

Sustainability Management Guidelines

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Prepared for the Department of Water Affairs and Forestry, South Africa

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Introduction

Background

The Department of Water Affairs and Forestry commenced an infrastructure development programme of considerable proportions in 1994 to address the backlog of services, mainly amongst rural communities. The number of unserved was estimated at between 12 and 16 million people without basic water supply and 19 million people without sanitation.

There have been four rounds of RDP funding allocated to the infrastructure development programme under the auspices of the government's Reconstruction and Development Programme (the RDP), amounting to R 3.161 billion. The programme is an accelerated delivery programme which aims at meeting the wide spread demand for services as soon as possible. The mandate given by Cabinet to the Department of Water Affairs and Forestry is to meet the needs of 90 % of the population within a ten year programme. The work has been carried out in close association with the Department of Constitutional Affairs, the Provincial governments and local government. (The constitutional, institutional and legislative framework for service delivery is explained below.)

A primary concern of the Department of Water Affairs and Forestry is that the infrastructure created under the programme is sustainable. International and local experience points to the fact that establishing sustainable services is very difficult in conditions of poverty such as is found in South Africa. These difficulties are exacerbated in the context of an accelerated programme.

The objective of these guidelines is to strengthen the procedures of the Department and its agents so as to ensure that the work done under the water services development programme is sustainable.

Status of document

These Guidelines are designed as a management tool for the Department.

They set out the conceptual framework and provide specific guidance for sustainable development and support of water services in South Africa. The Guidelines provide the framework for the activity of the Department, consultants, contractors and local government, within the context of the Department's policy. The guidelines will be binding on the agents of the Department and will determine how their work is undertaken.

During the course of the past two years a number of guidelines have been produced by the Department. The guidelines on sustainability contained in this document should be considered as an umbrella under which all other guidelines fall and in the context of which they should be read.

Scope of document

The document contains the following sections :-

- The document begins with establishing an understanding of sustainability. This is borne out of experience both in South Africa and the broad international development world.
- The institutional, legislative and policy context of South Africa is then set out which emphasises that the responsibility for local service delivery lies with local government.
- The problem of sustainability has been highlighted through an evaluation which the Department has undertaken of selected projects which formed part of the initial infrastructure development programme. The findings of this evaluation are summarised.
- The main contents of the document comprise a set of management guidelines which draw on the preceding sections and translate the concepts of sustainability into specific guidelines.

This document is purposefully written in an ordinary, non-technical style.

A note on terminology - An unequivocal context of empowerment

There are many different contexts to development in South Africa. A vocabulary has developed which is continuously manipulated to meet the particular needs and perspectives of the user. New terminology, coined in an attempt to avoid misunderstanding and re-interpretation, inevitably becomes over-used and miss-used in its turn. There are many terms and phrases used in this document which have also become so widely interpreted that they now mean different things, depending on who is using them. Thus "participation" means to one person an essential activity in which all participants are of equal standing, where any decisions made have real results and where power and responsibilities are shared. To another person "participation" is a necessary evil which must be carried out with minimum expense and disruption to existing plans, and is achieved by holding the prerequisite meeting, irrespective of the content or outcome of the meeting.

Short of inventing an entirely new vocabulary, it is important to make clear at the beginning of this document its overall tenor and perspective. All terms and phrases used in the document should be read, therefore, in the light of the following statement:

Development is a process of social, economic and human empowerment through which ordinary people gain a greater control over the factors which control their lives. It is a process where people are at the centre of their own emancipation with the support of others.

Understanding sustainability

A global problem

Sustainability is a problem which faces all development, in industrialised countries as well as in the developing world. In recent years the debate has taken on new urgency through the adoption of Agenda 21 at the Earth Summit in Rio de Janeiro in June

1992. In the global debate sustainability is considered primarily in terms of continuing to improve human well-being, whilst not undermining the natural resource base on which future generations will have to depend.

The term "sustainability" in the context of this document, however, is limited in its meaning. It is used not to refer to the tension between development and the natural environment, but rather to refer to the narrow context of service delivery in the fields of water supply and sanitation in a developing country - South Africa. Maintenance and protection of the natural resource base remains a prerequisite for durable services.

The provision of adequate water supply and sanitation services to the people of the developing world has been an ongoing quest which has occupied the minds of development experts and governments for the past 40 years. Although a great deal has been done, enormous amounts of money have been spent, and Drinking Water Decades have been proclaimed, coverage levels remain inadequate. In recent years a new trend has been emerging - throughout the developing world increasing amounts of money are now being spent on the rehabilitation of water services which have previously been installed but which have fallen into disrepair.

The figures quoted for coverage by most countries do not usually include the dereliction rate. Accurate figures for dereliction rates are not available. Rehabilitation is an embarrassment to most governments as it implies that, not only did they require assistance to implement the original project, but they are not capable of keeping services going and hence the original investment has been wasted.

As these very difficult realities come to light it becomes increasingly clear that sustainability is an issue to be addressed at the very beginning of development programmes and that if sustainability is not assured there is little point in spending the money except for very short-term welfare purposes.

South Africa is not immune from these concerns. There are very few places in South Africa where there have been absolutely no past activities aimed at providing water - there are a great

many places where there are disused and derelict water supplies, some of which have only been built in recent years, since the 1994 elections, under the government's Reconstruction and Development Programme (RDP).

Understanding sustainability

Introduction

The following comments develop a framework for understanding sustainability. It is based on the hard realities of success and failure, on both local and international experience, and on the urgent necessity to find answers to questions which effect the everyday lives of millions of people in South Africa. The conceptual framework below is presented in generic terms and then used throughout the remainder of these guidelines as the "point of departure". It has to be put within the institutional framework as described by the Constitution and the new legislation in South Africa, which is done in the document. It is not just "theory" but the foundation on which the Department of Water Affairs and Forestry will build in the future to achieve sustainable development of water supply and sanitation services through co-operation with local government and provinces throughout the country.

Defining sustainability.

At one level sustainability is very simple. It is whether or not something continues to work over time. For a water service, this would mean that water continues to be available for the period for which it was designed in the same quantity and at the same quality as it was designed. In other words, if a person can turn the tap in 15 or 20 years time and the water comes out at the same rate and quality as the day the scheme was commissioned, then it is a sustainable supply (provided, of course, that at some time the scheme had not become derelict and had to be completely rehabilitated).

If the water flows then all of the many elements which are required for sustainability must have been in place. There must have been money for recurring expenses and for the occasional repair, there must have been acceptance from the consumers of the

service, the source supplying the service must have been adequate, the design must have been properly done and there must have been sound construction. These elements include the following factors:-

- Technical issues,
- Social factors,
- Financial elements,
- The natural environment,
- Durable gender equity and empowerment, and
- Institutional arrangements.

In search of the "silver bullet".

Over the past few decades many things have been learned about development. The learning has generally taken place in phases when different factors were "discovered" and championed. In the seventies the issue was appropriate technology. Arising out of the scientific advances of the first half of the century, technology was regarded as being the basis of endless advancement and the solution to development. There was something of a reaction to technology as the panacea, particularly as it was often applied inappropriately. This led to the appropriate technology, 'small is beautiful' philosophy.

Then, in the 1980s, it became obvious, particularly with the passing of the colonial era and the growing identity of developing countries (the South), that 'grass-root' communities should be empowered and made responsible for the management of their own affairs, and so community management became very important. In the nineties capacity building has been identified as a critical factor. There are other issues which are coming to the fore at present such as proper financing, political will and the importance of behavioural change, which are also critically important.

There is a tendency for each one of these issues to be seen by their proponents as the answer or the missing key - the "silver bullet" of development.

The clockwork myth.

Experience has shown that each one of the issues above are vitally important and necessary for sustainable development, but none of them is sufficient in itself. Through the years a

myth has emerged 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 up like a clock and would continue to work, by itself, for the next twenty years.

This is a myth and it develops false expectations. It can also be used as an excuse. The implementing agent could say (and this has been said many times in different forms) that all the components were put into place - if the scheme does not work it is the community's fault, not theirs. Equally, the community may say that the scheme is not working, obviously something must have been done wrong at the start. This is particularly likely in the light of South Africa's past where there has been a long list of factors mitigating against sustainable development such as no local governments, the "homeland" system, social and political fragmentation.

No community is an island.

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. This is clearly not the case in South Africa or anywhere else. There are a host of interconnections between rural communities and the broader society, through such social mechanisms as migrant labour, the influence of urban drift, education and health systems, modern communication, and the mass media such as radio and television. These create both linkages and expectations. There is a constant movement and mutual influence between different parts of the whole society. This social flux is an essential part of development and a key element of sustainability as it provides the basis for support to communities.

Service provision - a human activity.

The clockwork myth also falsely assumes that a service or project can have a pre-determined 'life' which can be set up through deterministic processes and expected to continue to function on its own. Services and their

provision certainly have an important physical and technical element but their provision, administration and maintenance depend on complex processes of human organisation. Development and sustainability are human processes - not technical or engineering processes. To understand this is to discover half the solution to the problem of sustainability.

A helpful although somewhat cynical view of development is that it is the art of finding the greatest confluence of self-interest. This can, however, be very helpful when attempting to answer the difficult questions surrounding sustainability. Questions of affordability, for example, can be better understood from the perspective of a mother of 5 in a remote rural village with an absentee husband providing irregular and inadequate remittances - is it in her interests to commit herself to an expense which represents a significant proportion of her below-the-poverty-line income to get water from a tap when she could continue the back-breaking task of fetching free water? If her interests coincide with those of her neighbours, there may be grounds for a successful project.

Identification of such realities as self-interest assists in the important process of gaining a more realistic and honest perspective on development and sustainability. The tendencies to romanticise development are brought to a rude awakening with the hard realities of dereliction and failure. It may not be easy or even expedient to say to the poor that they have to pay for their services but not to tell them is to ensure that their expectations will be dashed. We can be assured that each person will weigh the merits and costs and determine their own interests in the matter. Ensuring that people can make these choices from an informed perspective, and that their decisions are communicated at the beginning of a project, could have saved the wastage of many millions of Rands on projects which were not sustainable because they were not, in the opinion of the 'beneficiaries', in their best interests.

The difference between a service and a project

One of the recurring reasons why sustainability is often a problem is that it is not necessarily an objective! This

happens when the issue is approached from the perspective of constructing a water supply or a sanitation facility rather than providing a service. There is a vast difference between the two approaches - one is an event whilst the other is an ongoing process. One provides a once-off product (pipes in the ground) which is essentially technical in nature and requires little human interaction, whilst the other is a complex process requiring a great deal of interaction between customers/consumers, providers, local authority etc.. One is an end in itself after which the engineer can say "I've done my bit" whilst the other is a means to an end - a perpetuated benefit to the community. The project is in fact just a phase in the process of service provision.

When water supply and sanitation is seen as a series of projects where the construction is the element which enjoys most of the attention, rather than the provision of a service, then it is hardly surprising that the projects are unsustainable. A service includes the initial construction phase but is primarily an ongoing business of supplying (selling) water to consumers (customers) over a long period of time.

Thresholds for sustainable services

To establish and run a service a number of activities are required such as the collection of revenue, administration, technical operation, maintenance and governance. Skills are required to undertake these activities effectively, in order to keep the service running. If there are insufficient skills in any particular area it can have disastrous effects on the entire service. For example if the administration (bookkeeping, accurate billing, payment of wages etc.) is not adequate, the technical staff may not be paid resulting in the system not being maintained and customer dissatisfaction, payment resistance and finally the collapse of the service.

The minimum levels of skills which are required to keep a service functional, could be regarded as a series of thresholds which, if breached, could result in the failure of the service. Thresholds do not only exist in terms of skills but also in areas such as public awareness and opinion, the wealth of the community and their ongoing

ability to pay for the services, social conflict and other areas.

Critical support

Even if the various thresholds are established initially and exist at the commencement of the service, contrary to the clockwork myth, they will not last. Pumps will inevitably break down; trained, capable people move on; conflicts arise. A fundamental element of sustainability is the support which a community or local government can expect from outside of itself. The support infrastructure, and the capacity of that structure to perform its function of support, is critical to sustainability. A village level scheme will require support from the District, and, in similar fashion, the District will require support from the provincial structure etc. etc.

Thus, in order to ensure sustainable services at village level, effort and attention needs to be put into the full range of support institutions. This is another reason why the project approach seldom results in sustainable development. If the support structure is not built, with its own sustainability thresholds, the separate projects will not be able to regenerate themselves and will fall into dereliction.

It is important that the support is derived from the appropriate source. It has been proven throughout the developing world that it is not possible for a central government to support the local level directly. The lines of communication and accountability are too long.

Relationship between the village and the nation

Given that sustainability involves factors that go beyond individual communities, and given that communities are not islands in the broader society, it is reasonable to expect that there is a relationship between the viability of village level functions and the health of the broader society. If the nation can sustain, for example, a sound education system, then this will affect the skills available to run local services. If the country has high employment rates at reasonable wage scales then there will generally be improved affordability for village level services. In fact it is unreasonable to expect that village

level services will be sustainable in a country with a weak economy, corruption, conflict or other problems.

South Africa presents an interesting example. "Sustainable" services have been provided for many years in the "first world" sector of the country - in the larger cities and in the rural towns. These are places with viable local economies which are integrated into the national economy which has generally been healthy and growing, albeit that their wealth was created at the expense of the majority, through their exploitation. However, in the "third world" sector which, because of 'separate development' and other policies of the past, was constrained from developing, the situation is very different. There is large scale poverty, not only in monetary terms but also in terms of education, health and local services. It has proven to be very difficult to establish sustainable services, even of the most basic standards, in the midst of this poverty. Sustainability at local level in South Africa therefore depends, to a degree, on macro policy issues related to the integration of South Africa's economy, economic growth and the success of national policies in areas such as education and health care.

The two essential "phases" of sustainability

There are two important phases in the provision of services which are critical to sustainability. These are the initiation phase and the ongoing phase.

The initiation phase is the establishment of the service, from the recognition that a service is needed, through the articulation of a demand, the planning of the service, the design and construction of the physical infrastructure, the establishment of the institutional framework, and the initial commissioning.

The ongoing phase is the rest of the service's life. It includes operating the services to the satisfaction of the consumers, collecting revenue, maintenance of the infrastructure, administration, and all of the other day-to-day activities. It is a much more difficult phase to succeed in than the initiation phase.

Because service provision is essentially a process of human organisation

and the use of technology to the benefit of society it must be expected that things will go wrong during the ongoing phase. The key is to ensure that the conditions exist to re-establish the required thresholds and to regenerate the service without it falling into dereliction and needing to be completely rehabilitated. The preferred terminology for the ongoing phase is the "Continuation" phase.

In terms of sustainability, there are activities which can be done or which can be omitted in both the Initiation and the Continuation phases which will either promote sustainability or mitigate against it. A great deal of effort has been invested in getting the Initiation phase of service provision right - demand driven development, capacity building, community awareness, project initiation, the development of Key Performance Indicators etc. By comparison very little thought has been given to the Continuation phase.

It is very difficult, if not impossible, to extrapolate whether or not the activities undertaken during the Initiation phase will result in long term sustainability. Certainly there are a number of incorrect things which can be done or correct things which can be omitted which will mean that the service has no chance of succeeding from the beginning, but to attempt to extrapolate into the future is to assume too deterministic an approach. Perhaps it is an indication that the clockwork myth is still adhered to. If proper attention were given to the Continuation phase it would not be necessary to try to build into the Initiation phase all the requirements for the service to continue to function for the rest of its design life without any support.

The key to sustainability in the Continuation phase is the support system which should be in existence through the institutional arrangement of local government, District Councils, Provincial Government and the National Government. It is clear therefore that if "projects" are to survive and real services are to be delivered, equal if not more attention, investment and expertise needs to be targeted at ensuring that the institutional support systems are established and have the capacity to perform their functions. The clockwork myth applies to each institutional layer - it is not reasonable to assume that a District Council, for example, can be set up and will con-

tinue to function over the years without support.

Conclusion - a South African definition of sustainability

The above comments provide a conceptual framework for understanding sustainability. The primary objective of the Department of Water Affairs and Forestry is sustainable service delivery at local level. The purpose of these guidelines is to identify the factors which will promote sustainability in both the Initiation and the Continuation phases of service provision. Because development and service provision are primarily human processes, however, the debate about sustainability and best practice will continue.

South African context

Sector development in South Africa

During the apartheid years, under the policy of "separate development", the majority of South Africans were left to fend for themselves with regards to water services. This resulted in an estimated 16 to 19 million people being without formal water supplies and 21 million people being without sanitation. The Department of Water Affairs and Forestry did not have the mandate to provide water services.

After the elections of 1994, the Department of Water Affairs and Forestry received the mandate to address the issue. Legislation was amended empowering and requiring the department to intervene and enabling other institutions such as water boards to provide services directly to consumers. The constitutional and legislative environment was also developed for representative local government to be established throughout the country, with the constitutional responsibility for local service provision. The lack of capacity in local government, however, required that support for the function of service provision be provided by central government through the Department of Water Affairs and Forestry.

The water services sector, including the public sector (central and local government) and the private sector (consultants, contractors and suppliers) were not generally prepared for

the demands for local service provision. This is both from the perspective of the capacity to function on the scale required to begin to meet the demand, and from the perspective of the type of work required at local level in generally impoverished communities. This is a very different environment from working with established municipalities where the engineers are working with expert clients. A considerable reorientation of perspective, approach and ethos was required and is still required to undertake successful and sustainable service delivery.

Substantial work has been done since the 1994 elections in four RDP rounds which has resulted in over 1 million people being supplied with water services. The rate of service delivery, however, is still below expectation with only some 30 - 40 % of the budgets allocated to the Department of Water Affairs and Forestry being able to be spent. At the current rate of delivery, although over a million people have been supplied with services, it will take an extrapolated 60 years to reach the target of universal coverage. With expected population growth resulting in a doubling of population every 20 years it is clear that, at the current rate of delivery, universal coverage will never be achieved - in fact the number of unserved remains on the increase. It is for this reason that the Minister is calling for an acceleration of the rate of delivery. Accelerated rate of delivery implies increasing the volume of work being undertaken, not increasing the speed with which projects are implemented which would sacrifice sustainability.

It is one thing to engage in service delivery and to accelerate the pace of delivery - it is another thing to ensure that the services are sustainable and continue to deliver over time. In recent evaluation exercises it has been shown that a considerable number of projects undertaken in the early stages of the Department's mandate to develop services have encountered difficulties and have proven not to be sustainable.

Existing policy framework

The primary policy of the Department which has driven the water supply and sanitation development programme is the November 1994 White Paper on Water Supply and Sanitation Policy. In the foreword of the White Paper the

statement is made that "the last word in policy is never written", reinforcing the fact that, with new developments and increased experience, policy needs to be dynamic and able to be amended over time. Whilst the 1994 White Paper remains the basic policy document of the Department, new aspects and refinements of policy are included in a number of papers and documents produced by the Department particularly the annual Business Plans. Whilst the 1997 National Water Policy White Paper of the Department is primarily aimed policy relating to water resource management, it includes a number of elements of importance to water services provision.

The basis of government policy regarding water service as set out in the November 1994 White Paper on Water Supply and Sanitation Policy is that water services provision should be a locally driven process which involves the community and all stakeholders in the process :

The principles on which the policy is based are as follows :-

- Development should be demand driven and community based;
- Basic services are a human right;
- "Some for all" rather than "all for some";
- Equitable regional allocation of development resources;
- Water has economic value;
- The user pays;
- Integrated development (ie water and sanitation service delivery must form part of socio-economic development as a whole.);
- Environmental integrity.

In terms of sustainability, these principles are extremely important and have not changed. It is one thing, however, to write policy which is sound and based on a wealth of local and international experience - it is quite another thing to apply it in practice, especially in the face of pressing social, political and economic realities.

Water services provision is a local government responsibility. It is therefore, very important to consider not only the development of water related policy but also developments in local government policy. The publication of the White Paper on local government policy in 1998 is very important. The processes which are being engaged in to implement the local government

policy and to implement the Water Services Act must be coordinated.

Constitutional framework

The Constitution is critical to the framework of the provision of services for two reasons. It sets out the rights and obligations of the individual and the government with regards to basic water supply and it sets out the broad institutional framework for service provision.

The Bill of Rights of the Constitution of South Africa provides for the rights of everyone to a healthy environment. The Constitution specifically guarantees the rights of all people to access "sufficient water and food".

The Constitution also provides for the division of functions and responsibilities for the three spheres of government at National, Provincial and Local levels. Local Government is clearly responsible for the provision of local services to consumers resident within their areas of jurisdiction. National government is responsible for establishing norms and standards for service provision and for support of provincial and local government. In the event of another sphere of government being unable to perform its functions, the national government is empowered by the Constitution to undertake such functions. It is on this basis that the Department of Water Affairs and Forestry is engaged in the provision of water services at local level.

Legislative framework

As in most areas of life in South Africa since the elections of 1994, there has been a need to review the legislation regarding water in the country. Beginning in 1994, a process of legislative review was undertaken by the Minister of Water Affairs and Forestry. Two bodies of legislation have been or are in the process of being prepared. The first is the Water Services Act (Act 108 of 1997) and the other is the National Water Bill which is in the process of preparation.

Services provision by local government is subject to a variety of legislation the most important of which is the Local Government Transition Act. One of the most important related aspects of this Act is the requirement for local governments to prepare an Integrated

Development Plan. The Act also governs how local government must handle financial affairs and administration.

The Water Services Act sets out the norms and standards for water services in the country. The Act requires several activities to be carried out by the water services authority or its agent including the preparation of a water services development plan. The Act also sets out the institutional framework for the provision of services which is discussed below.

The Water Services Act requires action from the Department of Water Affairs and Forestry which is substantially beyond the infrastructure development programme with which the Department has been active over the past three years. The Act requires the Department to undertake a monitoring and evaluation function of all water services wherever they are provided throughout the country. This is an important element as it provides a legal mandate for the Department to ensure the sustainability of services to all customers.

Institutional framework

The institutional framework of water services in South Africa is set out in the Water Services Act (Act 108 of 1997).

The Act contains a number of definitions of institutions which are summarised below. (The text in *italics* is quoted directly from the Water Services Act.)

"Water Service Authority" means any municipality responsible for ensuring access to water services. In other words, a water service authority is local government. This is in accordance with the Constitution which sets out that local government is responsible for service delivery.

"Water Services Provider" means any person who provides water services to consumers, but does not include a water services intermediary. A water services provider is therefore any person, organisation or company which actually supplies water. It may be the water services authority itself (i.e. the local government) or any organisation appointed by it.

"Water Services Intermediary" means any person who is obliged to provide water services to another in terms of a contract where the obligation to provide water services is incidental to the main object of that contract. This is an organisation which performs the function of a water service provider as an extra function to its normal or main activity. An example would be a mine which provide water to residents in the area surrounding the mine.

Water Service Committee. A water service committee is a body which acts as a water service provider when the water service authority is unable to exercise its duties. A water services committee may not be established if the water services authority is "willing and able" to provide services effectively in an area. It must be dis-established when the relevant water service authority is in a position to exercise its functions. A village water committee in a rural area without effective local government would fall under this category.

Water Boards. The primary function of a water board is to supply treated water in bulk to water service authorities (or water service providers, as the case may be.), although they can also function as service providers and supply water direct to consumers in some instances.

Private Sector involvement in the sector is provided for within the Act, within a framework of regulation to protect the public interest, particularly as water services are monopolistic in nature.

The following table (Table 1) describes the main elements of the institutional structure and the bodies responsible for different functions. (Items marked with an * are interim arrangements. Note that some of the descriptions or functions may change as the writing of the National Water Bill is finalised.)

TABLE 1

Water Use or Function (WHAT)	Area (WHERE)	Institution (WHO)	Responsibility (HOW)
Water Resource Management	National	DWAF	<ul style="list-style-type: none"> ▪ Conservation & protection of resource ▪ Allocation / licensing ▪ Large scale water works ▪ Promotion and regulator of "best practice" ▪ Co-ordinator of water resource management institutions ▪ Monitoring and enforcement ▪ Emergency intervention & safety
	Regional	DWAF: Regional Office	<ul style="list-style-type: none"> ▪ Delegated responsibility
	Catchment	DWAF: Regional Office Catchment Management Agency	<ul style="list-style-type: none"> ▪ Delegated responsibility
Bulk Water Supply Raw water (untreated) Treated water	General	DWAF	<ul style="list-style-type: none"> ▪ Norms and Standards ▪ Regulator ▪ Monitoring ▪ Revenue collection
	Inter – catchment (transfers) Regional	DWAF Water Boards	<ul style="list-style-type: none"> ▪ Extraction ▪ Storage (Dams) ▪ Transfer (pipes and pumps)
	Regional	Water Boards Water Service Authority Water Service Provider DWAF *	<ul style="list-style-type: none"> ▪ Extraction & storage ▪ Transfer ▪ Treatment ▪ Storage of treated water
Water Reticulation to end-users <ul style="list-style-type: none"> ▪ Domestic supplies ▪ Industry & mining ▪ Public facilities ▪ etc 	General	DWAF	<ul style="list-style-type: none"> ▪ Norms and Standards ▪ Regulator ▪ Monitoring
	Municipalities Rural Districts Rural villages / settlements	Water Service Authority Water Service Provider Private sector BOTT Water Service Intermediary Water Service Committee Water Board * DWAF * ad hoc Committee*	<ul style="list-style-type: none"> ▪ Treated water provision (direct or purchased) ▪ Storage ▪ Reticulation ▪ Revenue collection and administration ▪ O&M

Sustainability issues in South Africa

Introduction

Since the establishment of the infrastructure development programme by the Department, a great deal of work

has been done and many lessons have been learned. In particular the tension between accelerated delivery and sustainability has been a source of learning. It has become clear that there are problems with sustainability "on the ground" and that some projects which have relatively recently been completed are not functioning properly. In order to learn and document the experiences of past projects an evaluation project was undertaken. The project and its conclusions are

described briefly below in the form of extracts from the executive summary of Synthesis Report on the evaluation project.

Evaluation project

In 1997 the Department of Water Affairs and Forestry commissioned an external evaluation of the Community Water Supply and Sanitation Programme (CWSSP), selecting 3 water supply Presidential Lead Projects,

funded under the first tranche of RDP funding (RDP1). The selected projects reflect a range of the socio-economic circumstances that are the legacy of apartheid:

- Winterveldt, a large (population 223,000) in part densely-settled, peri-urban administrative area in the North West Province, the majority of the population being tenants or squatters on small-holdings;
- Shemula, a region with a medium-sized population (48,000), dispersed in largely traditional rural villages in KwaZulu-Natal;
- Kgobokwane, a single, densely-populated settlement of 12,000 in Mpumalanga.

The overall objectives of the evaluation were, through an empirical and participatory assessment, to:

- Review progress made towards the achieving the objectives of CWSSP.
- Identify lessons which could be learnt to enhance the implementation of future Programme activities.

The evaluation was managed by a Steering Committee comprising representatives DWAF, the Mvula Trust, the Development Bank of Southern Africa, Palmer Development Group and ACER (Africa) over a 7 month period from March to October, 1997. Detailed studies, using a variety of methodologies, were undertaken by specialist teams to assess different project aspects:

- Community impact and community management
- Project management
- Technical aspects
- Financial aspects
- Training
- Environmental considerations, and
- Environmental health impacts.

Evaluation conclusions

There exists a gap between the well articulated and highly regarded policies in the Department 's macro-policy stance and their practical interpretation and implementation. This evaluation demonstrates that profound and ambitious concepts such as a commitment to equitable, demand-driven, community-based approaches, a practical recognition of the economic value of water, user payment, integrated development, and environmental integrity are not always being successfully implemented in practice.

It is early in the life of the CWSSP and there is much to suggest that from the forward-looking and delivery-focused management approach, new responses to problems will be found. But the evidence from these early evaluated projects suggests that serious problems may lie ahead if the Department does not modify key aspects of its micro-policies and project implementation procedures.

The evaluated projects in practice appear expensive relative to the available resources and this is questioned in relation to the "some for all" principle. In many respects these projects have been implemented emphasising water provision as a social, political and (sometimes) free good, have achieved limited effective local-level management capacity, and have not been implemented with adequate reference to environmental risks or the maximisation of potential environmental health benefits. Concentrated ongoing attention is needed or they are likely to go the way of many previous water schemes and enter a cycle of lack of local will and capacity to manage the service, the blossoming of illegal connections, non-collection and non-payment for running the supply and collapse of the service.

Policy and guidelines for sustainable development

Introduction

The following sections set out the policy of the Department of Water Affairs and Forestry on a number of specific issues which have been identified as key factors in the attainment of

sustainability and critical issues encountered in practice. The issues have been identified through the experience of the Department in the course of its work and through the evaluation of past projects. The policy is expressed in terms of the conceptual framework for the achievement of sustainability as set out in the beginning of this document. Each issue is introduced together with a brief statement of the problem, the policy position of the Department and the activities which are required of the various stakeholders in order to ensure sustainable service provision. Each issue will be specifically addressed in terms of the two essential phases of sustainability - the Initiation phase and the Continuation phase.

The objective of these guidelines is to introduce best practice for the activities of the Department of Water Affairs and Forestry and its agents. The Department is not in a position to determine the activities of other spheres of government or other government departments beyond in those areas where it is empowered to do so by the Constitution as discussed above. In the field of the provision of water services (water supply and sanitation) these areas are addressed in the Water Services Act. These guidelines are recommended to other government departments and other spheres of government, however, for consideration in regard to their activities in the interests of co-operative government and best practice.

The issues to be addressed are as follows:

- Sustainability as the primary management objective
- Focus on the consumer/customer
- Identification and support of the Service Provider
- Support for the Service Authority/local government
- Planning and pre-project arrangements
- Resource allocation and project identification
- Financial arrangements and project financing
- Environment, health and community awareness
- Technical standards and guidelines
- Service provision arrangements and levels of service
- Accommodating inherited and failed projects

- Water service business and related plans
- Capacity building and training
- Monitoring and evaluation

Sustainability as the primary management objective

Introduction

The Department of Water Affairs and Forestry is a central player in the national reconstruction and development agenda. Politically, an imperative in this agenda has been the delivery of tangible change, especially in sections of the population previously disadvantaged by discriminatory resource distribution. The improvement of water supply is one such change, and the Department's management has focused on delivering improved water supply to as many disadvantaged communities as quickly as possible. Delivery has thus been a key objective for management.

Policy

The notion of sustainability is explicit in the policy slogan "some for all, forever". However, rapid delivery has been accompanied by a growing list of failed or failing water projects. These are added to water schemes that had fallen into dereliction prior to 1994. Against this background the need for an emphasis on sustainability has been recognised.

Sustainability and *service* delivery are thus central management objectives. Whilst sustainability has been made a key item on the management agendas, it is important that it becomes a part of the internal management *culture*. This will serve to integrate the delivery (planning, implementation) and support (operations, ISD) functions of the Water Services Chief Directorate.

The sustainability/service delivery objective should also flow through the relationships between the Department and other actors in the water sector. The vision is that of achieving a situation where all managers with water and sanitation responsibilities adopt sustainability and service as a primary objectives.

Activity in the Initiation Phase

It is clear that sustainability-driven management is multi-dimensional, dealing with matters as diverse as customer relations and technical standards. In essence, activity in the initiation phase should concentrate on ensuring that the *preconditions* for sustainable service delivery are in place. The transfer of a management culture where sustained service delivery is the objective is not an easy or mechanical task. It may extend beyond the initiation phase in some circumstances.

Activity in the Continuation Phase

An activity central to management with a sustainability focus is monitoring and evaluation, not as end in itself, or purely as a measure of the performance of those delivering project-related services, but as a measure of customer satisfaction. A key outcome of monitoring and evaluation must be the effective remediation of circumstances and processes threatening sustainability.

If sustainability is accepted as a primary management objective, a critical element of management information should be that emerging from the consumers / customers. A management culture focused on project delivery, on the other hand, might not see customer feedback as a priority.

The section below on customers and consumers deals with the theme of customer feedback in more detail.

Focus on the Consumer/Customer

Introduction

South Africa does not have a well-developed consumer culture. This is most evident among disadvantaged groups, where access to essential services has tended to be a matter of dispensation. In this context, providers and users have been locked in an unequal relationship, with users mostly passive and disempowered. An emphasis on the delivery of hardware runs the danger of perpetuating this form of consumer disempowerment,

because it is technically driven and because success is judged by numbers of taps rather than by numbers of satisfied users.

Policy

Delivery by dispensation has been shown to be unsustainable because, among other reasons, users are not required and/or motivated to contribute to cost recovery. This is contrary to the policy of the Department which places emphasis on demand-driven water services provision. Studies all over South Africa have shown that cost recovery potential is greatly enhanced when a good service is sold to willing consumers. Such consumers are customers, and they will remain in a constructive relationship with the provider for as long as they receive perceived value for money. Symptoms of a breakdown in the relationship are retarded payment, non-payment and illegal connections.

Activities in the Initiation Phase

A focus on customers means focusing on sustainable relationships between Service Providers and paying users. An objective for all water managers should thus be to ensure that users become customers in the initiation phase, and that existing customers retain that status during the continuation phase. The Department can contribute by adopting a customer focus in its own activities (ranging from policy development to implementation).

Service Authorities have a critical role to play in providing the right environment for customer development. A lack of political will to encourage cost recovery, and a general lack of accountability in the local government environment will work against customer development. Capacity building and mentoring around a customer focus may be necessary in some contexts.

A key issue is the motivation of Service Providers to adopt and promote a customer oriented approach. Open-ended subsidisation and lack of competition work against the approach. Since water provision is often a local monopoly, it is difficult to promote competition. A form of competition could be facilitated by Service Authori-

ties, by offering contracts to providers willing to deliver a specific level of customer service.

Activities in the Continuation Phase

The major activity in the continuation phase will be that of monitoring the customer service delivered by Service Providers. Ideally, the customers themselves should be the source of such information, but this will require organisation and infrastructure. In this context, the Department will initially monitor customer service issues at a district level through Area Forums. In time the Department will encourage the establishment of consumer desks, possibly under the auspices of District Councils. Existing consumer organisations will be encouraged to assist in such an initiative.

Identification and Support of the Service Provider

Introduction

Service Providers are in the front line of service delivery, so it follows that they are key actors in any initiative to promote sustainability.

Policy

The Water Services Act has made the useful distinction between Service Authorities and Service Providers. In the Department, growing emphasis is being placed on support to Service Providers, but policy in this regard has not been fully developed. This shift has suggested a re-evaluation of the role of Project Steering Committees.

Service Providers must be identified at the pre-project stage of the service provision process. The relationship between the Service Provider and the Service Authority must be formalised as provided for in the Water Services Act. Service Authority support should not be neglected, however, because local government should play a number of key roles in ensuring an enabling environment for providers, and in ensuring that the best providers are active in their areas of jurisdiction.

Activities during Initiation Phase

It is important that Service Providers are identified as early as possible. This process needs to link with the activities of PSCs, but the roles and responsibilities of PSCs relative to Service Providers must be clarified at the outset.

A number of scenarios around Service Provider identification can be envisaged:-

- Where a provider is already available, and where the provider meets Service Authority criteria, negotiations should start as early as possible. The relationship between PSCs and the provider should be considered carefully, but the two should work together. Where a provider is agreed, capacity building and training resources should be directed as necessary to the provider. Among these should be training around a service/customer orientation.
- A second scenario is the situation where several provider options are available. This is uncommon, but it is foreseeable, for example, that private sector and community-based providers will vie for the same work. In an open market, the consumers would make the choice. However the market is not open, and it is not possible to change providers easily. In this context a selection process should be developed, with service delivery and customer focus at its core.
- The most common scenario is that where there is no Service Provider identified at the start of the project. A number of strategies may be pursued in this context. The first is to build local provider capacity, or to support it if it is already present (in the form of a Local Water Committee, for example). This may be particularly appropriate in deep rural situations. The role of the PSC in this situation might be to facilitate Service Provider capacity building and to plan for handover to the Service Provider.

A second strategy is to "import" a provider, either temporarily while a local option is being developed, or

with the possibility of a more permanent role. In many situations, it is necessary to begin thinking about the installation of Service Providers in strategic terms, where the short-term solution is not the desired end-point. For example, a contracted short term provider may be given the brief to build local Service Provider capacity (similar to the BoTT model). In turn, local capacity may be consolidated in the form of service cooperatives or partnerships with District Councils, Water Boards or the private sector.

Activities during the Continuation Phase

From an orthodox project delivery point of view, the promotion of effective Service Providers makes good sense. At issue is the way effectiveness is assessed, and by whom. From a sustainability perspective, success should be judged according to the quality of the service (including its durability). The best judges of this quality are the users, and one expression of approval is the choice to become a customer of the provider. In the absence of competition, it is difficult to guarantee that Service Providers will be customer oriented, but strategies to achieve this will be purposeful subsidy reduction and the promotion of customer sensitive providers by the Service Authorities. A consumer reporting mechanism was discussed in the previous section.

A strategy to deal with non-performing Service Providers has to be developed. This will be most appropriately managed by Service Authorities, who will have contracted the Service Providers in the first place. The monitoring of combined Service Authorities / Service Providers cannot necessarily rely on the process suggested above. In this context an independent ombuds role should be considered.

Support for the Service Authority/local government

Introduction

Constitutionally, local government is the arena for service delivery, including water services. The Department

has placed considerable emphasis on supporting local government, and, in the spirit of co-operative governance, works closely with the Department of Constitutional Development, Provincial departments responsible for local government and with local government at district and municipality level.

Policy

Policy around the role of local government is very clear. It is this sphere of government which has responsibility for ensuring access to water and sanitation services. The distinction in the Water Services Act between service authority and service provider roles provides the Department with the opportunity to develop a more focused policy on local government support. The effectiveness of service authorities and service providers cannot be separated, especially from the perspective of the service delivery process. In this context, a capable and committed service authority can provide the conditions for cost recovery, and can act to promote customer orientation in service providers. The providers in turn can consolidate service authorities by delivering a service that pleases the local electorate.

Activity in the Initiation Phase

In the initiation phase, a key role for the Department is to prepare service authorities for their supportive role in service provision. If the service authority and service provider roles are combined, the assistance should combine both functions. Included in the possible preparatory work are the development of model service provider contracts (including customer-related performance clauses), identification of service providers, assistance in negotiations with service providers, the development and sharing of guidelines for service provider management, and the development and sharing of guidelines for customer-oriented service provision.

Activity in the Continuation Phase

Activities in this phase should ensure that service authorities continue to provide an environment for customer-oriented service delivery, and that they

deliver such services where they act as providers. In this context, there are many dimensions of the relationship between service authorities and service providers that will require monitoring and possible remediation. For example the authority should be a role model by promoting good governance, accountability and customer orientation.

District councils should also act as a facilitator of customer orientation by promoting a measure of competition among service providers. It can do this by basing contracts on service quality criteria, or simply by publicising provider performance in its area of jurisdiction. District Councils may be best placed to pursue the latter strategy, since they might encompass a number of providers. The Department will assist by providing guidelines for the measurement of service quality (including building and retaining a customer base).

Planning and pre-project arrangements

Introduction

Planning is an essential function into which the Department has put considerable effort. Planning is required to co-ordinate the activities of all the role players, to allocate resources, to co-ordinate the timing of activities, to integrate activities and to liaise with related activities and stakeholders.

The Planning Directorate has played a critical role in the implementation of the basic infrastructure development programme of the Department. The strategy has been the development of Area Forums throughout the country as the vehicle for bringing parties together to plan for and manage service provision, to ensure that the processes are owned and controlled by the appropriate parties, and through which to finance projects.

Policy

Planning is a tool - it is a means to an end and not an end in itself.

The role of the Department of Water Affairs and Forestry in planning in relation to the provision local water services is to support local govern-

ment. The plans should be the plans of local government. Local government should formulate the plans with support from the Department. Local government should be responsible and accountable for the fulfilment of the plans.

Planning should take place at a level as close as possible to the sphere of government responsible for implementing the plans. That is, planning should not be done by a "higher" level if it can be done at a "lower" level, although the higher level may need to provide support to the lower level.

Planning for water services should not be done in isolation from other activities and local services but should form one component of the Integrated Development Plan of the area under consideration. These plans will be part of, and should conform to the requirements of, the Infrastructure Development Plans as required by the Second Amendment Act of the Transitional Local Government Act.

Planning should include as many stakeholders as possible. It should be participative but it should in no way undermine the authority, responsibility or accountability of any party to undertake their constitutional or legally required functions.

Planning must be for sustainable service provision. It should not be for undertaking the construction of physical infrastructure only but must include planning for all aspects of service provision, in particular the long-term operation, maintenance, administration and governance of the service. This issue applies particularly to the development of business plans as discussed below.

Activity in the Initiation Phase

All planning undertaken by the Department at national and regional level will take into account the above policy points. The responsibility for planning the activities of the Department will increasingly be that of the regional office of the Department where the proposed development is to take place.

Plans for the initiation phase of a service will include full consideration for the long term sustainability of the

service. (Refer to the Business Plan section below for greater detail.) Such consideration must include details of how the service will function over time, who will be responsible for the large number of activities required to sustain a service, how the service will be financed over time and how customers (consumers) will be kept informed and aware and their rights and responsibilities.

The Area Forums, which are the primary planning body of the Department and local government, will increasingly become the responsibility of local government with the Department moving into a support role. It is particularly important that the Area Forums are not run by outside parties such as consultants. Particular attention is required to develop the capacity of local government representatives to take ownership and control of the forums.

The Project Steering Committee (PSC), the body with the responsibility of representing stakeholders during the implementation phase of development of a water service, should not undertake planning outside of the context of local government or the Area Forums.

Activity in the Continuation Phase

The ongoing provision of services requires planning. Specific plans for the delivery, operation, maintenance, administration and governance of services should be prepared by each local government in terms of the Water Services Act, 1997.

Area Forums will be required to develop plans for the ongoing sustainability of water services (which may be based on or the same as the plans required under the Water Services Act.) These plans will include all of the activities which are required for sustainable services, how these will be implemented, who or which institution will be responsible for each activity, how the service will be financed, what capacity exists to perform the functions, what "gaps" exist in the capacity available, and what provisions need to be instituted in order to fill the capacity gaps.

The Department will plan how it is to fulfil its functions in terms of the new Water Services Act for the support of

local government in achieving sustainable service delivery, both in those areas where the Department has been active in recent years and also in all other areas of the country as required by the Act. Planning is particularly required to support capacity building in local government to enable them to provide sustainable services.

The Department will plan its activities for the support of local government in close collaboration and, where necessary, jointly with the Department of Constitutional Development and relevant provincial departments.

Pre-project arrangements

Introduction

Development experience throughout the world shows that although a service is designed to work for many years, one of the most critical elements in terms of the sustainability of the service is the work that is done (or omitted) at the very outset, at the pre-project stage. This is often the time when a community or consumer group is either "won" or "lost". This is particularly pertinent in the light of South Africa's past history where communities were not considered and where services were installed which did not meet their needs, their expectations or their ability to pay.

A great deal has been learned regarding the nature of demand driven development and its relationship to sustainability. It is during the pre-project arrangements for service delivery that it is critical to determine whether or not the motivation and drive for development is derived from within the community or from outside. Whilst there is undoubtedly a general demand from society at large for services, this should not be extrapolated to the individual community level. When a specific water service is being considered, there are a number of decisions which customers / consumers need to make. These decisions will be made from the perspective of the interests of each household. If the scheme is not considered to be in their best interest, it will not be supported actively. Passive consent should not be construed as demand.

Service provision is a social contract between the provider and the customer. In the past services were pro-

vided after only having considered one party to the contract. It is hardly surprising therefore that the services were not sustainable.

In the light of the experience of the Department over the past few years, the importance of the pre-project stage has been reinforced. For the community to enter into a social contract there has to be real communication between the parties to the contract. The customer body - that is the community - must be aware of its obligations, rights and responsibilities.

A "chicken-and-egg" situation often arises because the pre-project stage occurs before the project is at an advanced stage of development. As a result of this monies are often not budgeted for this important stage. It is because of this reality and a lack of understanding of the importance the pre-project stage that it is often omitted.

On the other side of the social contract to the consumer, in terms of the South African constitution and its supporting legislation, is local government. It is therefore imperative that local government should be involved in the pre-project arrangements. Once the contractor and the Department have left after the Initiation phase, the reality of the relationship between local government and the consumers of the service will be tested.

Policy

The pre-project arrangements are critical to the long-term viability and sustainability of water services. Service provision involves a social contract between the providing authority and the consuming community. It is the policy of the Department of Water Affairs and Forestry to ensure that the community, represented by the local government and other community representatives where appropriate, is engaged in the initial phases of projects. It is also policy that the community expresses discernible demand for services and that the process is not supply led. All stakeholders should be appropriately involved in the initial decisions.

In order for real decisions to be made by the consumers, they need to be aware of the implications of their decisions and their responsibilities. Simi-

larly, local government, as the Service Authority, must be fully aware of its functions and responsibilities. This requires awareness creation at the pre-project stage.

Activity in the Initiation Phase

All Departmental staff and their agents must apply the policy of the Department in relation to assessing the real demand and perceptions of the community during the pre-project phase. The real demand should be demonstrated by the community. Measures for assessing the demand will be included in the KIPs (Key Performance Indicators) of projects.

Local government will be engaged during the pre-project phase and involved in decision making in terms of the functions and responsibilities as prescribed in the Water Services Act. Capacity building and awareness creation activities will be undertaken in order to ensure that the local government can play its proper role during the pre-project phase.

Monitoring and evaluating the effectiveness of the pre-project phase will be undertaken and successful achievement of KPIs will be a prerequisite for remuneration of contractors.

Activity in the Continuation Phase

Pre-project activity is by definition an activity which takes place during the initiation phase. However, continuing awareness creation needs to occur during the whole life of a service in order to maintain customer awareness and avoid misunderstandings and problems arising.

Environment, health and community awareness

Introduction

Sustainability can be considered in a number of contexts. One of these is the institutional and organisational environment that promotes service delivery. Another context is that of the users, the manner in which they use the service, and the way in which attitudes and behaviour around service

use affects quality of life. Environment, health and community awareness are related in a cycle. Lack of concern for issues like water quality and hygiene can affect health and quality of life, and awareness can address this. Once the benefits are realised, this can build further awareness.

Policy

The Department has developed clear norms and procedures relating to water quality and the environment. Concern for the environment is an issue of long term sustainability. However, there are also short-term environmental impacts that can seriously harm water projects. The contamination of sources is the most important of these. Contamination is undesirable in any context, but it is particularly problematic where water is scarce, and where water treatment and water quality monitoring are not present. In addressing the delivery imperative for water, it is easy to neglect sanitation and the disposal of "grey" water.

From a sustainability perspective, it is important to pursue both water and waste disposal services. Service authorities and service providers are frequently not motivated to address sanitation and waste disposal because there is no clearly articulated demand. Communities can collectively express a demand for water, but sanitation and waste disposal are often matters that impact at household level. To promote sanitation and waste disposal services, therefore, it is important to mobilise and empower households. The need to build health and hygiene awareness is well recognised by sanitation protagonists.

Further, whilst building awareness during project implementation serves to build an informed customer base, a broader awareness building process unconnected to specific projects is necessary. This will stimulate demand and the motivation to provide sanitation and waste disposal services.

Activity in the Initiation Phase

Awareness building around health, hygiene and environmental issues should precede project initiation if possible. This should be mobilised where

possible through existing structures like District Councils and Area Forums. Locally, community resources should be mobilised, together with health and community development workers operating at local level.

Training and capacity building initiatives will include awareness building. This will be built into contracts with social and training consultants.

Environmental impact studies should accompany the development of new projects, and should be undertaken where issues of water quality are identified in operating schemes, where directed by the Department. It is important that environmental studies provide management strategies, and that these are practical in the context of existing organisational capacity.

Activity in the Continuation Phase

Awareness building is a process that should not stop. In the continuation phase, it is appropriate that this process should be in the hands of local government and of service providers seeking to establish a sound customer base. Best practice sharing and interaction between communities is a way to facilitate ongoing awareness building.

The Department and the service authorities will require water quality monitoring by service providers.

Technical standards and guidelines

Introduction

Generally in the past, the provision of water supply and sanitation has been the arena of the engineer and has been considered as a technical activity. The inadequacies of this approach have been clearly illustrated in the developing world. However, the appropriate application of technical standards and guidelines play a key role in achieving sustainability.

The Department has produced guidelines for the design and construction of basic water services which form part of the documentation for implementation guiding the work of the Department and its agents.

Policy

Technical standards and guidelines form an important part of ensuring that sustainability is achieved.

Whilst sustainability certainly involves a wide variety of factors which are addressed in this document, the technical viability of a system is critical to sustainability. If the design and construction of the system is inadequate and the system fails to function as required, all the other activities will be to no avail. Technical standards and guidelines must however be oriented towards sustainability and customer needs. Such standards and guidelines must take into account both social and economic constraints.

Although technical elements of projects may be within the areas of expertise of engineers, designs must be discussed with and approved by the water authority who will have the task of operating and maintaining the service in the long run. Awareness creation and training of local councillors may therefore be required in order for them to make informed decisions.

Technical design should provide for basic operation and maintenance to be carried out at local level with consideration for the levels of technical expertise which are likely to exist at local level. Projects should include training of local people for these activities.

Operation and maintenance should be the ongoing task of local government supported by District Councils which should, in turn, be supported by the provincial authorities, the Department of Constitutional Development or the regional office of the Department of Water Affairs and Forestry, whichever is appropriate. During the initiation phase of service delivery attention should be given to the capacity of these institutions to perform these functions. Their existing capacity must be assessed in order to establish where capacity needs to be developed. In terms of the function of the Department as required by the Water Services Act, the proper functioning of services in all local environments is the concern of the Department, not only in those areas where the Department has been the source of funds for basic service provision.

Activities for initiation

The guidelines produced by the Department for the technical design and construction of projects must be adhered to.

In the specification of plant, such as pumps, hand pumps, electrical equipment etc., consideration must be given to the maintenance and repair of such plant. Spare parts and maintenance and repair expertise must be locally available and reasonably priced. All designs must specifically address this issue to the satisfaction of the Department.

Water supply and sanitation systems must be "designed for sustainability". This includes all aspects of sustainability including such issues as cost recovery and ease of maintenance and operation. Consideration for how the service will be run as a sustainable business including such issues as metering and future upgrading of levels of service will be specifically taken into account during the design stage.

The local authority must give approval of designs. Capacity building and training must also be provided such that the local authority can make informed decisions regarding the technical aspects of the project.

Activities for continuation

It is imperative that systems of technical support are established at all appropriate levels in the appropriate institutions so that ongoing operation and maintenance of services can happen at local level. The Department will establish procedures in each province to monitor the water services at local level and the functioning of support processes. The Department will develop programmes for ongoing support, training and re-training. In conjunction with the Department of Constitutional Development, the provinces and SALGA.

Service provision arrangements and levels of service

Introduction

The concept of service provision needs to be seen from the perspective of the water services authority and services provider. The activities in each case are described in the 'Framework for establishing water services providers in rural areas' and are summarised in Table 3 above.

In this section only those activities relating to the water services provider function are addressed.

Policy

In order for service provision to take place sustainably, a wide range of activities need to be performed properly, primarily by service providers and secondarily by those who support them. Key policy issues in this regard have already been addressed elsewhere in this document, including: the central role of services providers; financial arrangements; proper planning; and an overriding emphasis on the customer.

Further policy positions relating to service provision are stated below.

Project steering committees (PSCs)

PSCs need to be seen as subservient to water services providers and, in turn, to water services authorities. However, they retain an important role in the project planning and project implementation as bodies to assist the services providers and, less directly, the water services authority. Their function is to broaden the participation of stakeholder groups during project planning and project implementation.

Implementing agents

For a sustainable programme, it is essential for a broad range of implementing agents to be supported. Ultimately these agents should be contracted to service providers. However, in the medium term contracting to water services authorities should be seen as the objective, to replace the existing situation where implementing agents are contracted to the Department.

Service levels

With demand based principles founded on a set of financial rules for grant finance, the need to set specific minimum service levels falls away. The approach then becomes one of using the resources made available by the state in the best way possible to achieve the highest level of service possible while maintaining the affordability of the system.

Operations

Proper arrangements for operating and maintaining water services are the essence of sustainability. For this to be successful operations must be properly planned up-front within the financial constraints established in the business plan; staff, whether formally or informally appointed, must properly identified and trained; sound arrangements need to be set up for supplying fuel, materials and spare parts; and contracts need to be set up for carrying out major maintenance.

Activities for initiation

It has been mentioned that, for water services to be sustainable, water services providers need to perform all of their key activities adequately. The important issues from the point of view of sustainability are dealt with in the box below.

Detailed services provision requirements

Governance and administration

A water services provider needs to have a governing body in the form of a board, council or committee. The structure of this body is defined by law for formally established services providers while guidelines are available for informal community based organisations.

For smaller services providers the board, council or committee would carry out the administration function while for larger services providers this would be done by others either employed or contracted to do the work.

The key issues from the point of view of sustainability is training and mentorship.

Customer relations

The issue of customer relations, and the crucial importance of this activity for sustainability, has been dealt with earlier in this document.

For this activity to be carried out successfully, it is necessary for responsibility for it to be assigned to a particular individual and for proper liaison arrangements to be set up. This may include mass meetings, customer surveys, complaints desks, house visits etc.

Finance

The finance (treasury) function also needs to be assigned to a specific individual, either a council, board or committee member in the in the case of smaller services providers or an employee or contracted body in the case of larger services providers.

Proper financial management is perhaps the most important activity for sustainable service provision and it is thus essential for this to be done satisfactorily. The sub-activities which form part of the finance or treasury activity (or portfolio) include raising capital, setting tariffs, keeping accounts, billing, collecting income and following up on debtors.

Planning

The business plan

From the point of view of a water services provider the key plan with regards to sustainability is the business plan. Although business plans are currently required for all projects these are in fact closer to project plans or project feasibility studies. New thinking is required in this regard with the emphasis to be placed on long term sustainability.

Business plans need to have at least five year time frames and should focus on customers, demand for services, customer relations, income policy and affordability before they deal with projects.

Relationship to the Water Services Development Plan

A water services provider is bound by the conditions of their contract with the water services authority. This contract will have as its basis the water service development plan (WSDP) and thus the services provider is bound by this plan. This implies that business plans need to be drawn up within the context of the WSDP.

Level of service

It is becoming well recognised that for water supply and sanitation projects to be sustainable customers must be provided with the level of service which they want, providing they can afford to pay for the service. In a rural water supply context this means that a range of service level options need to be available, including:

- Unreticulated supplies including wells and boreholes with handpumps
- Reticulated supplies with public standpipes
- Yard tanks
- Yard taps
- House connections

While the national policy currently states that everyone should have access to a supply within 200 metres of their dwelling recent studies have shown that this is not possible for everyone as the capital costs are often too high to achieve this, particularly in scattered settlements. Further, the provision of such supplies may only be achievable with very high operating costs which are not affordable to customers. This renders the system unsustainable.

Business planning needs to be undertaken with a variety of level of service options in mind, tailored to customer requirements.

In the case of sanitation the level of service options in rural areas are constrained by the high cost of reticulated (waterborne) sanitation in low density conditions. Nevertheless, while on-site sanitation systems such as VIP toilets may be the most widely applicable due to their cost effectiveness, other sanitation service levels need to be considered.

Demand for services

The key element of the planning process is the assessment of demand for different service levels. In order for this to be done properly, various scenarios need to be investigated and costed. Provisional capital finance arrangements and tariffs then need to be made so that customers can be offered options with associated payment requirements. In this way the demand for services can be assessed and projects can be planned and implemented to give customers what they require in a situation where they know what it will cost them and where the payments are seen as reasonable in relation to their household budgets.

A planning model and guidelines for planning in the context of mixed service levels is under preparation.

Projects

The project cycle

A project includes a cycle of activities which includes services provider and contractor training, project planning, design, construction and setting up ongoing operational arrangements.

Steering and managing the project

The importance of identifying the service provider before the project is commenced has been mentioned. The service provider then needs to play a key role in steering the project, in accordance with the project plan which, in turn, fits within its business plan and the water services development plan.

Project implementation has a substantial impact on the community the project is serving. Therefore they have to be involved in many of the decisions taken. While the water services authority and services provider

represents their interests, this level of representation is generally not sufficient during the project implementation phase. Thus the establishment of a project steering committee (PSC) is necessary. The PSC should provide for representation of all local stakeholders. While it may be best if it is chaired by a representative of the water services authority, distance and capacity will often mean this is not possible. Then a local leader, who may also be the chairperson of the body acting as the water service provider, would need to chair the PSC.

At least 40% of the PSC members should be women.

The day to day management of the project should be carried out by a project manager appointed by the implementing agent. The project manager would be tasked with implementing the project in accordance with the project plan, steered by the PSC.

Project planning

The business plan sets the basis for a project plan essentially by giving financial limitations, level of service requirements and overall criteria for implementation and operating of the system. Within this framework a project plan needs to be prepared dealing with the technical, financial and management issues associated with the project.

Project implementation

The actual sub-activities associated with project implementation (design and construction) are well understood in South Africa and well covered by existing documentation.

Training and support

Training and support for the various roleplayers throughout the project cycle is an essential part of building sustainability. This aspect is covered elsewhere in this document.

Implementing agents

The implementing agent is directly responsible for implementing the project. From a sustainability point of view it is best for this implementing agent to be contracted to the water services provider as it is this latter body which must take primary responsibility for managing the project after completion. However, in a situation where public money is involved, the next best option may need to be used where the contract is entered into with the water services authority (generally the district council).

The current situation with the WS is that the implementation agent is contracted directly to the Department. This has been done primarily as water services authorities currently do not have sufficient capacity to manage the contracts. However, as water services authorities build capacity it is essential that they are made contractually responsible.

There are currently a range of implementing agents used in South Africa, including BOTT contractors, Mvula Trust, water boards and local government. At this stage it is important for the diversity of agents to be maintained, so that competition takes place and broad based capacity can be built.

Activities for continuation

Many of the activities described above under 'initiation' are also central to 'continuation', notably governance and administration, customer relations, finance and business planning. But the key activity for continuation is 'operations'.

Operations

The term 'operations' refers to the operating and maintenance activity which is necessary to keep water supply and

sanitation systems running in the long term.

This requires the employment of staff, the purchasing of consumables such fuel, electricity and chemicals, purchasing of spare parts for maintenance work done directly by the services provider and the contacting of others to do major maintenance work.

It is not possible to describe all of the activities which are required for successful operations in this document. Some guidelines are available relating to this topic and further work needs to be done to improve the support for

services providers in carrying out this activity.

Accommodating inherited and failed projects

Introduction

Historically, rural water supply projects in South Africa have been implemented with insufficient attention paid to sustainability; all too often in the past the emphasis has been on project implementation rather than service provision. This has meant that many

water supply systems are no longer operating properly for a number of reasons.

These projects represent a substantial investment and, generally, funds spent now on rehabilitating them will represent better use of resources when compared to constructing new projects. Such an approach is consistent with a sustainability ethic.

The situation with sanitation is somewhat different: so little attention has been paid to sanitation in the past that very few 'projects' have been implemented.

Non-operational or partially operational water supply systems can be grouped into three categories, based on the action to be taken to make them fully operational:

- Rehabilitation: situations where the infrastructure is damaged and requires substantial repair.
- Upgrading: situations where previous projects provided a low level of service and where current policy allows the service level to be improved.
- Service provision: situations where a properly functioning service provider is not in place.

Policy

General approach

As mentioned previously in this document the general approach is to identify systems which are non-operational as part of the water services development plan. The cost of bringing these systems back to operational condition needs to be assessed and then they need to be prioritised in relation to other projects in the WSA area.

It is suggested above that these non-operational projects be given a relatively high priority.

Service provision

With regard to service provision, specific projects will have to be set up to support the establishment of service providers for existing systems which are not operating properly. These projects will not require capital finance but

will need finance to cover training and capacity building.

Implementation

In general the implementation of projects to bring non-operational systems on line again should be carried out using implementation procedures similar to those used for new projects. The main difference will be in the relatively low amount of capital finance needed per capita.

The lack of capital intensity of such projects is likely to discourage implementing agents from undertaking this work. Further criteria should be set to ensure that adequate attention is paid to strengthening service providers in settlements where there is existing infrastructure.

Water service business and related plans

Introduction

In terms of the conceptual framework presented at the beginning of this document, the primary activity of the Water Services Branch of the Department is supporting the provision of water services which are sustainable. This is a very different activity to that of undertaking water supply and sanitation projects. Water service provision is a business of considerable complexity.

In the early stages of the RDP programme directly following the 1994 general elections in South Africa the terminology "business plan" was widely used to mean the planning for the implementation of the project itself rather than for the planning of a long term service. It has become increasingly apparent that sustainability is unlikely to be achieved unless the business plan is regarded as the plan for the provision of the service within which the actual construction phase is but a small part.

The new Water Services Act requires that each water Service Authority develops a water service plan. These plans are explicitly set out in the Act and include all necessary activities for the provision of ongoing and sustainable services. It is the Department's responsibility to monitor and evaluate these plans and to support local water

Service Authorities in the preparation of such plans.

All planning of water services must integrate with and comply with the requirements of local government legislation such as the Local Government Transition Act, Second amendment.

Policy

Water service provision is a complex business activity requiring thorough planning which includes all aspects of the service. Planning spans several years including the ongoing activities of provision of service and the related activities of revenue collection, administration, operation, maintenance, governance and support.

The drafting and approval of business plans must be done in conjunction with local authorities particularly as they carry the constitutional responsibility for providing services and will have to live with the consequences of the planning process. It is very unlikely that a service will be sustainable if those who are responsible for ensuring its continued functioning are not involved in its planning, particularly in the longer term activities which include collection of revenue and administration.

The Department will support local government and other appropriate institutions in the preparation of the water services development plans as described in the Water Services Act.

Activities for initiation

All business plans must incorporate a plan for how the service is to be operated for an initial period of at least five years after construction. Such business plans must indicate clearly the financial planning for the service including revenue collection, other income from inter-governmental transfers, anticipated expenditure etc. The plan must also include how the service is to be administered and governed. Where the service is to be run by a Service Provider which is not the Service Authority the Service Provider must prepare the business plan which must be approved by the Service Authority. The business plan must be prepared in collaboration with the Service Authority.

Business plans must incorporate the support which it is envisaged will be required and from whom such support should come.

Activities for continuation

Business plans need to be updated and kept current if they are to have any impact and lasting value over time. This is both the requirement of the Water Services Act and good practice. Such ongoing planning requires thorough monitoring and understanding of how the service is functioning and how the consumers view the service. Business plans therefore need to be re-viewed annually and occasionally completely new business plans will be required.

Capacity building and training

Introduction

In the context of RDP project delivery imperatives, capacity building and training are of central importance. However, capacity building and training initiatives have often been poorly targeted and inadequately evaluated. Capacity is complex and multi-dimensional. It resides within groups and organisations, but it is also dependent on the relationships between groups and organisations. Certain thresholds of capacity are necessary for sustainable service delivery within communities, but this capacity has to reside in a broader enabling environment of policy, proven practice and support. In many cases, local capacity building has to be accompanied by the building of capacity in the institutional hierarchy that supports the local organisation.

Policy

The Department has produced capacity building and training guidelines for use primarily in RDP implementation. However, these guidelines have more general applicability, and should be used as a reference by all service authorities and providers. Contracts for social scientists are also being piloted at present, and the lessons emerging from this should contribute to greater clarity and accountability among capacity building and training practitioners.

Activity in the Initiation Phase

The idea of capacity thresholds is common currency, and this should be used to guide and target capacity building. For sustainability, however, the elements of capacity building that create the conditions for self-generation should be prioritised. These include planning and problem solving skills, customer relationships, cost recovery, and reliable and appropriate networks of support. The latter includes links between service authorities and service providers, and links between service providers and the suppliers of technical and institutional support. In this context, it is important in the initiation phase to identify service providers early, and then to build the capacity and networks outlined above. In many cases, purposeful capacity building should be preceded by more general awareness promotion.

A "scatter gun" approach to capacity building and training is both wasteful and counterproductive. It is counterproductive because it raises unfounded expectations, frustrates those who never get to use the training, and encourages some newly trained people to seek opportunities elsewhere. Hence it is important to target capacity building and especially training during the inception phase. This targeting has several dimensions: train the right people; deliver the right training; use the most effective and durable methods.

Train the right people. From a water service delivery perspective, training and capacity building should prioritise service providers. In this context the existing model of PSC/community training should be modified. If the PSC is to become the service provider, or if it is linked to the service authority, the investment of significant training resources is warranted. However, if its role is to be that of a temporary project management body, then training should be appropriate to this task. In some cases, service authorities may require orientation and training support, but this should not be the primary concern of the Department. Naturally service providers have to be identified as early as possible to permit meaningful capacity building and training. If possible this training should run concurrently with the planning and construction

of water projects, with a close link between the two.

Deliver the right training. Just as it is unproductive to train the wrong people, so it is also wasteful to deliver the wrong training. The usual manifestation of this is that the training is too broad, in the expectation that a portion will prove useful to the recipients. Careful training needs analysis is one way to target training (especially once the right people have been identified). However, the best way is to develop a detailed management plan for the system in question, with job descriptions. Where the identified providers are able to fill these jobs without training, none should be undertaken. Where training is seen to be needed, it can be focussed and practical. Training for service authorities, where needed, might include guidelines for contracting and monitoring service providers, and the establishment and maintenance of conditions supporting good provider / customer relations.

Use the most effective methods. Orthodox show/tell methods of capacity building and training are useful, but interactive and experiential approaches should be encouraged. Among these are best practice sharing, the development of detailed service provider-driven manage and problem solving strategies, and self-monitoring. As capacity building tasks become more defined and more effectively targeted, and as interactive and internally-generated capacity building is employed more frequently, the need for formal training is reduced.

Training and capacity building should take place in a supportive environment. Timing should take account of the readiness of the trainees, and of the institutional environment in which the training will take place. For example, the training of a service provider that is unacceptable to a community is a waste of resources.

Conditions for monitoring and evaluating training should be agreed in the inception phase. Clauses should be built into contracts with trainers and development practitioners, and service authorities (and / or independent monitors) should be briefed on how to evaluate the in-service performance of trainees.

Support networks should be identified during the inception phase, and where

possible firm relationships should be agreed.

Activities in the Continuation Phase

It may be necessary to retrain or to do additional training under a variety of circumstances: the service provider is not able to perform some tasks adequately, the service authority is not able to deal with its role, new responsibilities are added due to modifications to the water supply system or to the way in which the system is managed. Further training must be undertaken with reference to information from a monitoring and evaluation process.

For monitoring and evaluation to be effective, it has to have an institutional home. Customers are the most relevant critics of service authority / service provider performance, and feedback from customers should be promoted wherever possible. Where the provider and the authority are separate bodies, the authority should be a vehicle for monitoring and evaluation. Where they are combined, an ombuds function might have to be established. Service-oriented providers should also be willing to monitor themselves.

Ideally, capacity building and training should never stop. The most sustainable source of ongoing training and capacity building is the water institutions themselves. The sharing of best practice among like-minded authorities and providers is a promising vehicle for ongoing capacity building, but this will require appropriate institutional support. Area Forums could be one forum for best practice sharing.

Monitoring and evaluation

Introduction

The monitoring of local water services, the evaluation of the information derived from monitoring activities and the changing of practice arising out of evaluation is a critical process for ensuring sustainability. This is the process whereby learning occurs and through which best practice is established.

A separate set of guidelines is being prepared by the Department to cover monitoring and evaluation. The monitoring and evaluation guidelines should be read in conjunction with these guidelines. The issue of monitoring and evaluation is therefore only briefly mentioned below.

Policy

It is the policy of the Department of Water Affairs and Forestry to ensure that all activities undertaken by the Department or its agents is monitored and that such activities are evaluated for effectiveness and in terms of the spending of public monies. With regards to water services, it is not only the policy of the Department to monitor its own activities but it is also the Department's responsibility, in terms of the Water Services Act, to monitor the activities of all bodies engaged with the function of water services provision.

Activities for initiation

The monitoring of the initiation of services to ensure that they will be sustainable in the long run is critical. Where service provision is undertaken to the Department, the Department will ensure that all activities are monitored and evaluated in terms of its guide-

lines. Monitoring and evaluation will seek to ensure that the issues which have been raised in this document are addressed and that sound principles which will ensure sustainability are applied.

Activities for continuation

It is essential that services and the institutions which provide them are monitored to enable problems to be identified as early as possible. As repeated on numerous occasions in this document, services can never be established which will continue to function without any problems. It is therefore essential that monitoring processes are established at all appropriate institutional levels to provide early warning of problems with the sustainability of the service. Monitoring is therefore part of the support structure which is essential for sustainability. Monitoring as simply a process of gathering information, however, is of little value if the information is not evaluated and if there is no process for acting on the outcome of the evaluation.

Conclusion

Sustainability of water services is the objective of the Department of Water Affairs and Forestry. It is of no service to the people of South Africa if the services which have been so heavily invested in are not sustainable.

It is for this reason that these guidelines must be rigorously adhered to by the Department and its agents.

As experience is gained these guidelines will be updated and amended.

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