

## Water resource management

### Funding catchment management

# Guidelines for setting water resource management tariffs for Catchment Management Agencies (CMAs)

### Who are the guidelines for?

These guidelines are intended for specifically for CMAs with the purpose of setting appropriate water resource management tariffs.

Water resource management tariffs are intended to cover the costs of water resource management activities. These are activities that protect, allocate, conserve, manage and control the water resources and manage water quality located within Water Management Areas (WMAs).

### Background

South Africa comprises 19 Water Management Areas (WMAs), all of which are ultimately to be managed by 9 CMAs. The CMA is directed, through the National Water Act (Act No 36 of 1998) to collaboratively protect, allocate, conserve, manage and control water resources distributed across the specific WMA.

However, in order to finance these activities, the CMA needs a strategy for generating income, which will be used to cover various costs including the functioning of the CMA. A catchment management agency may be funded by the state from water use charges made in its water management area or from other funding sources.

The NWA envisages the funding sources of catchment management agencies to include money appropriated by Parliament; water use charges; and money obtained from any other lawful source for the purpose of exercising its powers and carrying out its duties in terms of this Act.

To date, the Department of Water Affairs (DWA) has developed water resource management (WRM) tariffs guidelines, as set out in the DWA Water Pricing Strategy 2007, in the absence of knowledge of the actual costs of CMA operations.

Since 2007, two CMAs have been established. Analysis of the actual operations of these CMAs, conducted during the WRC-funded study, showed a 270% under-recovery in water resource management costs.

By implication this means that catchment management activities are under-funded or subsidised.

In addition, analyses by National Treasury have highlighted several weaknesses with regards to setting of water resource management tariffs:

- Where CMAs are in place, DWA holds regulatory responsibility in this case regulating charges set by the CMAs. The regulatory approach is an informal one and it follows that the incentives for efficient pricing are likely to be weak. However, the water resource management activity typically represents a small component of the full water cost chain and the associated charge is a correspondingly small proportion of the end-price.
- Individual water charges vary widely across South Africa. Due to the large number of links in the water supply chain that are regulated in different ways and by different entities, final charges are unlikely to be cost reflective.
- Regulatory incentives for cost reductions and for efficient prices are weak at all levels of the activity chain. The absence of an independent regulator is problematic with highly opaque regulatory relationships currently in place.
- Efficient regulation and any reliable assessment of pricing efficiency likely to depend above all on ring-fencing

of water operations at local authority level from other local authority activities so that better information can be made available.

This WRC report reviews the Raw Water Pricing Strategy (2007) and proposes potential enhancements to the existing guideline.

## Principles of effective water tariffs

The DWA Water Pricing Strategy is based on several four key principles, which broadly guides the setting of WRM Tariffs.

**Social Equity**, which is focused on redressing the imbalances of the past with respect to:

- Inequitable access to basic water services at affordable tariffs within municipal areas, by facilitating a conditional subsidy on raw water cost where stepped tariffs are introduced; and
- Inequitable access to water for productive use purposes by subsidizing tariffs for emerging farmers for a limited time period.

**Ecological Sustainability**, which requires:

- Safeguarding the ecological reserve;
- The ecological management of the catchment;
- Water quality protection; and
- Water conservation and demand management;

**Financial Sustainability** aimed at generating adequate revenue for funding the cost related to:

- The management of water resources; and
- The operation, maintenance and refurbishment of existing schemes.

**Economic Efficiency**, which aims to:

- Promote the efficient allocation and beneficial use of water: water should be priced at its opportunity cost; and
- Provide for administrative as well as market-related measures to achieve this goal.

## Attributes of effective water tariffs

What constitutes effective water tariffs? The United Nations Development Program (UNDP) proposes 8 attributes for setting of effective water tariffs.

These attributes include that the tariffs should:

- Be simple and easy for customers to understand
- Produce a revenue stream sufficient to covers the cost of providing service
- Provide a steady revenue stream that can be relied upon to cover cash flow requirements
- Where applicable, discourage inefficient use of resources, including water resources
- Support investments and operations that provide high quality service to its customers
- Support investments and operations that protect the environment
- Be affordable to customers
- Where applicable, reflect the different costs of providing service to different customers.

These attributes are also relevant for tariff setting for CMAs. It has to be noted however that the relative importance and priority of the attributes may vary from CMA to CMA.

## Best practices for setting effective water tariffs

The UNDP also proposes eight sets of best practices for setting effective water tariffs. These are summarised the table on p 3.

### Further reading:

*An analysis of water pricing instruments governed by the DWA water pricing strategy, and its potential for generating revenue for CMAs* (**Report No. 2078/1/13**). To order this report contact Publications at Tel: (012) 330-0340, Email: [orders@wrc.org.za](mailto:orders@wrc.org.za) or Visit: [www.wrc.org.za](http://www.wrc.org.za) to download a free copy.

Best practice	Notes
Develop and maintain accurate and extensive accounts and records	Acquire and maintain good customer records. Cost or expenditure records should be linked to tasks and activities. Establish and keep good capital accounts Develop and maintain performance indices
Meter and measure water flows and quality	Measure water network flows Meter/measure final users Monitor water quality
Establish cost-based tariffs	Establish full cost tariffs including proper account of depreciation Establish cost-reflective tariffs
Set tariffs with both variable and fixed charge components	These provides management options for CMAs to reduce, where possible, the complexity of WRM tariffs
Beware of, and limit, the tariff burden on customers	Develop suitable subsidy policies (there is no "best practice" level of affordable tariff) Develop long term service agreements with key customers Implement ring-fenced budgets
Provide incentives for good management	Award contracts for system management on a competitive basis. Provide pay bonuses CMA staff when performance targets are met. Provide incentives from the central government to the CMA for taking the lead in improving water quality and/or reducing pollution or other externalities.
Develop and annual tariff review mechanism	Assess the achievement of performance indices Adjust annual tariffs as required
Public Information Programs	Publish and regularly remind customers of the water and wastewater tariff schedule. Describe to customers policies that govern calculation of tariffs and Commission an external, performance audit.