

International Water and Samitation Centre P.O. BOX 2869, 2601 CW DELFT. THE NETHERLANDS

Library IRC International Water and Sanitation Centre Tel.: +31 70 30 689 80 Fax: +31 70 35 899 64

2051.99DE-15453

Item 5

**STRAP WORKSHOP** 

12 APRIL 1999

# THE DEMAND RESPONSIVE APPROACH TO COMMUNITY WATER SUPPLY AND SANITATION

COMPILED BY MARTIN RALL

\_\_\_\_\_\_\_\_\_\_

LIBRARY IRC PO Box 93190, 2509 AD THE HAGUE Tel.: +31 70 30 689 80 Fax: +31 70 35 899 64 BARCODE: 154 53 LO: 205, 1 99DE

======

# THE DEMAND RESPONSIVE APPROACH

## TO COMMUNITY WATER SUPPLY AND SANITATION

#### as interpreted and applied by the Mvula Trust

By Martin Rall

#### Introduction

In spite of decades of investment in rural water supply and sanitation infrastructure, it is estimated that in the developing world some 40% of the rural population still lack an adequate water supply, and 60% are without adequate sanitation<sup>(1)</sup>. The figures are considerably higher in South Africa. However, valuable lessons have been learned over the years, and particularly during the 1980s, proclaimed by the UN General Assembly as the "International Drinking Water and Sanitation Decade". Much of the experience gained in approaches which enhance sustainable development, was systematised in the proceedings of several world conferences in the early 1990s, notably Abidjan 1990, New Delhi 1990, and Dublin 1992.

One of the key conclusions emerging from these conferences was that the goal of universal coverage of water and sanitation services would be unattainable as long as governments in developing countries, facing severe economic pressures, continued to plan in the belief that their resources and those provided by donor countries, would be sufficient. It had become clear that communities themselves would have to carry some of the cost of service provision.

Similarly, investment itself was only the start of the process. Many new water systems had failed because of inadequate maintenance and poor management provided by governments and their agencies. The need to empower communities to take responsibility for their own service provision was a lesson learned from harsh experience<sup>(2)</sup>.

Over the past decade a considerable degree of consensus has developed amongst international agencies active in the sector, as well as governments and other stakeholders in developing countries, on principles to guide the provision of rural water supply and sanitation services. These call for water to be treated not only as a social good, but also as an economic one, that should be managed at the lowest appropriate level. This requires that consumers be engaged in the process of selecting, financing, implementing and managing systems that meet their demands and are affordable in terms of what they and their governments can afford to pay. Two other key supporting principles are the need to adopt a holistic approach to the use of water resources, and to acknowledge the importance of the role of women in the management of water.

While there is broad consensus around these general principles of what has now become known as the Demand Responsive Approach (DRA), inevitably differences have emerged with regard to the details of implementation, and more importantly, around the longer term vision of where the DRA approach should lead to. Agencies such as the World Bank have naturally interpreted DRA in the context of their own vision of global economic and political trends, while many other role players, notably NGOs and governments, have embraced a somewhat different philosophical and practical interpretation of the approach. The Mvula Trust was established with a set of policies and programme "rules" designed to put this approach into practice, with the central objective of promoting sustainable water and sanitation services for unserved rural communities. Since then Mvula has gained an enormous amount of valuable experience in the implementation of water supply and sanitation projects based on DRA principles. Mvula policies and procedures have been continually modified and improved to apply the principles more effectively.

Mvula has also gained considerable insight into the applicability of the principles in the particular situation in which South Africa finds itself today. Along with many other agencies worldwide, who have sought to develop locally appropriate approaches to the implementation of DRA, Mvula has developed its own view of DRA and how it can best be applied in this country. This view differs in some important aspects from the dominant view promoted by the major international agencies.

This paper seeks to briefly outline the internationally accepted principles of DRA, and then to look at how different political approaches and agendas influence how they are interpreted and applied. Finally, the Mvula approach to DRA and how these principles are being applied by Mvula in its water supply and sanitation programmes, will be discussed.

# 1. General Principles of the Demand Responsive Approach $\nu$

The core principles of DRA have been well developed and refined over the past few years. A global study was carried out by the World Bank in 1996/97 of 10 programmes in 6 countries, with the aim of learning more about demand and the linkages between demand-responsiveness of rural water supply projects and the sustainability of the infrastructure provided<sup>(3)</sup>. The lessons and conclusions drawn from this study were further developed at the 1998 international Community Water Supply and Sanitation Conference in Washington DC, convened by the UNDP-World Bank Water and Sanitation Programme<sup>(1)</sup>. Mvula was one of six case studies of international best practice presented and analysed at the conference<sup>(4)</sup>.

The core principles of DRA, already mentioned above, are:

- Water should increasingly be managed as an economic, as well as a social good.
- Management should be focussed at the lowest appropriate level.
- A holistic approach to the use of water resources must be applied.
- The role of women in the management of water is important.

Based on these principles, the key characteristics of DRA include:

- The community initiates and makes informed choices about service options, based on their willingness to pay for the service, and acceptance of responsibilities for subsequent operations and maintenance.
- The community contributes to investment costs relative to level of service and has significant control over how funds are managed.

- There is an adequate flow of information to the community, as well as procedures for facilitating collective action decisions within the community (social intermediation).
- Communities can choose how goods and services are delivered and how water and sanitation services are managed.
- Government has a facilitative role, sets clear national policies and strategies and creates an enabling environment (including the legal framework) for participating groups.
- The community (or representative legal body thereof) owns and is responsible for sustaining its facilities.
- Community capacity is appropriately strengthened.
- Innovation is promoted and the need for flexibility is recognised.

The demand responsive approach (DRA) is a radically different approach to rural water and sanitation service delivery in relation to what was done in the past. It requires a new way of designing programmes in order to pay closer attention to the correct incentive structure that will elicit appropriate responses from a wide range of stakeholders. A learning process is therefore a required component of this approach and serves to verify that the incentives in place do in fact produce the intended results.

Ensuring demand responsiveness requires a coherent set of programme and project rules and supportive implementation and operational procedures. Careful attention needs to be paid to the design of appropriate institutional and financing options, and to mechanisms for channelling information to communities and to other stakeholders. Experience has shown that, if the following measures are taken, services are more likely to be sustainable:

### Financing Policy

Financial policies need to:

- Send out correct signals linking service levels to actual costs.
- Maximise cost recovery by capturing community willingness to pay.
- Make efficient and equitable use of subsidies.

Communities should choose their preferred level of service from a range of technical options with full knowledge of what they would be expected to pay. The options should be presented to the communities at known prices related to relative costs. User payment should be expected at these prices.

Relative demand should be used to select and prioritise applicant communities.

Financial policy must consider the costs of construction, O&M, upgrading and replacement.

Financing mechanisms need to enhance community capabilities to manage, control and direct financial resources. They should be simple and promote transparency and accountability at all levels.

### Institutional Arrangements

There is a wide range of actors, or stakeholders, that can be involved in service delivery and management; however, at the forefront is the community. Goods and services can be supplied by the private sector and non-governmental agencies, with government agencies playing more of a facilitative role. The institutional rules of a programme should create the incentives for each organisation or stakeholder to assume a role for which it has a comparative advantage, and also to promote a partnership between the different agencies.

Communities should be encouraged to explore the different institutional options which exist for operating and maintaining water services.

There must be legal recognition for the community organisation charged with managing the facilities.

#### Social Intermediation

Social intermediation is defined as a process whereby communities are enabled to exercise collective action for the selection, implementation, maintenance and sustainability of their water and sanitation services.

It is important that the purpose of social intermediation is clear and well defined, so as to accomplish the following:

#### Making Choices

- Getting complete information out on the programme rules to eligible communities and to all community members, in order to assess initial interest and demand.
- In communities that have demonstrated an interest, clearly communicating the advantages and disadvantages of different technical options in terms of:
  - > Levels of service (including possible expansion and/or upgrading)
  - > Investment and recurrent costs, including prices
  - > Service delivery and management options and complexities
  - Availability of spares and technical assistance
- Communicating the responsibilities of households, community, local government, funders and all involved in project implementation.
- Assisting the community with eliciting and aggregating demand and collective action, based on the information provided.
- Ensuring that community requests reflect the choice of all.

#### **Project Implementation**

By using intermediaries, and ensuring that the community plays an active role in the selection of contractors and in making the contracts, conflicts of interest from those providing particular services (including government agencies), are less likely to occur. Since most communities have limited experience with contracting procedures, those responsible for social mobilisation need to assist the community to understand how to do it and the options amongst potential contractors. The community should have final sign-off on contracted work.

#### **Operation and Maintenance**

Communities who have to manage the O&M of their system should select and contract trainers to build the capacity of those responsible, or contract other operators.

Social mobilisation should not deteriorate into social marketing, for example of a supply side "approved solution" or forcing a community to accept a "choice".

All those who provide services to the community, such as engineering design or training, should be accountable to the community.

# 2. Assumptions which affect the implementation of DRA

The Demand Responsive Approach and the different interpretations of it are based not only on the evidence of what works in different developing countries, but also on a number of assumptions which are political or ideological in character. This is because the way water supply and sanitation services, and indeed all basic social services, are provided, to whom, by whom and how, is a highly political issue. While many of those who advocate and apply DRA, including the Mvula Trust, do so precisely because it works better than supply driven approaches, when applied flexibly and appropriately, others, again including Mvula, question some of the assumptions of those who tend to hold up DRA as a solution based on a set of universal truths. Some tend to see DRA as intrinsic to the currently dominant global political and economic system, and therefore as needing to serve similar strategic objectives. Others, for other reasons, elevate the concept of community self reliance and independence to the level of an inviolable principle, irrespective of the context.

While these assumptions are not overtly stated by those who advocate DRA, and indeed some of them may be considered by some to be only perceived assumptions, it is important for Mvula to understand them and to take a view of them. It is important, in the first place, because it is precisely around the political assumptions, and some of their intended and unintended spin-offs, that DRA is contested in South Africa (and elsewhere). If Mvula is to be successful in promoting good practice in the sector, and particularly to local government, a locally appropriate and acceptable interpretation of DRA must be developed.

An understanding of the political assumptions underpinning DRA is also important for Mvula and the sector in order for both short and long term strategies to be developed. Such strategies, aimed at enhancing the sustainability of services, need to take not only the current political and economic conditions in the country into account, but also the potential for these conditions to change in the foreseeable future. The basis of this argument will become clearer once the assumptions have been analysed.

### Assumptions underlying the different interpretations of DRA

The list which follows is based both on an analysis of the key documents already cited above, as well as on the views of those in South Africa (and elsewhere) who are not fully

convinced by the "dominant" view of DRA. The latter include participants at the 1998 Washington conference, whose views the author heard personally, but which were not reflected in the conference documents.

The most important assumptions of DRA include:

- a. Basic social services, including water and sanitation, are not fundamental human rights like individual liberty and freedom of expression. They are conditional on the ability to pay. Policy objectives should therefore not be based on providing a particular level of service, even if it is considered to be the basic minimum required for health and human dignity, but on what consumers can afford to pay. Government should move away from financing O&M costs to any extent.
- b. The economies of developing countries are too weak for governments, even with donor support, to be able to make enough financial resources available for the infrastructure required to enable all their citizens to have access to basic services. Consumers must therefore pay for a significant part of the cost of providing services to them.
- c. Sustainability of services can only be ensured if consumers pay the full economic cost. This is because, firstly, consumers respond only to economic incentives and disincentives. Treating services as a commodity to be supplied in accordance with the rules of the "market" is the best way to achieve efficiency and cost-effectiveness.
- d. Government should seek to play as limited a direct role in service provision as possible, and should seek to shrink in size, leaving more space for the private sector and the "market". The role of government should be to create the right environment and incentives for role players to participate. The role of the private sector is particularly important, as this sector is the most efficient and effective, and therefore sustainable.
- e. Subsidies to the poor are not good, because governments can't afford them, and even when they can, they cannot be relied on for any length of time, and leave communities worse off than before, when they are withdrawn. They send out the "wrong" signals and generally don't end up benefiting those for whom they are intended anyway.
- f. Service provision to rural communities needs to be approached in a fundamentally different way to urban services, because:
  - Institutional support in rural areas is very weak, and not likely to improve in the foreseeable future. Therefore communities must take the leading role in service delivery and management. In essence, rural communities should plan on the basis that they are on their own and have to solve all their own problems. Any outside assistance they may receive is then a bonus.
  - This implies that most rural communities will remain outside of the formal or mainstream economy for the foreseeable future. Rural local government will also be not able to play a significant, or at least not a reliable or sustainable role.

6

#### How valid are these assumptions in general, and in South Africa today?

In answering this question, Mvula's approach has been, firstly, to compare the situation of South Africa with that of the other developing countries on whose experience the principles of DRA are based. Secondly, the prevailing global political and economic environment, notably the trend towards the globalisation of the role of private capital, with the corresponding reduction in the role of governments, and the extent to which this impacts on South Africa and on our government's policies, needs to be taken into account. Finally, and most importantly, South Africa's history of distorted development, based along racial lines, which has resulted in high levels of rural unemployment, marginalisation and poverty, must guide policy formulation.

Most of the above assumptions relating to the capacity of government, and particularly local government, to finance and provide direct management support for basic services, are valid today. DRA is therefore an appropriate approach to take. However, South Africa is classified as a medium income country, and has incomparably more resources and capacity than most developing countries. Current capacity limitations are also due to South Africa being in a phase of transition, transformation and consolidation, particularly with regard to the building of capacity at the level of local government. The development of rural areas and the rural economy is a high priority for government.

Consequently, strategies which assume that the status quo will be maintained indefinitely, or at least as long as in other developing countries, are inappropriate. Appropriate strategies should be two pronged, catering for the current situation on the one hand, while incorporating a longer term (but not distant) vision of a growing economy, providing significant spin-offs to currently marginalised rural areas, and of an increasingly significant role for local government. In this context, the role of significant intergovernmental financial transfers from central to local government, enshrined in the Constitution, is important.

However, against this scenario, the realities of government fiscal and monetary policies, in the context of an unfavourable world economic situation, should be counterpoised to some extent. In the short term it is not realistic to assume that current government funding allocations for rural water supply and sanitation will increase. In terms of financing therefore, DRA principles which emphasise cost effective and lower cost technologies, implementation strategies and O&M arrangements, are entirely appropriate.

Overshadowing all these considerations, and rightly so, is the political necessity to redress the economic imbalances inherited from Apartheid. The assumption that this reality can be ignored, that South Africa should be viewed like any other developing country and the DRA principles outlined above strictly applied, is simply not valid. This is so not only from the point of view of social justice, but also for practical, strategic reasons. Unless a DRA-based approach is developed for the sector in South Africa which takes this political reality into account, DRA will not be embraced to the extent required to ensure sustainable services, and Mvula will have lost the opportunity to make the contribution it can make.

These general considerations inform Mvula's view of the six assumptions listed above, and have shaped Mvula policy on how DRA principles are applied in practice (see Section 3). The assumptions will now be considered in detail:

#### Assumption "a" - Water as a human right or as an economic good:

Basic social services **are** a fundamental human right. This does not mean that they should be completely free, and as long as people do not manage such scarce resources as water responsibly, on the basis of a sufficiently developed sense of social responsibility, financial incentives and disincentives are the best way to regulate demand. Water is therefore also an economic good.

However, a basic level of service, sufficient for health and a dignified standard of living, should be affordable to all. Subsidies should be provided to ensure this. Subsidies should, however, never cover the full cost of the service, and forms of sweat equity should be accepted in lieu of the minimum payment required of any citizen. This implies a form of decentralised management of services.

#### Assumption "b" - Government does not have the resources to fully finance services:

This assumption is valid for South Africa, both now and in the future. However, South Africa's abnormal history must be taken into account. and government fiscal policy should continue to be based on the need to redress the inheritance of Apartheid. South Africa's relative wealth allows it to make considerably more resources available than most other developing countries.

#### Assumption "c" - Water is a commodity which should be regulated by market forces:

Water has economic value and is a scarce resource, particularly in a water scarce country like South Africa, but it is not a commodity. Treating it as such entrenches current socio-economic disparities, ignores the legacy of South Africa's past, and does not deal with the plight of the poor.

#### Assumption "d" - Less government and more private sector is good for service provision:

Certainly, government cannot do everything, and must enter into partnerships with civil society organisations, including NGOs and community based organisations, and the private sector. Each of these potential partners has a relative advantage over the others in particular areas of activity. However, partnership arrangements must ensure that all role players are accountable to consumers and to government. The private sector, in particular, is driven by the need to make profit, which rarely coincides with concepts of equity and making allowance for the poor.

Government is often relatively inefficient in the direct provision of services, and should concentrate on creating an enabling policy, legal and financial environment for other role players to participate. Civil society organisations are usually best suited to assist government in providing and managing services for rural and other poor communities.

Cost effectiveness is not the only criterion that should be considered in the provision of services; social effectiveness is equally important.

### Assumption "e" - Subsidies are not good policy:

This is true in many instances, particularly when they are not sustainable. However, a distinction should be made between capital and O&M subsidies. High levels of capital subsidies to poor communities for water supply infrastructure are justified in a relatively wealthy country like South Africa, both to redress historical imbalances, as well as to make services more affordable than through loan finance.

Capital subsidies should be capped, however, in order to create incentives for cost effective designs and reduced implementation overheads, as well as to spread limited funds as far as possible. In addition, although Mvula has been obliged to change its policy of requiring communities to contribute a fixed proportion to capital costs (although it is maintained in institutional sanitation projects), it still believes that this is an important element of DRA, as it reinforces the link between affordability and the cost of different technology choices.

In the case of sanitation, in the current situation of declining government budgets, subsidies should be channelled into awareness and demand creation, and the training of builders in a range of technical and cost options only.

Designing and implementing developmentally sound O&M subsidy policies is a far more complex task. Communities should pay as much of the full cost of O&M as they can afford. Poorly targeted subsidies which discourage any financial contribution from consumers are doomed to fail. In the current phase in South Africa, reliable subsidies for water supply are not likely, since local government has more pressing uses for central government funds (i.e. the "Equitable Share"). Policy should therefore be driven by considerations of local affordability, while making provision for services to be upgraded in the future, once subsidies can be channelled in a sustainable way to those who need them. Any subsidies should rather be used for providing indirect support to communities by local government or agents engaged by it, while cross subsidisation at community level should be encouraged.

#### Assumption "f" - Rural communities must be as self sufficient as possible:

This assumption is valid for most rural communities in South Africa at present, particularly in the case of smaller, remote communities. All the DRA principles relating to community management and community empowerment are appropriate. However, experience has shown that community management in large settlements has rarely been successful. Here more formal institutional arrangements, involving statutory bodies like water boards or local government, are necessary.

Another conditionality relates to the assumption that it will take as long in South Africa as in other developing countries for the existing local government structures to develop the capacity to assist communities in a meaningful way (and for larger villages to develop into municipalities). This process, as well as the economic development of rural areas, will be faster in South Africa, and this must be taken into account. Rural communities should not be considered as being separate from the mainstream of the South African economy for ever.

Insisting on community self reliance when significant and sustainable support is available or potentially available, does not help communities in the long term, even though it is intended to. Communities should be assisted to access as much support as possible, without compromising the sustainability of services. It is not an easy balancing act, but must be striven for.

# 3. The Demand Responsive Approach as Applied by Mvula

In the previous section the Mvula approach to the political assumptions underlying DRA was outlined. This approach, based on over five years' experience of project implementation and engaging with the other role players in the sector, has guided the policy making process in the Trust. Mvula has developed its own interpretation of DRA, appropriate to South African conditions, but faithful to the core objective of the sector worldwide, namely the provision of sustainable services to unserved rural communities.

The success of this approach is well known in the sector. Successive formal evaluations and ongoing field experience have demonstrated the relative advantages of the Mvula approach over other approaches currently being employed in South Africa. In general, where projects have failed, it has not been due to inappropriate policies, but on the contrary, to Mvula's policies not been implemented properly.

However, it has also become clear that Mvula's policies and procedures have not adequately ensured that DRA principles are adhered to, and that this failure has been the cause of many of the identified shortcomings. As a result, the Mvula model of water supply project implementation and management was recently revised and improved. In this section the new model will be described, in terms of how Mvula has interpreted DRA and incorporated its principles into policy and procedures<sup>(5)</sup>. The different phases of the project cycle will be looked at in turn.

### Project Selection and Approval

Although conditions vary from province to province, in general there is little scope currently for demand based selection criteria to be applied in prioritising and selecting projects. The supply driven planning approach is dominant both within DWAF and at local government level, and Mvula must either comply or to be totally marginalised. The Mvula approach is thus to strictly apply demand responsive criteria after project selection, which may mean accepting a project for funding even if demand has not been demonstrated up front.

This is clearly not ideal, but is a response to realities which will not be changed in the short term. Mvula sees it as an important task to advocate forcefully within the sector, particularly at local government, for more demand responsive project selection criteria to be applied.

Having to fit into supply driven systems has also affected Mvula's former policy of leaving communities to overcome certain hurdles on their own, without any assistance from Mvula, such as selecting consultants and having feasibility studies done by them. Mvula will increasingly have to commission feasibility studies directly, or even to do them inhouse.

### The Planning Phase

Experience has shown that poor planning, without adequate community involvement, and with insufficient attention to DRA principles of choice and appropriateness to specific local conditions, have been major causes of project failure. In addition, since there is little scope for demand based project selection, the Planning Phase becomes the most important time to test and, if necessary, to stimulate demand.

The Mvula approach is therefore to invest considerable resources during this phase, specifically in the application of the most important elements of DRA. These include:

- Involving the whole community, not only the water committee.
- Empowering the community to make informed choices, and facilitating the aggregation of individual household choices and demand.
- Facilitating decision making around every aspect of the project, including, amongst others:
  - level of service and plans for future upgrading, based on comparative costs, local affordability and the prospects for government or other outside assistance
  - technology

- the value of the Emergency Fund and how much households will pay
- how to deal with very poor families
- planning for using the water for income generation.
- appropriate management structures and gender roles.
- choices of technical and social consultants and trainers
- training needs
- contractual arrangements
- O&M responsibilities, management structures and institutional linkages, including agreement with local government (the Water Services Authority) on who the Water Services Provider will be
- Not proceeding to the Construction Phase until the up front Emergency Fund target has been met.

The key at this stage is effective social intermediation. Experience has shown that there are few consultants or NGOs in the sector who have the skills to do this well. Mvula's approach is thus to use and further develop in-house capacity to play this role during the Planning Phase, while gradually building capacity in the sector.

By the end of this phase, broad based and well informed agreement will have been ensured on all the important issues, and this is captured in a comprehensive Project Planning Report.

### The Construction Phase

The key elements of DRA which are applied during this phase relate to effective community control over the process. This includes:

- Community management of all or most of the project funds.
- Community management of as much of the implementation as their capacity allows.
- Intensive, participatory, outcomes-based training and capacity building.
- Household contributions to the Emergency Fund, linked to continued funding.
- Contracted consultants, trainers, and other suppliers of goods and services being accountable to the community.
- Developing community based M&E systems and activities.

The construction phase ends once water starts flowing and O&M activities have to start.

#### **The Completion Phase**

During this phase, with the community and its Water Services Provider focussing on getting the O&M system to function, Mvula again becomes directly involved to complete minor finishing touches to the infrastructure and to close the project books properly.

### The O&M Mentorship Phase

The key DRA principles applied in this phase, which ends one year later, are management at the lowest appropriate level, cost recovery and communication between the O&M committee and consumers.

Management at the lowest appropriate level includes a partnership with local government. Under South African law, the community cannot own the infrastructure, which belongs to local government, and cannot manage the service unless appointed by local government (the Services Authority) to do so.

Partnership with the WSA includes accessing subsidies. Mvula is currently working with DWAF and local government to develop a model to ensure that when subsidies become available, they are efficiently channelled, in a developmentally sound way, without undermining the willingness of consumers to pay what they can afford.

The principle of management at the lowest appropriate level is also applied by Mvula at community level, in the design of decentralised O&M systems. Most of the ideas in this regard have been developed by communities themselves, and involve structures such as tap stand and ward committees, responsible both for tariff collection and simple maintenance tasks. Such structures are also much more effective in establishing and managing forms of intra community cross subsidisation, which have the potential to complement indirect external subsidies very effectively.

# References

<sup>(1)</sup> Proceedings of the Community Water Supply and Sanitation Conference, Washington, 5-8 May 1998. World Bank, 1998.

<sup>(2)</sup> Water Supply and Sanitation Policy White Paper, DWAF, 1994.

<sup>(3)</sup> Making Rural Water Supply Sustainable: Recommendations from a Global Study, World Bank, 1998.

<sup>(4)</sup> The Mvula Trust: A Case Study of an Independent Approach to Rural Water Supply and Sanitation in South Africa, The Mvula Trust/Ian Palmer, 1998.

<sup>(5)</sup> Redesigning the Mvula Model of Community Water Supply Delivery: Workshop Report 28-30 Sept 1998, The Mvula Trust/HSRC, 1998.