is a recognised and respected member of the community who proposed that he manage the system. He has the necessary technical and managerial skills and good contacts with the Water Department and other external organisations. The division of responsibilities for managing the system were written down. While Massinga is responsible for operation and maintenance, repairs and financial management, major decisions are taken in consultation with the water committee, the village government and the community members. The success of this village and the positive impact it has had on people's lives has encouraged community members to raise funds to rehabilitate other boreholes and, by request, it has been replicated in other neighbouring villages. "This successful, private water-supply initiative was not imposed by external agencies, but was planned, implemented and continues to be managed from within the community." (Boydell 1999)

Example 1 District Planning Guidelines for Community Management

An example from Zambia illustrates the implications for community management of decentralisation policies and the need, at district level, to plan within the new guidelines of a National Water Policy (from WASHE Manual 4, Carty et al. 1996). The following tasks had to be planned at district level.

Ensuring that Rural Water Supply and Sanitation programmes are community based through:

- forming water committees for effective co-ordination, management and mobilisation of resources;
- integrating community education, motivation, health and hygiene and water awareness programmes in development, operation and maintenance of Rural Water Supply Services (RWSS) programmes;
- developing standardised educational materials and training of trainers.

Developing a well-defined investment programme for sustainable RWSS by:

- assessing the cost of meeting water and sanitation needs;
- establishing appropriate procedures for appraising and financing RWSS projects;
- giving preference to rehabilitating and upgrading existing facilities rather than constructing new RWSS schemes;
- encouraging investments in RWSS.

Promoting appropriate technology and research activities in RWSS through:

- standardising construction methods, equipment, procedures and other important aspects of appropriate technology;
- considering user views in relation to choice of technology;
- involving educational and research institutions in developing appropriate technology;
- establishing an appropriate mechanism for data collection, processing, analysis and dissemination of vital information related to RWSS;
- providing incentives to local manufacturers engaged in development and production of appropriate technology.

Developing a cost-recovery approach as an integral part of a RWSS which will ensure sustainability by:

- encouraging user communities to contribute part of the investment cost of RWSS schemes; (This contribution could be in form of labour with locally available materials used during construction.)
- assisting the community to assess costs, establish revenue (fees and charges) collect mechanisms and determine contributions towards operation and maintenance of RWSS schemes.



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Developing and implementing a well articulated programme by:

- establishing a human resources unit;
- defining service targets and estimating manpower needs in the sector;
- identifying occupational priorities and determining training requirements;
- preparing an instructors manual and planning guide for the training of trainers.

Example 2 Contents and characteristics of a National Water Law

These are extracts from the European Commission Guidelines for Water Resources Development Co-operation (Commision of the European Communities 1998:236-238).

Rights to water tend to be viewed differently in different societies, leading to a variety of water laws. Laws may be needed to protect the water rights of individuals – for example, access to a clean and adequate supply of water for basic needs – but can also be used to restrict water use or proprietary control and to introduce new policy initiatives deemed to be for the public good. The right to use water is a concept distinct from the ownership of water, and this distinction must be taken into account in the development of water laws and the management of water resources.

Water laws can take two forms: written and unwritten.

- Unwritten law is **customary law**, which evolved over the centuries from social customs, and traditions designed to govern relationships between individuals. Unwritten law can also take the form of common law where precedent inform the judicial decision taken in a given dispute.
- Written **statutory law** or **legislation** is promulgated by a duly authorised law making body.

In many countries several bodies are empowered to make legislation relating to water. A water law establishes fundamental principles and distributes powers relating to the management of water. As a general rule, matters which do not relate to fundamental policy, principles or rights, but which need to be governed by detailed regulations are not included in the main water law and instead form subsidiary legislation or regulations.

The main task of any government in revising or drafting new legislation is to make sure that it will be socially acceptable and administratively feasible. In deciding who shall have the ultimate authority to control and distribute water and how existing laws and customs should be modified, consideration needs to be given to a wide variety of political, social, economic and administrative aspects. Although water legislation should result from, rather than be imposed upon, the situation prevailing in a given country,

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national water laws must also take into account any International Conventions accepted by that country.

A water law has two basic functions:

- It must confer certain powers for control of water and land upon the Government, whilst preserving or granting such rights to individual users as consistent with the social, political, economic and developmental goals of the country.
- It must establish a basic administrative framework and the necessary institutions to execute the various functions assigned under the law.

Areas which should be covered by a water law:

Rights in natural waters – these provisions should establish the relative rights, powers and duties of individual users, private operators and the Government over naturally occurring water in its various forms. It should define those sources and matters subject to administrative control and those which are free of administrative intervention.

Responsibilities for service provision should be distinct from those relating to resource management or regulation.

Necessary powers relating to land – certain ancillary powers to undertake or control acts on land are essential to effective water management. Action may be necessary to protect the beds and banks of rivers and lakes, and to prevent erosion or pollution of adjacent land.

Registration and licensing of rights to use water – in order to formulate realistic plans for the sustainable development of water resources, information is needed about the availability of water. This information should cover quantity and quality, existing utilisation, and future requirements. It is therefore important to make provision for the proper certification, protection and measurement of the various consumptive uses of water. Other uses such as effluent disposal also have to be controlled.

Administrative structure – it is necessary to designate the administrative agencies responsible for developing and controlling water, to define their aims and objectives, to award them the necessary powers and to provide for their organisation.

Other issues – water laws should address many issues apart from water rights, including protection of the environment, waste and misuse of water, recycling and re-use of water, health promotion and pollution control.

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खाने पानी तथा ढल निकास विभाग

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HIS MAJESTY'S GOVERNMENT
MINISTRY OF WATER RESOURCES

DEPARTMENT OF WATER SUPPLY & SEWERAGE
KANTIPATH, KATHMANDU



2 Opportunities for co-ordination and co-operation among agencies

Support agencies do not work in a vacuum, but in a situation where communities receive support from a variety of agencies; permanent governmental agencies, NGOs that work in a certain area on a temporary basis, or the private sector. Too often however support agencies do not take into account what other agencies do.

Sometimes they are not even aware that there are other agencies working in the same communities. Their mandates may overlap and sometimes even lead to contradictory messages towards communities. This section is about avoiding overlaps, avoiding contradictions and about the need to aim for complementary and coherent programmes.

Everyone is convinced of the need for co-ordination and co-operation among agencies, even agencies themselves. Nevertheless, it only happens on an ad-hoc and piecemeal basis. Too often agencies are too pre-occupied with their own targets and piloting their own approaches. Donors chop up the country and select 'their' region. Government staff are made responsible for, or seconded to, donor programmes, while activities meant to co-ordinate effort to ensure higher effectiveness are usually not planned and budgeted for. National governments are often not strong enough to challenge donor plans and to force co-ordination and co-operation. The result is that many efforts are duplicated, wheels are reinvented and precious time and resources are wasted. Governments should provide leadership, co-ordinate donor activity, and direct donors to certain areas and to work in line with their policies.

Developing partnership agreements is one way to promote institutional co-ordination and co-operation to set up a platform to create synergies. But it is not only agencies who have to work with each other. There is also a need within those agencies for staff with different backgrounds, expertise and responsibility levels to co-ordinate their activities. Multidisciplinary and interdepartmental approaches are crucial to integrate non-technical staff into the work with communities.

2.1 Understanding the context and roles of different support agencies

Managers need to design consistent, efficient and effective strategies and plans. This is not an easy task. Many different types of support agencies may operate in the same areas and work with the communities living in those areas. Here is where the need for co-ordination and possibly co-operation is most needed and mechanisms are required to bring together the various support agencies.

Just like communities, agencies also differ from each other. For easier analysis of the different roles of support agencies we will focus separately on the major agencies involved in supporting community management, i.e. government agencies, multilateral

and bilateral agencies and NGOs. The private sector has already been discussed in chapter 1.2 on private sector participation and community management.

2.1.1 Government agencies

Government agencies comprise ministries and departments responsible for water, health, environment, agriculture and any others that might be involved in working with communities. As each of these ministries is responsible for lower levels (regional, district and local), we often see that there are many overlaps in the functions carried out by the different government ministries. For each government agency, at each level, the clear definition of functions and responsibilities is a precondition for effective and efficient support. Water supply is an area for which responsibilities are spread over different ministries, with for example water resources in the Ministry of Agriculture, water supply projects in the Ministry of Rural Development and community development in the Ministry of Social Affairs. Sometimes donors prefer to co-operate with one ministry and not with another. This spread of responsibilities at the national level is reflected at the lower levels. Also at these lower levels staff of the various ministries is not encouraged to look for ways to co-ordinate activities. An additional problem may be that at the various levels government staff usually has a much lower salary than staff of donor agencies. This also discourages government staff from undertaking extra work to co-ordinate activities. Unclear roles and overlapping functions at the various levels within a Ministry tend to reduce the effectiveness and responsibility of lower level authorities in a way that hinders proper support, financing mechanisms and accountability. As already indicated in table 1, all levels should have their own clearly defined roles and responsibilities. The general rule (in line with decentralisation, see chapter 1.1) is that management should take place at the lowest possible level. The national level government has the responsibility for developing a common framework and for providing guidelines to co-ordinate activities in the water and sanitation sector. It also has to ensure an adequate provision of resources (including training), and set guidelines for technical and managerial aspects, such as appropriate technology, equipment standards, responsibilities of communities and their ownership of the water supply systems, cost-recovery mechanisms and fee structures. The existence of a national framework where community management is promoted and the presence of local governments that acknowledge the importance of community management by supporting communities

2.1.2 Multilateral and bilateral agencies

Multilateral agencies are international agencies such as those of the United Nations organisations and the World Bank. Bilateral agencies are official development agencies of developed countries that administer bilateral aid such as Danish DANIDA, German GTZ, Japanese JICA, Dutch DGIS, American USAID and British DFID, just to mention a few. They work through government agencies at national and regional level, but most also support the NGO and private sector without government involvement.

These multi- and bilateral agencies do not all play the same role in the same countries.

In some countries a large share of the financial resources may be provided, whereas, in others, only modest contributions are given. The agencies have different concerns; some focus their resources on promoting community-managed projects, whereas others are more interested in building larger infrastructures. Some have a detailed description and conditions of the projects they want to see implemented. Others are more flexible and open to negotiations. However, in many cases they are in a good position to support innovative developments, leading to new approaches.

There is no doubt that foreign funds have been very important in the development of approaches that were assumed to promote community management. In many cases foreign supported projects have piloted – such as planning and implementation approaches. However, often too little attention was paid to the development of 'after-construction' management approaches, and in particular to mapping out a more permanent role for support organisations. In addition, in some countries, many major donors also work directly with NGOs, because government structures are felt to be less efficient and too far away from community reality. Fortunately, realisation has come that government structures should not be left out. Ignoring these permanent bodies will make it difficult to achieve the desired long-term sustainability of the projects or to build capacity at the district, regional or national level. Once the (international) NGOs leave, who provides the after-construction-support? In cases where governments undertake serious efforts towards decentralisation, we find donor agencies prepared to contribute to strengthening the intermediate levels, those for whom supporting the communities is of prime concern. "Strengthening accountability mechanisms, reporting obligations and channels of information are key leverage points for increasing citizen access and influence and act as a first step in combating corruption, collusion and nepotism" (GTZ 1999:40).

A recent development is the new aid model; Sector Wide Approaches, known as SWAPs. This model is based on the principle that national governments are the main actors in promoting developing efforts in their own countries, while the role of donors is to give support. It aims at creating more co-ordination among donors and at facilitating the management of funds by national governments, using the same financial and administrative procedures to which all donors contribute. "Sector Wide Approaches have emerged in response to the failure of project-based approaches to make significant impact on development related problems. They seek to put national governments at the centre of development strategy and policy, and to channel all aid through nationally designed sector plans" (Moriarty et al. 2000:1). In practice this means that governments have to develop a sector strategy, integrating the different ministries and stakeholders at all levels. In the water sector, SWAPs are still rather new and it is premature to provide an indication of their effectiveness.

Donors sometimes have their own agenda. It is important to ensure that all conditions laid down by the donor are understood before any money or equipment is accepted from them. Some donors only finance particular types of projects or specific

technology/equipment (for example financing only Afridev hand-pumps) (Mvula Trust 1997). A type of pump or system recommended by the donor must not be accepted if it does not meet the community's needs, for example, because it is difficult to provide spare parts. Government officials may too easily accept contracts with donors and international organisations especially if fraud is involved. Furthermore, government institutions may know that the contracts are not the best but they lack negotiation skills, fear losing support or believe that a little is better than nothing. "Well, I do not expect this project will change anything, but it will bring in some foreign exchange, there will be a bit more transport around in the department during the project..." (Hudson 1991).

2.1.3 Non Governmental Organisations (NGOs)

NGOs work at different levels, but most frequently at district level and closer to communities than multilateral or bilateral agencies. They play an important role in implementing water supply programmes that include community training and capacity building in planning, managing and maintaining the rural water supply services. We can distinguish international NGOs and local NGOs. Usually the international NGOs such as CARE, Helvetas, SNV or WaterAid bring in a high degree of specialised skills, and have more resources available than national or local NGOs. They usually delegate community level activities to local NGOs, while they control, monitor and develop (training) materials and the capacities of local NGOs. They often do so at the request of bi- and multilateral or (less often) government agencies.

Traditionally local and national NGOs have worked closely with communities and have often proved to be an effective interface with government agencies to facilitate the joint development of schemes. They also tend to be more flexible than formal water agencies, which enables them to integrate different aspects of water supply such as management, training, hygiene education and technical maintenance training. Because they are relatively small-scale, they can mobilise and adopt ideas more quickly and are excellent promoters of pilot projects. However, NGOs often operate in a limited geographical area and so do not reach out to many people.

There are other problematic aspects of NGO involvement. First of all, usually they feel little accountability to the local authorities, making it difficult for local authorities to keep track of what they are doing. Secondly, the insistence of many donor agencies on developing water supply systems with NGOs, combined with local factors, such as exemption from government taxes, has led to a mushrooming of organisations that are not all of a good quality. This situation tends to be aggravated by the decentralisation drive in many countries where district government agencies are simply not able to perform the functions required of them under the new policy. Local NGOs that lack experience or qualifications can do more harm than good to development processes in the communities. It is therefore essential that some form of control is exercised, and that experience and records are assessed, similar to the way that the activities of other private sector participants are scrutinised (Wegelin-Schuringa 1998).

Concerning the support to community management efforts, (international/local) NGOs hardly pay attention to sustainable mechanisms of after-construction-support. Usually community management is best dealt with through training a water committee and mechanics. NGOs may have a policy of visiting communities up to two years after system construction, but fail to actively support them after that. In addition, NGOs often pay too little attention to co-ordinating activities with local/district authorities and to involving them in their work. After projects are 'handed over' the support that these authorities are supposed to give, will then become difficult, since they have insufficient insight into technical details and community dynamics at the time of construction.

Some governments provide guidelines for co-ordinating the activities of different NGOs in the water sector. However, agreements with clear responsibilities and obligations are a better way than guidelines to ensure some accountability. These agreements are made to the advantage of the communities, who are the final beneficiaries of after-construction-support. They also need to clearly state how communities can influence such projects. Subsequent agreements should be made dependent on successful performance of the NGO, for which, in particular, the satisfaction of different community groups (including women and poor people) should be an indicator. See example 3 at the end of the section for an agreement with an NGO in the water sector.

Tips for the Manager and the Support Organisation

- Invest up-front in knowing the context in which your agency works:
 - What other agencies work with the communities in your area?
 - What are their mandates, roles, and resources?
 - What is the potential for co-operation and complementarity?
 - Show your willingness to collaborate with others.
- Co-ordinate with national, district or local authorities depending on your level of work. Co-ordination can start with a meeting where activities are mapped out to determine where agencies can join hands when activities are similar or complementary, or where some agencies may skip activities because other agencies already undertake them.

A useful way to visualise the responsibilities of different actors might be through a star diagram shown in figure 1 in a simplified form. The 'star' can have as many points as there are stakeholders. For different roles, different diagrams can be made and compared to check for discrepancies, complementarities, gaps and overlaps, or to identify if there is too much power in the hands of a single stakeholder. The darker part of the diagram indicates the level of management responsibility of each actor, from a slight role, to a major role when all the rectangles are dark (adapted from Roark et al. 1993). So in this diagram the local government, unlike the private sector, has a major role in monitoring.

For an example of the division of responsibilities of different stakeholders in the Eastern Region of Ghana see example 4 in end of the section.

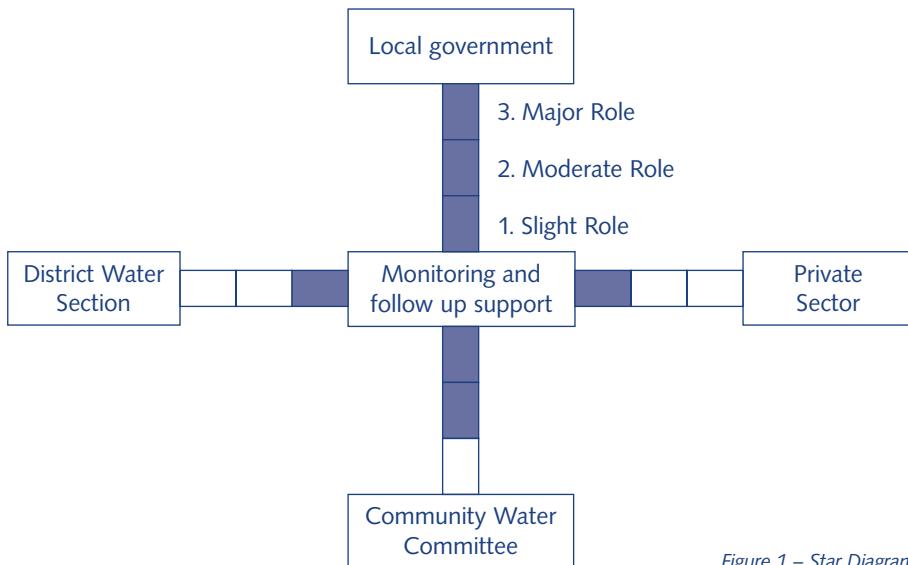


Figure 1 – Star Diagram

Food for Thought

In **Cameroon** there were three ministries involved in rural water supply, all three involved in system construction, and each of them had an agreement with a different international NGO. Additionally, there was a diversity in professional backgrounds: the staff of the Ministry of Mines, Power and Water were engineers, the staff of the Ministry of Agriculture, department of Community Development had a social background. There was a total lack of co-ordination. There was one community in the North West province where two different systems were constructed by two ministries, supported by two different international NGOs, with two different approaches, manuals and training.

In **Zimbabwe** there is a well-defined policy on water supply based on decentralisation, with a committee at district level responsible for the co-ordination, planning and monitoring of all the water supply interventions in all the districts. There was only one district where the committee could not co-ordinate the activities because there was an international organisation that wanted to implement its own water supply programme under different conditions, and using their own cement, technology, training and manuals. The committee did not agree with this intervention that was against everything the new policies promoted, but they did not have the confidence to say so to the international organisation. The committee had a legal role that it did not enforce because it was afraid of losing all support.

2.2 Multidisciplinary approaches and partnerships

Multidisciplinary approach can be looked at from different angles. Within the drinking water sector we look at multidisciplinary approach in terms of integrating water, sanitation and hygiene improvement activities. Looking at the broader water sector, multidisciplinary means taking into account the use of water for different purposes.

Within the water supply sector, the need for integration of water, sanitation and health/hygiene education has been subject of an ongoing debate and we will find hardly any people arguing against it. It is generally felt that integration of these components has a positive impact on community management of the water supplies. Sanitation and health/hygiene education help to protect water sources. It also hopes to stimulate people to use more water and to keep it clean, which calls for good and sustained management of the water supply system.

Integration probably means different things to different people. Some may consider it a situation whereby the three areas are considered as one, with integrated planning of activities, staff and budgets. Others consider it a situation where inputs are co-ordinated, the staff of the different sectors know what the others are doing and where staff plan their activities taking into consideration the work already developed in the communities and with other stakeholders.

Additionally, water is used for several purposes, such as drinking, washing, irrigation, food processing, watering livestock. Many of these uses have a high social and economic value and they can play an important role in the household income and hence for livelihood³ strategies. However, most water related programmes and policies tend to focus on their own discipline, thereby often competing for the same resource. "To come up with sustainable and appropriate development projects, it is necessary to look not just at expressed needs or wish lists, but rather at whole livelihood systems, to see how they work within environmental and climatic systems, and to identify key points at which interventions may take place" (Moriarty & Lovell 2000:11).

The cost and availability of water influences household livelihood strategies. When cost recovery is seen as essential to reach a sustainable supply (see chapter 4.6 on cost recovery) and communities have to pay for their water, it is essential to link the benefits of water for productive and economic use. "While a poor quality supply for a household's own consumption might warrant poverty weighting, the same supply might be plentiful and not harmful for livestock, serving to increase livestock productivity and reduce the vulnerability of the household. It may also increase the household's income sufficiently to free other assets to improve supplies in the long term" (Nicol 2000:14). This calls for an approach where various disciplines look at how they can support each other.

³ Livelihood definition - a system of economic activities which allows people to maintain their quality of life

The integration of water, sanitation and health/hygiene education as well as looking at the different uses for water do not always fit well with existing institutional divisions, particularly the institutions that are not only concerned with water resources, such as agriculture, health and education, leading to strange situations, such as illustrated in Zambia (see Food for Thought below).

Projects implemented through multi- and bi-lateral agencies or NGOs have often been able to experiment with integration of water, sanitation and health/hygiene education and with combining different water uses. This is often made possible by working in parallel with government structures or by asking for government staff to be seconded to their projects. These integration experiences usually relate to project implementation and less to long-term management support. Even though they have been gained through artificial institutional set-ups and are related to project implementation, we can still learn from these experiences when preparing for long-term support towards community management. This particularly relates to planning exercises with various departments and organisations, to approaches towards working with communities in an integrated manner and to staff development.

Integration of various disciplines, within or beyond the water and sanitation sector, requires co-operation. Partnerships among disciplines can be created to look for most efficient and effective ways to use our resources. They are ways to contribute proactively to setting up efficient and effective modalities for inter-agency exchange of information, professional complementarity, platforms for co-operation and coherence of planning, implementation, monitoring and review. Partnerships can develop between various stakeholders: government authorities at different levels, private organisations, individuals, business enterprises, NGOs, etc. There are also specific kinds of partnership, such as networks, where organisations that share a common interest exchange information or resources in various forms on a regular basis and in an organised way. Even then, differing interests of project implementers, governments and communities can inhibit integration and co-operation, unless a process is started whereby the possible added value of integration and co-operation is identified. Through such a process interest may be reviewed and negotiations started on how to make integration and co-operation operational.

Partnerships may also develop between local or district authorities and the private sector. The private sector may be contracted for after-construction-support (see chapter 1.2 for private sector participation and community management). Care is to be taken that those contracts do not focus only on purely technical, short-term solutions, but also on developing expertise in the community. They also need to be critically reviewed and changed if performance is not satisfactory.

Platforms are needed where people can voice their interests and where these negotiations can take place to arrive at a common understanding and before deciding on what will be done. Such platforms can also be used to divide tasks, for example with

regards to organising training activities or developing information materials. Creating or strengthening existing platforms at district and community level and facilitating discussions are tasks of the support institutions. These can also inform partners about regulatory frameworks and (national) policies that they have to take into account.

Partnerships should be viewed as dynamic relationships, which can change over time. The early stage of a partnership may be an expression of commitment to work according to agreed values, which then develops into a longer-term commitment of working together. One of the strategic benefits of partnerships is the opportunity to learn from a partner. For all the stakeholders it must be clear that the existence of different types of interests and motivations is not a reason not to trust the other, but an opportunity to understand new interpretations of the same reality. Trust in the other grows from horizontal relationships in which all the actors feel that they have the same opportunities for taking part in the decision-making process. There also has to be transparency, which is associated with the expectation that each of the actors defines and assumes clear positions, and that these are widely known. There is transparency in the sense that the ones involved in the process can debate and analyse, which can lead to change. However, change can only become a reality if there is flexibility, the capacity to accept new ways of seeing and doing things. Lack of flexibility inhibits capacity building, because it makes it impossible to start a process of trial and error whereby the actors learn together and manage to consolidate solutions to problems (Rojas 2000).

Tips for the Manager and the Support Organisation

- Besides becoming well aware of the presence of other stakeholders you have to be willing to invest time in co-ordination and to adapt your plans to those of other organisations. Specifically ask yourself:
 - Which institutions besides your own are involved in community work where water, sanitation, water resources management, education, agricultural extension, etc. play a role?
 - What are their institutional links and how can they co-ordinate activities?
 - At which levels are the responsibilities for planning/budgeting/implementation/monitoring?
 - How can after-construction-support for drinking water supply, sanitation and primary health care, agriculture extension and income generation be integrated at regional and local levels?
- In the process of partnership development, it is crucial that the partners know each other well enough to be sure about their co-operation. Make sure that all the partners have a clear understanding of their different roles, resources and capacities to ensure that expectations of each other are realistic and mutually agreed upon. (See chapter 2.1 on understanding the context and roles of different support agencies).



- Some organisations establish partnership agreements, others believe that contracts can make real partnerships even more difficult to achieve. When contracts are written up, you should negotiate:
 - the roles and contributions of each of the partners;
 - the purpose and goals of the partnership;
 - the definition of mutual expectations and commitments;
 - the development of operating arrangements;
 - the means of assessing and evaluating the progress of the partnership;
 - the time frame for activities to take place.

Food for Thought

Villagers in Mbala, **Zambia** received the following advice from different government departments: to uproot trees (Ministry of Agriculture); to plant trees around water sources (Forestry Department) and to uproot trees and replant them with orange trees to protect water sources (other advisers) (Visscher et al. 1999:16).

In **Colombia**, in a training course an integration game was done with 30 people from different backgrounds: technical and social sciences. The trainees were divided into one group with staff with a technical background and two groups with staff from a social background. Each group was asked to organise the different steps that it takes to support communities in the development of their water services, by ordering different cards. The topics of the cards listed such things as discussion with local leaders, local assessments and monitoring. It took each group 5 minutes to organise the cards. After adding social scientists to the technical group and vice versa, the groups were asked to organise the cards again. Now the discussion took one and a half hours, with precisely the same cards! It became evident how people with different backgrounds perceive the type of support that is needed differently.

In **Kenya** a canal from a river intake transported water over a distance of 10 km for the use of a mining company in its mines. The canal carried far more water than the mine needed and so the water agency was able to install pumping and a treatment plant to serve several communities at different points along the canal. It was in the interest of the mining company to keep the water flowing in the canal so they ensured the intake and canal were well maintained. The water agency looked after the pumping and treatment plant. Each community took responsibility for its own branch line and standposts. Similar partnerships are possible in smaller agricultural communities where water is required for growing and crop processing, e.g. tea estates, coffee washing, etc. (Wegelin-Schuringa 1998:18).

Example 3 NGO responsibilities and obligations

Responsibilities and obligations of an NGO in an agreement with the Water Supply and Sewerage Authority in **Ethiopia** (Davis et al. 1993:106):

- undertake activities to establish water management committees;
- undertake health and hygiene education activities on water-related diseases with advice from the Ministry of Health;
- supervise the construction of 70 hand dug wells and 20 protected springs;
- fund all the equipment, vehicles, tools and materials necessary for the construction programme;
- submit the final designs and specification of wells and springs to the water authority for approval;
- employ and train staff for programme activities at the agency's own expense;
- comply with the prevailing labour laws;
- provide to the water authority all spares sufficient for five years' operation of the installed handpumps;
- submit quarterly progress reports to the water authority and an annual report at the end of the dry season;
- submit a programme completion report at the end of the programme.

Example 4 Division of responsibilities of the different stakeholders in Ghana

This is an example of the division of responsibilities of the different stakeholders in programmes of the Community Water and Sanitation Agency (CWSA) in Eastern Region **Ghana**⁴:

Stakeholder	Responsibilities
Communities	<p>Sustainability of water supply and sanitation facilities is based on community participation and community willingness to take action to plan, build and manage the facilities.</p> <p>Beneficiary communities would be required to pay 5% of the capital cost and 100% of operation and maintenance costs.</p> <p>Form water and sanitation committees as a focal point for all water and sanitation activities at community level.</p>
District Assemblies	<p>Establish District Water and Sanitation Team (DWST) consisting of three persons with skills in community development, hygiene education, water supply and sanitation who will promote, support and manage the programme at district level.</p> <p>Provide office space and allowance for DWST.</p>

⁴ From the brochure on Community Water & Sanitation Agency - Eastern Region Ghana

>	Establish a revolving sanitation fund to finance sanitation facilities with reimbursement by the programme.	
Private Sector	Partner Organisations	Teams of community development field workers. Provide animation services by strengthening community organisational capacity, leading the planning and design process, implementing hygiene education and establishing community operation and maintenance capability.
	Contractors	Construct facilities according to specifications under contract to the CWSA
	Spare parts suppliers	Local shops who stock spare parts for pumps and sell directly to communities.
	Area mechanics	Mechanics who do major repairs of pumps at the request of and paid by communities. They also help to install pumps and train community pump caretakers.
	Latrine artisans	Local builders who are selected, given training and then hired by individual households to build household latrines.
	Small Business Development Units	Experienced water sector professionals who help the Regional Water and Sanitation Team select and train the Partner Organisations (POs).
Regional Water and Sanitation Team (RWST)	A regional team of CWSA responsible for the implementation. The RWST supports, arranges training for DWSTs, POs and Contractors, administers programme funds, ensures that technical standards are observed, and promotes, monitors, evaluates, develops and consolidates the programme.	
Donors	DANIDA and the German Government (KfW) Provide funding and overview execution of the programme.	



3 Creating a supportive organisational environment

Providing communities with the skills and support that they require to manage their own water supplies not only requires a supportive institutional environment as described in the previous chapter, but also a supportive organisational environment. At the level of each organisation it implies a different approach: from single project implementation to long-term support and facilitating processes. Here, an adaptive attitude, demand responsiveness, customer orientation, a gender and equity focus, strengthening capacities, empowerment, and transferring responsibilities are all important.

Support agencies require internal changes in terms of management style, motivation and capacity building for staff who work with communities. Capacity building is more than training; it must be seen as a process of learning from day-to-day experiences and building training around this. Not only individual staff, but the organisation as a whole needs to adopt an action-learning approach "based on building people's capacity to learn through processes of adapting and re-adapting ideas, perceptions, information, knowledge and experience to deal with reality and ultimately to bring about change" (Espejo 1993:2).

3.1 Process approaches

When promoting community management, support agencies are encouraged to put into motion a process of continuous learning between themselves and the communities on how to best manage water resources and services in a sustained way. There are no solutions with universal application. Conditions under which resources and services are being used and managed change continuously.

The challenge for support agencies is to be aware of the continuing changes and to be prepared to regularly adapt their support to deal with processes taking place in communities in such a way that the water supply maintains agreed standards. Such process approaches are different from the pre-defined blueprint approaches, for example where communities are visited twice after project implementation, once after six months and once after two years. Processes are difficult to predict and require flexibility and the ability to adapt procedures and working methods. Solutions may differ from community to community and evolve over time, and those solutions may require different mixes of resources (technology options, skills required, timing, financial resources, etc.). Targets and standards have to be defined in terms of increased capacity in communities and systems that are well functioning.

Facilitating community management processes is challenging, and good facilitation is an art. Each situation, each culture, each village, each experience requires its own answers from the support staff and their behaviour and attitudes are crucial. Staff will get involved in all kinds of community conflicts, power divisions, and diversities in interests.

If they just let it go the powerful will win. It is jiggling around with these problems, which makes facilitation an art. Support agencies will therefore have to prepare their staff not only for technical support, but also for dealing with social issues.

Tips for the Manager and the Support Organisation

- The focus of after-construction-support, while still looking for results, should also be on supporting community processes. For instance, when defining the objectives of your activities, you must include quantitative indicators as well as those on quality and sustainability. While long-term quantitative objectives may still be agreed (such as percentage of people having access to water supply meeting agreed standards over a certain time), short-term quantitative physical objectives (such as: number of boreholes drilled and equipped with hand pumps) can be supplemented by more qualitative objectives. For instance the number of community-based management bodies that are able to keep water supplies running over an extended period of time. (See chapter 5.2.2 for the selection of monitoring indicators).
- You can start pilot projects to test process approaches in certain areas and to plan for long-term, large-scale, implementation of such processes. Financial resources and capacity building which are required to provide a service rather than simply undertake a project would become clearer. These have to be taken into account when choosing priorities and taking decisions based on long-term requirements.
- Allow for flexible forms of management and funding such as:
 - lump sum allocation of funds;
 - the ability to transfer funds to the next fiscal year;
 - mid-term budget adjustments.
- Supporting processes is quite different from engineering. An assessment of your staff should give you an indication of whether you have sufficient 'social' expertise, which may also lie in your technical staff. On the basis of this you may either decide to hire new staff, look into possibilities for training present staff in 'social' issues or developing partnerships with organisations that can provide these skills.

Food for Thought

Water supply and sanitation is often regarded from a short-term perspective rather than the perspective of providing a long-term service. A great deal of energy therefore goes into the initial process of construction and community organisation and little thought is given to the long-term, year-in and year-out, mundane realities of providing



>

a reliable service. Whilst it may be possible to generate enthusiasm and leadership for the quick results during the initial project phase, the long-term commitment required to provide a service is often far less attractive. One of the most common failures is the inability to adequately predict both the governance and financial resources which are required to provide a service to communities rather than simply undertake a project (Len Abrams, personal communication, 2000).

3.2 From provider to facilitator

Many say that governments have to change their role from provider to facilitator. Facilitation in the context of after-construction-support is in line with a demand-responsive approach which has two sides: the need to elaborate projects/programmes around the demand emerging from the communities, and also the capacity of competent organisations to respond to this demand (UNDP-WB 1997). Support organisations should be able to provide continued supervision and assistance when communities ask for services, such as: technical advice, mediation services, legalisation of local institutions, training/refresher/update courses, guidelines for socio-economic studies and principles for cost sharing.

This demands greater flexibility and the ability to listen to and assess the needs and demands of communities and to accept less concrete, hardware outputs and risks. Facilitating processes of change at the level of the user communities, building capacity and facilitating decision-making at the lowest level, demand a lot from agencies and their staff.

National governments need to facilitate by creating the conditions for water management in communities supported by facilitating intermediate institutions. This facilitating role of government entails different tasks and functions of which supportive policies and legislation are the most important. For example, the formulation of legal frameworks or changes in existing laws may be necessary so that they encourage rather than hinder the establishment and functioning of water supply management bodies. A community management body which does not enjoy any form of legal status, will have to depend entirely on social pressure for compliance and enforcement, particularly with regards to the collection of tariffs. If governments decide to support the concept of community management they need to provide some form of legal status and the ability to enforce the "operating rules" of the system. Legal provisions may need to be amended specifically to allow for the legal status of water committees and the community administration of funds as well as the community ownership of public assets. (See chapter 4.5 on ownership and management arrangements).

However, having written laws and regulations is not useful if they are not enforced and backed-up with capacity building. "One of the most innovative elements incorporated in

the Colombian Constitution of 1991 has been the concept of participatory democracy and concrete conditions for citizenship participation were established in the law 134 of 1994. However, in practice, although there are more and more mechanisms ruled by legislation, participatory actions are non-existent or simply sporadic political initiatives. In other words, there are many mechanisms and norms, but there is a lack of motivated actors to intervene in the local public life. For instance, the requirement that complaints from users have to be heard, ended up in an advertisement on the wall in water offices which doesn't mean a thing for the users or the administration" (Gómez 2000:6, free translation). So as well as drafting supportive policies and legislation, implementing them is an important task, which involves building the capacity of the actors that need to implement the policy. In many countries policies favour community management of water supplies, but they are either not translated into workable rules and regulations at decentralised levels, or they are not supported by funding and capacity building, not backed by legislation or not implemented at all.

Another facilitating role that national governments should take on is providing information. In addition, a demand-responsive approach at the decentralised levels of support organisations requires an effective public relations strategy to make it widely known that support is available for well functioning water supplies. Radio campaigns, for example, can be used to inform communities about possibilities for support. However, some remote rural communities do not have access to information and other communities may not be aware of their need for support because of a highly polluted water source. Those communities require an active approach. They should also be given an opportunity to choose and decide on the possible upgrading of the level of service and the location of facilities whenever a system is being extended.

At the same time public and private organisations need to respond quickly to community demand. Here again national governments have a facilitating role to play to ensure that the public sector is well enough equipped to provide the support itself or to play a monitoring role when the private sector gets involved.

Agencies that once assisted communities with the development of improved water supplies and that see a role for themselves in 'after-construction-support' need to carefully review whether their organisational structure is suited to their new role. They need to check that their staff is well enough equipped; and whether the organisational culture is such that staff are appreciated as much for after-construction-support as they are for building new systems.

Tips for the Manager and the Support Organisation

- Provide after-construction-support around demand emerging from the communities. Orient your activities towards the felt needs of local people and institutions. Inform communities about support options to their water supply management as well as limitations, implications, rights and duties.
- Give communities the opportunity to choose and decide. To do this, you and your field staff might have to adjust your attitudes. Instead of making all decisions yourselves and giving instructions to the communities, you need to listen to people's views and ideas. Field staff have to provide information and answer questions that communities ask on:
 - available technical options, service levels, costs and access to funds; (See chapter 4.7 on technical aspects);
 - resources needed, availability and type of technical assistance that can be provided;
 - financial and operational responsibilities so that communities can select the levels of service that they want and can pay for; (See chapter 4.6 on cost recovery);
 - rights and obligations of water committees under existing legislation.
- Respond quickly to demand feeding it directly into planning and action. A minimal time gap between the request from the communities and the feedback is important if you want to have any credibility and develop further work with the communities. Practical decisions and/or feasible courses of action should be taken.

Food for Thought

In the Amhara Region in **Ethiopia**, besides the different levels of decision-making: region, district, woreda (municipality) and sub woreda's (community level) there is a parallel structure, a committee which was set up by the donor organisations to ensure the participation of all the stakeholders at the different levels. This committee has representatives from each of the different levels, who are supposed to be democratically elected at their own level of decision. However, members who were not from the main political party were being thrown out and substituted by others belonging to the governing party. Each of the decision-making levels had women 'participating'. They are there because they have to, but they never say a word. When asked why, some male members said that the women had to be there because the donors had demanded it. How representative and participatory this committee is in reality has to be questioned. The story shows how power, political interference, traditions and beliefs can complicate facilitation.



In **Benin** we wanted to find out whether participatory methodologies were actually used. We asked a few questions in a big meeting with all the project actors involved. People voted secretly but the results were shown to everybody so we could discuss them. One of the questions was on participation of the community in planning and decision-making. The agencies and the ministries all voted positively: yes, they were all using participatory methods. However, the community voted no. The good thing was that some community members dared to stand up and explained their vote: "No one ever informs us when there are visits to the community and then you expect us to be there. First you get angry because we were not there and then you end up meeting with a few people and say that you consulted the whole community. Some days later we hear that you have been there asking questions...". After that everyone started screaming and the facilitator had to explain that we were all there to learn from each other, and that it was not about who is right or wrong but about how we could improve the situation. After that, the meeting could proceed and we could actually try to solve the problems in a real participatory way...

In a northern province of **Mozambique**, remote rural communities had all the required information and presented their requests for support to the provincial water department. Against all expectations, 118 communities asked for support while there were only resources available for 22 communities. In such a case, it is better not to raise expectations among the communities and to be honest right from the beginning about the limited nature of support (Ivone Amaral, personal communication, 2001).

3.3 Human Resources and Capacity Building

One of the challenges for support agencies is to build the capacity of their own staff working with communities and within communities themselves. The quality of the human resources in support agencies is the most important factor that determines success or failure in working with communities on building their management capacities. Agencies need male and female staff who have the expertise and are motivated to work with communities, to build on existing knowledge and practices and who have an eye for, and know how to handle, gender and equity issues.

At an IRC workshop (IRC 2001a), participants concluded that the focus for the way forward in community water supply management should be on strengthening support structures to move from system implementation to a comprehensive service delivery for rural water supply. "Effective intermediate levels are crucial if stakeholder participation at the community level is to effectively feed up to inform policy making at the national level. Poorly resourced and motivated intermediate level agencies act as a block to the free flow of ideas from national level to community and back" (Visscher et al. 1999:26).

Different types of support staff may be involved in promoting community management. Typical support staff who could provide facilitation include: environmental health

assistants, members of district water and sanitation committees, village animators, community development staff, staff of specialised NGOs and water engineers. More than technical skills, staff supporting community-managed water supplies should have social and facilitation skills. They should be able and motivated to build on what communities already know and do, rather than negating this. Many water supply systems fall into disrepair as a result of conflicts in communities over tariffs and tariff collection, fraudulent practices, undemocratic procedures or lack of information. Dealing with these community dynamics requires social and facilitation skills. Proper legislation, expressed in clear rules and regulations with respect to the rights and obligations of the community stakeholders, helps support staff to do this facilitation job.

At the level of the support organisation a good assessment of the work at hand and available staff capacities needs to be made. On the basis of such an assessment a plan can be drawn up for human resource development and to build staff capacity by training existing staff or hiring new staff.

The support agency in its facilitating role should, whenever possible, train and delegate tasks to local field staff, relying on their local knowledge and experience. This has some advantages. Because they are working in their own areas local staff are likely to be more motivated than outsiders, their local knowledge is useful in their work and the skills acquired are kept within the community or region. Support agencies might also find some disadvantages. Usually few skills of the type required can be found locally, and additional training time is required. There might be pressure to employ favoured individuals and local politics can affect staff relations (Davis et al. 1993). When hiring and/or training staff, a balance between pros and cons will need to be reached, while not forgetting that longer-term processes will build up local capacities and project sustainability.

Concerning the capacities of the field staff, local or not, what matters is not so much the skills and qualifications of the staff per se, but the other employment opportunities requiring the same qualifications. Other employers may offer better salaries or career development. This will determine the willingness of people with a particular education and skills to work in rural areas. For example, in some countries water agencies will be able to find staff with high formal qualification who also have the right skills and motivation and who will perform well. In others, well qualified staff refuse to work with communities and it may be best to design after-construction-support around staff with less formal qualification, who have the skills and value the job.

Human resources development (HRD) is often considered to be the same as capacity building, whereby management thinks that training staff or having staff with a certain minimum level of education will do the trick. However, HRD is much more than that. It is also a matter of organising the operations of your agency in a way that your staff remain challenged and motivated and happy with the work they do.

After a capacity building process there is the need to avoid large-scale loss of trained field workers and other staff. Dedication to work is not simply a matter of personal characteristics but also whether the contact with the communities is positive, for example, if travelling is comfortable or if staff see the job as a fulfilling career when compared with other career opportunities. "A harder effort must be made to retain trained personnel; this requires, first of all, understanding the incentive system, and developing political support to mount counter-measures. Importantly, the organisations themselves should ensure that the returning trained staff is stimulated to put new knowledge and insights into practice" (Alaerts et al. 1999:37).

At regular intervals staff performance needs to be assessed, by looking at task descriptions, task execution, results achieved and staff satisfaction. Discussions about performance always need follow-up, either in terms of offering additional training or coaching or of extra incentives for good performance. An example of a performance discussion format can be found at the end of this section.

In addition, a learning atmosphere needs to be created in the organisation. Learning is a process likely to take place in a setting where people feel trusted and supported. Staff should be encouraged to be active, to experiment with things and to find their own personal way to do things. Differences of opinion, even confrontations are to be encouraged, since people have the right to make mistakes. Also, people evaluate together and learn lessons both as a group and as individuals (Espejo 1993). Putting it simply, you have to make people matter. For instance, when the task description says, "you have to visit the farmers once every two weeks" that kills passion and creativity. When instead, it says, "you develop a program to keep in contact with the community in the way that works best in your area, and we discuss it all together," then responsibility and passion are created (IIRR 2000).

Tips for the Manager and the Support Organisation

- Identify the needs and gaps in human resources and capacity building of the staff in your organisation who work with communities.
 - How many male/female field workers are there for each community (or a population number) at different levels (district, regional, local)? If the number is not enough and there are no resources to contract more staff, which areas are considered as priority? Why?
 - What tasks will the field workers have (hygiene, service management, agricultural extension, etc.)?
 - What other workers can do field tasks (public health nurses, rural development workers, teachers, etc.)?
 - Can we put together a multidisciplinary and gender-balanced support team that will allow us to address social as well as technical issues?
 - Does staff have previous experience with participatory approaches?

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- How much time will be allowed in each community for field workers to perform their tasks?
 - Can some tasks be transferred to a local committee or association?
 - Which areas are considered a priority in terms of capacity building (water and sanitation technologies, water-related diseases, data collection techniques, financial management, etc.)?
-
- Build capacities among the personnel working with communities and in the communities themselves, training and delegating tasks to field staff.
 - use field staff with a broad perspective on community management issues who are also able to judge when to call in more specialised assistance;
 - make sure your staff knows what is expected from them;
 - decide on criteria to evaluate field staff (practical tests, interviews, results, etc.);
 - decide on how to train your field workers (practical, on-the-job training, etc.);
 - decide on who will do the training.
-
- Create mechanisms to learn from field staff experiences with communities and to share this knowledge among the staff. Have regular meetings with staff where experiences are openly discussed and create other open channels for feedback such as workshops and newsletters. Promote exchange of experience and knowledge by staff within your own organisation as well as with staff from other organisations. Ensure that the results are translated into operational activities and planning.
-
- If you want to keep your staff, motivate them. Field staff should get the required back-up and resources and be sufficiently trained and motivated to promote a community-based approach.
 - create a good communication plan within the agency whereby plans, targets, activities and expected results are clearly communicated to all concerned;
 - involve staff in the planning process. If staff has a say in planning then they will be more committed to the planned activities;
 - make sure everyone understands who is responsible for what;
 - base your supervision on support and advice, rather than being punitive and disciplinary;
 - as a supervisor, have frequent contact with staff. It is very demoralising for staff to be left by themselves, while contact shows interest and opens channels for feedback. Communicate with your people;
 - delegation of work from higher levels to lower levels is a sign of good management, but does not mean that staff at higher levels does not do anything;
 - create incentives and career opportunities for field workers;
 - remunerate your staff adequately (compare salaries with the private sector).

Food for Thought

In **Nepal**, it is very difficult to work effectively with communities in remote areas. Every two years there is a new district director and district engineer. The consequences are that every two years the support process to the communities has to start again. They cannot try new approaches because they are always going back to the beginning and decisions are delayed because they won't be there in half a year so it's better to leave them to the new director. The main problem is that people with the level of education required for planning and financial tasks have to come from Kathmandu, the capital city, and because living in the area is very harsh and not very pleasant for many educated Nepali.

In **Vietnam**, I wondered during a training course on hygiene promotion, whether it was of much use. The course was based on participatory tools and methodologies. However, the working environment of the field staff was not suitable for their use. Often staff do not have enough time available to work with the communities and there is limited opportunity and flexibility to respond to what communities really wanted.

In an organisation in **West Africa** there were lots of conflicts because work with the communities was not at all participatory. But how could staff change the situation if their own boss, in this case a woman, was always bullying around her own staff? She never completed the responsibilities assigned to her and she never read anything or prepared material. She would force staff to do extra work to cover for what she was supposed to have done, and would order them to break agreements they had made. She felt that she was the queen and others had to do all the work for her while she was treating them really badly. How can you talk about participation, sharing roles and responsibilities, burdens and benefits if this is the scenario in the support agency?

Example 5 Performance discussion format

Name staff member:

Job title:

Name section head:

Name of third party (if any):

Third party present on request of:

Date performance discussion:

Reporting period:

1. Report of the former functioning discussion

Mention date of the former functioning discussion, and describe the follow-up on items mentioned in the former functioning discussion report.

2. Activities and achievements in the past year

Mention specific activities and achievements of the staff member in the reporting period (for example the projects the staff member was involved in, extra activities that were carried out, specific outputs related to the function, extra efforts).

3. Contents of the work related to the function description

Mention the function and position of the staff member within the organisation and changes that took place, if any. Describe whether the function description still covers the actual activities that the staff member is carrying out. Identify differences between actual activities and function description. Analyse differences and mention actions to be taken, if any.

4. Time spending related to planning

Analyse the actual time spending of the staff member in the reporting period and compare this to the individual targets on time spending. Discuss and analyse differences and identify solutions for improvement, if needed.

5. Absence by illness

Mention number of days in the reporting period. Analyse absence by illness and discuss whether this may be work-related.

6. Relationship with section head

Describe the relationship that the staff member has with his/her section head. Identify problems, if any, and mention actions to be taken to find solutions.

7. Relationship with other staff members and project-teams

Describe the relationship that the staff member has with other staff members and project-teams that the staff member is involved in. Identify problems, if any, and mention actions to be taken to find solutions.



8. Physical and non physical working environment

Discuss physical (room, noise, desks, chairs, keyboards) and non-physical (atmosphere, general well-being) working environment of the staff member. Mention actions to be taken to find solutions, if needed.

9. Goals for the next year

Identify goals for next year for performance, activities and roles of the staff member.

10. Career development

Discuss career development of the staff member. Identify mutual expectations and future plans.

11. Education and study

Mention study-facilities that were used in the reporting period and discuss the wishes of staff member and the organisation for additional training, education or study.

12. Other items

Mention all other items that were brought in by staff member or section head.

13. Action points

Mention all action points and concrete arrangements that were made. For each arrangement, identify responsible person and deadline.

14. Signing

The functioning discussion report has to be signed in duplicate by both section head and staff member. After signing, one copy will be handed over to staff member. The second copy is to be handed over to the controller for the personnel files.

Agreed,

Section Head (name)

Staff member (name)

15. Remarks by staff member

Staff member can make remarks on the functioning discussion report.

Part II

Practice



4 Key issues at community level

This part of the book addresses a number of key issues support agencies should address when working towards community management of water supplies. It looks at the various issues from the managers' perspective. 'Keep It Working', the manual for field workers published by IRC takes a look at similar issues from the perspective of the field worker (Bolt & Fonseca 2001).

4.1 What is a community?

Too often communities are taken to be some sort of 'unit', consisting of a group of people who share the same interests and problems. It is also assumed that people living in the same geographic or administrative area form a homogeneous group. Guijt referred to this as 'the myth of community' (Guijt & Shah 1998). In reality, communities consist of different groups with common, but also conflicting concerns and priorities. These groups have different socio-economic and cultural backgrounds and they are based on occupation, casts, gender, education, religion, wealth, etc. Different groups may have different ideas and interests which can result in conflict. It is especially true that conflicts may arise when a new water supply system arrives in a community, a resource that has never been shared and managed before.

A second myth is that communities don't have any type of internal organisation for managing their water supply and sanitation facilities. Especially in regions where access to water is difficult, communities often have rules for individual rights and responsibilities and impose penalties for not abiding by these rules. Some of these rules are very explicit and some are in the form of taboos and traditions that are transmitted from generation to generation. If not implemented well, the introduction of a water supply system may damage such rules and traditions instead of building on them.

When raising issues around water, outsiders need to take into account that different groups within the community have different interests and that there may be ancient management arrangements for the water supplies. If we do not build or strengthen existing arrangements unexpected conflicts might be triggered. This may emphasise division in the community, making further work towards community management more difficult. It may also be that during project implementation different groups or clans within the community are made to use the same source. If we ignore conflicting interests, those with the most power often determine what shall be done and how. Women especially are often marginalised although they have the biggest interest in good water provision and are well motivated to take up management tasks.

Staff from support agencies often know what the recurring patterns are, which is very helpful. On the other hand, field staff may be part of that pattern as well. Since they are often locally recruited, they also belong to a specific religious group or a majority ethnic group or a class. This may bias their work and should possibly be discussed openly.

Tips for the Manager and the Support Organisation

- Make sure that your field staff can identify the different groups within a community, their specific interests and how these groups co-operate (or do not), as well as the traditions, beliefs and attitudes related to water, sanitation and hygiene behaviour. Here is a small checklist. For more details and tools for collection of information see 'Keep It Working', the manual for field staff.
 - What is the settlement pattern of the population in need of services (size and spacing of communities, road and service links, migration and mobility, etc.)?
 - What are demographic data (mortality and morbidity patterns, migration patterns, etc.) and how do they differ for the various groups in the community?
 - What religious or ethnic beliefs exist which may influence community management (practices in relation to water, sanitation and health, social distinctions, authority, time and money expenditure expected)?
- Gain insight in how water is being managed and approach it from a livelihood perspective.
 - What do people need water for: agriculture, vegetable gardens, livestock, washing and bathing, cleaning, food processing, ceremonies?
 - What are the existing arrangements for managing the water supply?
 - Are there rules for access and distribution?
 - Who is involved and who is not?
- Gain insight into traditions, systems, and rules for management of other communal goods, such as land, forests, agriculture production, or more modern services such as electricity, schools, health posts. Who is involved in management, what rules are used, what capacities are there, is it equitable etc. Communities as well as field staff may learn from these insights for the management of water.
- Analyse issues of ownership, such as the ownership of a source or the land on which the source is located, whether the source needs to be shared between more communities and the (traditional) rules for use of the source.
- Analyse water needs of the various groups in the community. Do they need water for domestic purposes alone or do (groups in) the community also want water for productive use?
- Analyse the availability of water resources. Do different communities or different groups in a community use different sources or share the same source. What are the arrangements for resource sharing?

Food for thought

In a village in the Cauca Valle, in **Colombia**, lots of people came to meetings to discuss the improvement of their water system. There was only one group of people who did not participate since the beginning. It was discovered later that they were the ones who never had problems with the water system in the first place. They lived in the lower part of the village and they always had water. After the system was running properly, this group started creating problems saying that now they didn't have as much water as before... This shows that you need to check carefully that all sectors of the community are represented, because their interests can be quite different.

In some countries in **Africa**, traditional beliefs play an important role in people's lives, especially in rural areas. For instance, certain managers of the water committees could not hold their positions because they were accused of witchcraft, or in contrast people would vote for a widely recognised inefficient member in the next elections because he or she was said to have certain powers. People would not dare to confront such powerful people because they were afraid. We, westerners, find it very difficult to deal with this, what can we do? From a rational perspective we can of course ignore it. We never hear such things in workshops, and project reports never incorporate such aspects. It is also not easy for us because we don't understand it, and because mysticism and superstition do not affect our lives in such a strong way. But the truth is that we must approach it as any other power or political issue, we have to take it into account if we want projects to be successful. For instance, in situations as described above it might be useful to have the influence of an external person who will not be so scared and can try to solve the conflicts, a district officer perhaps.

4.2 Sustainability of the system and its management

In theory, the sustainability of community-managed water and sanitation services has been achieved when the system functions, is being used and it is able to deliver an appropriate and equitable level of benefits in terms of water of good quality, in sufficient quantity, at affordable prices over a prolonged period of time and without negatively affecting the environment. This implies that users are satisfied, that O&M and replacement costs are covered through user fees or innovative financial mechanisms, and that the management of the system is institutionalised (for example, through partnership with local authorities, involvement of private sector) with feasible external support (financial, technical and training support) when needed (Brikke 2000).

Sustainability is strongly influenced by the way projects are implemented. A participatory assessment with 88 communities in various countries that manage their water supply (Dayal et al. 2000) strongly indicated that approaches that are more gender and equity sensitive are associated with services that are better sustained and effectively used. It was found that projects functioned better over time when both women and men were

offered more choices in technology, service levels, management and financing systems and when benefits as well as maintenance responsibilities were equitably shared between women and men, rich and poor. So the way a system is implemented can increase the chances of its sustainability.

The sustainability of system management is very important. A common approach adopted by government and development agencies is to require communities to establish committees to co-ordinate the local management of water schemes. Such local management organisations can either be specifically established to run the water system alone, or the necessary management tasks can be undertaken by existing community organisations. Which is more appropriate will depend on local circumstances, but again, building upon existing structures is often more sustainable than creating new ones.

Implementing agencies often have a limited perspective on sustainability. Millions of water systems have been installed in communities world-wide assuming that "if only the right combination of factors could be put together at community level, sustainability could be achieved and a service such as a water supply could be set up and would continue to function without outside involvement. If all the parts were assembled correctly – technical, social, administration, etc. the project could be wound like a clock and would continue to work, by itself, for the next twenty years. [...] The problem with the clockwork myth is that it assumes that the 'community' is an island – that it functions on its own, isolated from the rest of society" (Abrams et al. 1998:3-4).

Of course the chances for sustainable management and sustainable systems can be enlarged in the implementation phase, but achieving sustainability is not only about putting together the right ingredients during implementation. It is predictable that unexpected things will happen after the system has been handed over. Internal conflicts arise at community level, trained people move out of the community, illegal connections are made, etc. But there are also situations that are beyond community control such as migration into or out of the community, a national economic crisis, national political changes, natural disasters and war. Sustainability is about ensuring that conditions exist for the services not to fail completely when something goes wrong. A safety net needs to be in place through which communities are assisted to maintain or regenerate the management process without losing all the time and resources already invested. Communities need to have access to this support and know how to make best use of it.

5 Conducted by the Water and sanitation Program (WSP), in collaboration with IRC International Water and Sanitation Centre using the methodology for Participatory Assessments (MPA).)See chapter 5.5.2 on MPA

Tips for the Manager and the Support Organisation

- You need to ensure that when new politicians change priorities, the sustainability of the water supply is not at risk. By making the processes and interactions as transparent as possible and by providing information about the impact of certain political decisions, political interference as a result of new politicians coming to power may be minimised. However, the most a support organisation can do is to make political interference visible or to raise awareness amongst community people about how water is being abused by politicians.
- Introduce the concept of sustainability through meetings or workshops inside and outside your organisation and highlight the importance of involving communities and users, in co-ordination with local authorities, in the demand, design, management, operation and maintenance of the system. Make all stakeholders aware of and responsible for sustainable systems.
- Encourage the use of available local resources, such as private craftsmen and shops, as well as NGOs, which will help to develop the local economy and keep the system affordable while creating an enabling environment.
 - Are there training opportunities to increase management/skills capacity at local and community levels?
 - Does the water supply technology allow for local employment creation such as a new spare parts shop?
- Sustainability has a direct link to satisfaction of users. Good user surveys are needed, especially those conducted by an outside agency, because the outside agency can guarantee some kind of independence through which people can feel free to express their opinions.

4.3 Equity and gender

In the eighties it was recognised that women were often left out of decision-making processes and that this had a negative impact on the sustainability of water supply systems. Projects and programmes started to 'involve women'. Women were to become part of management committees or even to become maintenance workers, for they were the ones with the most interest in well-functioning systems. Some even exclusively addressed women in their attempt to arrive at sustainable systems, ignoring male responsibilities and tasks. However, sometimes this backfires and "project agencies pay so much attention to women's, as compared to men's involvement, that the service comes to be seen as a women's project for which women are responsible. In such cases projects cause women to carry the burden of a community water supply from which also male household members profit..." (Brikké 2000:189).

There was a realisation that 'women's involvement' was not necessarily the right approach. Women may not be allowed to participate in public affairs or their burden may increase as a result of the additional tasks. It was also realised that, for most women, involvement had a price tag. What else could they do with the time spent on meetings? In particular in rural areas such opportunity costs for participation are usually higher for women than for men. These realisations led to the development of so-called gender approaches. Within the water sector, gender deals with the ways in which burdens, benefits, resources and responsibilities related to water, sanitation and hygiene are shared among women and men of different social and economic class.

The equity principle also became important. Equity not only raises the issue of equal access to and control over resources and benefits as between women and men, but also among women and men of different classes, age, culture, ethnicity, religion and socio-economic status. The purpose of integrating gender and equity principles is not to look at women in isolation, but to make visible the differences that exist between men and women. It also implies analysing how these differences lead to inequalities of power between man and women or between rich and poor which may prevent full participation in the management of water supply and sanitation services. Applying gender and equity principles during project implementation as well as during after-construction-support is imperative if equal access to, and long term sustainability of, water supply provision is to be achieved. At the national level, policies need to be developed to ensure that gender and equity principles get rooted at all levels.

While in general applying gender and equity principles leads to better sustained systems (Dayal et al. 2000) there is always a need to strike a balance between what is possible in the context of local traditions and an ideal situation from the point of view of system sustainability. However, support staff should not take for granted that an existing situation is unchangeable 'because of culture and tradition'. Saying this can easily become an excuse when explaining why a gender and equity approach is not applied. Gender inequities can be redressed in ways that fit within one's own culture.

Managers should not underestimate the time and effort it can take to ensure that women and representatives of all ethnic or economic groups can voice their opinion and that these opinions are taken into account when water committees plan for improved management of the communities' water supply. But many good tools and methods have been developed to address this. 'Keep It Working', the field manual in this series provides more insight in the practicalities of applying gender and equity principles (Bolt & Fonseca 2001). Even more than increased funding, time or additional (female) staff, there is a need for awareness, willingness to take action and creativity from male and female staff and managers.

For organisational credibility and to develop internal support for the application of gender and equity principles, agencies also need to be gender and equity sensitive

within their own organisations. It would be difficult to apply and maintain gender and equity principles in one's work when the same principles are not practised in one's own organisation.

Tips for the Manager and the Support Organisation

- Have personnel trained and supported in a way that gender and equity skills and concepts can be applied and are considered to be useful and challenging. In some cases having female staff is actually a precondition for the success of the projects. In societies where women are not supposed to speak in front of men the employment of female staff helps encourage and enable women in communities to participate.
- Make sure that your field staff can answer the following questions (as an indication that they have at least considered the issues in their work):
 - Do you work with a representative group of people in the communities?
 - Who makes the decisions and controls their implementation at the various levels?
 - What measures are taken to work with the different groups identified within the community?
 - How have women been consulted, on what issues and have their views been acted upon?
 - How have the views of the most disadvantaged been taken into account?
 - For what purpose do women and men use the water resources?
 - Is there difference in the access men and women have to water resources?
 - How are contributions (labour, time, payments and contributions in kind) to the development and management of water resources divided between women and men, rich and poor?
 - Who reaps the benefits (such as status, water close to the home, products produced with this water, income resulting from products) and who has control over these benefits (for example who decides on the use of the water and the use of this income)?
- Make sure that the answers to the above questions are discussed and that they are used to make an assessment of the level of gender and equity sensitiveness and action. Should this be too low, ensure that proper action is taken.
- If you want to find out how your staff feels about gender and equity issues and whether within your organisation gender and equity are sufficiently addressed, you may carry out a gender assessment. This is an "assessment of an organisation performance and potential to develop and implement gender inclusive policy and practice to strengthen its activities, products and services" (Streams of Knowledge Coalition 2001).

Food for Thought

In the Gaza Strip, in **Palestine** it was found that due to cultural barriers it was not possible to create mixed committees and so separate committees for men and women were established. Communication between these two committees and the support organisation were based on an exchange of letters, through married couples who participated in the committees and through separate meetings with the staff of the international NGO that was promoting the programme.

In **Colombia**, in the community of La Sirena, during the implementation of a project for improving the water system, both women and men worked voluntarily. As soon as the new source was ready, the men got the paid jobs (supervisor, operator, etc.). The operator let his wife and daughter do part of the work, while he himself did something else. The wife and daughter had had no access to the training, they could not explain the reasons for and effects of what they were doing, they never were involved in any meetings on operation and maintenance of the system and their role was not acknowledged by either the operator or the committee or the agency. Credit, training and the salary were not for the family sharing the work, but for the operator alone.

In a country in **West Africa**, a meeting brought together four ministerial representatives involved in policy making. We were doing an assessment with them which was going quite well until we came to the question about the gender sensitiveness of their policies. One of the policy makers was arguing that they were very gender sensitive, but the others were disagreeing: "How can you say that we are gender sensitive? Look at our policy, we mention women everywhere, but what are we actually doing about it?" It took them about an hour to discuss this issue and to conclude that their concept of gender sensitiveness was totally different.

In **Pakistan** many people are convinced that in some areas of the country it is impossible to have women speak in public. Culture and religion are said to inhibit this. In the context of our research project we found that, if sufficient time is allowed to build rapport, and if men are convinced about the benefits of women's involvement, women are allowed to speak in public.

4.4 Leadership

Community leaders are very important when an agency wants to work with a community. There might be more than one leader or a hierarchy of leaders, by area, clan, etc. Leaders are often listened to by the community and as such are key people for understanding the different interests of the community and in managing conflict. But there are also leaders who seem to be more concerned with increasing their own wealth or in struggling for political power. Traditional leaders can motivate the whole of the community, mediate in conflicts and set examples; on the other hand they may also

set limitations because they do not want change or because they are not really representative. Although this is difficult to assess, field staff should show some respect for leadership in the community and refrain from creating a leadership crisis.

Understanding how the community is organised in terms of power structures and leadership is crucial to discern the importance of traditional leaders and other informal hierarchies. "The political systems inherited from the colonial powers were highly centralised in form and structure and gave limited powers to locally elected bodies at municipal levels and to existing traditional authority. (...) The issue of chiefs and traditional authority continues to be a vexing one in many countries where their authority continues to be a major factor in shaping local governance. In many cases traditional authority exists side by side with modern forms and structures of governments" (UNCDF 2000:3). Identifying at an early stage of implementation the relationship between traditional leaders, and political or administrative leaders and members of the community, can avoid problems in the after-construction-support development.

Staff of support organisations often have their first community contacts with male community leaders and have the tendency to accept and go for what the leader tells them. That is the easy way, but it immediately creates a male bias. Staff will need to understand and be motivated to go for the more tedious and time-consuming task of cross-checking the information given to them by the leader. This can be done through informal talks with a variety of male, female, rich and poor community members and through observation.

The creation and composition of a water management committee can usually only be done with the involvement of community leaders. It is a delicate process, because in the interest of a sustainable water system the representation of all groups is important. At the same time there is a need for specific capacities of office bearers and these are not always the criteria that local leaders use when selecting members for a water management committee.

As with gender, with leadership you have to find creative ways to deal with leadership traditions and practices.

Tips for the Manager and the Support Organisation

- Make sure that your field workers identify both the formal and informal leaders as well as their impact on community arrangements and behaviour and that real partnerships are established among the different community groups:
 - Do existing male community leaders represent all community members and, if not, which groups of the communities are represented?

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- Has sufficient time been allowed for proper consultation to take place and understanding to be reached among the different community groups (men, women, different socio-economic groups, different ethnic or religious groups) and their leaders?
- Get the leaders and politicians on your side, talk with them at an early stage to discuss with them what is involved and to get them to become your advocates. Attending workshops and other meetings with many stakeholders is a way for them to listen to what people have to say and to feel some responsibility for improving the situation.
- Do not ignore, but also do not get involved in leadership conflicts. You may mediate, but refrain from taking any decisions yourself. Unless and until the conflicting parties arrive at their own solution, the conflict will remain. "Leadership is part of the social and institutional arrangements of a community. It is part of the balance of power and it is being reinforced by the community. The style is often individualistic because democracy and representation are not always traditions in communities or countries. Leaders are part of systems of patronage and their decisions are often arbitrary. Outside projects become subject to that style of leadership. That can be positive and negative, depending on individual leaders and the space they get from their community" (IRC 2002).

Food for Thought

In **Palestine**, 1997, there was a water and sanitation programme in Gaza City which was trying to avoid political interference at the local level. There was a water supply service that served one street, which had very divergent groups and the programme tried to ensure that the caretaker of the service was a volunteer, not interested in the local politics but in the good provision of the service. An idealistic caretaker was found. The positive aspect of this situation is that the street was actually very clean and the taps were in excellent condition. However, after a while, given its visibility, the post of the caretaker became a motive of dispute among the local politicians.

In Lumbini, **Nepal**, disputes are taken up by the Water Users Committee. The committee sends recommendations to the Village Development Committee (VDC) and a decision is made. Most problems are solved this way but the dispute can be passed on to the District Development Committee (DDC) if necessary. The DDC will then send a team made of members from the DDC, the Water Resources Management Committee, the line agency, VDC and user groups to investigate. While there, they will organise meetings with the villagers to resolve the problem. At this point, if the dispute

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is not settled, the district administration office can become involved. Disputes can last up to two years before full resolution (Visscher et al. 1999:35).

Tresia Mutisia is the chairperson of Yanthooko women's group, in Kenya. In her own quiet way she has kept the project going. The problems are many but so are her life experiences. Her illiteracy has not stood in the way of becoming a leader. Tresia saw in herself the wisdom that age brings with life experiences. She saw the problem as a lack of clean and adequate water and a high prevalence of diseases, and not an essay writing competition. She saw the problem as women becoming beasts of burden, travelling long distances in search of water, not as an exercise in grammar. She saw the problem as the wasting away of their soils and of an ever-reducing crop yield over the years, not as environmental science or agro-forestry. She saw communicating as passing on a message rather than as speaking fluent Kiswahili. Her local Kamba language will do. She is proof that illiteracy is not a handicap to leadership. Her members see her for what she is: a hardworking, fair and honest leader (NETWAS 2000).

4.5 Ownership and management arrangements

Ownership is an issue that is often insufficiently dealt with. In many countries water supply systems are installed by some agency, funded by an external donor and handed over to the community to manage, assuming that the community now feels the system is their own. Projects try to increase this 'sense of ownership' as a precondition for sustainable system management after handing over. However, 'handing over' is not the same as ownership. 'Handing over' usually means that the community is made responsible for operating and maintaining the system, whereas the legal aspects of ownership are often ignored. Who legally owns the source? Who owns the system? Who owns the land surrounding the source? Water committees and other local organisations are often not registered as legal entities and cannot own anything. A lot is left unclear, whereas clarity is required for long-term sustainability.

Clarity about ownership has a large impact on the way that management functions. Management arrangements can range from local tap committees all the way to a complex federation of committees or multi-village committees. They vary according to the size of the community, the technology used, the local context and national legislation. The degree of autonomy of these local organisations can also vary considerably. Some are closely tied to formal local government institutions, whereas others are much more independent. Additionally, there can be very well organised local organisations which were not elected democratically, or which don't represent all the groups in the community. Again, issues of equity and gender have to be brought in when discussing management arrangements.

Table 3 Community management arrangements

Tap or Neighbourhood Committee	Responsibility for operating and maintaining a specific water point lies with this type of committee.
Water Committee	Responsibility for all activities (managerial, operational, technical and financial) of a particular scheme, lies with the water committee. The area covered may be larger than a neighbourhood, possibly the whole community.
Village Association	Responsible for all development activities, including overseeing water and sanitation.
Water Committee contracting a private body	A private body, individual, mechanic, group of artisans, or firm operates and maintains the system, while the water committee keeps general management and control.
Inter-community Federation of Committees or Multi-village Association	Several communities share the same pipe or water source. Each community has a water committee, which operates and maintains its own water point, and collects fees. Part of the collected fees goes to an Association of committees to maintain the whole system (pipes, source).

(Brikke 2000:171)

Table 3 shows community management arrangements that can be found. This is not an exhaustive list and in reality management arrangements are a mixture of the options presented.

Legalisation of the management body has various benefits. Being registered allows a committee to open a bank account, have access to funds and to sign contracts. It creates a basis for solving conflicts within the community or with other organisations: for example, when community members do not pay, when there is a water source dispute with a neighbouring community or when the contracted private sector company does not perform as agreed. With legal registration the non-paying user can be sued by the committee, the malfunctioning committee can be sued by the users and the committee of one community can sue that of a neighbouring community if the source is damaged or destroyed. It also makes the performance of the committee more transparent since a legal entity is bound by certain rules concerning accounts and financial reports. In short, registration helps to give the management body the recognition and the legitimate authority to perform their tasks. In many countries water committees still do not have and cannot obtain that legal status. That makes sustainable management difficult.

Clear legal ownership also helps the support agency. The agency can refer to these laws in case of conflicts. If there are no such laws, performing a facilitating role in case of conflicts will be much more difficult. In all ownership related matters, law enforcement is crucial. The support agency can play a positive, be it limited, role in law enforcement. In the last instance an independent judge should be available to enforce the laws.

Tips for the Manager and the Support Organisation

- Have access to some legal expertise and ensure that field staff are able to explain ownership and legalisation issues to community members. Where there are different possible forms of community registration as an autonomous body, major issues need to be clear both to the communities and the support agencies, not to mention to the higher political levels (Wegelin-Schuringa 1998).
 - What are the legal options for committees?
 - What are the legal rights and obligations for the users or members?
 - What protection of users is there against abuse or corruption of committees?
 - What is the cost, time required and location of the office for registration?
 - What are the requirements for registration (for instance the amount in a bank account, membership)?
 - What is the legal status of registration and consequent authority to act (buying and selling, contracting)?
 - Who has the legal power to pursue non compliance by community members, contracted services, etc.?
 - What is the possibility of preparing by-laws to guide operations?
 - What qualifications are needed to receive funding support?
 - What is the possibility of becoming owners of the land and assets?
- Even when such issues are clear there are other legal problems that emerge linked with community boundaries and customary practices. You have to discuss these with the communities to clarify responsibilities:
 - Which should you use: government administrative boundaries or traditional community boundaries?
 - Are there nomad populations in the region?
 - What rights and obligations exist between members of a community (access to resources, legal rights, etc.)?
 - What customary practices and agreements have there been concerning different groups in the community/ or with other nearby communities (obligations for community service or towards leaders, etc.)?
 - What are the main problems with the customary practices?
 - Are there any contradictory issues when looking at customary practices and new legal arrangements?
- Where the legislative framework is lacking or not clear, lobby and advocate for legislation or review the possibilities for legal management bodies at community level and for other management arrangements.

Food for Thought

The water committees of some villages in **Ecuador** designed a Venn Diagram⁶. It became very clear that they felt that the local government was the agency most remotely involved. They did not have any relation with the local government and never even considered asking the local government for support. We started discussing the roles of each of the institutions and of the community. They had never realised that the local government was legally responsible for their water supply system, which meant among others that it had to do water quality analysis every year and discuss the results with the community. How was this possible? We then found out that the systems had been built by international NGOs which had never involved the local authorities....

In **Kenya** the policy framework for community-based organisations dates back to the 1960s and 1970s. Community water committees can be legally registered as 'self-help' groups. However, the challenges faced by most communities today cannot be adequately addressed by this set of policies. The self-help group has critical legal limitations that prevent a water committee taking legal action if the group defaults on payments, and, in the event that the treasurer is stealing money, that prevent consumers from taking legal action against the committee. In trying to resolve conflict a water committee asks for mediation at district level or from traditional chiefs, and this system has been working fairly well. Traditional methods of solving conflicts should not be forgotten, but there should be appropriate legislation when conflicts cannot be settled in this way (Netwas 2000).

4.6 Cost recovery⁷

There is no one single definition of cost recovery. Very simply, cost recovery is the process by which investments and expenses are later recovered. However, its precise interpretation is very context specific. Which costs are to be recovered - costs for replacing the water supply system (capital costs), operation costs, maintenance and repair costs, costs for capacity building (running costs). In much of the literature cost recovery refers to recovering only the running costs. An important mechanism in cost recovery is direct or cross subsidy. Direct subsidy implies that poor users pay their water tariffs with a subsidy given by the agency that made the investment. Cross subsidy

⁶ Venn diagrams are used to make a visual representation of institutions, their importance and their inter-relation and can be used to discuss the roles and responsibilities of the various institutions. It is based on touching or overlapping circles of various sizes to indicate the degree of contact or overlap in terms of decision-making. Each circle represents an individual or institution and the size of the circle indicates importance (see Bolt & Fonseca 2001).

⁷ Part of the information of this section was collected and adapted from Brikké 2000 and Brikké and Rojas 2000.

implies that wealthier households pay more for the same amount of water than poor households. Some subsidies are part of national policy, others are decided on at the community level, underpinned by by-laws.

In the context of sector reform, policies and strategies regarding cost recovery are based on the premise that water is an economic as well as a social good (WMO 1992), and that water services have a price which consumers should pay. As fresh water is sometimes scarce, environmental and economic considerations create a tendency towards applying commercial principles to its management. However, reality is often too complex to just apply commercial principles. Willingness and ability to pay are two important concepts in cost recovery.

Paying for water often conflicts with socio-economic problems, with political expectations and with perceptions of water as a free good. It is not always clear whether in the construction phase community groups, including both male and female heads of households, have been allowed to choose the most affordable systems and service levels. It is often doubtful, whether they had the right information to choose a service level for which they are able to recover operation and maintenance costs. People in communities often consider cost recovery unfeasible because they say that they are too poor to pay for improved water supply and sanitation services. Cost recovery is also undermined by politicians who use 'free water' as a slogan to win votes or to gain support in their campaigns. In numerous places water is also considered a God's gift that one does not need to pay for. On the other hand there are also situations where people pay a considerable amount for water while receiving poor services. Supporting communities to implement sound cost-recovery practices is quite complicated and often threatened by outside forces.

Support agencies face two challenges: agencies have to guarantee the efficiency⁸ and the effectiveness⁹ of their support activities and, at the same time, ensure that communities can financially afford and sustain the water supply. The first relates to the support organisation's own operations. The second addresses the challenge for support institutions to build community capacities to financially manage water supplies, to guide them through the process of making budgets, fees and rules for collection, enforcement, penalties, cross subsidy, financial reporting etc. and to help them build their capacities to implement cost-recovery strategies. These strategies should be articulated within local realities of ability and willingness to pay. Sound financial management requires trust between the users and the implementers of the financial system and trust needs to be actively pursued.

⁸ The ratio between inputs (revenues) and outputs (expenditures) is satisfactory.

⁹ The contribution of a programme towards its objectives and results.

Support agencies can assist communities by:

- clarifying financial responsibilities for "who should cover which costs?";
- maximising willingness and ability to pay;
- helping to clarify and assess costs and to calculate an appropriate and equitable tariff structure based on a proper budget;
- organising access to alternative financial sources.

Each of these issues will be discussed in this section:

4.6.1 Financial responsibilities: 'who should cover which costs?'

Only a few communities will have the capacity (financial and managerial) to cover the full cost of operating, maintaining and rehabilitating or upgrading a water supply system. In most cases communities can only recover the running costs and contribute a small percentage to capital costs. Depending on the context, for example whether income generating activities were made possible as a result of the water system, some communities go through a progressive process towards full cost recovery. Other extremely poor communities, or those with easy access to alternative, but unprotected water sources, will need subsidies or alternative financial sources or sustained promotion to encourage them to use the protected source. In all cases it is important to clarify "who is financially responsible for what" and not to allow any misunderstandings to persist.

Cost items will have to be identified and their actual levels in the community calculated. Budgets can then be drawn up and compared against the potential income from water supplies. Field staff and community groups play a crucial role in this process. Discussing financial management at community level and facilitating its improvement is discussed in 'Keep It Working' (Bolt and Fonseca 2001).

Financial responsibilities often match operational responsibilities. For example, a water committee may be responsible for keeping water flowing and for meeting the costs. However, operational responsibilities may be delegated by the group or institution. Should that be the case it needs to be clearly indicated who is accountable for what and whether the financial responsibility has also been delegated. For example, if a water committee, that is financially responsible for the upkeep of a tap, delegates the operational responsibility to a mechanic and also delegates a certain budget to carry out this task, the mechanic has to account for the expenses on a regular basis. Field staff need to discuss this with a committee as well as with users in order to build mutual trust and to achieve a sustainable service from the mechanic. This distinction between financial and operational responsibility can be made at the community level as well as at the level of support organisations. Tables 4 and 5 provide two examples on the distribution of responsibilities. When reading these tables it has to be taken into account that 'the community' is not a homogeneous group of people and that in the community responsibilities may lie with sub-groups.

Table 4 Distribution of financial and operational responsibilities for the operation and maintenance of a handpump

Distribution of responsibilities for the O&M of a handpump	Financial responsibility	Operational responsibility
<ul style="list-style-type: none"> • Monitoring handpump use and encourage proper use; • Check all nuts and bolts, and tighten if necessary; • Measure output per stroke and compare with expected output; • Check and adjust pump handle and stuffing box; • Grease or oil all hinge pins, bearings, or sliding parts; • Clean the pump, well head, concrete apron, and drainage area; • Check well head, concrete apron, drainage area, repair cracks; • Record all operations and maintenance activities in notebook. 	○	✗
<ul style="list-style-type: none"> • Disassemble pump, check drop pipe, cylinder, leathers and foot valve; • Check corrosion and wear; • Repair or replace if necessary. 	○	○ or ✗
<ul style="list-style-type: none"> • Conduct water test for micro-biological contamination; • Conduct water level check and well yield test. 	█	█
<ul style="list-style-type: none"> • In case of contamination, locate and correct source of contamination, and disinfect; adjust cylinder setting if necessary; • Rehabilitation and replacement of entire handpump when fully worn. 	○ or █	✗ or █
<ul style="list-style-type: none"> • Management of a stock of spare parts, tools and supplies. 	○ or ✗ or █	

(Brikké and Rojas 2000)

○ Community or a designated person/group of persons in the community

✗ Local mechanic / private sector

█ Government

4.6.2 Maximising willingness and ability to pay

In order for community management to work it is essential that the new system of water supply is competitive with the existing supply and that the new system is what people want and are willing to pay for. It has to be taken into account that middle class, poor and better off people, and women and men often want and are willing to pay for different technologies and service levels. Willingness and ability to pay are regularly confused. Often we hear that people are not able to pay the price of water, because they are too poor. This may be true in individual cases, but in many cases people are able to pay, but not willing to put priority on spending their resources on improved water supplies.

Table 5 Distribution of financial and operational responsibilities for support activities

Distribution of responsibilities for support activities	Financial responsibility	Operational responsibility
<ul style="list-style-type: none"> Conduct technical and socio-economic participatory studies. Prepare annual budgets and long-term financial estimates for operation and maintenance as well as capacity building activities; Analyse O&M tasks for use in planning and budgeting; Collect, analyse, monitor results, and conduct follow-up support or training if necessary. 	🏛️	👤 or 🏛️*
<ul style="list-style-type: none"> Develop and evaluate technical and management training for water system operators; Develop and evaluate financial and management training for community managers. 	👤 or 🏛️*	👤 or 🏛️*
<ul style="list-style-type: none"> Provide on-going technical training for operators; Provide on-going technical, financial and management training for community managers; Develop information and materials on hygiene education 	🏛️*	🏛️*
<ul style="list-style-type: none"> Select and appoint operators/ contractors for O&M; Delegate tasks and responsibilities, supervise and pay salaries; keep archives, inventories and log books; Collect water fees and manage revenues; make payments for purchases, loans and other obligations; respond to users complaints; Organise and conduct general meetings for discussions, elections; Organise community contributions for upgrading or extending the system; Report urgent problems to government agency. 	👤	👤

(Brikké and Rojas 2000)

👤 Community or a designated person/group of persons within the community

🏛️ Government

🏛️* Government and/or Non Governmental Organisations

Trying to understand people's willingness to pay for certain services is often more fruitful than just assuming that they are not able to pay. Sometimes people continue to use a polluted water source although there is an improved water supply service available, because it is not a priority to pay for it, because they do not see health or other (productive) benefits or because they don't like its taste or/and colour. Willingness to pay is influenced by many cultural, social, economic and institutional factors and this makes attempts to deal with it complex.

Water supply policies can influence the willingness to pay. Providing water in rural areas free of charge or below costs reduces willingness to pay because consumers come to regard water services as a responsibility of the State or an outside agency. Socio-cultural factors that can create resistance to pay are, for instance, when water is considered a gift from God.

Project approaches also have an impact on people's willingness to pay. If the communities demanded the water supply and they were involved from the start in improving the system, a sense of ownership encourages responsibility and pride and may result in increased willingness to pay. However, in cases where the improved system has to compete with an abundance of traditional sources work has to be done to raise awareness of the benefits of the improved water source (time saved, health improvements, etc.). Transparency in the workings of the operation and maintenance fund is another factor influencing people's willingness to pay. Poor transparency greatly reduces willingness to contribute.

In cases where people are genuinely too poor to pay, helping them to start income generating activities can be useful, provided there is a market for the products they want to sell. Income generating activities can be linked to making productive use of water, e.g. for gardening, livestock or a home industry. The start of income generating activities requires a careful process of selecting the households to participate. Even though access may be to all, too often the 'better off' rather than the poor benefit from such activities.

In some cases negative effects may result. In Africa, pastoralists were previously able to move long distances using water which they gained rights to through a reciprocal arrangement. Today, most water has to be paid for. This can prevent poorer pastoralists from moving their herds, as they cannot afford the water at 'foreign' boreholes. This inability to move herds leaves them more vulnerable to dying in a drought. So, increased provision of water resources - and the monetisation that has gone with it - have, ironically, reduced the food security of the poor in times of emergency (Clarke 1998:63).

Willingness and ability to pay are two sides of the same coin. They can both be influenced. Factors negatively influencing willingness to pay are: a system that does not reflect people's demand, non-transparency, lack of financial capacities, political interference, beliefs, competing water sources. If these factors are dealt with sensibly, willingness to pay is positively influenced. Ability to pay can be influenced by income generating activities directly linked to the availability of reliable water services and by cross subsidies. Both need to be addressed by the support agent through capacity building, dialogue between staff and community members and technical support services that take people's demands into account.

4.6.3 Setting an appropriate and equitable tariff structure

Support agencies have an important role to play by helping communities to set appropriate tariffs to cover operation, maintenance and management costs and, at the same time, guaranteeing enough safe water within reach of the poorest. Tariffs can be set to cover operation and maintenance costs, but also to cover other services such as sanitation or to subsidise poor users. But besides operation, maintenance and management costs there are also costs for replacement and improvement in the system and for water quality analysis. Who will pay for that? The answers will depend on the national policies and the agreements made between the community and the support agencies (See chapter 4.6.1 on financial responsibilities). Once it is clear what the community's financial responsibility is, discussions on tariff structure can start.

As part of a regulatory framework, some governments set a lowest and highest tariff that can be charged while the water committees set tariffs for their village water scheme within the government range. There are several ways to set a tariff, by unit volume consumed, by number of people in the household, by socio-economic status etc., or by a combination of different characteristics. Table 6 shows an overview of different possibilities.

Table 6 Different possibilities for tariffs setting

Flat charge per person	Households pay a fixed (per month, per season, etc) fee according to number of people (and cattle) in household independently of the volume of water used.
Flat rate charge per household	Households pay a fixed charge.
Flat charge per unit volume	Users pay for the volume, for example per cubic meter or per container.
Agreed user charge	Each user group pays for an agreed quantity of water collected from a water point (e.g., so many buckets each month).
Metered charge	Flows to standpost and taps are metered and consumers pay according to the volume used each month.
Tariff levels depending on service level	For example, public standpost users receive free water, household connections pay a charge, commercial users pay a higher charge, etc.

(Shordt 2000b: 60-1)

It is good to realise that in certain parts of the world communities themselves apply equity principles. They may for example, charge tariffs per adult where women and men have their own sources of income. Sometimes women are charged less than men as their net incomes tend to be lower. In other situations the poorest families and elderly and/or disabled people are exempted from payment.

A crucial issue for communities to decide is whether they want to apply a cross-subsidy system where those who are wealthier pay a higher tariff to make up for a lower tariff

paid by the poor. Should communities want to apply this principle, field workers may help them do a welfare classification and mapping exercise to sort out who classifies wealthier and who classifies poor. This can be done in combination with other socio-economic indicators (for more details on how to do a classification see 'Keep It Working' Bolt & Fonseca 2001).

Roark confirms this; "In arid zones, where water is at a premium and conservation is essential, water typically is sold by the unit volume. When water is pumped by a fuel drive engine, volume sales are the norm. In areas where cash is not in general use, communal sales of agricultural products are earmarked for the WSS system. Some communities insist on payment from every consumer, while others may provide free water to the very poor. In notable instances, some communities receive funds from (presumably better-off) members who have moved to the city or to foreign countries" (Roark 1993).

Over time, tariffs have to be revised to reflect changes in demand, inflation or costs, and, again, the support of the agency to assist in the calculations and financial feasibility of a tariff structure is important. Tariff revision has to be made regular practice of a management body and be based on past service and service management as well as on plans for the near future. Decisions are to be taken by a quorum of male and female heads of households in the community.

Communities together with agencies have to decide if they want to improve the level of service in order to increase willingness to pay, by, for example, reducing water lost in the systems so that the proportion of water that is paid for increases, and/or increase access to the improved system. "If the tariffs are set correctly, then as the volume of water sold increases, the revenues increase. Sometimes local committees that set tariffs do not understand that reducing the cost of water slightly can increase the amount sold and thus the amount earned" (Shordt 2000a:63). Many financial problems are caused by poor administration practices by the organisations responsible for the service, such as inaccurate meter readings, poor billing or fraud.

4.6.4 Organising access to alternative financial sources for unexpected or large expenses

Tariffs are not always enough to cover major repairs, upgrade or rehabilitate the system. Any support agency promoting a water supply system has also to think about suggestions to bring together the necessary funds and to make communities aware of the possible alternatives.

In some cases local savings are available, but usually money has to be borrowed. Financial institutions are reluctant to lend to poor people, as they cannot offer any collateral that would guarantee the return of the loan. This is reflected in the attitude of financial institutions that deny credit to management committees because they do not

have a formal public status, are not legal entities and do not have assets. More and more micro-credit schemes try to bridge this gap and to open up credit possibilities by which rural people can borrow money. Planning for the productive use of water can then be useful because it generates income and makes repayment of the loan easier.

Raising funds and tariff setting for regular operation and maintenance has been discussed. Table 7 explains a few potential sources for the larger expenses related to system extension or rehabilitation.

Table 7 Potential alternative financing sources

Revolving funds	There is an initial capital donation. On the basis of this capital, loans are given to individuals or groups. After the repayment, new loans are provided to other members or groups of the community.
Subsidies	Subsidy can come from local authorities' or donor budgets for extension or rehabilitation, reduction of prices for spare parts or fuel, free technical assistance for major repairs, etc. Tax money is generally used to provide subsidies.
Social and development funds	Many development countries have put in place special funds or poverty reduction programmes that provide money for social and development purposes with interest rates lower than on the financial market. Access to these funds is often restricted to local authorities and not directly by communities. However, access may be possible through partnerships between the local authorities and communities.

(Brikke, 2000:213)

Tips for the Manager and the Support Organisation

- To reach agreement on financial and operational responsibilities you may promote workshops with different stakeholders at which commitments are publicly demonstrated. Here is an example of some steps that can be taken to make responsibilities clear for all stakeholders.
 - conduct technical and socio-economic participatory studies to identify/clarify existing responsibilities;
 - get together all the stakeholders and discuss all the options (See chapter 2.2 on multidisciplinary approaches and partnerships);
 - prepare annual budgets and long-term financial estimates, and discuss them with all the stakeholders (See chapter 6.4 on financial implications of supporting communities);



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- provide training and other capacity building activities if necessary (See chapter 3.3 on human resources and capacity building);
 - collect, analyse, monitor results and conduct follow-up support or training if necessary (See chapter 5.2 on monitoring);
 - ensure that all groups in a community have a choice and a voice in the process of assigning responsibilities.
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- Make sure that field staff realise that there is a difference between willingness and ability to pay and that they have the capacity and tools to assess the implications of both in a community. (For examples of tools see 'Keep it Working' Bolt & Fonseca 2001).
 - Ensure that field staff realise that transparent financial management in which user contributions are clearly accounted for, motivates users to continue to pay. Ensure that this is discussed when looking with communities for the best collection system and reporting methods.
 - Have your field staff discuss with communities the benefits of a well-functioning improved system so that they understand that these benefits can only be achieved if everyone contributes to its upkeep. Field staff need to realise that benefits may have a different value within communities and within households (men and women) and that meeting with a variety of specific groups in a community is therefore useful.
 - Raise awareness within the regional banking system. Show successful cases of other regions or countries and promote exchange visits when possible. Link up potential banks with local entrepreneurs, making activities in the region more attractive for the banks. Enabling policies and regulations may also be needed.
 - Raise awareness among communities. Communities might not have access to information concerning financial sources. Make a list of the available options (loans, potential funders, micro-credit schemes, banks etc.) in your region and their specific conditions. Your field workers can spread knowledge about the options in a clear way amongst communities, including information on how they can achieve legal status (see chapter 4.5 on ownership and management arrangements) to make it possible for them to apply to some of the financial options.
 - Help in writing project proposals and requests for funding. Good project proposals (for extension of the system, a higher service level, rehabilitation) that are developed in a participatory way will motivate the community to pay for the system.

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- Before setting a tariff structure, your staff need to assist communities to determine the costs that have to be covered and who is financially responsible for each (See the examples in section 4.6.1 on financial responsibilities). You also need to check government policies on tariff setting. The agency must train communities in budgeting, book keeping, transparency in financial matters, setting tariffs, collecting tariffs etc.
- Ensure that your staff has the capacity to assist communities to set tariffs and to check if the tariffs help to achieve the objectives set by the community such as:
 - operation and maintenance costs are met;
 - efficient use of water is encouraged;
 - sufficient water is made available to lower income groups. In such cases communities may opt for a system of cross subsidy.
- Field staff also need to assist communities in choosing a method of tariff collection: Women may collect the tariffs from women; collections may be done immediately after market days, collections may be right after the daily or weekly religious service, collection in kind, etc.
- Provide the proper tools, such as bookkeeping books, household tariff collection booklets, a calculator and a pair of glasses.
- Besides setting tariffs, it is essential to determine who collects and manages the money: the water committee, the local authority, a private operator? Whatever the decision, it has to be taken by the community. When needed, provide training.
- Ensure that there is transparency. Or, in other words, make sure that financial rules and information are known by all involved. This helps prevent misuse and corruption. The use of payment cards, on which payments are marked, may be helpful. The task of the support agency is also to stimulate good communication between the committee and the community. Budgets must be explained so that people know how the tariff has been set and for what they are paying (and for what they are not paying). The tariff system has to be explained and there is also a need for gender and class specific financial reporting to the community.
- Stimulate annual revision of the tariff structure and arrangements based on monitoring indicators (See chapter 5.2.2 on selecting monitoring indicators).

Food for Thought

In **Ecuador**, in a mountainous area, the water committees collected a lot of money. They even fined people who didn't show up at meetings. They were also lending out their money at high interest rates, 5-6% per month to the local community members. However, they never spent anything on their water supply system, not even for preventive maintenance. They would use the money for corrective maintenance but only after trying every possible way of getting the money elsewhere. When a pipe would burst, they would go the nearest NGO to get free pipes. The conclusion is that they were very good financial managers because they optimised their resources but were very poor managers of their water supply system.

It is not enough to assume that ability to pay depends on people's priorities and that water will always be top of the priorities list. In a lot of situations this is not true. A typical situation is that apart from water from the water system there is no water of suitable quality, but there is water, meaning that as soon as water from the system starts to be charged, people prefer to use other sources. Why should they pay for a borehole half a kilometre away from their house when they have a stream passing behind their houses? There are many examples of this in **South Africa**. The issue here is to give people an assured level of service that increases both their willingness and their ability to pay, magnifying the impact of providing a water supply. For example, by providing drinking water and linking the service with a vegetable garden.

In Campoalegre, **Colombia**, the local Stone-crush Company is dependent on the satisfactory functioning of the water system for its activities, so it supplies materials for the maintenance of the system and aid for breakdowns in the water supply that need urgent repairs. It also pays much more for the water than the community members as part of an agreement with the Water Committee.

4.7 Technical aspects

Even if you support communities in their managerial tasks, and the communities are responsible for most of the operation and maintenance of the systems, there are still technical issues that will require support. Support agencies will have to plan and take into account these aspects that range from support for major repairs to system rehabilitation, upgrading and extension and to preventive maintenance. Some communities will be able to deal with these themselves, for example by hiring skilled labour, others will not. That will depend mainly on the technology used. Are there handpumps? Is there an electric pump, a diesel pump, or a solar pump? Are there shallow wells or boreholes to a depth of 50 meters? Is there a gravity system with different intakes? Is there a treatment plant? The technology used is crucial for the amount of support needed.

By monitoring the system, feedback from users can inform you about declining water pressure, decreasing yields, the need to extend the system to cope with an increasing population or the need for water treatment as a result of pollution, and allow the work to be planned in advance. This will avoid situations where communities become dissatisfied with the service and stop paying for it, or start using other water sources, increasing the risk of water-related diseases. In the long run, monitoring system performance should be in the hands of community members so that they actually see what is happening with their system and the water. Acting on it can also be a shared task.

Preventive maintenance is a task for the communities, but regular visits by field staff to monitor system performance saves time and money. Rather than waiting for communities to have major problems and react to them, regular visits to communities increases the trust and confidence of community members and avoids unexpected expenditures when things go wrong. The purpose of visits should be to support the community in acting on monitoring results. Using information from field staff, agencies can better plan activities and expenditure by knowing in advance what are the technical priorities in different communities.

A major difficulty relates to breakdowns and repairs of an existing system. One of the major issues for communities is the difficulty in obtaining or the high cost of spares and replacement parts. This problem with spares is a reality in many regions. The absence of a service structure to supply spare parts is a challenge for many national authorities. If there are many different pumps in the same area (as a result of lack of standardisation during planning and design), it will be difficult for the private sector to provide spare parts, or to create distribution networks. Support agencies will have problems dealing with systems constructed with the use of totally different technologies. Co-ordination during planning and design reduces these problems (See chapter 2 on opportunities for co-ordination and co-operation among agencies).

Another difficulty is a lack of technical skills to carry out the repairs. One of the main problems with repairs to an existing system, or the connection of new users, is that this is carried out by 'unqualified' technicians, who do not know enough about the system. Particularly when using a private entrepreneur, clear terms and conditions must be agreed and the work must be closely monitored. Communities may require support in monitoring and in identifying where to go in case the work is badly done and the private entrepreneur does not respond to complaints.

It is not enough to repair breakdowns, it is important to find out why they occurred. Depending on the cause, appropriate actions, such as training the system operator or raising awareness among users on proper handling, can be taken to prevent similar breakdowns in future.

When rehabilitation is needed it may be good to consider the option of building in provisions and steps for what to do in case of serious problems. For example, when a choice is to be made between a hand dug ring well and a drilled well, communities may be encouraged to go for hand dug wells. Hand dug wells take longer to dig, but if the handpump is out of order water can still be drawn from a manhole. In the case of a drilled well this is not possible. The well-informed choice should lie with the community.

To increase the capacity of a supply system the support agency can expand the existing one or construct a new one. Several technical strategies are available, such as increasing the water catchment capacity, building storage and distribution tanks, increasing the pumping capacity, extending the pipe network or installing new handpumps.

The community must be involved in the decision-making and, again, be well informed to make wise decisions on technology choice.

Tips for the Manager and the Support Organisation

- Have data available on important technical issues, such as on water catchment areas, hydrological conditions and sources, as well technologies used and technological options.
- Ensure that field staff are familiar with technological options and, more importantly, with selection criteria such as operation and maintenance requirements and cost implications.
- Get a clear view on why the system has to be extended or rehabilitated. This information is needed for decision-making regarding for example the amount of water to be supplied, the technologies used and costs involved. Local knowledge of water sources should not be ignored.
- A new technical solution may require different management capacities at the level of the community. This has to be weighed against the management capacity available. If necessary, additional capacity building efforts should be undertaken.
- See that communities (committees, caretakers) have effective monitoring tools to measure the quantity and the quality of the water available (See section 5.2 on monitoring). Ensure that there are channels of communication and clear responsibilities for tasks and for who should take action when things are not going as expected.
- Ensure that technicians from your agency or from a private entrepreneur are qualified for the technical work they are expected to perform. A technician who does not know enough about the system may use inappropriate materials putting



water quality at risk, or may not be aware of the impact of additional connections on the overall system performance.

- If your support agency doesn't have the financial resources to support major rehabilitation or repairs, it can support the community in identifying external financial support, while your agency continues to provide engineering support and support with feasibility studies, to formulate proposals, etc.
- Before taking a decision concerning the use of a water source, clarify the water rights. You should be able to provide to the community information on issues such as:
 - possible restrictions on abstracting ground water or water from a river or source;
 - possible restrictions on building structures in a river channel;
 - whether the water supply scheme being planned, will deprive someone downstream of the water they are legally entitled to.

Food for Thought

In Shinyanga, **Tanzania**, a number of communities had sealed the manholes so that these could normally not be used (also to prevent witchcraft from spoiling/poisoning them). They would only be opened if the pump was broken and needed to be fixed. They also stressed the hygienic use of the wells and asked for disinfection when the pump had been repaired and the manhole cover re-sealed.

In **Tanzania**, in 1999, there was a community that had to make a choice between handpumps and a ground water supply using an elevated tank and a distribution network. From a sustainability point of view, given the costs involved and the management skills available (among others), the best solution for the community was a handpump to improve the already existing well. After explaining the requirements of each system, the decision was left to the community. The community wanted the more advanced technology because that showed progress. They made a choice that was not rational. The community leaders, mostly men, who took the decision, were influenced by a politician, who had already decided even before the other options were explained. Informed choices only take place in neutral settings, where short-term political influence is minimised, and both men and women as well as the future user groups are consulted, otherwise communities may make choices that they cannot sustain.

Since 1987, the government of **Guinea-Bissau** has focused on developing a decentralised maintenance system and standardising handpumps. The government discovered that decentralised management and maintenance of handpumps was

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successful when placed in the hands of women, who are often left out of the technological training. Early in 1994, a survey was made in 46 villages to review the management performance of the water point committee. In almost all the cases the committees were functioning well. Some 53% of their members were female, with 20% of the women having management functions outside their traditional tasks of cleaning the pump surroundings. Candidates for the position of area mechanic were selected at village meetings. Villagers prefer male mechanics but the provincial promotion team encouraged the villagers to select women for the job as they had more of a direct interest in the outcome and were less likely to leave the village to seek an alternative income. By mid 1993 a total of 177 village mechanics, including 98 females had been trained and were maintaining their handpumps (Maharaj et al. 2000).



5 Collection and use of information

To support community management there is a huge need for information at different levels and for different purposes. Support agencies need information at various points in time to be able to determine the type of support communities require and the scale at which this support has to be provided. However, when collecting information, there is the need to avoid wasting time and money in endless socio-economic questionnaires. Already in 1983 White indicated that "many agencies' questionnaires [...] have lain unanswered because they require searching through files and no one has time to do it. General social descriptions also have limited validity because people's knowledge, attitudes and practices vary across short geographic distances and between neighbouring communities and families" (Whyte 1986:17). Instead, it is better to start from existing information, most of which will probably be unpublished reports. Sources of information range from government departments (such as for health, water affairs, public works, environment, education, geology and mines), other agencies that work in the area and the communities (previous participatory appraisals, census done, etc.)¹⁰. Additional information may be required. However, there is a need to be very selective in the information you assemble and to ask for very specific quantitative as well as qualitative data. Information is usually collected through a baseline survey or baseline research, (see chapter 5.1 on baseline information), through monitoring (see 5.2) and through evaluation (see 5.3).

Information has to be stored, managed, made accessible, used for analysis and followed by corrective action. Baseline information is useful for planning 'from scratch', monitoring information can be used to improve ongoing activities, evaluation is a process of looking back and judging what has been done and whether it should be done again. In the context of long-term continuing support for community management the distinction between monitoring and evaluation is not always clear. In the chapters 5.2 and 5.3 these differences are dealt with.

5.1 Baseline information

When after-construction-support is to be provided, the support agency needs to ensure that it is well-informed about the water supply and sanitation situation in the communities, and also about enabling factors such as national policies and legal issues. The latter have already been discussed, and this section focuses on baseline information about and from communities. This information allows you to discover differences and commonalities among communities in practices and problems that occur.

¹⁰ For information gathering at community level see Bolt and Fonseca 2001.

A number of issues on which information is required can be listed and grouped as follows:

Technical

- technologies used;
- number and location of water points;
- year of construction and implementing agency;
- ease of access by all;
- most common breakdowns;
- availability of, and access to, spare parts.

Environmental

- sanitary conditions in and around the community;
- water quality at source and water point level;
- locations and yields of water resources;
- potential threats towards availability and quality of water resources.

Institutional and managerial

- presence and composition of a water committee (are women and men, poor and better-off people represented?);
- functioning of the committee (e.g. do all members attend?) and the committee's legal status;
- presence and function of trained people;
- systems for monitoring;
- level of capacities;
- cost-recovery mechanisms that are gender and equity sensitive in place;
- willingness and ability to pay;
- maintenance and management regulations and patterns in place;
- leadership patterns;
- contact and relationship with neighbouring communities, with whom sources are shared;
- contact and relationship with local and district authorities.

Baseline information provides technical, environmental and institutional mapping. Baseline information also gives you the possibility of detecting patterns of problems or practices in the data that is collected and any deviations from those patterns. This information should help to identify with communities their support requirements. Once these are known for all communities in the support agency's area of operations, the management can start planning and allocating resources. Through monitoring this can be updated regularly.

5.2 Monitoring¹¹

"Monitoring is the checking, collection and analysis of information about current programme development to improve implementation, performance and results. In essence it means comparing the actual situation with the expected (or planned) situation – and then taking action to bring reality and expectations together" (Shordt 2000a:5). Monitoring effectiveness, in the sense used here, is meant to be a continuous set of actions that improves performance over the short-term and influences the impact over the long-term. Monitoring is best conducted in partnership with the stakeholders who have a real interest in the monitoring process and it should stimulate a two-way flow of information between communities, districts and agencies, and ensure that after-construction-support can be adapted and changed to fit local circumstances.

5.2.1 Who monitors what?

For each stakeholder and at different levels (district authorities, local authorities, local NGOs, field staff, community committees, etc.) monitoring has a different purpose. The support agency will not only monitor its own performance and effectiveness, but also develop the capacity within the community to monitor its water supply systems. In both cases this should lead to a regular review and adaptation of operations. Communities usually delegate a large part of monitoring to a water committee, while district staff monitor the effectiveness of their own operations using information from community level monitoring. A general rule is that monitoring should be done by those who have a vested interest in the reliability of the information in order to work towards improvements. So maybe agencies should be monitored not only by themselves, but also by organisations who pay them (line ministries, donors etc.). Committees, operators and community members monitor management and system performance. Monitoring provides relevant information to the community about system performance and thus allows for the identification of remedial action. Monitoring requires a sense of ownership, a community demand for improved and well-functioning water supply as well as functional lines of communication with the support agency. If all is in place monitoring can save costs both for the community and the support agency, because major breakdowns that are expensive to repair, will be less prevalent.

If problems are monitored and can be dealt with at the community level, information does not need to be channelled to higher levels which should only receive information that is relevant, limited in quantity and of high accuracy. The support agency usually needs to organise and facilitate the development of monitoring activities at other levels and only act on aggregated information. At community level issues related to the community members and to the direct environment are relevant and can be acted upon. These issues include:

- number of families served by the improved water supply;
- quality and quantity of the improved water supply;
- time spent on management activities;
- number of women participating in decision-making.

¹¹ Part of the information in this section was collected and adapted from Shordt 2000a and Shordt 2000b.

At the level of the support agency more generic and aggregated monitoring information is needed on issues such as:

- costs of support activities;
- impact of support activities on community capacity or adoption of improved facilities and behaviour concerning hygiene practices, etc.;
- impact of user education on operation and maintenance costs;
- impact of support activities on breakdown times;
- impact of improved services on health;
- socio-economic impact of improved services;
- impact of any of the above on most disadvantaged groups (such as women, ethnic minorities).

An example: at the community level field staff can help communities to draw up a maintenance plan based on baseline information about the number of standposts, the number of users, the technology used and the availability of spare parts. In this plan they can indicate timing of activities and the resources required. When subsequently maintenance is monitored, the monitoring information may reveal that breakdowns occur frequently. When this information is used by the water committee, this will lead to a change in the maintenance plan. Round trips by the caretaker for preventive maintenance will be made more often, or the caretaker is replaced or trained. At district level this information is used to draw up plans for providing maintenance support to communities.

5.2.2 Selecting monitoring indicators

The most important thing to remember is that in data collection it is better to be almost correct, cheap and timely rather than exact, expensive and too late.

The first step is to identify the key issues to be monitored. Start by identifying the main problems expected rather than asking yourself: "What do we want to know?" Often when we begin by listing everything we 'want to know' this leads to long, unfocused lists of information to be collected but not necessarily used. It is more effective to start with the problems and concerns of the key stakeholder groups and partners" (Shordt 2000a:16). Involving those who have an interest in monitoring and in having the problems solved will ensure that the information will be more to the point, useful and accurate.

The next step is to define indicators that allow you to measure the key issues to be monitored. Traditionally, monitoring systems produce endless lists of quantitative indicators. Indicators such as the number of wells constructed, the number of people trained or the exact amounts spent are informative, but these indicators alone don't tell us anything about the quality and use of the improved water service or about community management. It is best to combine quantitative with qualitative indicators: "Qualitative information can tell the reasons behind the quantitative information – why something is happening. Qualitative methods are ways of finding out what people do,

know, think and experience" (Shordt, 2000a:9). The following are some examples that combine the two types of indicators:

Some community level indicators for monitoring **functionality and reliability of the water supply system**. The water point (standpost) should operate in a way that:

- a standard 15-litre container will be filled in one minute;
- water will be available 12 months a year;
- water is provided at least 5 hours a day, including the peak period 6 to 9 AM;
- water is available at least 25 days a month.

Some agency level indicators for monitoring **gender sensitiveness**:

- women select technology and sites using agreed procedures;
- men can list three hygiene behaviours and explain how these help keep children healthy;
- at least half the members of each water committee are women and they take part in decision-making;
- staff can give at least two examples of communities that score positive on the above indicators.

A good indicator should reflect a significant concern or problem, answering the questions: how can this information be used and by whom? It should be clear and not have a different meaning for different people (reliability), it should measure accurately what it is supposed to measure (validity) and the data should be easy and inexpensive to collect. Most importantly, indicators should help us to assess whether we get what we are aiming for. They should be directly linked to the objectives of the support agency.

Monitoring issues and indicators will change over time, reflecting different stages, better service, higher awareness, etc. To ensure the validity and reliability of the indicators, extra checks using different sources of information (triangulation) are necessary. This can be done, for example by having more than one person collecting the same information, making the information as public and open as possible and doing some spot checks.

For monitoring **agency performance** the following indicators can be used:

Efficiency:

- actual time spent on supporting the communities does not exceed planned time by more than 10%;
- funds for field visits to communities can be released within 48 hours;
- less than X administrative steps or approvals are needed for release of funds (funds should be made available rapidly so that support is not delayed by lack of funds);
- staff costs are not more than X% of the total costs.

Staff performance:

- staff can make and alter work plans and budget line items at least once a year following agreed procedures and reflecting demand from the communities;
- the chairmen of the water committees in the jurisdiction of the staff member can mention 3 examples of positive changes in the management of the water supply that are likely not to have taken place without the contribution of the staff member;
- staff apply set rules and procedures (such as consultation with different ethnic groups, rich/poor, women/men) for minimising political interference when selecting communities for after-construction-support.
- during each community visit, staff examine at least one facility and talk with users to get a view on their satisfaction;
- field staff can describe the costs, are able to explain in an understandable way how to calculate costs and can inform communities correctly on cost implications.

Demand responsive management:

- management is flexible, responding to new challenges and opportunities by altering planning or ways of operating;
- at least 3 randomly selected consumers in a community can mention all technological options that are available to the community;
- the technical option is selected by communities/users with full knowledge of the O&M costs and requirements;
- agency staff have prepared an after-construction-support plan for all communities according to the format developed by the agency. Socio-economic and technical teams prepare joint after-construction-support to communities, have integrated procedures and a joint manual.

For monitoring financial sustainability at the community level possible indicators are:

- clear policies and rules have been agreed with communities for payments, cost recovery and subsidies;
- male and female community members know the costs of operating and maintaining the system;
- users can state roughly how much money is in the committee's bank account;
- there are receipts for all financial transactions.

Contributions paid and efficient and transparent financial transactions:

- percentage of users paying the tariff is more than 90%;
- user and community payments are fully explained to male and female heads of households;
- users can state the system of fines for delays in payments applied by the committee;
- members of the water committee are able to explain the content and implications of their contract with a private contractor.

Lowest cost for good quality:

- itemised costs of water are known and calculated accurately, reflecting market value;
- members of the water committee have carried out competitive bidding for maintenance between at least 3 private contractors;
- members of the water committee have checked the quality of materials supplied by a private contractor and confirmed that the quality meets specifications.

Indicators used at community level do not only provide a view about the performance of the water supply system and its management at community level, but also on the performance of the agency and its staff. However, the agency and its staff should be monitored separately as well. This should be done by government and/or donors who pay the agency and define its targets.

When the monitoring plan is completed, ask the following questions: Is the information to be collected really useful? Do we get information on gender and equity? Is there something important missing? What information does not make sense? Pre-testing the indicators can be useful to simplify the monitoring plan and eliminate unnecessary questions.

Once indicators are defined, clarity needs to develop about:

- tools to be used for information collection;
- who will collect information;
- the training needs of the people who monitor;
- what to do and where to go with the information collected.

Monitoring is much easier than to act afterwards on what's going wrong. From the beginning of a monitoring plan, it is important to define who does what when something does go wrong. Monitoring information should flow to the lowest level of management that can act on it. If no remedial action is taken, then one level higher needs to be informed about what has happened, then a second level and so on until action is taken. Higher levels should only receive information on problems that could not be solved at lower levels. From the indicator examples above you can tell that much depends on the performance of field staff and on the conditions a manager has put in place. Much of the remedial action is therefore likely to be set in motion by managers.

Tips for the Manager and the Support Organisation

- Raise awareness of the need of monitoring and train the people who will be involved.
- Ensure that the full potential of communities is developed in monitoring their water supply systems. To achieve this there are aspects where adequate support is required. This includes the development, together with communities, of simple but effective monitoring tools to allow communities to assess and improve their own performance, and a contribution to strengthening the communities' problem-solving skills and to learn from experience.
- Develop a monitoring system aimed at providing useful information to solve a problem, answer a question or adapt activities. Practical participatory monitoring tools at field level are described in 'Keep It Working' (Bolt & Fonseca 2001). Check the following:
 - Were communities and stakeholders at various levels consulted for the development of indicators?
 - What problems and issues are of interest and to whom?
 - What are indicators and criteria to which the stakeholders agreed?
 - How does the collection and use of monitoring information differ at community, district and regional levels?
 - Will participatory approaches be used for information collection and for determining remedial action?
 - Is there a combination of quantitative and qualitative strategies?
 - Who will monitor activities at different levels?
 - Are those involved properly trained?
- Establish clear lines of communication with communities and with 'higher' levels and ensure remedial action.
- Go through the steps for planning a monitoring programme:
 - identify, with the people involved, key issues, concerns, questions or demands, which will become the focus of monitoring;
 - identify who is concerned and who has a real interest in the issues to be monitored;
 - determine indicators;
 - determine strategies for collecting, analysing and reporting data;
 - determine the use of information and how action will be taken;
 - determine how information will flow and be verified;
 - test monitoring system;
 - provide training or orientation to groups involved.

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You can visualise all the elements of a monitoring plan in a table. Below you find an example:

Issues to be monitored	Indicators	Collection of data			Use of data		
		Sources of information	Who collects	Periodicity	How does information flow	Who analyses	What is the action
Maintenance	Breakdown time and frequency of a tap	Women using the tap	A member of the water committee	Once every fortnight	From the collector to the committee at large	The committee	The committee informs the caretaker, who then checks and repairs more frequently if needed

- Monitoring information should be reported in a way that promotes action, in the support agency or in the community. One of the most effective ways is to do it verbally, promoting discussion and illustrating with simple graphs and images.
- Findings concerning the results of the work of your field staff can be good, but may also be not so positive. Congratulate or explain what could have been done better, but always consider monitoring as a learning experience and an opportunity for improvement. Do not ignore the results of the monitoring process. It may be useful to validate the findings and conclusions through, for instance, feedback workshops where different stakeholders and experts in the area are asked to review critically the monitoring findings. This is also a way to decide on further actions. Possible questions might include:
 - Do these findings reflect your own experience?
 - Do the conclusions from the analysis make sense to you?
 - Do you have suggestions about how to improve the situation or act on the conclusions?

Food for Thought

In Dos Quebradas, **Colombia**, there was a driver and a person who was taking water samples to monitor water quality. While the person was taking the samples, the driver was talking with the system operator, which proved to be very useful because the driver found out much more about the problems of the system than the person who was monitoring the water quality.

In **Bolivia**, it was not permitted to use drinking water for irrigation purposes, but we knew that in that village the quantity of water being used was far higher than it should be and people from the higher houses were not getting enough water. During the

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house visits, the people would say that they were not using the water for gardening or for the cattle. However, school kids would tell us the opposite and denounced the culprits. What could we do? If the information from the kids was revealed, they probably would be punished and on our next visit wouldn't say anything to anyone. We did not want to kill our information sources... So we started to discuss the performance of the system, what was wrong and why they thought that certain people were not getting enough water. Gradually some villagers began to mention that a neighbour had a vegetable garden, and then another mentioned that he would leave the tap open so his goats could drink from it, etc. Now we could start discussing the real causes of the problem and do something about them.

In Southern **India**, we decided to monitor functionality in 9 large water systems with a total of 6.000 water points and a lot of problems. We wanted to convince the donor that something was going wrong so we made a form with indicators and we tested it by sending it to a few hundred people. We got the data back and to our surprise, the data did not look bad at all. But we had been there and knew there was no water, so how could this be? We decided to go and check on the spot. We went to one of the water points where on the form it had been written that this water point had never needed any repair and it was assumed that it was OK. However, there was no water coming out of it. We asked the lady who had filled in the form and she said that she had filled in the form correctly. It was just that there had never been any water at all coming out of that standpost to begin with, so nothing had gone wrong! As an outsider, you really need to pre-test your monitoring indicators if you want your results to be valid.

In **Guinea-Bissau** monitoring showed that the level of management by the community was much lower in one area than in another, while the responsibilities and tasks of the two communities were about the same. When analysing why this was the case it appeared that the people who collected the data had different ideas of what community management was and therefore scored each community differently on monitoring indicators.

5.3 Evaluation

Evaluation is often regarded as the final step in a programme or project. However, the evaluation of ongoing support activities is an important moment of reflection, learning and re-planning. The process of evaluation aims to determine the impact of the activities by reference to the original objectives and also to give recommendations for the planning of future after-construction-support. It answers the questions:

- Have the original objectives been achieved?
- If not, what are the reasons?
- What has been achieved instead?
- What can be done differently, next time?

These general questions can help to draw up more specific questions that can be used in the field. These will need to address the specific objectives the agencies have with regards to after-construction-support.

The most important difference between monitoring and evaluating on is that while evaluation tells you what happened in the past (when it is too late to correct mistakes), monitoring means to control the present, when if things are not going well there is still time to correct them. "Evaluation is the checking, collection and analysis of information about past programme development for purposes of making decisions about continuation and/or to improve the performance of similar projects and the sector as a whole" (Shordt 2000a:5). This implies that evaluation tells us something about the effectiveness of the strategy of the support agency and its working methods. Ultimately evaluation should answer the question: are we providing the right community support to make systems in the area more sustainable?

As with monitoring, outsiders play an important role in evaluation, particularly outsiders who defined policies and the institutional framework to support community managed water supplies, or those who financially support the support agencies. This will usually be the national government in conjunction with one or more foreign donors.

Evaluation data can be gathered through baseline information collected during the planning phase (see chapter 6.1 on information feeds into planning); information from monitoring and data can be collected at the time of the evaluation. However, it is difficult to measure the real impact of after-construction-support because it is not always clear whether impact at the community level was exclusively caused by the support activities or by some other external factor, such as improved economic conditions.

Tips for the Manager and the Support Organisation

- Allocate time and resources to evaluate your performance in after-construction-support to communities and ask yourself:
 - What are the main areas of concern in your ongoing support for communities?
 - Would the staff and members of the community be willing and able to work together in a joint evaluation of your support activities?
 - How can the community become involved in the evaluation process?
 - Would staff feel threatened by an evaluation and if so, what can be done about this?

5.4 Information management

If information is going to be useful then it must be managed. In other words, information must be analysed, stored and made accessible to potential users.

Analysis of information should allow you to interpret the information and to draw reliable conclusions. These conclusions will then serve as a basis for reflecting on and adapting working procedures. Analysis of quantitative information can be done through computer programmes, such as Excel, or, if computers are not available, through manual calculations. You may for example have 50 community data sheets filled in with information about the operational state of standpoints in these communities. In the office data may be entered onto an Excel spreadsheet and (by using the right formula) the software programme will tell you, for example, that only 55% of the standposts are functioning. It may also become clear that in communities where women earn an income the standposts are more functional. This type of analysis can be done manually, but is then more time consuming. It may be obvious from looking at the original sheets that just over half the standposts are working, but it may be more difficult to deduce from the raw data the association between functioning standposts and economic activity by women. Stimulating field staff to analyse data with communities through participatory exercises will help to find the underlying causes. In such a process they can also better define their own role in solving problems. The field manual 'Keep It Working' has some tools for data analysis.

The analysis of qualitative data is usually done manually. For example, information pertaining to why people are or are not satisfied with the level of service provided by your office is difficult to enter into an Excel spreadsheet or any computer package, unless qualitative information is expressed in quantitative terms. Field staff may ask people to rate their level of satisfaction on a scale from 1-10, or field staff may have a list of possible reasons and tick mark those mentioned by a particular person.

Once information is analysed, the results must be discussed and checked with field staff. When the results are accepted the course for remedial action can be determined.

Information can be stored electronically as well as in hard copy, and in many cases you will find a combination of both to be convenient. The computer hardware and software available in your office determines the choices you can make. If there is only one computer in the entire office, hard copy filing is required. If you are in a situation where frequent power cuts occur, it also makes little sense to rely on electronic filing. If each member of staff involved has a computer and your office has an internal network making all stored information accessible to everyone, hard copy filing is less important.

Good filing, electronically or in hard copy, is a profession and some guidelines and principles for filing are essential. However, communication with staff who do the filing is necessary as well. Repeated discussion and explanation will stimulate communication and understanding about each other's 'filing-logic' and hence improve the filing system. Even if you never arrive at a consensus over the logic to be applied, an iterative process will increase ownership of the filing system and stimulate its use.

Accessibility of information is very important, not only for agency staff but also for committees, operators and other stakeholders. Accessibility does not only refer to physical accessibility, i.e. that the information can be found by people who need it. It also refers to the presentation of the information. Some information may be physically accessible, but presented in a complicated way, making it inaccessible and unattractive to any potential user. When you plan to make information accessible to users, you need to think carefully who the users will be, the (electronic) means they have available, their reading capacity, the time they have available and what their intended use might be.

For heads of departments in your office for example, summaries on maintenance performance will be sufficient to remain abreast of key-areas of their work. However, the caretaker trainer will need the entire report to judge whether the training is addressing the right issues. When information is fed back to the community creative methods of visualisation may be required to make it accessible to people who are illiterate.

5.5 Methodologies for information collection, storage and analysis

There are several methodologies that help collect, store, analyse and use information, and that subsequently lead into planning. Several management manuals exist that deal exclusively with this issue. In this section we provide brief information on these tools, while in the reference list you will find details of books about most of these tools that you may consult if you want to know more. We have selected tools that promote participatory approaches for information collection and analysis with communities, within the organisation, but also with other sector organisations, providing a broad perspective of problems as well as a comprehensive analysis. Their use is geared towards raising awareness, creating a sense of responsibility and power over decision-making and thus building ownership. Above all, we have chosen those that are strong communication tools when used with a variety of staff and stakeholders. Some are briefly explained below:

5.5.1 Participatory Rural Appraisal (PRA)

Participatory Rural Appraisal started to become popular in the late 1980's and is a 'way of thinking and behaving' and a way of enabling local people to analyse their living conditions, share outcomes and plan activities (Schonhuth and Kievelitz 1994). 'Doing a PRA' facilitates the process of data collection and analysis by field staff. (See 'Keep It Working', the manual for field workers in this series Bolt & Fonseca 2001).

PRA is used with communities to assist them to come to an understanding of what is at stake and what can be done to improve the situation. In an aggregated form, the information from various communities can provide the agency with insight into support requirements.

A number of key-concepts underlie PRA:

- Triangulation; a form of cross-checking information by varying the composition of the field staff team, sources of information and tools being used.
- Learning in the community; field staff should try to look at problems 'through the eyes of the affected community members'. Community members should also become members of the PRA-team in order to ensure a minimum level of insiders' insights.
- 'Optimal ignorance' and appropriate imprecision; the team should avoid unnecessary precision when collecting and analysing data. Field staff must bear in mind that the data are not part of a scientific study, but are being used to provide a general insight in the water supply situation.
- Appropriate well-sequenced tools; the tools are many and all allow for a certain degree of participation by community members. They are clear, self-evident, simple, appropriate (and to be appropriated) to local conditions. Tools are used in a sequence that brings about general information first and more and more details at later stages.
- Visual sharing; rather than jotting down information on questionnaires and taking it to the office, field staff can make maps, diagrams or tables (or assist community members to do so) on big sheets of paper. This allows all present to watch it take shape, suggest changes or point out problems. This also increases ownership of the information in the community.
- On-site analyses and on-site presentation; during a PRA the field staff needs to get together each evening to discuss and jointly analyse that day's findings. On this basis they can determine what is to be done the next day. Daily analysis also helps identify contradictions in the information in time to do some further triangulation and checking.
- Regular follow-up meetings; models and maps made at the beginning can also be used for monitoring. For example a map of water points may show non-functional ones tick-marked in red. If the PRA led to an improved maintenance plan, the number of water points tick-marked red should diminish over time.
- Avoiding biases and self-critical awareness: field staff facilitating a PRA would intentionally seek to work with those who would otherwise never have a chance to speak, such as poor people, women, groups living far away. Field staff must refrain from making any value judgements.

PRA includes all kinds of very practical tools that can be used by field staff in different situations and for different objectives. Many of these tools have proven their validity and usefulness. Field staff should therefore be trained and stimulated to use these tools.

5.5.2 Methodology for Participatory Assessment (MPA)¹²

The Methodology for Participatory Assessment (MPA) is an information collection and analysis tool that enables project planners and service providers to engage with consumers and to ensure that frequently excluded groups, most often (poor) women, are

¹² From Dayal et al. 2000

not overlooked. It is a comprehensive methodology for social assessment and recognises the importance of gender and poverty sensitive approaches. The MPA monitors key indicators of sustainability and demand responsiveness and links sustainability with gender, poverty, participation and demand-responsive approaches. It allows women and men in communities, project staff and managers to visualise how their actions can contribute to sustainability of water supply systems. MPA is the first methodology that uses quantitative statistical methods to analyse data obtained by using PRA-tools. MPA can be used for designing, for monitoring and for local capacity building and institutional reform. It offers different things to different levels of users; the underlying principle being that it is designed to enable self-assessment and analysis at each level. This permits stakeholders to take action at their level to enhance sustainability in combination with equity considerations. All stakeholders, from the community upward, also have access to information generated by the user communities themselves.

General data on the community and the water supply system are collected and recorded. These data are used to assess whether anything other than community factors can explain what is found during an assessment with the community. These assessment activities with the community are:

- observation of physical conditions through a transect walk;
- participatory activities with selected tools, including focus group discussions;
- open interviews with key-respondents;
- review of written records. (Through a stakeholders' meeting and review of documents information can be gathered at the support agency level.)

Using a sequence of participatory activities, male and female community members, and members of the local water management organisation, review their water services. Field staff working with communities can participate in these assessments as co-facilitators, observers and learners. Project managers can use the MPA to compare communities within and across the area and to identify why some communities do better than others at sustaining the system and the benefits it brings about.

In contrast to PRA, which is a tool to be used at community level and basically feeds into community level planning directly, MPA provides information that goes beyond the level of a single community and provides information about trends and problems that communities in a certain area might have in common. It is therefore a good tool for support agencies and can be used as an adaptive management tool or as part of a management information system to help managers to make decisions and plan strategies.

5.5.3 Strengths, Weaknesses, Opportunities and Threats (SWOT) - analysis

SWOT is generally used in groups to analyse a specific institution and/or a specific strategy. A SWOT-analysis is a method of collecting and analysing information that helps to develop a strategy to improve performance. It helps you to connect the most important strong and weak points of your organisation and the most important

opportunities and threats that feature in the environment of the organisation. A SWOT-analysis has a number of steps. It starts with an inventory of strong and weak points of the internal organisation. This is followed by an inventory of the opportunities and threats related to external factors. An internal weakness could be the limited accessibility of field data, an external threat could be the upcoming elections.

Through a series of questions each of the elements are then related to each other:

- When a strong point is related to an opportunity you ask: Does this strong point enable you to make good use of this opportunity?
- When a strong point is related to a threat: Does this strong point enable you to deal with this threat?
- When a weakness is related to a threat: Does this weakness hinder dealing with this threat?
- When a weakness is related to an opportunity: Does this weakness hinder making best use of this opportunity?

A scoring system then allows you to determine the strategic objectives. These can be more defensive (dealing with threats) or offensive (making use of opportunities).

Once the strategic objectives are clear, operational objectives, outputs and activities can be defined for further planning.

Criteria			Opportunities			Threats			
A. Does this strength enable us to make use of this opportunity?		B. Does this strength enable us to deal with this threat?		1 Subject areas in which we are experienced	2 New areas in WSS are developing in which we have capacity/ skills	3 Donor organizations providing funds to the sector	1 Subsidies are decreasing	2 Increasing political instability	3 Growing competition potential of other organizations
S T R E N G T H S	1	Good knowledge about issues that are recognised as essential in the sector	y 6	y 3					
	2	Good reputation in the sector		A	y 4		B		
	3	Good working relationships with partners	y 4						
W E A K N E S S	1	Weak financial management			y 3				
	2	No background and limited experience in marketing, acquisition and fundraising		y 5 C	y 3		B		
	3	Involvement in too many small projects on too many issues		y 2					

Figure 2 Example of a scoring system

How to score a SWOT analysis?

- Answer the right question (A, B, C or D) for each cell in the matrix. If you can answer the question with 'yes', put a small 'y' in the corner of the cell, otherwise leave it empty.
- Allocate per column (vertical!) a total of 10 points over a maximum of 3 cells (marked with 'y'), starting on the ones you find the most relevant. Work your way through all the columns. See the example on page 112 where quadrants A and C are filled in.
- You can discuss the scores with your colleagues and as a group you can try to reach a joint conclusion. The discussions in this method may give you important information. (The quadrant where the highest scores are located, gives you an idea of the nature of your strategies: quadrant A is 'offensive', quadrant B 'defensive', quadrant C 'making a clean break' and quadrant D 'crisis and survival').
- Formulate a maximum of three strategic objectives based on the most important cells (i.e. the cells with the highest scores) and the discussions.

5.5.4 Geographic Information Systems (GIS)

Just as over the last 15 or so years spreadsheet software has revolutionised many day to day office tasks, so Geographical Information Systems (GIS) are becoming essential additions to the project and programme manager's toolbox. GIS allows all sorts of information or data to be collected, stored, and analysed spatially in the form of maps. There are many different GIS software packages available on the market, ranging in price and complexity.

Despite the range of different packages, all GIS share a number of common features. All GIS handle data in 'layers' which show the location of different types of objects (or features) along with a range of information or 'attributes' about each feature. Normally each layer in a GIS is used to store a single type of feature. At its simplest a GIS can be queried by using a mouse to 'click' on a given feature to list all the known attributes of the feature, however far more sophisticated analysis is also possible.

To give a concrete example, a project manager implementing village water supplies might be interested in a GIS which has layers that contain information about villages, and water points. Villages can be represented on the village 'layer' as either individual village features, or collections of 'household' features. Each village feature could have attributes such as 'number of inhabitants', 'average wealth' and so on. As much information as is wanted can be stored about each village. Similarly the 'water point' layer could contain water features with attributes such as 'reliability', 'yield' etc.

The information in GIS layers can be analysed just as in a spreadsheet or conventional database. For example, all the villages in a layer can be grouped together to find average populations. Features in a layer can be coloured or sized to illustrate certain data, for instance by making all the villages in an area with more than 500 inhabitants appear yellow, or by varying the size of the symbol used to represent a village according to wealth. More complex spatial analyses are also possible. Layers can be stacked on

top of each other (overlaid) and analysed. A 'villages' layer can be overlaid on a 'water-points' layer and then the villages can be analysed in terms of distance to the nearest water point. All villages more than 5km from a suitable water point can be made to appear red on the map, allowing for quick prioritising of new water point location.

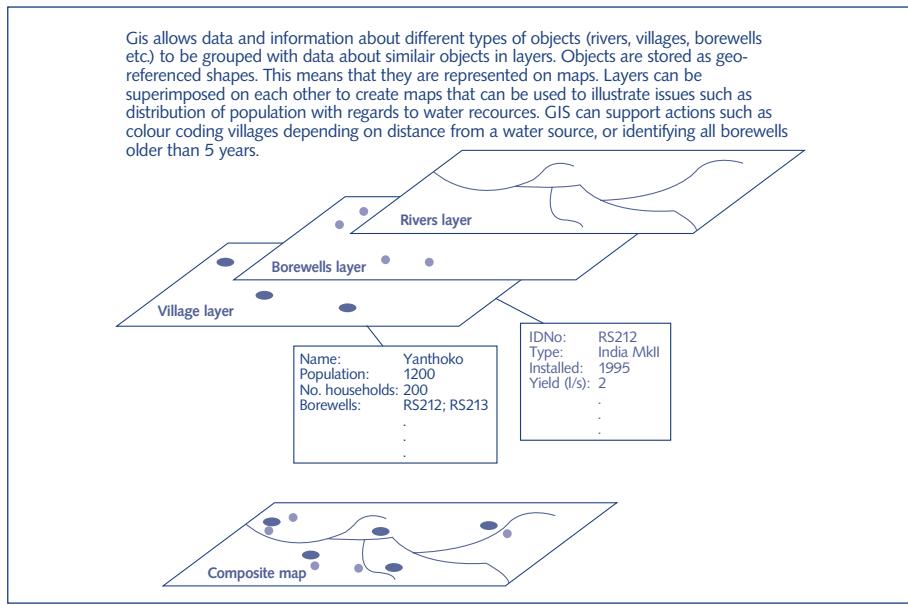


figure 3 GIS

GIS is a powerful tool for data analysis and subsequent planning. Information from monitoring schemes can be analysed quickly and efficiently. Maps can be produced quickly and easily and coded for easy reference. Complex information can be shared in a way that is simple to understand. In addition scores from community self-analysis from MPA-applications can also be stored in a GIS.

5.5.5 Bayesian Network (BN)

While GIS is rapidly becoming as essential to the project manager as spreadsheets and databases, a less widely used, but potentially important new addition to the project or programming toolbox is decision support software. In this section we briefly introduce one particular type of software, Bayesian Networks, which are particularly suited to use in projects or programmes where complex decisions need to be made on the basis of great uncertainty and little hard information.

BNs are a computer based graphical decision support tool that allow easily understood models of complex systems or decision-making processes to be analysed. They work equally well with qualitative (knowledge based) and quantitative data and so are ideal to environments where hard data may be difficult to come by. BNs go a step further than problem tree analysis or other paper based decision support tools to allow interactive investigation of different factors affecting a decision and their relative impact on the system as a whole.

Bayesian Networks consist of diagrams in which main factors in a decision or system are represented as nodes (or factors) each of which can be assigned a number of states. The nodes are then connected to each other by arrows representing the flow of cause and effect. Underlying each node is a so-called conditional probability table that relates how the states of the nodes feeding into a given node (its parents) in turn affect the likelihood that it will be in a given state. The data that feeds each node can be derived from prior project data, modelling, or the qualitative knowledge of experts (ranging from community members to academics). The power of BNs lies in allowing quick and easy assessment of the impact of changes in key factors on a desired outcome. Because the likelihood of a node having a given state is represented not as an absolute but as a spread of probability (or likelihood). BNs are particularly suited to decision-making under conditions of lack of data or great uncertainty.

The simple BN in figure 3 illustrates the main points. The diagram represents a simple conceptual model of the main factors affecting community ability to maintain a water system. Two main factors directly influence the ability to maintain the system: 'leadership', and 'skills'. However, the skills base is in turn affected by 'training'. The BN shows simply and visually how an extension programme is thought to influence this ability.

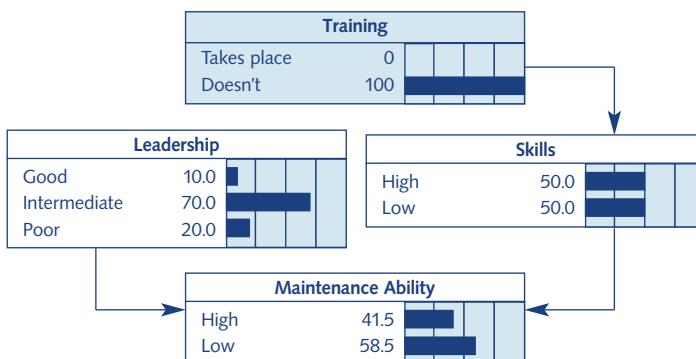


Figure 4 Probability of high 'maintenance ability' in the absence of 'training'



Figure 5 Probability of high 'maintenance ability' when 'training' takes place

Figures 4 shows how by changing the state of the 'Training' from 'Doesn't' to 'Takes Place' the probability of having the necessary skills goes from 50% to 90%. This in turn leads to a 60% chance of 'High Maintenance Ability – an improvement of 20%. The simple model therefore suggests that while training can have an important impact on skills (and should therefore receive attention) this has less of an impact on overall maintenance ability than it otherwise might due to leadership being poor. The implication would then be that leadership skills should also be strengthened. The BN also indicates a high level of uncertainty about baseline skills and leadership. Addressing this would in turn lead to greater certainty in terms of impact of a given intervention.

BNs can be constructed as part of stakeholder workshops and help to make explicit the often implicit assumptions underlying their preference for a given course of action. The software is freely available on the internet and can be downloaded for free from these sites:

- Netica (www.norsys.com)
- Hugin (www.hugin.dk)

A good and very accessible reference material to using BNs for water resource management can be found in Cain 2001, while a good entry level text to the underlying theory can be found in Jensen 1996.

BNs can be used to develop simple models to help clarifying decisions. However, developing full decision support systems is a complex task that requires the skills of a professional. The decision as to whether or not to use Decision Support Systems (DSS) depends very much on the particular project, and the costs and benefits likely to accrue. A simple rule of thumb is that the larger the project, the more complex the decision, and the more stakeholders involved the more likely an investment in DSS is to be worthwhile.

In **Zimbabwe** we used the Bayesian Networks with a group of national level extension people. We got them to describe what they believed was the impact of their work on farmer welfare and they built the networks. The result was that independently of the extension work being good or bad, it had a minimum impact in the farmers' welfare because there were a lot of other important factors. Their work by itself did not have the power to overcome the problems of low rainfall or a wrong agricultural policy, but when all the other factors were positive then the extension work could have a much higher impact on people's lives. The whole point was to make people realise that simple answers seldom exist.

5.5.6 Objective Oriented Project Planning (OOPP)

The Objective Oriented Project Planning (OOPP) is an analysis and planning tool much used in development co-operation and it is adopted by a large number of External Support Agencies. It is based on a logical sequence of reflection and teamwork. It is also

a very visual tool. Coloured cards are used to show a logical sequence of cause-effect relationships between various problems and, subsequently, solutions. A major product resulting from an OOPP exercise is a Logical Framework, which indicates priorities for action and which forms the basis for further planning.

The tool is divided in two phases, each with different activities, as shown in table 8. Whereas it is possible to do an OOPP-exercise at the community level, with field staff

Table 8 OOPP phases and corresponding activities

Analytical phase	Participation analysis Problem and objective analysis
Planning phase	Development of a Logical Framework Estimation of resources needed Time planning of activities

facilitating, the exercise is mostly done at the level of implementing organisations in preparation of a project. However, it is also a useful tool for agencies in charge of providing long term, after-construction-support to communities wanting to manage their water supply.

An OOPP is best done with the involvement of a variety of stakeholders, who are identified through a so-called participation analysis. All stakeholders will have different perspectives on a certain situation. In the context of collecting and analysing information about after-construction-support stakeholders could be representatives of water committees, local authorities, head of departments in your office, and External Support Agencies operating in your area. With this group an inventory is made of all kind of problems related to after-construction-support, and cause-effect relations among these problems are then identified and visualised. Interestingly, participants may have very different views of how problems relate to each other and heated debates may occur. Everyone needs to be very clear about what they mean to say.

Through problem analysis, a problem tree is developed (see figure 5). Problems are rephrased into objectives and the logic that existed in the cause-effect relations of the problem tree will to a large extend hold when establishing the 'if (this objective is reached) then (that objective will be reached)-logic'. This objective analysis will lead to the objective tree, which is the basis for the Logical Framework. Crucial objectives are selected as objectives for the Logical Framework and from the other objectives in the tree the results are identified that need to be achieved to reach these objectives. The remaining objectives will be found among the activities to be identified to achieve the results. Once the logical framework outlines what will be done, an estimation of the required resources can be made as well as a time-line for the activities. Whereas the OOPP-exercise may seem a rather mechanical exercise, it is still powerful, in particular

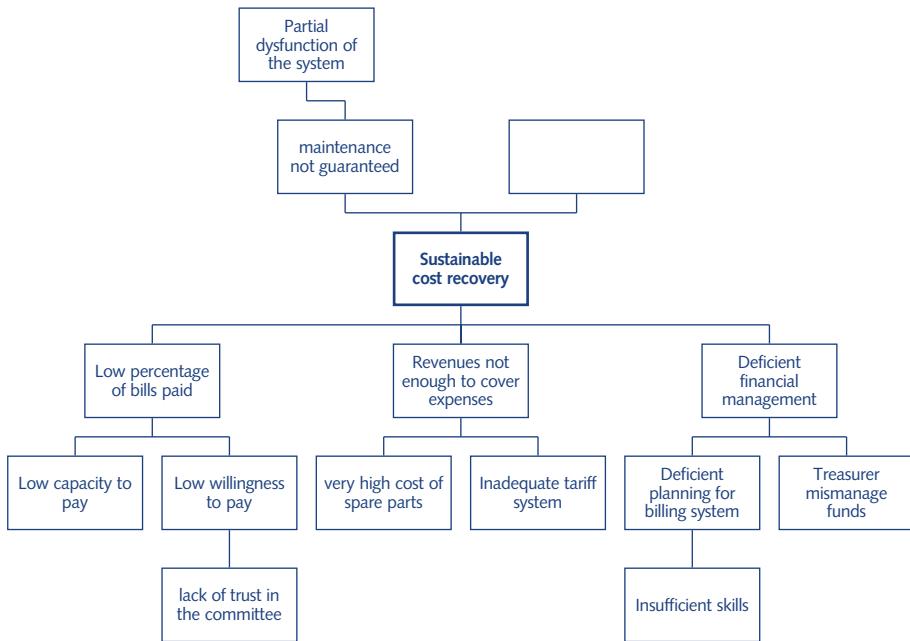


Figure 5 – Example of a problem tree

since it offers a lot of scope for exchanging ideas and getting to understand the different perspectives that exist. It provides a good overview with regards to the problems related to community management and at which level problems need to be addressed. Once the logical framework is made, a detailed plan can be drawn up.

Tips for the Manager and the Support Organisation

- In trying to avoid time and money spent collecting information that won't be used, you can start by identifying national, regional and district experiences in community management:
 - Which sectors and agencies have or have had programmes involving community management?
 - What types of water supply programmes have involved community management?
 - What is the scale of these programmes (geographic/administrative region, population served, size and distribution of communities, etc.)?
 - What are the constraints and the 'good things' encountered?
 - What are the costs of these programmes (annual budget and expenditure, investment per person, per installation, etc.)?
 - Who are the key people (at all levels - national, district, regional and local) who have been involved and who can best contribute to the assessment and planning process?



>

- Ensure that your staff are well trained in the use of any tools to be used or hire in expertise. Ensure that data collection and analysis really are followed by planning for improvement and by implementation of the plans. In the case of GIS/BN and OOPP the initial work should probably be undertaken by a qualified consultant. You should pay particular attention to what prior GIS work may already have been done either nationally, locally, or in neighbouring districts to avoid reinventing the wheel wherever possible.



6 Planning and financing support to communities

The tasks of a support institution are very diverse. They collect and analyse information, provide capacity building to committee members and operators, mediate conflicts, monitor management and system performance, provide legal, financial and technological support and co-ordinate with other sector agencies.

This section is about planning the work of a support agency that wants to provide support to communities after the construction phase. It does not focus on the planning at community level, which is covered in 'Keep It Working', the manual for field workers of this series. It emphasises interactive (with communities and with other stakeholders) and iterative (developed over time) planning, that is oriented towards results. Issues such as the financial implications and setting a communication and dissemination strategy are also discussed.

6.1 Information feeds into planning

One of the best ways to avoid or minimise problems related to supporting community management is to anticipate and plan how to deal with them. Baseline and monitoring information are the foundation of planning, although, of course, the financial and human resources available also have an impact on planning. After assessing the situation and identifying the problems related to community management in the area of work, and after assessing available resources the agency can plan for after-construction-support with the various parties involved.

In the mid-90s, IRC and six partners undertook a participatory action research project to look into community management of rural water supplies. The section below presents the ways in which country research teams in the project gathered information on 'typical problems'. These 'typical problems' can be used to guide planning, since they are the ones that support agencies have to respond to.

The research teams usually comprised two or three men and women with relevant technical and social science experience. The teams began the research by preparing a country study with a focus on community management in the water sector. The team reviewed relevant documents to learn about the policies and strategies for systems managed by communities. The team interviewed the staff of implementing organisations, asking them about how they set about improving community management of water systems. Afterwards, each team carried out an in-depth case study into the strengths and constraints when rural communities manage improved water supply systems.

Through a review of documents, interviews with staff of implementing agencies and the in-depth case studies in the six countries involved – Guatemala, Colombia, Nepal, Pakistan, Cameroon and Kenya – some initial insights developed. In each country,

community management of rural water supply systems figured in the national policy, but there were no country-wide strategies or methods for working towards community management, and each agency had its own methods. Furthermore, no government treated communities as if they were future managers, able to make their own choices from a range of options. Training, which was mostly given to men, only focused on technical tasks and book-keeping. Many external support agencies stipulated preconditions for future management, usually the formation of a water committee with some women representation and a particular way of setting tariffs. However, little was done to develop management tools or training and little was done by the organisations themselves to prepare for their support tasks.

Many community-managed systems did not function well, partly for technical reasons and partly due to poor administration and lack of management training and support. Sometimes community members were not served because of poor water distribution and poor network management. Several of the unserved households had contributed in cash or in kind to the construction of the system, but had not reaped the benefits. Records of financial transactions and agreements made during meetings were rarely kept and this eroded the confidence of community members. Other commonly found typical problems included:

- in many communities committees did not communicate properly with users and there was a lack of transparent decision-making, resulting in distrust and users refusing to pay;
- women were usually not involved in the management;
- monitoring rules, formats and responsibilities were usually not in place;
- some communities had problems with illegal connections;
- in some communities people had problems with acquiring spare parts for the system from close by.

Problems with system management can be technical, managerial and/or socio-economic, but the communities involved in the research mentioned only technical problems, they did not pay attention to the important aspects of management such as cost recovery, regular meetings, communication, record keeping etc. These other problems surfaced only after further probing by and discussion with the research teams.

These problem areas can be researched further, if possible solutions are not evident or if solutions that had been tried appeared not to work. For further research, tools as described in chapter 5.5 can be used. Depending on the level of work, the mandate of your organisation and your area of action, you may collect more detailed information. However, refrain from too much detail, and always keep your mandate in mind. Information is collected to identify patterns of typical problems in your area and geographical distribution of problems. This information will help you to establish your strategies, planning and necessary resources.

As the manager of a support agency, you may be interested in information about the general performance of standposts and the number of communities not able to bear operation and maintenance costs. The exact nature of the breakdowns and knowing exactly which people have problems paying is useful information for the field staff, but too detailed for you. You can act on the meagre effectiveness of the field staff, for example by allowing them more resources to visit communities. The exact nature of the breakdowns and the payment problems are for the field staff to act on. Staff may decide to refocus the training of the caretaker and discuss the tariff system with the water committee. Should field workers not be able to solve the problems they need to be able to discuss with you or their superior how to address these problems.

This clarifies how monitoring information feeds into planning and why there is a need to be flexible in order to be able to respond to needs in the communities.

6.2 Who does what, when, how and with what resources?

Planning basically requires finding answers to the following questions: Who does what? When? How? With what resources? Planning is done at different levels. Communities plan for improvements in their community. Field workers plan their work in the communities taking into account the support requirements indicated by the communities. You, as manager, will make a more aggregated plan, based upon what needs to be done according to communities and your field staff, and based upon what happens in your institutional and political environment. Available and required human and financial resources also have an impact on planning.

Planning has two aspects: proactive planning of fixed support activities and responsive planning. Fixed activities can be derived from the list of typical problems identified in the area. Examples are:

- develop a format for monitoring system performance and promote its use;
- establish training in budgeting and book keeping for treasurers of water committees;
- develop a list of by-laws;
- make manuals for the operation of a specific handpump;
- organise an awareness raising workshop for politicians etc.

Such activities can be planned under headings:

- Who does it?
- When will it be done?
- What is needed in terms of staff inputs and resources?

An important part of the support agency's work should also be responding to immediate community needs, such as:

- illegal water connections that cause conflicts in the community;
- problems with fraud;
- problems between committees and land owners over access to a source;
- technical problems with getting spare parts or the breakdown of system parts.

In general these are problems that cannot be solved at community level but need intervention from the staff of the support agency. Time needs to be calculated for this kind of responsive planning and you may set up a help desk. Another core task of support agencies is to bring different stakeholders together to encourage exchanges of information and negotiations. For example, water committees may meet with government representatives to discuss funding and support from the government, and donors may meet to co-ordinate their activities.

This implies that planning requires communication and sharing at all levels. Decisions on who does what, when, how and with what resources are not to be taken in isolation behind desks. Communication increases the feasibility and usefulness of plans. People you involve can indicate what is to be done, who would be the best person to do it, when the best timing is etc. Joint planning also increases the commitment of those who need to approve the plans and of those who are involved in their implementation. Given the continuous need to respond to community demands and the flexibility required, the plans should not be too detailed.

Tips for the Manager and the Support Organisation

- Anticipate! Make a list of 'typical problems' and use them to make a list of fixed support activities that you will plan. Review documents, interview staff of relevant organisations and organise some in-depth community research by field staff to make the list. The 'typical problems' can be further elaborated in a workshop for the most important stakeholders with the objective of identifying patterns of problems. A facilitator for the workshop is useful.
- Before any final decisions are made, the planning process must be evaluated. Answering the following questions might highlight the need to reconsider decisions already taken. It is better to reconsider them at the planning stage rather than much later, when the cost of a mistake will be much higher:
 - Have different actors had an opportunity to contribute their ideas and pose their priorities?
 - Is there an agreement about what the priorities are and how to achieve them?
 - Have all the alternatives been considered?
 - Is everyone involved aware of the cost implications and does everyone accept them?
 - Is everyone involved aware of their responsibilities and obligations?

6.3 Planning for communication and dissemination

One area often forgotten when planning a water and sanitation programme is the need for a clearly articulated and systematic communication strategy. A planned communication strategy recognises the need for communication between all those

involved, to close the gap between planners, government agencies, the private sector, aid agencies and communities.

Good communication and information sharing flows from a commitment to the process. "Objectives can be met only if adequate information is available at all levels from the communities to the central government. All players within the sector should be abreast of policies, legislation, decrees, administrative decisions, and any other pertinent matters. While the lack of technological hardware sometimes impedes communication with distant points, more often it is a lack of will that is the cause" (Roark 1993). This implies that relevant information needs to be disseminated to those who need to know: target groups such as communities, planners and decision-makers alike.

"Communication is not the same as 'telling': the words 'to communicate' imply a two-way process. A communication strategy must include the opportunity for feedback from the target group to the sender and back again. When people are allowed to participate in the process of defining and implementing the rules for their own water strategy, the potential for sustainability is accelerated. A corollary to this is the need to listen, and therefore communication requires listening. If the messages coming back across the feedback loop are not listened to (and acted upon where appropriate), communication is not taking place" (Cowater International Inc. 1997:50). This is valid at all levels.

A practical example concerns discussions around budgets of local government which tend to be limited and focused on a few priorities. "Channels of communication and negotiation have to be established which guarantee that the results of local planning processes are properly considered at higher levels when deciding about public investments, projects, etc. and that higher level planning can be adjusted to local conditions" (GTZ 1999:46). Support agencies can play an intermediate role in enabling information to flow between national and community levels. They also need to develop strategies to disseminate information to communities in their jurisdiction. What information should be disseminated, to whom, how and when?

Many experiences have shown that good ideas diffuse spontaneously as the experiences of communities are shared with neighbouring communities, as support agencies pass on management advice or as workshops are held on the topic. However, hearing about good experiences and getting management advice does not necessarily lead to change. All kinds of conditions need to be in place for change to happen. Nevertheless, when you show and promote sustained examples of community management, other communities and support agencies may become interested in the approach and willing to learn from these examples.

Tips for the Manager and the Support Organisation

- Draft a text on which support services the agency has to offer and what is expected from the communities who want to apply for support. Indicate clearly how your agency can be reached (addresses, telephone numbers etc.). Distribute the text to those that may require support services.
- Look at the situation from the viewpoint of other stakeholders and imagine what type of information is useful for them. Present relevant and practical options for this information to be disseminated. Design and implement a communication plan. The development of a communication plan has the following steps:
 - defining the target audiences (who are they, where are they, what language do they speak etc.);
 - defining the channels of communication for each of these audiences (at the community level these could include radio, literacy classes, gatherings in churches or mosques);
 - defining what needs to be communicated with each of the audiences;
 - developing communication methods and tools (these can range from the organisation of a stakeholder workshop to the development of informative posters);
 - testing the methods and tools;
 - scaling-up the implementation of the communication methods and tools.
- Involving the people you want to target is critical to the success of your planning activities. People only tend to change when they understand the nature of change, so unless people are consulted and informed they will not feel part of the effort.
- Use data to support and strengthen your decisions, for instance by disseminating the benefits of your activities and the support you are giving to the communities. You must communicate "to provide feedback and to bring about involvement and action. If a critical mass of concern and interest is generated within the sector, communication will become a new and powerful thrust" (Gore-Dale et al. 1993:11).
- The dissemination of good experiences in other parts of the country may take place along a number of different lines:
 - disseminating the approach and building skills among other support staff in the agency;
 - introducing the approach in other regions covered by the agency;
 - disseminating the approach and building skills among staff of other agencies working with the same communities;
 - disseminating the approach and building skills among staff of interested agencies working in other parts of a country;

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- encouraging support groups and networks for information sharing. Cross-community networks, scientific exchanges and dissemination at international levels can help people to better understand different options and the conditions for community management.

- As well as disseminating information on the support the agency has to offer and where and under which conditions communities can get it, advocacy is also needed:
 - for the importance of a safe and reliable water supply;
 - for good management of the water supply; and
 - for improved hygiene behaviour.

6.4 Financial implications of supporting communities

There are costs involved in supporting communities who want to keep systems working. Field staff need to pay regular visits to communities, training (including refresher training) needs to be organised for various members of water committees, staff resources need to be made available for specific support requirements and your staff may need some training to enable them to adapt their style of working with communities. Although real proof cannot be given here, we feel that this type of investment is worthwhile, because the costs of repairs and premature rehabilitation of systems due to lack of proper management are much higher. You may argue that you are not responsible for repairs and therefore do not face these costs, because communities are supposed to repair their own system. However, we do know that if the support structure does not exist, many systems fall into disrepair and stop functioning altogether. This adds to community opportunity costs because community members, mostly women, once again have to spend more time walking longer distances, and there are also costs involved in taking care of people who fall ill as a result of renewed use of unsafe sources or of a reduction in water consumption.

A manager needs to have a clear budget which includes the costs of support activities to communities. Drawing up a budget requires a detailed overview of expected expenses. One way to calculate the total expenditure is by making a list of planned activities and estimating costs for each activity. Some costs can be based on real prices but others will have to be estimated. Because estimated prices are not always correct, contingencies (a reserve to cover unexpected expenses) are also an important part of the budget as they allow some flexibility. This amount is usually 10% of the total budget. Budgets should be reviewed and adapted after monitoring expenditure and the impact of activities. Besides the annual budget, it is also necessary to calculate how much money will be needed each month to ensure that there is enough cash flow available when needed.

Table 9 shows some costs that might need to be estimated for an annual budget (for a non-specific organisation).

Table 9 Example of costs to be estimated

Management of personnel	Planning, supervision, financial management, administration, monitoring, etc.
Support costs	Multidisciplinary group of staff for managerial and technical assistance, monitoring and evaluation
Capacity building at different levels	Trainers, teaching materials, daily allowances, transport costs, rooms, administration costs, production of brochures, etc.
Communication and advocacy	Production of leaflets and other informative material, dissemination of the material, telephone, fax, preparation of meetings and workshops, etc.
System rehabilitation and system expansion	Pre-feasibility study, project design, equipment, material, parts and tools, staff, services paid to private contractor, etc.
Financial costs	Interest, amortisation, depreciation, exchange rate variations and inflation.
Contingencies	10% of total budget

At the political level a decision has to be taken about the financial sources for support activities. Some may be met from revenues or taxes, others may require some co-financing by the community or by a donor agency. Although answers to these questions require a political framework, you probably have some room to manoeuvre and make your own decisions. Your experience will count when political decisions are taken and good documentation of your experience will help you get the evidence to support your arguments.

Clarifying how the costs of support services will be covered allows you to draw up an estimate of the income required. The comparison between estimated expenditures and income will show the financial viability of the support activities.

The next step is to calculate 'who pays for what' (see chapter 4.6.1 on financial responsibilities). For instance, local authorities must be kept informed about any funds and equipment received from a donor. If there is no clarity about the amounts received and expected use, local government authorities might think that they do not have to budget local government funds for water services in the area.

Good financial administration contributes to the transparency and accountability of the support agency in relation to communities and other stakeholders. Financial administration

is related to keeping records, documents, information and books concerning financial issues. This information is essential to estimate which resources will be needed and to make accurate investment decisions. Financial information has to be simple, clear and complete, providing enough information for you to make good and informed decisions. It allows you to control present and future expenditure and income and to provide this information to users and other stakeholders, keeping their confidence and trust.

Tips for the Manager and the Support Organisation

- Calculate estimated expenses for after-construction-support and make a budget allocation for it. In case there are other actors in the area working on water supply, motivate them to do the same.
- Keep record of what you do in the field of after-construction-support. This will help you to convince the national level about the need for post-construction policies and budget allocation.



The way forward

There is a need for 'scaling up in space' and 'scaling up in time' of community management. In an attempt to contribute to an environment where community management can flourish, we have tried to provide you with ideas, examples, tips and food for thought. Much of this material can be used right away, without having to wait for political decisions to be taken or for budgets to be released by the national government. Only your own commitment towards community management and towards your support role is crucial. However, we realise that some of it also depends on changes at the national level, for example, putting policies or laws into place. This goes beyond the direct sphere of influence of a manager of a support agency. However, you still have a role to play here as well as you gain experience, share your experiences and talk about issues with those who can make change happen. As long as field information is not fed back to the people at the centre, things will not change.

What needs to be fed back to policy makers is meaningful information, i.e. information that goes beyond mere reporting on the number of systems built in your area. What ultimately matters is whether these systems are functional and well used and if they are not, what are the constraints on their use. Sometimes, eliminating those factors is within your control. By organising training for maintenance workers, you may help eliminate the lack of technical expertise at community level, or by organising a meeting between committees of neighbouring communities, you can be instrumental in solving a source conflict. If eliminating these factors is beyond your control, for example the unwillingness of community members to invest in an upgraded system, because the law is unclear about property rights, you will have to inform those with access to legislative bodies. If you feel that the field workers generally lack skills to facilitate community processes, you can as a short-term solution organise training for them. However, to achieve long-term improvements you should discuss with educational institutes the qualifications you need in your staff. Only if you and your colleagues take the responsibility to speak will things start moving.

So the way forward is to use this book, to act yourself or to stimulate those who can change things to act by sharing your experiences and insights with them.

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List of abbreviations and acronyms

BN	Bayesian Network
CFA	Communauté Financière Africaine
EU	European Union
GIS	Geographic Information Systems
HRD	Human Resources Development
IRC	IRC International Water and Sanitation Centre
MPA	Methodology for Participatory Assessments
NGOs	Non Governmental Organisations
O&M	Operation & Management
OOPP	Objective Oriented Project Planning
PRA	Participatory Rural Appraisal
RWSS	Rural Water Supply and Sanitation
SWAPs	Sector Wide Approaches
SWOT	Strengths, Weaknesses, Opportunities and Threats
UNICEF	United Nations Children's Fund
WASHE	Water, Sanitation and Health Education
WB	World Bank
WHO	World Health Organisation
WSP	Water Supply Programme



IRC international water and sanitation centre

IRC facilitates the sharing, promotion and use of knowledge so that governments, professionals and organisations can better support poor men, women and children in developing countries to obtain water and sanitation services they will use and maintain. It does this by improving the information and knowledge base of the sector and by strengthening sector resource centres in the South.

As a gateway to quality information, the IRC maintains a Documentation Unit and a web site with a weekly news service, and produces publications in English, French, Spanish and Portuguese both in print and electronically. It also offers training and experience-based learning activities, advisory and evaluation services, applied research and learning projects in Asia, Africa and Latin America; and conducts advocacy activities for the sector as a whole. Topics include community management, gender and equity, institutional development, integrated water resources management, school sanitation, and hygiene promotion.

IRC staff work as facilitators in helping people make their own decisions; are equal partners with sector professionals from the South; stimulate dialogue among all parties to create trust and promote change; and create a learning environment to develop better alternatives.

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