



Cost recovery at any cost?

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SCARCE FINANCIAL, HUMAN and water resources are major constraints on the delivery of sustainable water supplies to the previously disadvantaged rural communities of South Africa. Of these constraints on sustainability, the scarcity of financial resources has received the most attention. During the period from 1994–2000, the prevailing view in the South African water sector was that some form of cost recovery from the beneficiary communities was necessary to compensate for the scarcity of external funding. Cost recovery became to be seen as so central to sustainability that, in many schemes, it became almost an end in itself. However pronouncements during the local government election of 2000 regarding the provision of “free” water have called into question the appropriateness of cost recovery.

This paper will step back from a detailed assessment of specific cost recovery methodologies and focus on the broad objectives and principles underpinning cost recovery on rural water schemes. It will ask whether the pursuit of cost recovery is really worth the cost given the changing political priorities (best illustrated by the recent promise of 6kl of “free” water) and evidence that efficient cost recovery severely reduces household consumption?

Cost recovery principles

Why recover costs?

For rural water supply, there appear to be three main reasons for recovering costs:

- **Economic Necessity**

Financial resources are often inadequate to fund both the capital investment in rural water schemes and the long term operation, repair and maintenance costs.

- **Accountability Principle**

Recovering costs from the beneficiary community increases accountability by placing a price on consumption.

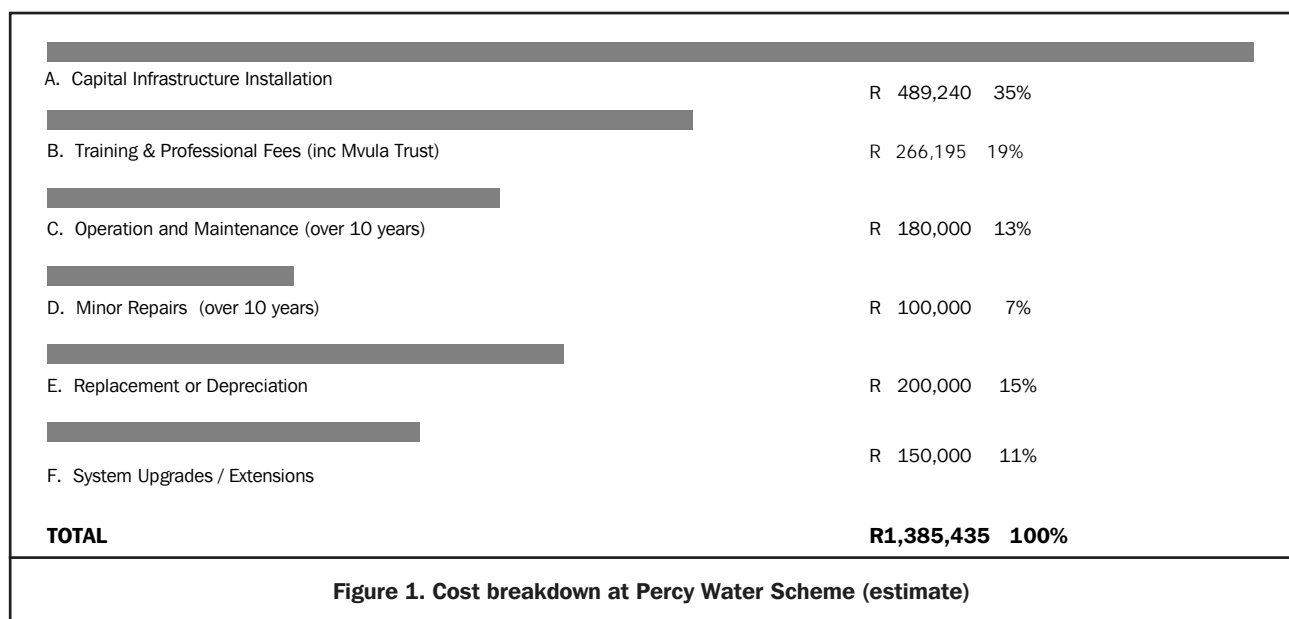
- **Allocating scarce water resources**

Charging for water is one way of minimising wastage, or over-consumption, through economic rationing. In short, a mechanism for cost recovery can be used for water resource management (even if actual costs recovered are minimal).

What costs are to be recovered?

The Percy Water scheme near Queenstown in the Eastern Cape is a typical example of a small standalone scheme. Funded by Mvula Trust, the breakdown of costs at Percy gives a good indication of costs that can be recovered.

Of these costs, only the costs of operation, maintenance and minor repairs (C&D in Fig1) are recovered from the community.



Cost Recovery Examples:	In arrears	In advance
Flat Rate	Electricity bill recovered through uniform household tariff paid in arrears	Household tariffs purchase diesel or pre-paid electricity cards
Direct link to Consumption	Metered household connections read and pro-rata bills issued	Pre-paid tokens or credits for water purchased

Figure 2. Categories of Cost Recovery

How to recover costs?

For small rural schemes, costs have traditionally been recovered through some form of flat rate tariff levied, in advance or in arrears, on all households. For schemes with un-metered communal standpipes, there is no simple way of fairly allocating costs to individual consumers so this approach, while simple, is potentially inequitable.

Fig 2 divides cost recovery methodologies into flat rate and direct payment categories, and into payment in arrears and in advance. The term “Pre-Payment” is often ill-defined, in that it is taken to mean pre-payment directly linked to consumption; while of course it is also possible to pre-pay a flat rate tariff.

With the passing of the Water Services Act (3. Govt RSA 1997) and the increased involvement of local government, accountability for consumption has received higher priority. The direct linking of payment to consumption has been seen as a means of increasing such consumer accountability. For communities experienced with the difficulties of implementing a flat rate tariff (defaulter problems etc), this approach is, initially at least, very attractive. Direct payment for water consumption can be made in advance through the purchase of pre-paid credit, or in arrears through billing for metered consumption. While it is possible to manage such direct advance payment for consumption (or pre payment as it is commonly known) with a labour intensive system; in South Africa, by far the most common approach has been to utilise technological tools. The merits of the various technological “pre-payment” options are assessed in detail in other documents, especially (1. DWAF 2000), but the most common are:

Electronic

Several electronic communal standpipe systems featuring direct payment have been developed in South Africa in recent years. These include the Bambamanzi water management system produced by Conlog, the Aquanov communal pre-payment standpipe produced by Bateman Water and the Kent-Telbit pre-payment system. All these systems are fundamentally similar in that all have a computerised management system, community-based credit sales units, consumer credit tokens fitted with a data storage “button” and a network of communal standpipes. Evidence from the field suggests that these systems have great potential in controlling water wastage and reducing consumer debt.

Mechanical

The Thelamanzi Mechanical Pre-payment meter, developed in Kwa-Zulu Natal, uses plastic tokens to release a fixed amount of water (up to 26 litres) from a holding tank housed in the robust meter unit. Trials of the system near Port Shepstone indicate that the mechanical system is popular with consumers. Particularly popular is the fact that the mechanical credit tokens are visible, unlike the rather abstract credit on many electronic systems. Individual mechanical units are more expensive than the equivalent electronic units, but they do not require expensive computerised management systems for monitoring and so may be a cheaper for small schemes (up to 15 units).

Cost recovery in practice

Efficient cost recovery on the ground is affected by a number of factors:

Water is not an economic good

One common misconception surrounding the pricing and billing for water is that it can be treated as any other economic good. The economic laws of supply and demand do not apply for water as they do for other commodities. Firstly almost every rural community has an alternative source of free water, to that offered by the water scheme. It may be that this alternative source is distant, of poor quality and limited; but it must exist or else the community would not be viable in the first place. Secondly access to water is not a luxury, but seen as a right both by the majority of the community and (somewhat controversially) the South African Constitution.

Flat rate tariffs work best in small communities

The application of a uniform tariff is inherently unfair in that it favours those who consume most. At Umtebe, a small Mvula Trust scheme near Umtata in the Eastern Cape, most of the O&M costs are carried by just 40% of households. In this case, there is sustainability because the 40% accept that they are the wealthiest households and probably consume the most. However in many communities, particularly those with more than 200 households, there is rarely sufficient community spirit to encourage such voluntary cross-subsidisation.

Direct payment reduces consumption

Most evidence suggests that direct payment severely reduces consumption. In 1998 and 1999, DWAF undertook

Scheme	C.R System	Population	Average usage of regular users (l/day)	Average usage of whole community (l/day)
Modderspruit	Bambamanzi	858	8.0	3.4
Khutsong	Kent-Telbit	2,274	13.5	2.7
Masakala	Aquanovo	6,250	unknown	1.2

Figure 3. Water Consumption for Advance Direct Payment Schemes

an evaluation of 3 electronic pre-payment cost recovery systems (1. DWAF 2000). Could this be because demands are not being met and cost recovery is low?

These figures can be compared with the definition of a daily basic water supply for direct consumption (i.e.: food preparation and personal hygiene) of 25 litres per person per day (4. Govt RSA 1994).

These figures can be viewed in two ways. On the one hand, direct payment reduces water wastage and ensures that a high percentage of consumed water is paid for. On the other hand, they also highlight an alarming drop in domestic consumption. This has implications both for economic viability of the schemes and for the ability of the schemes to improve community health and raise the quality of life.

Technical solutions dominate

Technical cost recovery solutions have tended to dominate even though the challenges are largely social. Investment in labour-based cost recovery systems may be equally expensive, but more of the investment would be in rural people rather than in technology provided by urban consultants.

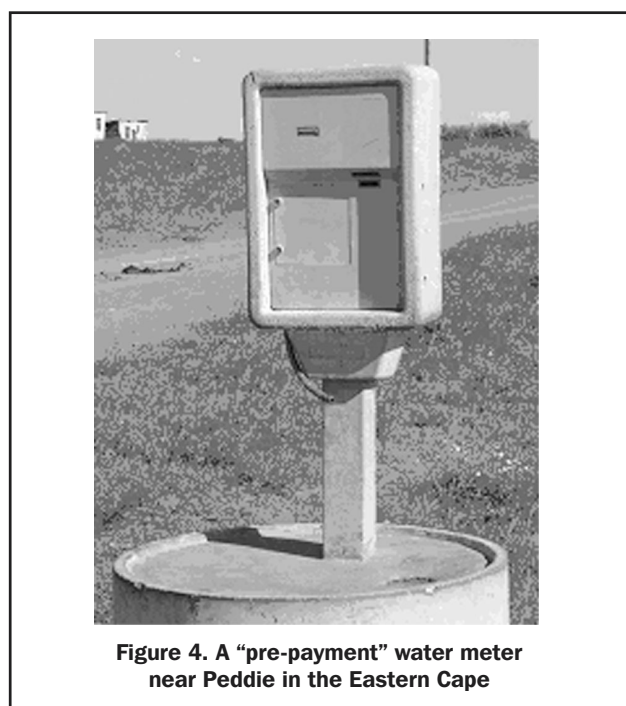


Figure 4. A “pre-payment” water meter near Peddie in the Eastern Cape

Efficient cost recovery is expensive

Implementing an efficient cost recovery system (technical or social) is expensive. Often a large amount of additional investment is used to recover a relatively small level of costs.

Shifting policy groundrules undermine cost recovery

Efforts at cost recovery have been severely hampered by changes to government policy. The original Reconstruction and Development Plan (RDP) (5. Govt RSA 1994) envisaged water delivery on the basis of “some for all” not “all for some”. An RDP level of service was set at 25 l/person/day, and the principle of payment for services was firmly entrenched through the principle of operating cost recovery. However during the local government election campaign of 2000, the promise was made to provide 6kl/house/month of “free water” before any tariff would be charged. When applied in a rural context, where consumption rarely reaches these levels, this policy effectively means a “free” water supply. The implications of this shift in policy are already being felt on the ground.

Two Worlds – The Reality Gap

The application of urban policies in rural contexts is one indication that South Africa is still very much a country that straddles two worlds. Many of the problems facing delivery of services stem from the fact that legislation is being framed for nationwide application, while conditions on the ground varies so markedly. There is a “reality gap” between what the legislation and theory suggests should be implemented, and what is practically possible. In many rural areas of South Africa, the capacity of local government to manage and support rural water schemes (let alone recover costs) is very limited.

Costs must be clearly allocated

For cost recovery to work effectively, particularly where costs are being covered by both the beneficiary community and an external subsidy, there must be clarity on the responsibilities for paying different costs. There are many DWAF water schemes where the community is supposed to be paying for diesel (for example) but where the government ends up footing the bill. If funding is coming from more than one source, then a transparent allocation of costs is essential.

The psychology of payment

The significant drop in domestic consumption when consumption is directly metered may be viewed as a plus for water conservation, but it is a concern if the aim is increasing consumption of clean water. Other services that are good for the individual (e.g.: medical aid schemes, life insurance or gym memberships) are rarely charged on a direct payment basis. Even if the marginal cost of each “unit consumed” is greater under a subscription, consumption may be maintained because the consumer is freed to consume what is needed not what s/he perceives is affordable. This is one of the psychological aspects affecting payment for, and consumption of, water.

Lessons

- Cost recovery from beneficiary communities in South Africa may no longer be politically viable. This is a big change of emphasis from the previous policy that consumers must pay for services.
- Before any cost recovery strategy is formulated for a particular scheme, there must be clarity on the objective. Is the primary aim to recover costs, to increase accountability or to manage the water resources?
- If the aim is to recover costs, then a thorough cost-benefit analysis is essential to assess whether the initiative makes financial sense. Efficient cost recovery is not cheap, and may not be worth the expense.
- Given the shift of in government policy over the payment for water; future cost recovery, or water resource management, systems must accommodate the ability to ration a first 6kl per month of “free” water. This rationing of “free” water will reduce the ability to recover meaningful costs.
- Any cost recovery strategy must be considered in the light of its impact on other broader development goals such as improving community health status, average clean water consumption, rural employment, community empowerment, rural income and discouraging rural to urban migration.
- Any cost recovery strategy must be responsive to the needs of wishes of the target community and appropriate

to the situation on the ground. Special attention should be paid to community preferences for particular technological options (eg: physical over electronic credit tokens).

- If technical cost recovery solutions are being used, then they must be combined with extensive social facilitation. Technology can only be a tool and is never, in itself, the solution.

Cost recovery has always been one of the most challenging aspects of implementing sustainable rural water supply schemes. Recent policy changes in South Africa regarding the funding of water service delivery have called into question the approach to, and relevance of, cost recovery. In the light of recent developments, the questions of: Why recover costs? How to recover costs? and Is cost recovery worth the cost? have never been more relevant.

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Exchange rates (April 2001)

US \$1: SA Rand 7.8

UK Pound 1: SA Rand 11.2.

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