
DEPARTMENT OF WATER AFFAIRS AND FORESTRY

DIRECTORATE: POLICY AND STRATEGY

FREE BASIC WATER

Implementation Strategy 2007: Consolidating and maintaining

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Prepared by



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List of acronyms used

DM	District Municipality
dplg/ DPLG	Department of Provincial and Local Government
DWAF	Department of Water Affairs and Forestry
FBW	Free basic Water
LM	Local Municipality
SFfWS	Strategic Framework for Water Services
WSA	Water Services Authority
WSP	Water Service Provider

1 Introduction

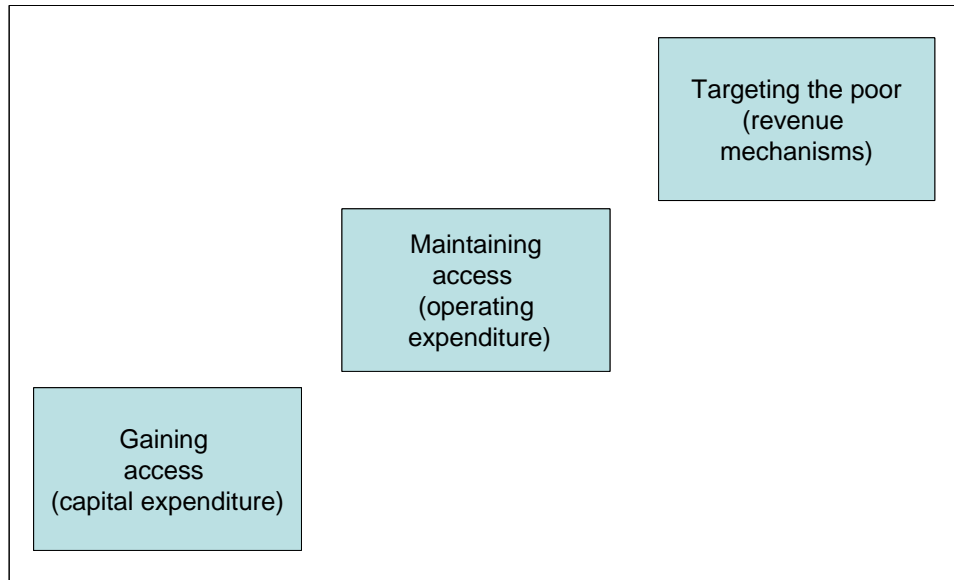
The purpose of this document is to set out an implementation strategy that is responsive to the changing context, current implementation challenges and is informed by lessons learnt during the past five years of implementation.

Among the key considerations in terms of the changing context is the fact that 5 years ago the primary concern was that poor households, who could not afford to pay for services, were expected to pay for potable water supply *from existing water supply infrastructure*. This resulted in the following negative consequences:

- Those households who could not afford would opt for unsafe sources even where safe water supply was available from public infrastructure
- Municipalities continued to expect payments from poor consumers and reflected these “unrealistic” payments in their budgets leading to high “unexpected” non-payment levels at the end of financial years.
- In many cases, consumers, even those who could afford were not paying for services leading to negative financial impact on municipalities.

Therefore there was a need to ensure that there was a strategy that would guide provision of services in such a way that those who could pay were made to pay while those who could not afford to pay were provided an adequate amount of free potable water within the limits of ensuring continued financial viability of municipalities and, therefore, sustainability of municipal water supply systems.

Following from these consequences the emphasis of the strategy needs to remain that of ensuring that the revenue collection policies and practices of municipalities provided for an adequate supply of free potable water to poor households, while ensuring continued financial viability of municipalities and the sustainability of their water supply systems. But there is also a need for the strategy to respond to current challenges and be informed by latest thinking with regard to the role of government in alleviating services poverty. This thinking is reflected in recent policies and practices of national government and some municipalities. Among these is the Framework for a Municipal Indigent Policy developed by DPLG in 2005. This Framework policy refers to three parts of an indigent policy as shown in the diagram below:



Source: Framework for a Municipal Indigent Policy

Figure 1: The Framework for a Municipal Indigent Policy: three parts of an indigent policy

The Strategy as adopted in 2002 does not adequately deal with “gaining access” and maintaining access”. In this regard there has also been recent innovative thinking with regard targeting the poor in some of the municipalities e.g. the Joburg Social Package Policy which adopts this ‘three step’ approach.

Over the past three years there has, also been an increasing recognition of the fact that issues are different in different categories of district and local municipalities; the revised strategy and related implementation support tools need to demonstrate an improved appreciation of this reality.

This document includes much of the information from the previous strategy document as this is a continuation of one process. It also draws on experience gained over the 5 years since the free basic water policy was launched.

It is acknowledged that much of the ultimate responsibility for delivering free basic water rests with local government. However, they have to operate in a context which enables them to provide subsidised services effectively. This includes appropriate national subsidy arrangements and guidance and support from other spheres of government. This document therefore focuses mainly on how government can provide the context for the detailed implementation strategies of local government.

2 Problem Statement

Implementing a free basic water policy successfully is a complex task which requires a wide range of issues to be addressed both nationally and locally. The process of implementation will also differ across municipalities. Given the very different organisational capacities, income and service level profiles of municipalities; some will find it relatively easy to implement the policy while others will face severe constraints. This is borne out through experience over the last 5 years where relatively better capacitated and largely urban municipalities have generally been successful in implementing free basic water strategies locally, while poorly capacitated and largely rural municipalities are still struggling with implementation. Currently more than two thirds of poor households receive free basic water. The majority of the remaining one third is

households that do not have access to water supply infrastructure. The focus of this strategy therefore should be on ensuring that there is increased access to water infrastructure by the poor while maintaining access through sustainable operational arrangements that should include appropriate subsidy targeting mechanisms to minimize 'leakage' of subsidies intended for the poor to wealthy consumers.

The 2002 strategy identified the following as constraints that an implementation strategy had to overcome:

- a) *financial*: how to finance and target the supply of free basic services in a sustainable and efficient manner;
- b) *socio-political*: how to establish successful communication and co-operation between consumers, councillors, local government officials and different spheres of government;
- c) *institutional*: how to develop the required organisational capacity and working relationships between different institutions
- d) *technical*: how to choose the appropriate technical and service level options to facilitate free basic water.

These continue to be areas that need attention. However, over the past five years it has become clear that institutional capacity constraints are more significant.

The SFfWS also identifies the following as key challenges of the free basic water policy:

- The provision of the infrastructure (facilities) necessary to provide access to water to all households.
- The development of subsidy mechanisms which benefit those who most need it (including households in remote rural areas, especially those served by small local systems and vulnerable groups such as households headed by women or children or affected by HIV/Aids).
- The equitable treatment of large households and multiple households sharing one connection.
- Collecting revenue for services rendered over and above an allocated free basic amount.

A study by DPLG in 2005 to determine progress with and challenges faced by municipalities in the provision of free basic services (DPLG, 2005) identified a number of challenges. These included the following:

- Policy challenges – especially consistency in defining indigent households and targeting (poor vs. all)
- Implementation challenges – including use of indigent registers, infrastructure backlogs, and appropriate levels of service
- Financial – including inadequate funding and financial planning
- Capacity – technical skills shortage and shared learning
- Monitoring – poor monitoring and duplications in information requirements by national government
- Planning and sustainability – lack integration in planning and inability to develop long term plans
- Local partnerships – strengthening the role of ward committees
- Communication – communication support
- Coordination between national government departments and municipalities – including alignment of support initiatives

This document proposes strategic approaches to overcome most of these constraints and challenges. It does so with reference to local and international experience; technical and service level issues; and the respective roles of different actors in the water supply system.

3 Policy Objectives and Clarification

3.1 Volume of water: What is a basic amount?

The Minister of Water Affairs and Forestry announced in February 2001 that government had decided to ensure that poor households are given a basic supply of water free of charge. He said that Cabinet had approved a policy to provide 6 000 litres of safe water per household per month (Kasrils, 2001). This standard relating to the amount of a 'basic' level of water supply, that is, a level sufficient to promote healthy living, comes from international practices and norms that recommend 25 litres per person per day. This amounts to about 6 000 litres per household per month for a household of 8 people. The volume of 6 000 litres per month was therefore set as the target for a 'basic' level for all households in South Africa using 8 as an average number of people per household.

Over the past 5 years concerns have been raised regarding the adequacy of the amount of water provided. These questions related to both the adequacy of 25 l/cap/day and the average household size assumed in the policy. Government as, stated in the SFFWS, is also committed to supporting households to step up the water ladder by reviewing the basic level from 25 to 50 litres per person per day.

Municipalities relate to consumers in terms of the points of access to particular municipal services not in terms of household units. In some cases a group of people living on a plot which has a single water supply and/or electricity connection may be made up of more than one household unit. The municipality relates to this group as one unit, a consumer unit. A consumer unit, therefore, may comprise more than one household, particularly if there are multiple dwellings on a plot. Therefore a blanket allocation of a given amount of free water per consumer unit may result in free water being over-supplied to some dwellings, especially single dwelling households, but under-supplied to some dwellings in multiple dwelling units.

Further, it needs to be noted that the figure of 25 litres per capita per day was not intended to provide for toilet flushing. Where consumer units are utilising flush toilets, the amount of free water per capita per day should be in the range of 35-40 litres in order to enjoy the benefits intended by the free basic water policy.

The above points suggest that the WSA needs to understand the sizes and the sanitation facilities of the consumer units to which it is intending to provide free basic water rather than just supplying 6kl per month. Therefore based on the local circumstances, local authorities have discretion over the total amount to be provided per household with the national target being a minimum of 25l/cap/day excluding water for flushing in the case of use of waterborne sanitation.

The supply of free basic water is based upon a policy decision that can only be implemented within a well developed legal framework for water services. The legal parameters in which the policy operates is discussed later in this document and specifically in section 4.5.

3.2 Continued extension of water services

A significant number of South Africans still lack *any* access to an adequate level of water supply. According to Census 2001, approximately 3 million households had inadequate water supply in

2001. The following diagram shows trends in the reduction of backlogs since 2001 according to data gathered by DWAF. This data has been analysed for different municipal sub-categories in order to assess where the backlogs actually occur.

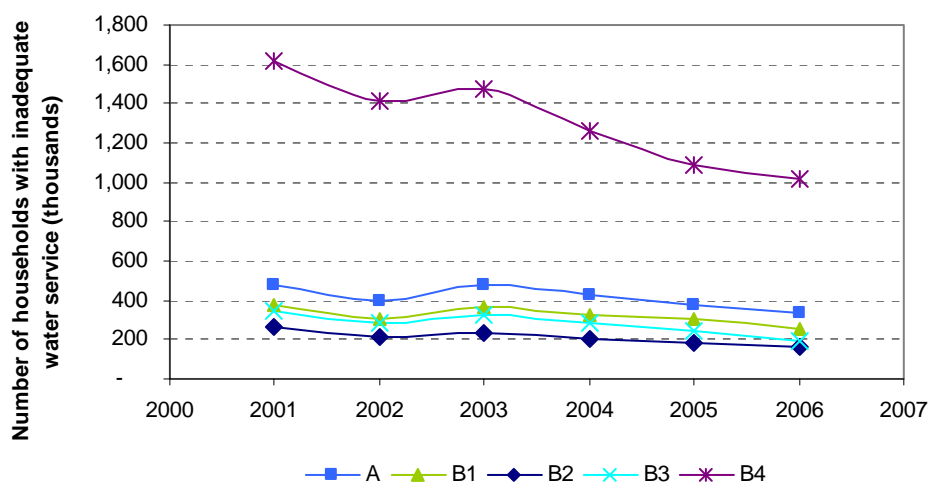


Figure 2: Trends in water supply backlogs in municipal sub-categories according to DWAF data¹

The above trends show a decline in backlogs that is consistent across municipal sub-categories. It shows that the greatest progress has been in rural areas (B4 municipalities and the districts which serve them). It also shows that the cities still retain substantial backlogs.

According to this data, the distribution of the backlog has remained almost unchanged since 2001.

Table 1: Distribution of water supply backlogs in 2001 and 2006 by municipal sub-category

	Share of backlog	
	2001	2006
A	16%	17%
B1	12%	13%
B2	9%	8%
B3	11%	10%
B4	52%	52%

The above table and graph show that access to infrastructure remains major issue, especially in rural areas. Clearly if a household does not have access to a basic supply of water the provision of a *free* basic supply cannot occur. Therefore the continued extension of adequate water supplies to

¹ A, B1, B2, B3 and B4 are based on a sub-categorisation of the three categories of municipalities, as applied in other policy initiatives, based on the following features as obtaining in their municipal areas:

- A: Metros
- B1: Secondary cities: the 21 local municipalities with the largest budgets.
- B2: Local municipalities with a large town as core
- B3: Local municipalities with small towns, with relatively small population and significant proportion of urban population but with no large town as core
- B4: Local municipalities which are mainly rural with communal tenure and with, at most, one or two small towns in their area

unserved households must remain at the core of any provision of free basic water. In fact more attention needs to be given to accelerating the reduction of backlogs in B4 municipal areas.

The 2002 strategy focused on the provision of a *free basic level* of water supply to those households already having at least access to water supply infrastructure. It did not deal with the continued roll-out of water services. Given progress with regard to provision of free basic water services to households already having access to a basic water supply infrastructure, this revised strategy will also deal with the issues of accelerating roll-out and maintaining existing water services.

3.3 Who are the intended recipients of free basic water?

The primary intended recipients of free basic water are poor households. However, there is currently no commonly accepted definition of a poor household in South Africa.

The DPLG's Indigents Policy Framework recognises the inability to access income as one of the most obvious expressions of poverty. However its definitions of poverty also refer to the "absence of capital such as land, access to natural resources, or to the importance of social and intellectual capital and even the climate of democracy and security necessary to enhance the capabilities of the poor and excluded". It further recognises "an additional institutional dimension of poverty that recognises that the poorest in the nation are those who are unable to access state assistance designed to provide a social safety net because of institutional failure". The Indigents Policy Framework described the experience of economic exclusion or poverty by indigent households as often linked to exclusion from access to basic services. This is where the primary role of municipalities, which is to provide services, becomes important. Through improving access to services, municipalities can have a major impact on poverty.

In other words the poverty definition provided by national policy is a broad and all encompassing one. Therefore municipalities have an important role to play in defining local poverty indicators and identifying households that fall within this category in terms of the indicators. Local and international experience indicates that it is appropriate that local authorities continue to have primary responsibility for defining poverty thresholds and identifying such households. It is likely that, due to cost differences across the country and due to other local issues (such as seasonal unemployment in some areas), specific local poverty indicators will be more appropriate than national indicators.

The use of household income or expenditure for assessing level of poverty is always difficult but is necessary if targeting using 'indigent registers' is used. The DPLG Guidelines for the Implementation of the National Indigents Policy by Municipalities provide a detailed methodology. If such a method is to be used it is notable that national initiatives to redistribute funds apply the following:

- At present the Equitable Share of national revenue transferred to local government is on income level as an indicator of poverty (currently R800 a month).
- MIG funds are distributed based on household expenditure of R1 100 per month.
- Eligibility for housing subsidies is set at R3 500 per month.

The emerging consensus with regard to the definition a poor household, as proposed in a document published in the National Treasury website titled "A national poverty line for South Africa", is that a poor household should be defined as a household that does not have enough money income required to attain a basic minimal standard of living – enough to purchase a

nutritionally adequate food supply and provide other essential requirements. Stats SA has estimated this amount of money income to be R322 per capita per month in 2000 prices. This yields R431 per person per month in 2006 prices and R3 448 per household of 8 people in 2006 prices. This will be further refined as the national poverty line discussions spearheaded by National Treasury reaches finality.

WSA must begin to think in terms of targeting in line with the national poverty line.

3.4 Sanitation linkages

In certain situations there may be difficulties in reconciling current sanitation policies with a free basic water strategy. For example, as discussed above where poor households have waterborne sanitation, the amount of free basic water provided will have to be substantially higher to provide for flushing.

Often water and sanitation are dealt with by the same departments at the local level and financial viability of one service may affect the other. The free basic water policy therefore may have negative impacts on the provision of sanitation and local authorities will have to consider the implications at the local level.

This issue of integration of a free basic water policy with a possible free sanitation policy is being given attention by government. There is a broad policy decision to supply free basic sanitation. The DPLG Indigents Policy Framework includes sanitation. Significant progress has already been made towards a policy definition of 'free basic sanitation' and a detailed policy framework for implementation. Therefore this document does not deal with water supply issues related to free basic sanitation.

3.5 Legal framework

The legal framework for implementation of Free Basic Water is essentially that of tariff setting which is guided by the Constitution of the Republic of South Africa (Act No 108 of 1996), the Local Government: Municipal Systems Act (Act no. 32 of 2000) and the Water Services Act (Act No. 108 of 1997). The relevant clauses of these acts will be briefly outlined below:

- The Constitution says in section 152 that one of the objectives of local government is "to ensure the provision of services in a sustainable manner"
- The Municipal Systems Act in section 74 says that : "A municipal council must adopt and implement a tariff policy on the levying of fees for municipal services provided by the municipality itself or by way of service delivery agreements, and which complies with....any other applicable legislation"
- The Municipal Systems Act in section 75 says that : "A municipal council must adopt by-laws to give effect to the implementation and enforcement of its tariff policy"
- The Water Services Act determines in section 10(1) that: "The Minister may, with the concurrence of the Minister of Finance, from time to time prescribe norms and standards in respect of tariffs for water services" and following that in section 10(4) stipulates that: "No Water Services Institution may use a tariff which is substantially different from any prescribed norms and standards". Such norms and standards for tariffs have been promulgated by the Minister of Water Affairs and Forestry. In this Regulation 3 (2) a water services institution must consider the right of access to basic water supply and the right of access to basic sanitation when determining which water services tariffs are to be subsidized.
- The Water Services Act Section 4(3)(c) states that procedures for limitation or discontinuation of water services must not result in a person being denied access to basic water services for non-payment, where that person proves, to the satisfaction of the relevant water services authority, that he or she is unable to pay for basic services.

In summary then:

The provision and operation and maintenance of water services infrastructure services and setting of tariffs is a local government responsibility. Tariffs are to be determined within a clear framework of norms as provided for in both the Municipal Systems Act and the Water Services Act as well as the tariff regulations. It means on the one hand that tariffs must cater for poor households by means of special tariffs or a zero tariff but on the other hand financial sustainability of the service must be ensured. This is the challenge that municipal councils will face, taking into consideration their unique local circumstances.

3.6 Timing

Many local authorities commenced implementation on or before the 1 July 2001, when tariffs for the 2001/02 financial year were promulgated. However, in local authorities with a large proportion of rural consumers the task proved to be more difficult as there was a lack of information, institutional arrangements needed to be set up and new financial procedures were required.

As stated earlier, the Strategic Framework for Water Services set a target that free basic water policies would be implemented in all services authorities by 2005. According to the DWAF website only 5 WSAs are yet to adopt policies and implement free basic water policies. Consequently 74% of poor households with access to services at least at RDP level are served with free basic water. The challenge is to increase access to free basic water to the remaining 26% and to households that currently do not have access to infrastructure. This has to be accomplished by 2008/9, in accordance with SFFWS targets.

4 The free basic water strategy 2007

This section seeks to explicitly outline the strategy for improving and maintaining access to free basic water supply to poor households. In line with DPLG's Indigents Policy Framework; the strategy deals with

1. Gaining access – extending services to the unserved
2. Maintaining access – establishing sound operating arrangements to ensure that services are properly managed
3. Targeting the poor – subsidy allocation

4.1 Gaining access

Currently, 17% of South Africans do have access to adequate water supply. And about 60% of those without access to adequate water supply are poor (DWAF, 2007). There is therefore a need to accelerate public investment towards provision of water supply infrastructure to improve access.

A DPLG study in 2005 (DPLG, 2005) indicated that most of the estimated R65 billion capital investment has to focus in the metropolitan areas and rural areas under the authority of district municipalities. In the case of metropolitan areas the investment is likely to be linked to housing projects developments and to some extent provision of transitional solutions for informal settlements. In the case of rural areas, gaining access relates to investment in water supply infrastructure to provide established communities and dwellings in villages and upgrading of informal settlements in rural towns.

4.1.1 Service levels and technical solutions

A key aspect of investment in order to ensure sustainable provision of free basic water is the choice of appropriate technical options that is informed by a service level policy

The requirement to supply a free basic level of water implies a need to either measure or control the amount of water supplied free. Certain service level options address this by their nature (such as standpipes and flow limiting options where consumers are unlikely to consume more than 6 000 litres per month). Other service levels allow unrestricted consumption and these must be metered and managed

The mix of service levels will be an important tool available to local authorities in implementing the policy. DWAF produced a *Water Supply Service Levels Guide* (DWAF, 2000). The range of service levels discussed in the Guide is listed in Table 2 below, together with comments on their applicability to a free basic water implementation strategy.

Table 2 Water supply service levels and their applicability to free basic water

Description of service	Application	Suitability for 'free basic water'
<i>Rudimentary systems:</i> Hand pumps on boreholes, spring protection etc	There will always be rural areas which can not feasibly be provided with reticulated systems; rudimentary systems are inexpensive	With low capital and operating cost and inherent limitations on the amount which people can use this is well suited to a 'free basic water' policy. However, for the service to be 'free' this implies that a WSP will carry out maintenance at no cost to consumers. The capacity to do this must be in place.
<i>Communal street tap:</i> Tap shared by a number of consumers.	While communal taps have been used in urban areas their widest application has been in rural areas where this has been the most common service level provided under water supply programmes over the last decade.	Communal taps are a low cost option well suited to providing water to poorer consumers. It is seldom that consumers would use more than 6 kl with such a service and therefore this service level is well suited to a service level targeting approach. However, often the costs of such a service are not low enough to make FBW feasible.
<i>Prepaid communal street tap:</i> Communal tap with a prepaid meter	This option has been introduced recently in a number of areas with mixed results. Depends on community acceptance.	If up to 6 kl is to be provided free than the need for a pre-paid meter falls away as no payment is to be made.
<i>Low pressure trickle feed yard tank:</i> Tank, typically 250 litres, located in yard with flow control device in tank. Permanently connected to network.	Yard tanks have a major benefit in that they provide a restricted supply at a fixed monthly charge. They also allow for a cost effective reticulation design. This version (trickle feed) offers the benefit that bailiffs do not need to open manifolds on a daily basis. However, the tank can be easily bypassed.	In the context of a 'free basic water' policy yard tanks are an important service level as they provide a relatively high restricted flow service level (less than 6 kl/ month). Typically in urban areas the tariff for the tank would be set at zero. This fits well with any of the poverty relief options (rising block tariffs, targeted credits and service level targeting). In rural areas the feasibility of providing this service level at zero tariff is uncertain.
<i>Low pressure manually operated yard tank:</i> A tank which is filled from a manifold on a daily basis.	Has the same benefits as the trickle feed tank with the following exception: the daily manifold opening is labour intensive. However, the tank can not be bypassed.	As for the trickle feed tank, there is wide application for this type of service in a 'free basic water' context. Manual operation will be more applicable in rural areas.
<i>Low pressure regulated yard</i>	Similar to a yard tank but does not	As for other yard tank options, this is well

<i>tank</i> : A tank with a regulator (equity valve) at a node point on the reticulation.	require daily opening of a manifold. Bypassing of the tank brings no benefit to the consumer and therefore is not a problem.	suited to a 'free basic water' initiative.
<i>Medium pressure manually operated roof tank</i> : Unregulated flow to a tank on the roof directly from reticulation, with metering.	Has limited application as a service between normal metered supply and yard tanks. Main benefits relate to saving on reticulation costs. May be a good upgrading option.	No particular benefits: needs metering, billing and credit control systems.
<i>Medium pressure regulated roof tank</i> : A roof tank version of the low pressure regulated yard tank.	This option is also based on having a regulator at node on the reticulation. Therefore it allows for restriction of flow without the risk of bypassing.	This is well suited to a 'free basic water initiative'. It allows a relatively high service level with limited flow volume.
<i>Full pressure conventional house connection</i> : the standard system with a direct full pressure connection to the reticulation, metering and billing.	While named a 'house connection' system, the 'yard tap' is also included under this category. This is the highest level of service but it requires an effective metering and billing system to function properly.	This service level generally has to be integrated with a 'free basic water' initiative. If it is used with service level targeting then it would be assumed that those which have it can pay cost reflective tariffs. For situations where the poor have access to this service level then a rising block tariff or credit system needs to be in place.
<i>Full pressure prepaid house connection</i> : Conventional connection but with prepaid metering.	The inclusion of pre-paid metering avoids the necessity of reading meters and billing. Non-payment is not an issue but tampering with meters can be a problem.	Most prepaid meter systems provide for rising block tariffs and the option of having a zero first block. In this case they are suited to a 'free basic water' initiative.

From the analysis above some principles relating to service levels can be outlined:

- *Importance of mixed service levels*: In all but the wealthiest municipalities it is important to have a range of service levels to offer to consumers. This allows appropriate service levels to be matched to the ability of consumers to pay. Thus becomes even more important under a 'free basic water' policy, as noted in the table. A so-called 'low level' trap should be avoided i.e. one in which the water supply system is never improved because consumers are only willing to pay small amounts for their current service level. Given the option, many consumers would opt for a higher level of service and be willing to pay more for this service.
- *Importance of flow restriction*: The availability of options which restrict the flow to consumers is an important attribute of a good local 'free basic water' policy. It allows people who cannot afford to pay more to only get a basic supply (poverty relief consumption level). In cases where there is an existing system with direct connections from the reticulation to the yard, flow limiting becomes difficult. However, Ethekwini has facilitated the development of an electronic flow restrictor which allows only a fixed amount to be supplied each day. This has had limited success.
- *Metering*: Under a free basic water policy it is essential that all unrestricted supplies are metered. Households with unrestricted supplies or unrestrictive service levels are likely to consume more water. This would be consumption that the WSAs would not have budgeted to provide free. It is therefore essential that this additional amount is known and accordingly billed so that such households may pay for it. The installation of meters must at all times be properly communicated to users or else resistance and even vandalism may be experienced that will destroy all such good intentions.

- *Appropriate design standards:* A key component of a local ‘free basic water’ policy is the provision of water at the lowest cost possible while still maintaining a good quality of service to consumers. In order to keep costs down this implies that appropriate design standards must be applied.

4.1.2 Institutional capacity to manage capital investment

Institutional capacity is currently not a serious constraint to investment in metros and other large urban areas although there are well-publicised shortages of engineers in municipalities generally. On the other hand it has proved to be serious constraint in rural areas where capital budgets have often not been spent. In rural areas the great majority of spending on water services is financed from the Municipal Infrastructure Grant (MIG). The MIG programme includes requirements for setting up Project Management Units (PMUs) and the effective functioning of these units is essential for success. While good research is not available on the performance of PMUs, there is evidence that many of them are seriously under-performing. Improving this performance is thus central to ensuring the success of the ‘gaining access’ component of this strategy.

4.2 Maintaining access

There are two key strategic areas with regard to maintaining access. These are:

- Establishing sound institutional arrangements to ensure that services are properly managed; and
- Water services infrastructure asset management

4.2.1 Institutional arrangements and organisational capacity

It has already been observed that institutional capacity is probably the biggest constraint to sustainable provision of free basic water.

The role of WSAs in ‘orchestrating’ appropriate organisational relationships

The water services authority is the body that has the constitutional obligation to ensure that people get water and sanitation services. The Water Services Act (RSA, 1997) and the Municipal Structures Act allocate this obligation to municipalities. This arrangement allows the obligations to consumers in the area to be strengthened by the fact that the service authority is governed by councillors elected by these consumers.

A municipality which is assigned a water services authority function may undertake the water services provision function itself or it may contract this out to another body such as another local authority, a water board, a private company or a community-based organisation.

The diagram below shows the relationship between potential components of the WSA-WSP ‘chain’, linked by contractual agreements. The diagram illustrates the importance of a chain of contracts between WSPs that follows the water cycle from resource (controlled by a catchment management agency (CMA)) to consumer and back to resource via the wastewater infrastructure. Further the diagram illustrates the need for the WSA to ‘orchestrate’ these relationships through its own contract with each WSP.

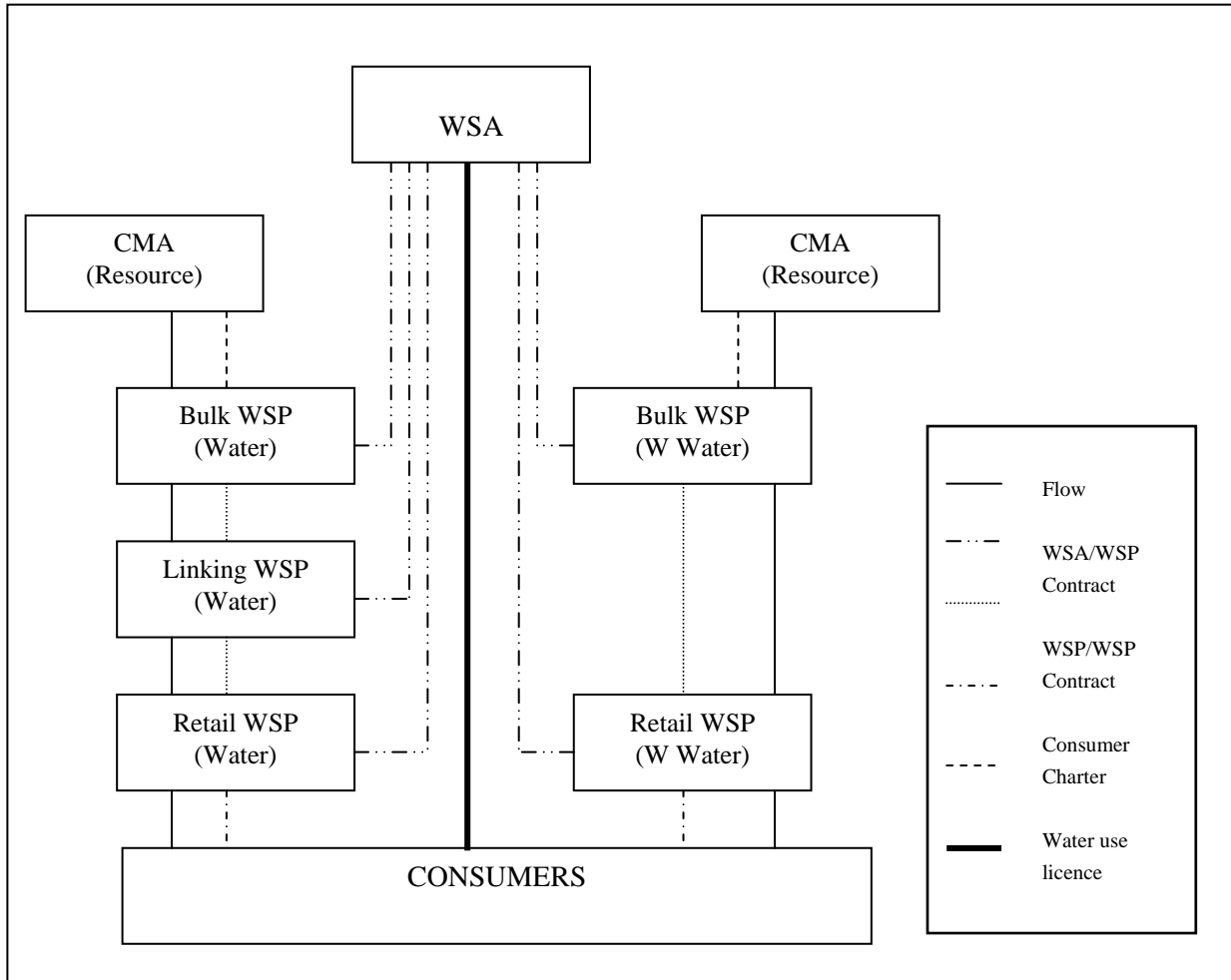


Figure 1 – Relationships between WSA and WSP's

It will seldom be the case that each part of the supply and return water chain is contracted out separately. Often water supply and wastewater services are provided by a single WSP (horizontal integration), or the water supply and/or wastewater chain, from resource to consumer, is contracted out to a single WSP (vertical integration).

With the exception of a few metropolitan municipalities, the important role of “orchestrating” the institutional arrangements outlined above has not been fulfilled by most WSAs. It is therefore important that WSAs address this gap.

Regulation of water services

A related aspect is the regulation of water services. This is meant to take place at two levels; the national level and local level by WSAs. Significant progress has been made towards establishing regulatory environment at a national level. However, very little is happening in this regard at local level. The situation is proving to be even direr in cases where WSAs have opted for internal mechanisms of water services provision because of poor or nonexistent performance management systems. WSAs will have to focus on establishing appropriate institutional and regulatory arrangements if the provision of free basic water is to be sustainable.

Institutional arrangements in smaller settlements

Over the past five years proper implementation of free basic water in rural areas has lagged behind. The dominant situation has been the unsustainable practice in which all rural consumers including non-poor households, institutions (schools, health facilities, churches etc) and businesses have been consuming relatively large amounts of water, well outside free water provisions, and not paying for this. Linked to this was very poor service provision characterised by poor maintenance, illegal connections, vandalism and unclear mechanisms of subsidising service costs. One of the main reasons for this has been weak WSP arrangements in these areas.

The option of using CBOs as service providers offers benefits for smaller settlements or groups of settlements (typically less than 5 000 people), notably:

- Arrangements can be informal and costs can be kept low.
- CBOs are close to their consumers.

Due to the findings from research, together with practical experience in South Africa, this type of arrangement has been strongly promoted by DWAF in the past. Unfortunately it does not appear as if WSAs have accepted this option.

A key criterion for success of CBO WSP arrangements is the provision of support services to the CBO. The support service may be provided by an external organisation or an internal capacity with the WSA. The concept of a 'support services agent' (SSA), a private organisation or NGO contracted to provide the necessary support, has been tested in the Eastern Cape, with some success.

Some district Municipality WSAs have contracted to local municipalities to be WSPs. This has had very limited success in the case of rural settlements with most LM WSP focusing much of their attention in towns.

DWAF water supply schemes

DWAF is the *de facto* WSP of 318 water supply schemes around the country (National Treasury, 2007), primarily in former homeland areas. The Department is in the process of transferring these schemes to WSAs. Where the WSA does not have the capacity to undertake the water services provider function, in addition to being the WSA, it is necessary for a newly contracted WSP to take over this responsibility from DWAF.

The financial arrangements during transfer are critically important. This requires a transition from a situation where DWAF is fully subsidizing the operating cost of the services to one where there is a mix of cost recovery from the users of the service (or 'downstream' WSPs) and funds from WSA resources such as the equitable share.

Private sector water services providers

The feasibility of using private sector WSPs in urban areas, and the methodology for doing this, is becoming well understood in South Africa, particularly through the experience with Queenstown, Nelspruit and Dolphin Coast. In rural areas there has not yet been significant involvement of the private sector in water supply but if the constraints can be overcome private-public partnerships may become important in these areas as well.

A free basic water policy will impact directly on private WSPs, and WSAs will have to work closely with private providers in implementing the free basic water policy. In areas where private WSPs are already providing water some re-negotiation of contracts may need to occur. This will

have to occur within the framework of the regulations governing contracts with WSPs under section 19(5) of the Water Service Act (DWAF, 2001). In areas where WSP contracts with private providers are still to be instituted, it is evident that the following basic requirements must be in place:

- Clear local institutional arrangements.
- Capital and operating subsidy rules with sufficient operating subsidy to make the service affordable.
- Planning taken to stage where water resources are identified and feasibility of operations can be demonstrated.
- Agreed service levels and service quality.

The structuring of viable WSP areas will be crucial to success. It is probable that these will cover larger settlements with larger schemes, at least for the medium term. For smaller settlements private sector WSP options will be less viable and CBO options with support arrangements will often be more appropriate.

Water services intermediaries

The Water Services Act defines a water services intermediary as: '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 a contract'. Examples of intermediaries are body corporates of flat buildings, farmers who have farm labourers living on their properties and mining companies who operate 'private towns' for their employees. In each case the intermediary provides the consumer with services but this is done as part of a service contract in the case of body corporates or an employment contract which includes housing in the case of farmers and 'private towns'.

DWAF has produced two very useful documents that may assist WSA to deal with issues of water services provision to households supplied by intermediaries. These are

- Water Services Intermediary Explanatory Guideline, version 1, 20 May 2002; and
- Ensuring Water Services to Residents on Privately Owned Land: A Guide for Municipalities, Version 1, July 2005

With regard to free basic water, intermediaries are a special case and influencing the tariff charged to the consumer by the intermediary requires particular arrangements, as discussed later in this strategy.

4.2.2 Water services infrastructure asset management

Water services infrastructure asset management, includes, *inter alia*, keeping of a register of assets and ensuring that rehabilitation or renewal (requiring capital expenditure), maintenance and repair (requiring expenditure in the operating account), and provision for replacement of infrastructure takes place.

The focus on providing water supply to the unserved in the last decade has, to some extent, unintentionally resulted in underinvestment in maintenance and refurbishment of existing infrastructure. This is beginning to tell as infrastructure is beginning to collapse in some urban areas especially rural towns.

Appropriate levels of expenditure in infrastructure maintenance will be key to sustainable provision of free basic water.

Further, most of the existing water supply infrastructure has exceeded its design life span. It is therefore imperative that WSAs develop and systematically implement programmes of refurbishing or replacing obsolete infrastructure.

DWAF has appointed a team, led by the CSIR, to assist it to undertake a national WS infrastructure asset management strategy study. The objectives of the initiative can be summarized as to:

- Investigate state of infrastructure in WSAs and other WSIs including the state of existing and non-existence of asset management plans
- Investigate the state of management of water services infrastructure;
- Identify key factors that drive these states and identifying elements needed for an enabling environment to ensure sound asset management
- prepare a plan of action for the WS sector; and
- prepare a Water Services sector asset management policy

The initiative is currently at Phase 3 the objective of this phase is to support municipalities to practise sound asset management.

4.3 Targeting the poor

4.3.1 Approaches

A free basic level of water supply can be supplied to consumers in three ways and these three basic approaches are suggested as the core of the free basic water implementation strategy. The approaches most widely applicable in SA are²:

- A rising block tariff (with a free basic amount to all who consume within the first block).
- Targeted credits or subsidies (typically using household income or expenditure as one way of identifying beneficiaries).
- Service level targeting.

It is recommended that flexibility remains at the local level in the use of these options. It is also likely that a mix of these options may need to be applied in any one municipality.

The choice of approach remains a local decision but one largely dictated by local circumstances.

Those municipalities with very low capacity and a high proportion of poor consumers may have to rely in part or full on a service level targeting approach where limited service levels are used which by their nature only supply a basic amount of water. However, even in these areas it may be necessary to recover some costs from those consumers who can afford basic services.

Table 3 Three options for free basic water supply

	Option 1 Rising block tariffs	Option 2 Targeted credits	Option 3 Service level targeting
Description	Rising block tariff is applied to all residential consumers, with the first block typically set from 0 to 6 kl with a zero tariff. No fixed monthly charge	Each consumer who is selected for poverty relief gets a credit on their water account which would typically be sufficient to cover the charge for the poverty relief amount (often 6kl per	Those service levels which provide a restricted flow, (below the poverty relief consumption level) are provided at no charge.

² There are other methods applied internationally, some of which are covered in an appendix to this document. One of these is geographic targeting but this has not seen significant application in SA.

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	applicable to those using below poverty relief consumption limit.	month) free.	Those with higher service levels pay the normal tariffs, except for poor consumers who historically have high service levels.
Targeting method	No targeting (first 6kl free to all). However, targeted fixed monthly charge may be necessary for holiday areas.	Requires a system for identifying those who require poverty relief. Typically this is based on a benchmark poverty indicator (household income or household expenditure).	Targeting takes place through selection of service level by the consumer (or authority in some cases).
Applicability	Mainly larger urban municipalities. Not suited to situations where there is a high proportion of holiday homes unless it is supplemented with a targeted fixed monthly charge.	Can be used in large municipalities but more typical for middle to small sized, largely urban municipalities. Requires a billing system to be in place for all consumers.	Best suited to municipalities which are largely rural in character.

Table 4 Method of selection

	Option 1 Rising block tariffs	Option 2 Targeted credits	Option 3 Service level targeting
Advantages	Consistent with current approach to use rising block tariffs. Does not require targeting. The 'free basic water to all' message can be applied but is misleading. Larger consumers typically pay more.	Suited to situations where there are fewer larger consumers. Relatively simple to apply from an accounting point of view. Easy to integrate with other services where a 'free basic service' policy is being applied.	Suited to municipalities with lower capacity and large proportion of poorer consumers. Typically does not require a metering and billing system for restricted flow service levels.
Disadvantages	Only applicable where there is a relatively high proportion of larger consumers. Requires an effective metering, billing and credit control system.	Requires a system to select those who are to benefit from poverty relief measures. Requires an effective metering, billing and credit control system.	Targeting may be poor if there are a large proportion of households using restricted flow services. Will only work if metering, billing and credit control system for unrestricted flow service levels is effective.
Residential frequency distribution requirements	Typically requires 30% of residential consumers purchasing more than 20kl/month	Only dependent on frequency distribution if poverty relief is to be partly or wholly funded from water account.	Not relevant unless poverty relief is to be funded from income raised from consumers with metered connections (which is seldom possible).
Impact of non-residential consumption	Typically requires more than 20% of water sales to be to non-residential consumers	Only relevant if poverty relief is to be funded from non-residential consumers.	Generally there is only a small proportion of non-residential consumers and it is not possible to fund poverty relief from income raised from them

Experience shows that the following approaches are usually best applied:

- **Rising Block Tariff** - Applied to all residential consumers, with the first block typically set from 0 to 6 kl with a zero tariff. No fixed monthly charge applicable to those using below poverty relief consumption limit.

- **Targeted credits or subsidies** - Each consumer who is selected for poverty relief gets a credit on their water account which would typically be sufficient to cover charge of poverty relief amount.
- **Service level targeting** - Service levels which provide a restricted flow, (below the poverty relief level) are provided at no charge. Those with higher service levels pay normal tariffs, with the possibility of applying credits in exceptional cases.

4.3.2 Large consumer units

As discussed earlier, consumer units with multiple dwellings may have more than working average of 8 people used in determining the 6kl amount. Options have been used in some municipalities e.g. Ethekwini where residential consumer units with a large number of people can apply for an additional allocation of free water.

5 Financing free basic water

The three options presented above provide a delivery framework for implementation of the free basic water policy. They do not however completely address the question of where the financial resources for the implementation strategy will come from.

It is evident that a number of local authorities will be unable to finance free basic water to all consumers (especially alongside other free basic services) solely from internal cross subsidies because some of them have a very small revenue base. Nearly 48% of the total population of the country live in municipalities with average 1999 per capita incomes of less than R720 per month³ (DPLG, 2000). The central challenge of the free basic water policy is therefore addressing the financial constraints.

Addressing the financial constraints require three issues to be addressed:

- *Reducing costs*: the lower the costs the easier to subsidise services;
- *Ensuring sufficient resources are available*: assessing the costs of the subsidy programme and ensuring that sources of revenue internal and external to the local authority are adequate;
- *Targeting the subsidy at poor households*: making sure that resources devoted to the subsidy are targeted to eligible recipients.

5.1 Reducing costs

The costs of supply of water services greatly affect the ability of municipalities to provide free services. Local authorities must, through such measures as appropriate infrastructure standards and management of water losses, reduce costs.

Bulk water is a major cost driver in water services. In those areas where bulk water is cheap it becomes relatively easy to implement a free basic water policy.

A case study of the then Lichtenburg Municipality demonstrated the importance of bulk water costs in the financial viability of free basic water provision. The municipality was sourcing its own bulk water from groundwater and it managed to supply water to consumers at a price of R0.34 per kl in 1997/1998. Given the bulk water costs, the municipality could provide a free basic water supply to consumers in 2001/2002 in the areas of the municipality where it sourced its own bulk. In the areas of the municipality where it had to buy bulk water from a water board, the greater costs of water prevented it from providing a free level of service. In these areas the municipality paid R1.10 for bulk as opposed to its own costs of R0.40. Similarly, a case study

³ This is based on pre-demarcation municipal boundaries

research from Ethekwini indicated that the cost of bulk water was high as a proportion of retail prices in international terms. Although this information was case-study based and not representative it did point to the need to keep bulk water prices as low as possible (with due regard to water conservation imperatives).

5.2 Financing free basic water capital expenditure

A study which assessed the financial viability of water services authorities (DWAF, 2006) projected the capital expenditure on water services over a ten year period as shown in the following diagram.

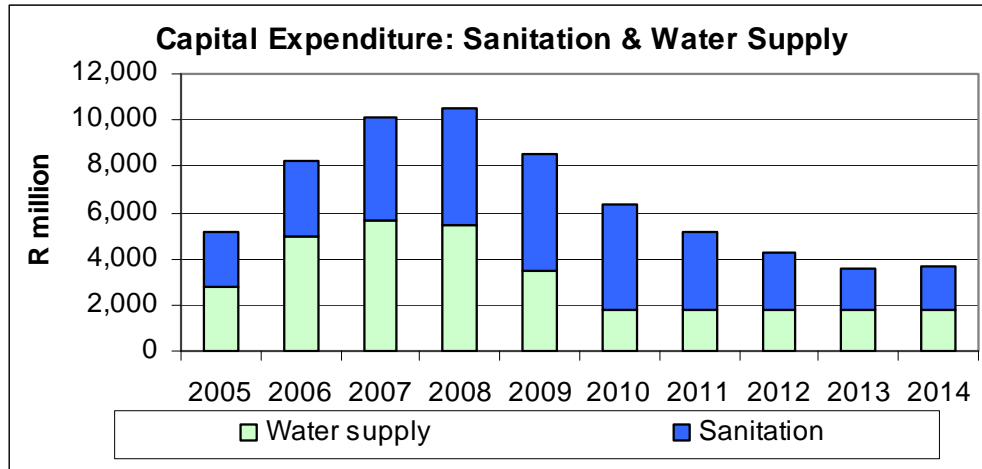


Figure 3: Capital expenditure profile for water supply and sanitation (national total)

If the national targets to provide services to all are to be met, it is evident that capital expenditure will have to increase rapidly to about R10 billion a year in 2008/09. The 10 year total amount from 2005 to 2014 was projected at R65 billion.

The main sources of funding for capital expenditure for water services are the Municipal Infrastructure Grant (MIG), the housing subsidy and own sources of funding which include borrowings and transfers of surpluses from the operating account. The capital finance profile as was projected in the study is shown below:

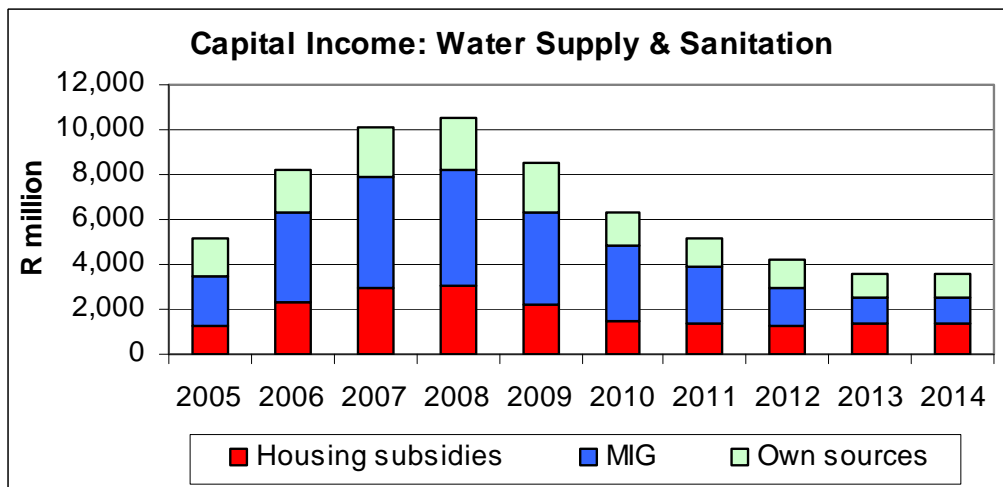


Figure 4: Capital finance required for water supply and sanitation (national total)

Table 5: Source of capital for national water services programme

<i>Source of capital</i>	<i>Amount over 10 years (R billion)</i>	<i>Split</i>
Housing subsidies (portion allocated to water services)	19	28%
MIG	30	46%
Own sources	16	25%
Total	65	100%

The study showed that the water services infrastructure investment programme is reliant primarily on grant finance. However, it also important to note that substantial level of borrowing is required (R2 billion a year at peak) in order to provide for services to those consumers who are not poor.

5.2.1 Municipal Infrastructure Grant (MIG)

As shown in the following table MIG will have increased from R2.4 billion in 2003/4 to above R9 billion by 2009/10. Over the 2007/8 – 2009/10 MTIEF period R24.7 billion is available for the MIG programme.

Table 6: MIG allocations

R million	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10
	Outcomes			Revised	Medium term estimates		
Municipal infrastructure grant	2,442	4,481	5,436	6,756	7,549	8,053	9,130
% Increase		83%	21%	24%	12%	7%	13%

Of the above amounts the amounts in the following table are allocated in terms of the MIG formula whose conditions are more flexible, designed to support the capital budgets of municipalities, and to facilitate integrated development. The water services component of MIG is part of the B component of the MIG formula⁴. The allocation per sector is as per weighting provided in the Explanatory Memorandum of the Division of Revenue (National Treasury, 2007), as reflected in the following table.

⁴ The MIG formula is as follows:

$$\mathbf{MIG} = \mathbf{B} + \mathbf{P} + \mathbf{E} + \mathbf{N} + \mathbf{M}$$

B: Basic residential infrastructure (new and rehabilitation of existing infrastructure) – water supply, sanitation, electricity, roads and other (street lighting and solid waste removal)

P: public municipal service infrastructure (new and rehabilitation of existing infrastructure)

E: Allocation for social institutions and micro-enterprises infrastructure)

N: Allocation to all nodal municipalities

M: Negative or positive allocation related to past performance of each municipality relative to grant conditions

Table 7: MIG formula allocations

		2006/7	2007/8	2008/9	2009/10
MIG formula allocations	Weighting	6,256	6,481	8,003	9,080
B component	75%	4,692	4,861	6,002	6,810
Water and sanitation	72%	3,378	3,500	4,322	4,903
Electricity	0%	0	0	0	0
Roads	23%	1,079	1,118	1,381	1,566
Other	5%	235	243	300	341
P Component	15%	938	972	1,200	1,362
E Component	5%	313	324	400	454
N Component	5%	313	324	400	454

The above means that R12.7 billion is available from MIG over the 2007/8 – 2009/10 MTIEF period for water services capital expenditure towards provision of free basic water services to the poor. This is of the same ballpark as was projected in the DWAF study referred to above. This means that, over the 2007/8 – 2009/10 MTIEF period, the MIG component of the sources of capital finance is adequate to provide for the provision of free basic water services to the poor if the other sources contribute as per projections.

However it is of importance to note that the MIG formula includes the **M component** which is a negative or positive allocation related to past performance of each municipality relative to grant conditions. This underscores the importance of ensuring adequate institutional capacity to manage capital projects if municipalities, faced with huge backlogs of water services access to the poor, are to attract or at least retain their MIG allocations.

5.2.2 Housing subsidy

As shown in Table 6 it was projected that if the national water services programme was to be viable, the housing subsidies portion allocated to water services had to be in the order of R19 billion or 28% of the programme capital costs in the ten year period between 2005 to 2014 or about R8 billion over the 2007/8 – 2009/10 MTIEF period.

The Integrated Housing and Human Settlement Development Grant Programme targets the eradication or formalisation of informal settlements on a phased basis by 2014. The expenditure allocated to this programme over the 2007/8 – 2009/10 MTIEF period is R29.6 billion. It is set to reach R11.5 billion by 2009/10 as shown in the following table.

Table 8: Housing subsidy allocations

	2006/7	2007/8	2008/9	2009/10
Housing subsidy (R million)	Revised	Medium terms estimates		
	6,404	8,238	9,853	11,531

If about 27% of this amount per year is spent on water services infrastructure then the required amount from the housing subsidy will be available. As is evident from the subsidy objectives; housing subsidies are likely to be mostly spent in urban areas.

5.2.3 Own sources

Own sources of capital finance can be from two sources; surpluses from the operating account and borrowings

Surpluses from operating account

Some municipalities are able to provide 'own source' capital funds by transferring surpluses from their operating account. As discussed in Section 5.3.4 below, even some poor municipalities are able to finance capital expenditure by transferring surpluses (including "surplus" equitable share allocation) from their operating account. Municipalities must be careful to ensure that this transfer is indeed surplus to the operating account subsidy requirements otherwise they will erode their asset base through inadequate maintenance.

Borrowings

Funds may also be borrowed from the private sector (or DBSA) to cover the balance of the required capital expenditure. Currently low capacity WSAs have no access to borrowings because of their weak financial status. Consequently they utilise grant funding intended to provide services to the poor to subsidize provision of services to the non-poor as well as businesses and institutions. It is critical that such WSAs work towards improving their financial status so that they may be able to access loans from the private sector and other development financing institutions such as DBSA to finance provision of services to the non-poor, businesses and institutions.

Coincidentally, the WSAs that will not have ability to borrow in the short term are the ones that also do not have adequate institutional capacity to manage capital expenditure of the required magnitude. Capacity is best built by responding to the challenge to utilise it (capacity). In other words, one does not build capacity and then utilise it. One builds capacity by utilising it as it is built. As a strategy therefore low capacity WSAs may focus on the two challenges of low capacity and limited access to required capital finance by utilising the available grant finance to stimulate improvement in their capacity to manage capital projects while simultaneously improving their ability to borrow so that when they have acquired such ability to borrow they would have also acquired capacity to manage capital expenditure.

Currently the Department of Water Affairs and Forestry is also investigating options of improving the ability of the sector to acquire private sector resources in order to speed up the process of reducing water services backlogs.

5.3 Financing free basic water O&M costs

The required revenue for providing free basic water (as either a targeted or universal subsidy) can come from internal or external sources. Establishing the costs of provision (in simple terms the average costs of supply multiplied by the amount of water provided for free) is the first step required of the local authority. More detailed cost analysis needs to occur which can be supported by a number of financial modelling tools available.

The next step is ensuring that adequate revenue is available to cover these costs. To do so a municipality will need to determine what resources are jointly available from cross subsidisation and the equitable share.

5.3.1 Internal cross subsidies

The extent of cross subsidies will be determined by the particular tariff structure adopted by a local authority. The level of such subsidies that can be sustainably incorporated into a water tariff structure will depend on a number of local factors (Eberhard, 1999):

- capital subsidies to, and capital requirements of, the local water system;
- total equitable share subsidy made available to the WSA;
- regional and local cost factors which influence the costs of supply;
- total wealth of the supply area;

- proportion of water consumed by the non-residential compared to the residential sector;
- income distribution within the supply area;
- consumption distribution within the supply area; and
- local political feasibility of introducing cross subsidies.

In particular the ratio between wealthy and poor consumers; the distribution of consumption in the supply area (i.e. the ratio of large to small consumers); and the ratio between industrial and residential consumers are likely to be central to the viability of local level cross subsidies. Local authorities should ensure that they gather adequate information on these factors to enable proper local financial planning. Financial models are readily available which allow for detailed tariff setting and long term planning.

Some suggestions as to the applicability of different tariff approaches to the provision of free basic water are given in Box 1 below.

The approaches required to develop a sustainable tariff policy are not in conflict with the DWAF tariff policy guidelines. There are, however, some constraints regarding raising revenue through cross subsidies including:

- the willingness and ability of higher income water users to pay costs above the average cost of supply;
- the distribution of consumption of water in the area;
- the impacts that price changes will have on water use; and
- the need to minimise distortions to the local economy.

Currently there are no legislated caps on the degree of local cross subsidisation that can occur through a local tariff structure. However, DWAF has published regulations under the Water Services Act which lay down norms and standards for water services tariffs. The introduction of a free basic water services policy fits within the framework established by the tariff regulations, as well as the relevant sections of the Municipal Systems Act (section 74 and 75 in particular) dealing with a municipal tariff policy (RSA, 2000).

Local authorities should bear in mind the concerns about too high a degree of cross subsidies through water tariffs alone. As discussed above, local level revenue raising mechanisms tend to be far more distortionary than national taxation. With respect to non-residential consumers there is a national policy commitment to keeping input costs of industrial consumers as cost reflective as possible to encourage efficiency and competitiveness. For these reasons those national revenue sources available, primarily the equitable share, should as far as possible be used to support the free basic water revenue requirements to minimise the need for excessive local revenue raising.

Tariff policy has typically been established at the local municipality level. As discussed district municipalities may have some role to play in distribution of resources across the district. However it does not seem appropriate at this stage that any such distribution should occur through the development of district-wide tariff structures.

The option also exists for the use of cross subsidies at the regional level through bulk services providers. This issue is under investigation by some bulk providers and their local authority customers. The advantage of this approach would be a broader consumer base over which to cross subsidise, and also that some non-municipal consumers (such as large industries and mines) would contribute to cross subsidies. However, there are also concerns about this approach, such as the mechanism of subsidy payments that would be used. Further investigation on the pros and cons of this approach in specific areas is still needed.

Box 1. The applicability of different tariff approaches to the provision of free basic water

5.3.2 Tariff structures – residential

Applicability of fixed monthly charges (also called basic charges or availability charges): Fixed monthly charges alone are not encouraged for unrestricted supplies as they do not promote equity, conservation or efficient management. However, they may be applicable for restricted supplies in some cases. While fixed monthly charges are not recommended as the only tariff they may be necessary where:

- A rising block is selected but there is insufficient funding to cross subsidise through only using a rising block tariff.
- The municipality has a large number of holiday homes.

In both cases the fixed monthly charge may need to be levied in addition to a consumption charge. However, the fixed monthly charge needs to be excluded for those targeted for poverty relief. If a rising block tariff is being used this can be done by levying the fixed charge only on those consumers using above the poverty relief consumption level. Where a credit system is being used the credit will have to be sufficient to cover the fixed monthly charge.

- *Fixed monthly charges varied for different groups:* The option of the fixed monthly charge being one amount for all except those targeted for poverty relief has been raised above. It is also possible to vary the charge for different socio-economic groups, making it zero for the poor for a free basic water policy. This creates a transitional arrangement.
- *Rising block tariffs:* This is the required tariff for use with the poverty relief option based on rising blocks. For the tariff to be ‘pro-poor’ it can not be associated with a fixed monthly charge to all consumers, as stated above.
- *Flat rate tariffs (the same amount for each kl consumed irrespective of the amount used):* If the poverty relief option is based on targeted credits or service level targeting, then either rising block or flat rate tariffs can be used for the consumption related charge. However, flat rate tariffs are simpler and often more suited to B3 and B4 municipalities.

5.3.3 Tariffs for non-residential consumers

- *Cross subsidise from businesses?* A key decision facing municipalities is whether to cross subsidise from commercial and industrial enterprises to poor residential consumers. The argument for this is that business has a responsibility at the local level to assist the poor. The argument against is that if local economic development is to be promoted then the input costs to business should be kept low. This is a local choice but the current view of national government is that municipalities should keep tariffs to commercial and industrial consumers as cost reflective as possible, ensuring that these consumers do pay the full costs of water supply.
- *Tariff structures for non-residential consumers:* The use of rising block tariffs for non-residential consumers is not recommended unless it is used with the concept of residential unit equivalents (RUEs). This is because larger users end up paying for most of their consumption in the top block which may be highly inequitable.

5.3.4 Allocation of the equitable share

If the local revenue base is inadequate to meet the costs of implementation, local authorities have recourse to the equitable share. Although the equitable share is an unconditional grant there are strong political and policy requirements to direct the grant towards the provision of basic services. The Constitutional intention of the grant is clearly to support the provision of basic municipal services. In fact the grant is based on a policy desire to support the provision of basic services to the poor. The grant includes a basic services component which is calculated as shown in the following table.

Table 9 Allocation of the basics services component of the Equitable Share (National Treasury 2007)

Municipal Service	Served Households		Unserved households	
Electricity	40	31%	15	33%
Water	30	23%	10	22%
Refuse	30	23%	10	22%
Sanitation	30	23%	10	22%
Total	130		45	

As discussed above there are also economic efficiency reasons for utilising this grant in support of free basic water provision.

Because the equitable share is granted on the basis of poor households in a municipality it will generally be insufficient to cover the costs of a free basic water supply to *all* households in an area. If the approach is one of universal provision of free basic water then the equitable share will have to be supplemented with locally raised revenue. If the approach is to use the available equitable share to fund free water to poor households such households have to be identified and targeted as discussed above.

An important element in ensuring that the equitable share is used to subsidise its intended beneficiaries is the passing on by municipalities of an appropriate proportion of the grant to local water service providers (see below) who are supplying poor households.

Although the equitable share is an unconditional grant the intention of the grant is clear and appropriate use of the equitable share would be supported by improved monitoring of its use from national level. At present national government has insufficient information on the local use of the equitable share. DPLG is intending to improve reporting by local government on the use of the grant and this information should be incorporated into a medium term evaluation of the free basic water implementation programme. A DPLG study referred to earlier, found that there are concerns regarding the adequacy of the equitable share to cover the costs of all basic services at the local level. However, there is also an indication that in the case of municipalities faced with high backlogs the operating subsidy requirements are not as high (see Box 2 below). These WSAs may decide to use the equitable share to subsidise capital investment.

Box 2. Directing Equitable Share towards capital investment

5.3.5 Use of Equitable Share to subsidize infrastructure investment
 A case study done as part of research commissioned by the Water Research Commission in 2006 (PDG, 2006) showed that, as a result of huge services backlogs, the municipality did not have as much of a need to subsidize the operating expenditure. It felt that its main challenge was to extended access to services. With low levels of consumer access to basic services it felt that there was no justification for spending huge amounts on the operating the account. Rather the resources needed to be directed towards extending access to services. As levels of access to services improve there would be a need to increase the O&M expenditure and a hopefully a proportional decline in the need to prioritise capital expenditure

Improved monitoring and evaluation of the use of this grant should provide better information on its adequacy and use.

Notwithstanding the need for improved monitoring of the equitable share, overall it seems that a mix of revenue sources is appropriate at this stage and that local authorities should have discretion over the financing composition of the free water policy as long as it falls within current guidelines.

5.4 Ensuring financial viability of water service providers

Where a municipality which is a water services authority appoints a water services provider which serves poor consumers, the extent to which the provider can provide free basic water to consumers is dependent on what subsidy is available to the provider. Unless cross subsidisation within the area served by the WSP is possible (probably the minority of such areas) some mechanism should be found to ensure that the relevant operating subsidy is transferred to the service provider.

Although the Municipal Systems Act provides for the transfer of subsidy funds to services provider to occur, the constitution does not allow national government to prescribe how municipalities should use their equitable share funds for this purpose. However, this can be influenced at national level through *national benchmarks and guidelines* where national government provides guidance to local authorities on the appropriate way to transfer operating subsidies to WSPs or where a national department with the approval of the National Treasury transfers funds directly to a public entity in respect of a low capacity municipality as stipulated in Section 29 of the Division of Revenue Bill.

Further, this can be influenced by the requirements relating to a *tariff policy* which must be developed by each water services authority. This tariff policy should set up a subsidy framework which defines the way subsidies are to be applied. Here equity is a key consideration and each poor household should have access to an equivalent amount of subsidy. The tariff policy can then deal with the conditions under which a WSP can access such subsidies.

Water services authorities should aim to ensure that all WSPs that are providing water to poor households should receive an appropriate proportion of the equitable share grant directed at basic services provision as well as a proportion of any local cross subsidies generated.

Within the overall framework of the tariff policy the WSA may enter into *case by case negotiations between service providers and authorities*: Here the WSP and WSA would negotiate an approach to the provision of free basic water (and other subsidised water supplies) when establishing the WSA-WSP contract. The contract would include details of the subsidy approach including:

- subsidy amounts per consumer served;
- relevant conditions and incentives;
- payment methods; and
- auditing and monitoring procedures.

In some respects the contractual option is preferable because it allows for maximum local flexibility. However there are some concerns with simply using an *ad hoc* contract based approach. The Water Services Provider Regulations regulate matters to be included between a WSA-WSP contract and provisions which must be included in such a contract (DWAF, 2001). The payment for services delivered by a WSP is one of these essential elements of such a contract. Some WSPs may have bargaining power with the WSA and will be able to negotiate suitable contracts (for example private sector providers are unlikely to agree to a contract under which they will have to supply a free basic level of water without some method of compensation

for this supply). However, small community based schemes have limited scope to ensure that they receive an adequate subsidy to cover the costs of free basic water provision.

Some principles to be applied in subsidising WSPs are listed in Box 3 below.

Box 3. Principles of providing subsidies to water service providers

Subsidising WSPs or consumers: basic principles

- *Primary principle:* Where a WSA is reliant on WSPs to provide services on their behalf, it is essential for funds to be transferred to the WSP or credited to consumers. If this is not done, a 'free basic water' policy will not work, as WSPs will not have sufficient funds to run the system effectively.
- *Exception to the primary principle:* If the WSP is serving an area with a high proportion of larger users it may be possible for viability to be maintained without a transfer of funds from the WSA.
- *Transfer to WSP or subsidise consumers direct?:* Much depends on the poverty relief option selected.
- *Payments to bulk WSPs:* In general the payment of subsidies to bulk WSPs should be avoided. It is better to pay the subsidies to the retailer or direct to consumers and they can use this money to pay bulk WSPs for their service. This promotes efficiency within bulk WSPs. However, in situations where the retail WSP is a community based organisation the municipality may choose to pay bulk WSPs direct. However, this should be done based on an agreement with the retail WSP on the amount to be paid on their behalf per consumer.
- *Payment of support services agents (SSAs):* Where community based or SSME type WSPs are being used it is often appropriate for the WSA to appoint a SSA. Ideally this SSA should be paid by the retail WSP. However, the municipality may choose to pay the SSA an agreed amount on behalf of the WSP.
- *Source of funds for WSPs (and SSAs):* Typically the source of funds will be from the 'equitable share'. However, local authorities may use other funds if these are available.
- *Assessing the amount:* The amount of funds transferred must be calculated on a per consumer basis based on an understanding of the costs.
- *Setting incentives:* WSPs can only be subsidised based on a clear set of conditions set into a proper contract which include incentives for them to perform. These incentives should include:
 - Maintaining or improving the quality of service to consumers according to an agreed measure.
 - Improving coverage (which will mean increased subsidy).
- *Setting controls:* Regardless of whether the WSP is being subsidised the WSA is obligated to regulate the performance of the WSA. However, if a subsidy is being applied the obligations of the WSA to monitor become more stringent. (see WSP regulation for it to be included in a WSA/WSP contract)

Finally, it should be noted that national government has an obligation to monitor the way payments are made to WSPs. This can be done through existing reporting channels.

5.5 Free basic water and water services intermediaries

Intermediaries represent a particular challenge in implementing a free basic water policy. The options for ensuring free basic water is provided to poor households by intermediaries are somewhat different for multiple dwelling units, farm dwellers and those living in 'private towns'.

In general, bylaws must include sections dealing with providing free basic water to households supplied by intermediaries and intermediaries must abide by such bylaws.

5.5.1 Multiple dwelling units

The following options are identified:

- a) *Individual metering.* Install meters for each individual household/dwelling unit in the complex. Each one then becomes a direct consumer unit and an intermediary is no longer involved. This is in line with the requirement of the Property Rates Act which requires that

sectional title properties get rated and charged separately. It however does imply installation of separate meters.

- b) *Free allocation or credits to complex.* Provide a free allocation of water (or an equivalent money credit) to the complex based on the number of households or dwelling units in the complex. In this case the allocation or credit will typically go to the landlord (the intermediary in this case) who may or may not distribute the credits to individual households.
- c) *Individual credits.* Provide (money) credits directly to individual households based on the value of the basic amount of water supplied. This can only be done if the service authority or service provider has an existing direct relationship with the individual households. This arrangement could be applied through a 'consumer association' as described below for farm dwellers.
- d) *Flow restriction.* Installation of flow restrictors for households wishing to be restricted to the basic amount of water and charging water at cost where flow is unrestricted.
- e) *No implementation.* Exclude such complexes from a FBW Policy.

5.5.2 Farm dwellers

In considering the situation on farms, those who are employed by the farmer (farm labourers) typically get free basic services as part of their housing and this is part of an employment contract. However, with regard to farm dwellers (those who are not employed but live on the farm the situation is more complex as the farmer often has no free services obligations to such households. In this case the options which can be considered by a WSA are as follows:

- a) The farmer is expected to provide FBW to all farm dwellers and carry the cost of this himself or herself.
- b) The WSA provides a subsidy per farm dweller household to the farmer based on the subsidy framework established for the WSA as a whole. Clearly this could only be done if there was a monitoring arrangement in place.
- c) Farm dwellers are expected to set up an association of some sort. This association would have a bank account dedicated to free basic services and the municipality would pay subsidy funds into this account. The association would then have an agreement with the farmer regarding services provision and would pay for services (partly or in full from the subsidy account) in terms of this agreement.

Options c) appears to be the best theoretically but of course it puts a lot of obligation on farm dwellers to organise themselves and on the WSA to monitor the arrangements. It has many similarities to the community-based WSP arrangement but the farm dwellers association would not have to perform any tasks in running the service (although this could be built into the agreement with the farmer). In general there would need to be some 'critical mass' of farm dwellers to make this worthwhile.

5.5.3 Private towns

Organisations such as mines and Eskom often run 'private towns' for their employees but may also provide services to non-employees. The same three options apply as for farm dwellers. If there are a relatively large number of non-employee households receiving services then it will probably be best for the households to form themselves into an association and for them to control a subsidy account. Obviously it will be in the interests of the intermediary to assist in setting up such associations, with the key condition being that they do not control the bank account.

6 Miscellaneous

6.1 National guidelines but local flexibility

Different strategies will be appropriate in different municipalities. Based on the institutional, technical and financial issues outlined in this document a suite of options should be provided to local government. These options should aim to assist local authorities in implementing the free basic water policy in a way which:

- is in accordance with current national policy in the water sector;
- supports continued financial viability of local government; and
- guards against a slowdown in the extension of basic services to those households with inadequate access to water.

At the same time the guidelines should allow for maximum local flexibility in the choice of options for implementation of the policy. The guidelines developed in parallel to this strategy document establish these options.

6.2 Management and institutional support to municipalities

The planning and implementation requirements on municipalities of a free basic water policy are substantial. These are elaborated on in detail in the accompanying guideline. National government has institutionalised support mechanisms for municipalities will continue to improve these based on the Sector support strategy these will take into account the need to consolidate and maintain the implementation of the free basic water policy.

The following areas of support to local authorities have been identified:

1. *Policy and implementation strategy framework*: the establishment of a strategic framework in which municipalities can develop local implementation strategies. This document serves this purpose.
2. *Developing implementation guidelines*: providing a more detailed set of guidelines which municipalities can use to establish local strategies. The existing document in this regard will be updated.
3. *Providing ongoing guidance and support*: ongoing support will be provided through existing mechanisms as provided for in the Sector Support Strategy.
4. *Information and planning tools*: providing access to financial models, international experience and best practice local examples through a CD-ROM, web-site and other mechanisms.
5. *Monitoring progress of the policy*: national government through the Water Services Development Plans and current and proposed DPLG and National Treasury financial monitoring will monitor progress of the policy and assess any impacts on financial viability of local authorities or negative impacts on infrastructure extension.

It is important that water services authorities provide regular feed back on the implementation of free basic water to the Department of Water Affairs and Forestry. This information will be submitted to Cabinet regularly and will be used to monitor and evaluate the implementation process which will provide a means to assess the situation at the local level.

Such information must be forwarded to:

Director: Water Services – Policy and Strategy
Department of Water Affairs and Forestry
Free Basic Water – Monitoring Programme
Private Bag X313
PRETORIA

'Free Basic Water Implementation Strategy 2007: Consolidating and maintaining

0001

E-mail: vbeda@dwaf.gov.za or fax : 012- 336 6737

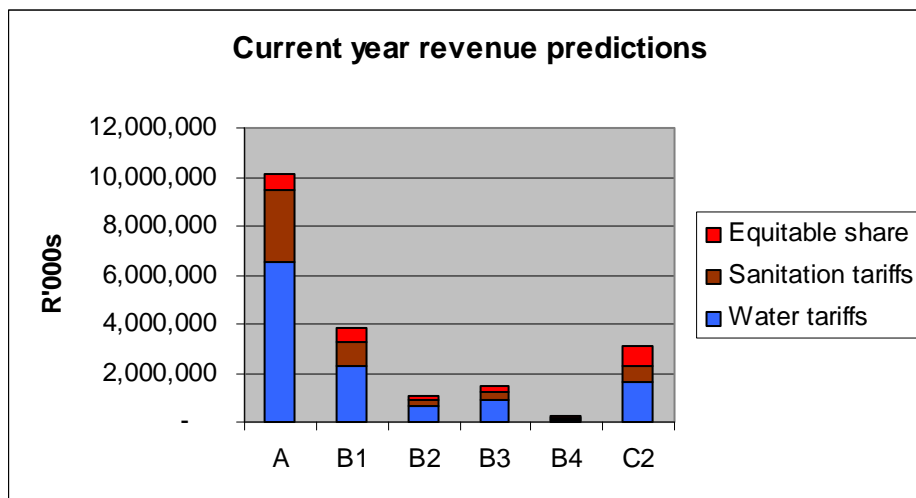
7 Annexure A: An overview of the South African experience in the past five years

7.1 Operating subsidy arrangements

7.1.1 Local revenues

The most important means of financing services at the local level remains locally raised revenue. However, when considering categories of municipalities, it becomes evident that rural municipalities have become increasingly more dependent on national transfers for financing water services. In 1998/99 revenues raised from water trading accounted for 14% of overall local government revenue (excluding Metropolitan areas) compared to the 2% contributed by intergovernmental grants (IGGs). In rural municipalities the proportion of IGGs was much higher, but still a minor proportion, at 21% of revenue. The situation has since in rural municipalities. The following diagram shows the relative contributions of revenue sources to water services.

Modelled operating expenditure for 2004/05 divided by WSA sub-category



The more rural WSA, which mainly are district WSAs, are more dependent on national transfers. However, even these WSAs have to raise revenue from tariffs. This is because of the fact that there are a substantial proportion of non-indigent consumers (32% in the case of the C2 sub-category) who must pay for water services.

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7.1.2 National transfers

Equitable share

The equitable share and other transfers that go to local government supplement local revenues. These transfers are distributed based on the number of poor households in a municipality. The local government equitable share received a further R5 billion in the 2007 budget for the delivery of free basics services (National Treasury, 2007)

A study done by DWAF in 2006 (DWAF, 2006) concluded that provision of free basic water to households earning less than R800 a month in the country as a whole is financially viable

(revenue exceeds expenditure) if 36% of Equitable Share allocation to local government is used to subsidize water supply and sanitation and all non-indigent consumers are charged and pay affordable bills.

The national equitable share formula used in the Division of Revenue Bill of 2007 allocates 46% to water services (23% to water supply and 23% to sanitation services as shown in the following table:

Municipal Service	Served Households		Unserviced households	
Electricity	40	31%	15	33%
Water	30	23%	10	22%
Refuse	30	23%	10	22%
Sanitation	30	23%	10	22%
	130		45	

Local government's total share of nationally raised revenue has risen significantly over the past five years as shown in the following table:

R million	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10
		Outcomes		Revised	Medium terms estimates		
Equitable share	6,350	7,678	9,643	18,058	20,676	23,775	29,444
% increase		21%	26%	87%	14%	15%	24%
Conditional grants	5,171	6,131	7,038	9,021	13,636	18,069	16,164
% increase		19%	15%	28%	51%	33%	-11%
Total allocations	11,521	13,809	16,681	27,079	34,312	41,844	45,608
		20%	21%	62%	27%	22%	9%
LG share of nationally raised revenue	4.1%	4.3%	4.6%	6.5%	7.2%	7.8%	7.8%

The increase in the equitable share allocation is the most direct contribution to the free basic services challenge.

The equitable share at present is composed of three parts; the basics services component (BS), the institutional component and the adjustments components. There are two adjustment component; the revenue raising correction factor (R) and the minimum guaranteed amount factor (C).

The development component of the formula (D) continues to be "set as zero until a suitable factor can be found that adequately captures the development needs of local government" (National Treasury 2007).

The basic services component (BS) component of the formula for the horizontal distribution of the equitable share is based on the number of households with a household income of below R800 a month and favours areas with the highest levels of poor households. This component is meant for the provision of water supply, sanitation, refuse removal, energy and environmental health. It is based on the number of poor households in a municipal area. For poor households that do not receive adequate water supply, Water Services Authorities are allocated one third of the amount allocated per poor household receiving adequate water supply. This should incentivise WSAs to extended provision of water supply services to households that are currently not provided with adequate services.

Research carried out by WRC in 2006 showed that metropolitan municipalities and secondary cities were the biggest beneficiaries of increases in equitable share allocation to local government (Hazelton D.G, 2006). Among the factors that influenced this allocation are; the migration of poor

people towards urban areas, and rate at which urban poor households grow as a result of rate of split of poor households as people move to RDP houses and informal settlements.

The revenue raising adjustment factor is meant to adjust the allocation to take into account the ability of municipalities to raise revenue.

The I component is meant to ensure that municipalities have sufficient funds to maintain a functioning administration. The BS component is the largest part of the equitable share and its purpose is to ensure that low-income households in all municipalities receive access to basic municipal services.

Existing transfer programmes are shown in Table 10 below.

Table 10 National transfers to local government (Source; DORB, 2007) (subsidies directly related to free basic water shaded)

National transfers to local government, 2003/4 - 2009/10							
R million	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10
	Outcomes			Revised	Medium terms estimates		
Direct transfers to LG							
Equitable share and related							
Equitable share⁵	6,350	7,678	9,643	18,058	20,676	23,775	29,444
Water and sanitation operating	273	133	165	300	550	600	462
Current transfers							
	796	699	588	790	695	350	400
Restructuring grant	494	388	255	445	350		
Financial management grant	151	129	133	145	145	150	200
Municipal Systems improvement grant	151	182	200	200	200	200	200
Subtotal direct transfers	11,521	13,809	16,682	27,079	34,311	41,844	45,608
Indirect transfers to local government							
Water and sanitation operating	817	819	904	440	490	531	393
Water services regional bulk					300	450	650
Backlogs in electrification of schools and clinics					45	90	150
Backlogs in water and sanitation in schools and clinics					105	210	350
National electrification	796	819	863	893	973	1151	1421
Financial management grant	60	69	66	53	53	50	
Subtotal indirect transfers	1673	1707	1833	1386	1966	2482	2964

The implications for local authorities of the increases in the equitable share will be a general raising of the average grant per poor household.

DWAF operating subsidies

Substantial subsidies to the water sector, R1 billion in 2007/8, R1.1 billion in 2008/9 and 855 million in 2009/10, are still occurring through the support by national government of the operating costs of DWAF water supply schemes. There are currently 318 water schemes funded from this indirect grant. These schemes are in the process of being transferred to local government. All funds on this programme will subsequently be transferred directly to

⁵ Includes Equitable Share, replacement of RSC levies and special support for councillor remuneration

municipalities in terms of the provisions of the transfer agreements. It will at that time be a conditional grant until 2008/9 wherein it will be phased into the equitable share.

In general terms a re-allocation of the current operating subsidies should support a free basic water policy. At present these subsidies are not well targeted. There are low levels of cost recovery in many of the schemes. There also appear to be high levels of illegal connections to large schemes. The implication of these factors is that many households are receiving subsidised (or free) water regardless of income level and possibly at volumes greater than 6 000 litres per month.

At the same time there are certain concerns related to the transfer of DWAF water supply schemes which should be addressed within the transfer process. It is imperative that municipalities taking over such schemes have appropriate management arrangements in place, including tariff policies to ensure financial sustainability, credit control measures and adequate technical resources.

The second concern is that due to the structure of the equitable share there is no guarantee at the local level that the increase in equitable share received due to the transfer of the DWAF operating subsidies into the equitable share grant will match the additional costs associated with a particular scheme. The transferred operating subsidy funds will contribute to the overall equitable share allocation and will therefore be spread nationally leading only to a moderate overall rise in the per-household grant. An appropriate mechanism of balancing the loss in transfers to some local authorities may still be required if particular transferred schemes are not independently viable.

7.1.3 Local level subsidy approaches

Cross subsidies at the municipal level have historically been managed either through transfers from the District Council levies; from transfers between general rates accounts and other accounts; or through transfers within trading accounts.

District level cross subsidies have generally been aimed at capital expenditure. In the water sector there have generally not been any district-wide cross subsidies for operating expenditure across either municipalities or consumers. In other words cross subsidisation has typically occurred between consumers within a local municipal area. In many districts there is a relatively small urban area (in terms of population numbers) who would bear the subsidy costs of a large rural hinterland. Assuming that this relatively better-off economic base can bear the costs of service provision in the entire district raises the risk of imposing cross subsidies at a level which damages the local economy. In fact economic analysis showed that, taking a view of the country as a whole, the opportunities for cross-subsidisation at district level are limited.

At the same time the Municipal Structures Act (RSA, 1998) does impose a requirement on the district municipality to promote the distribution of resources within its area. Section 83(3) (d) outlines those powers specific to district municipalities as *promoting the equitable distribution of resources between the local municipalities in its area to ensure appropriate levels of municipal services within the area.*

In fact the opportunities for cross subsidy at district level will depend largely upon whether the district municipality is authorised to be the water services authority. If the district is so authorised, it will be able to cross subsidise, within limits dictated by the relative strength of its urban and industrial core.

At the local level, tariff policies (combined with the use of the equitable share) have been used to provide cross subsidies from wealthier consumers (higher income households and non-residential consumers) to poorer households. However after the 2000 municipal demarcations, the ratio between wealthier and poorer consumers changed significantly in most local municipalities. A cross subsidy approach at local level outside metros and secondary cities therefore became unviable. For example, case study research indicated that while the former TLCs in the Nkomazi municipality were able to provide free basic water through cross subsidies alone within the former TLC boundaries they will not be able to provide free basic water throughout the new local municipality (which has a rural population of approximately 232 000 people) with internal subsidies alone.

Subsidy methods currently used

The case study research done in 2001 suggested that a combination of rising block tariffs, often with a low or zero rate for the first block, and targeted rebates to poor households were mostly used to provide pro-poor subsidies. This continues to be the case even though experience has shown that the costs of administering a means test for the purposes of a rebate are unjustifiably high. In addition, this mixed subsidy structure is very opaque in terms of the source of revenue for subsidies and the level of local cross subsidisation.

In general the following subsidy approaches are used in South Africa:

- Internal cross subsidies and service level options
- Targeted internal cross subsidies through indigents policy
- Targeted subsidies from equitable share through indigents policy
- Targeted cross subsidies and equitable share through indigents policy
- Use of equitable share for bad debts)
- No targeted subsidies but equitable share used to fund deficits that are largely attributable to high non-payment rate

In some areas, such as Ethekwini, service level options are explicitly used as a subsidy approach. In other areas there is also a *de facto* situation of using service levels (such as standpipes with no associated payment expected) to deliver subsidised basic water.

7.2 Capital costs subsidy arrangements

7.2.1 National transfers

A recent DWAF study (DWAF, 2006) which modelled the capital income and expenditure a of the water services sector up to 10 years concluded that R65 billion is required in capital investment if the national targets to provide water services to all are to be met.

The sources of capital were summarized as per the following table.

Source of capital for national water services programme

<i>Source of capital</i>	<i>Amount over 10 years (R billion)</i>	<i>Split</i>
Housing subsidies (portion allocated to water services)	19	28%
MIG	30	46%
Own sources	16	25%
Total	65	100%

The above shows that the programme of providing services to all as per targets is largely dependant on availability of national transfers. However, it also shows that there is a need for substantial borrowing to provide services to consumers who are not poor.

The following table shows the municipal infrastructure grants estimates as per DORB, 2007

MIG grants (DORB, 2007)

R million	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10
	Outcomes			Revised	Medium term estimates		
Municipal infrastructure grant	2 442	4 481	5 436	6 756	7 549	8 053	9 130

If the water services infrastructure investment linked to the housing subsidies become available as anticipated, and water supply receives a bigger share of MIG then the provision is adequate to ensure access to services to all poor households by 2014.

It appears therefore that the constraint with ensuring and maintaining access to water services for the poor is unlikely to be financial it is likely to institutional. The strategy therefore will have to address this constraint.

8 Annexure B: Lessons from International Experience

8.1 Broad strategies

The UNDP Human Development Report 2006 (UNDP, 2006) observes that in the last decade there has been a lot of talk about issues of access to water supply but little action. It also notes that in general, the overwhelming majority of those who are currently without access to water supply are poor. Therefore, even if they were to have access to water supply infrastructure, they would still not afford to pay for the service. In other words those who are currently without access to supply are those who would not afford to pay for the service. Therefore the global challenge is to invest public resources to extend and maintain water supply systems without expecting that the new consumers would pay for the service. The report provides four foundations for success in this regard. Two of these are focused a country level and are:

- *Governments must make water a human right and mean* – Governments must go beyond vague constitutional principles and enshrine human rights to water in enabling legislation. Citizens must be entitled to some minimum amounts of acceptable quality water and government must set targets and monitor progress.
- *Countries must draw national strategies for water and sanitation* – They must aim at a minimum of 1% GDP spending in water and sanitation and must financial strategies such as cross-subsidies, financial transfers and other measures that bring affordable eater and sanitation to the poor.

The report further suggests core strategies for overcoming inequality. These are:

- Setting clear targets for reducing inequality as part of the national poverty reduction strategy
- Establishing lifeline tariffs that provide sufficient water for basics needs free of charge or at affordable rates
- Ensuring that no household has to spend more than 3% of its income to meet its water needs
- Targeting subsidies for connections and water use to poor households
- Increasing investment in standpipe provision as a transitional strategy to make clean affordable water available to the poor
- Enacting legislation that empowers people to hold providers to account
- Incorporating into public-private partnerships contracts clear benchmarks for equity in the extension of affordable services to poor households
- Developing regulatory systems that are effective and politically independent, with a remit that stretches from the utility network to informal providers.

South Africa has gone a long way already in implementing these strategies and is accordingly acknowledged in the report. However, there are still challenges that are currently being addressed e.g. in the area of regulating water services institutions.

8.2 Approaches in Poverty Alleviation and Reduction

Most countries have some form of social assistance or welfare programmes to provide relief to the poor. In higher income developed countries these programmes are generally within the framework of a comprehensive social security system encompassing income support, unemployment support, pensions and often access to subsidised services. The general approach is that social security is provided by central government while public service delivery assistance lies with provincial or local governments.

Most systems have some mechanism for central government to fund the local level to assist them in meeting their statutory duties, particularly where minimum standards of provision are

obligatory. A common approach is the use of some form of equalisation grant which recognises that local authorities have differing capacities to raise revenue and differing expenditure needs and that there is not always a match between these. Equalisation grants operate on the principle that central government should direct assistance to where the mismatch between needs and resources is greatest (Parnell *et al*, 1998).

In middle and low income developing countries there is seldom as comprehensive a social security net as in the developed world. Therefore in these countries local level approaches to poverty alleviation, including subsidised services, are often more important than in the developed world because of the absence of broad income support measures. A wide range of such measures have been used (see Wegelin and Borgman, 1995). The experience from these countries has shown that “targeted local scale (urban or rural) interventions are most likely to succeed in eradicating poverty” (Parnell *et al*, 1998).

A number of key lessons were identified by Parnell *et al* in the design of targeted poverty alleviation programmes:

- Targeted local scale interventions are most likely to succeed in tackling poverty;
- The careful design and delivery of a targeting mechanism is as important as the level of expenditure committed to it;
- When poverty is widespread and administrative capacity is low, broad targeting rather than narrow targeting is desirable;
- It is critical to ensure that targeting mechanisms should not be ‘captured’ by the recipient lobby groups;
- Administrative costs should be kept as low as possible;
- Self-targeting and geographical indicators should be used as filters to reduce the need for individual assessments of who is poor;
- Since poor local authorities are less able to mobilise additional local revenue to support services well designed intergovernmental transfers are particularly important;
- Monitoring is always required so that the subsidies do not benefit the affluent at the expense of the poor.

8.3 Water sector subsidy approaches

Because of the public health and individual welfare benefits of universal access to water and sanitation services many governments have historically kept water companies within the public sector and kept tariffs artificially low through a range of subsidy measures. These subsidies have often been provided to the water companies rather than to consumers themselves (Foster *et al*, 2000). The results of these approaches have often been unsatisfactory. The main reasons for this have been the experience that under-pricing of water supplies has tended to benefit consumers with existing water connections, to the detriment of those households without services, and that general subsidies have led to highly inefficient water utilities. The large implicit subsidies that have been evident in the supply systems have tended to create unsustainable water supply systems, unable to extend their networks to the poor.

In response to these concerns there have been strong moves in the water supply sector internationally towards full costing of water services and away from generally subsidised water supplies. One result of these reforms has been an increase in household bills and the unwinding of cross subsidies. Improved credit control has also led to reduced levels of non-payment. All these effects have tended to increase the financial burden on poorer households (Gomèz-Lobo and Contreras, 2000).

The growing burden on poor households in turn has led to recent moves towards more targeted subsidies that provide better guarantees of access by the poorest households. A number of countries have introduced targeted subsidies which are directed at poor consumers who cannot pay their bills rather than at water providers broadly.

The main advantages of subsidies directed at consumers are that they are transparent and explicit and that they minimise distortions in the behaviour of water providers and consumers (Foster *et al.*, 2000). They are also targeted thus minimising subsidisation of wealthier households and serve well recognised public health and equity objectives. The main drawbacks are potentially high administrative costs, difficulties of designing suitable systems for targeting, and the need to raise finance somewhere else in the water or general fiscal system to cover the costs of the subsidy.

8.4 Experience with targeting approaches

Direct subsidies (i.e. subsidies to the household level) are an increasingly popular means of making infrastructure services more affordable to the poor. A central element of pro-poor subsidies is that they rely on the targeting of subsidies, in one form or another, towards those households deemed to be poor. International experience of direct subsidies provides useful lessons for South Africa's implementation of free basic water to the poor. The two differently designed water sector subsidy schemes in Chile and Colombia give particularly useful insights (see Box 4).

Box 4. Water service subsidies in Chile and Colombia

Chile and Colombia are amongst the few countries that have attempted to establish national scale water subsidies for poverty alleviation. The schemes in the two countries are quite different and offer useful lessons.

Chile has established an individual means tested subsidy in which households are screened using a socioeconomic classification system based on an interview in the dwelling. Although fairly costly to administer this targeting instrument is also used to administer a number of other welfare benefits. Eligible households are awarded a subsidy which covers between 25% and 85% of water and sewerage bills for a period of up to three years. The revenue for the scheme comes from general taxation funds raised by the national government.

Colombia has a different approach. The subsidy is based on a geographical classification of households. Based on guidelines developed by central government all dwellings in the country are classified into six socioeconomic groups based largely on neighbourhood characteristics. Households in the lowest three groups receive a subsidy for water, gas and electricity services (groups 1 and 2 get a subsidy equivalent to between 40% and 50% of the average service cost) while households in the upper three groups pay a surcharge. This local cross subsidisation is supported by regional and national transfers as required.

A comparison of the targeting properties of these schemes shows that large errors of inclusion occur in both cases (i.e. consumers receiving a subsidy who are not really eligible). As regards errors of exclusion the Colombian system has much lower levels of erroneously excluded households. Overall therefore it seems that the Colombian system has better targeting in terms of the objectives of the subsidy schemes.

8.4.1 Errors of Inclusion and Exclusion

Targeting is never completely accurate and the general balance that has to be found is between errors of inclusion and exclusion. Inclusion errors refer to the inclusion of non-eligible households in the subsidy scheme, while exclusion errors refer to the exclusion of those households who should be receiving a subsidy. These errors are often large in practice. In both the Chilean and Colombian schemes up to 60% of beneficiaries of the scheme were not really eligible (a large inclusion error). Possibly more serious are that exclusion errors tend to be high too. In the Chilean scheme more than 80% of deserving households do not receive a subsidy. A comparison of the experience of these and other countries tends to show that there is a trade-off

between errors of inclusion and exclusion. The more targeted one tries to make a scheme the more likely that deserving households will be excluded from receiving benefits.

8.4.2 Eligibility Criteria

To find an appropriate balance between exclusion and inclusion appropriate eligibility criteria need to be established. The criteria chosen also affect the administrative costs of the subsidy system. Income is often used as a single indicator. However it is often difficult to measure household income levels directly. Other indicators can be used which are proxies for income. These can include such variables as housing quality, level of education of head of household and others. However it has been found that it is difficult to find a suitable single variable that correlates well with income level.

Income and proxy variables for income are indicators based on individual household characteristics. An alternative approach is the use of geographical criteria which target all households in a particular area based on the area's characteristics. The main advantage is that location is easy to observe and a cheap indicator to administer. The important issue, however, is how well location correlates with underlying poverty measures. Although in some countries, such as Panama, it has been found that geographical criteria can lead to very high errors of exclusion (Foster *et al*, 2000) in other cases (such as Chile and Colombia) it has been found that there is no strong evidence to suggest that an individual means tested water subsidy is preferable to a formal geographically based subsidy scheme (Gomèz-Lobo and Contreras, 2000).

8.4.3 Estimating administrative costs

A targeted subsidy scheme can be very expensive. Estimates from Chile and Colombia suggest that the administrative costs of a subsidy scheme can range from 2% to 18% of the total value of the subsidies. Estimates for Panama however suggest that a subsidy scheme using targeting which relies on household interviews can absorb as much as 40% of the total value of the subsidy. This is because the administrative costs are high while the monthly subsidies are relatively low. It must be noted that in all the cases it has been found very difficult to get good statistics on the true costs of the subsidy programme.

In general, administrative costs must be managed and have the potential to use a significant proportion of the subsidies that should go to the poor. International experience and simulations show that low value subsidies are hard to justify in administrative terms unless the selection procedures can be shared across a number of subsidy schemes (Foster *et al*, 2000).

8.4.4 The "no targeting" option

It is of course possible to avoid the targeting issue by providing a free basic service to *all* households. The advantages of this are that the administrative costs of targeting are avoided and that there is equal treatment of all consumers. The disadvantage is that a significant proportion of the subsidies will be going to wealthy households (this can be mitigated to some extent in some cases by a rising block tariff structure, discussed in section 9). Because middle and upper income households in many cities have the majority of private, metered connections they often receive the majority of water sold at the subsidised price (Boland and Whittington, 2000). A deeper concern with not targeting subsidies is that this may simply not be financially viable in areas with limited ability by consumers to cross subsidise.

8.4.5 Sources of Revenue

There is a broad agreement in the international literature that the economic cost of raising revenue tends to be lowest at the national level. Use of the national tax base reduces high levels of

incidence on any individual region or consumer group. The use of income and value added taxes also tend to have lower distortionary effects in the economy. There are therefore strong arguments for revenue raising for a countrywide subsidy to occur through the national tax system.

At the same time there continues to be a strong reliance in the water sector internationally on local level revenue raising through cross subsidisation between consumers of a single service provider (Boland and Whittington, 2000). The reasons for this appear to be administrative ease rather than economic efficiency. Those countries with more sophisticated nationally determined subsidy schemes tend, however, to place greater reliance on transfers from national government and not solely on local level cross subsidies. The Chilean and Colombian experiences are instructive as to different subsidy design options as they rely on different levels of cross subsidisation or revenue raising.

8.4.6 National subsidies versus local cross subsidisation

In Chile the subsidy is financed from the national fiscus. The National Planning and Cooperation Ministry is responsible for determining the number, amount and regional distribution of subsidies, as well as the detailed parameters determining the benefits accruing to households. These parameters must also be approved by the Ministry of Finance. Once the total number of subsidies is determined they are made available to regional governors who distribute the total regional amount to the different municipalities according to national guidelines. The municipalities are responsible for all the administration related to providing the subsidies at the local level.

There is a complex financial control mechanism. The water services provider invoice the municipality for all charges discounted from eligible customers bills. The municipality then passes this to the regional governor who consolidates all invoices into a regional invoice. This is passed to the Regional Development Department of national government which verifies the invoices and generates a national invoice that is presented to the Ministry of Finance. The transfer of funds then flows in the opposite direction.

In Colombia the six national household income categories form the basis of the revenue raising approach. Firstly, a surcharge can be applied to the upper two categories and to industrial and commercial groups (institutions such as hospitals and schools are exempt from paying surcharge or receiving subsidies). The surcharges are capped at a maximum of 20% of the water and sewerage bill. If a water services provider, after applying the surcharges and subsidies, obtains a net surplus the funds must be deposited in a 'solidarity and income distribution fund' of the relevant regional entity (such as a Municipality, District or Department). These resources are then used to fund subsidies for other providers of the same service in the same regional area (i.e. those providers that show a deficit). If, after this last transfer, there is still a surplus of funds, these can be transferred to adjacent localities, according to national criteria set by the relevant regulatory commission. Finally, if the local surcharges are insufficient to fund the required subsidies the difference can be funded by transfers from the National or Provincial budgets. These national and provincial funds may come from general tax revenues or from 10% of the land tax revenues. These funds are also deposited in the 'solidarity and income distribution fund' of the relevant municipality which must in turn pay the service provider within 30 days from the date that the service provider submits an invoice to the municipality.

There is no easy way to assess which of these approaches is more efficient. The presumption is that the Chilean approach should impose less efficiency losses on the economy because the revenue is solely raised through general taxation. Because both schemes are based on the presentation of an invoice by the water services provider to the municipality, backed by national

level 'guarantees', they both provide strong protection against the service provider suffering financial loss as a result of the subsidy.

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