

Executive Summary

Introduction

The National Water Act (Act 36 of 1998) provides for the progressive establishment of Catchment Management Agencies (CMAs) throughout South Africa. The intention is for CMAs to be largely financed at a WMA scale, through appropriate "user charges", which enable CMAs to be financially self-supporting and sustainable.

This document is aimed at supporting those people involved in assessing the financial viability of a proposed CMA (as part of the proposal to the Minister for establishment of a CMA), as well as those involved in preparing the annual business plan (required of every CMA, once established). It provides background and interpretation to the relevant policy and legislation, with an emphasis on the user charges for water resource management that are set and recovered to cover the CMA costs. The document is supported by a financial model, that assists in the calculation of CMA costs and water use charges.

The Role of Catchment Management Agencies

In line with current international practice, South Africa has adopted the approach of establishing statutory river basin organisations (i.e. CMAs) to facilitate the integrated management of water resources and participation of stakeholders in local decision making. The CMA must develop a catchment management strategy, outlining the framework and intent of water resources management within its water management area (WMA). This must be consistent with the national water resources strategy (specifying international, inter-WMA and strategic use) and resource directed measures (specifying requirements for resource protection).

A wide range of water resources management functions may be delegated to these CMAs, depending upon the local priorities and capacity, including:

- Developing strategies for integrated water resources management within the WMA;
- Developing and supporting organisations in the WMA, including coordination and capacity building;
- Regulating water use, including authorisation and charging of water use;
- Managing information to support the other water resources management functions;
- Implementing physical interventions, including conservation and demand management and possibly infrastructure development and/or operation; and
- Auditing water resources management, in terms of the stated objectives of organisational business plans and water resources management strategies.

On establishment, a CMA is required to perform a number of *initial functions*, including the development of a catchment management strategy, the coordination of organisations and facilitate the participation of stakeholders. Additional water resources management functions may be delegated or assigned to the CMA, once it has demonstrated the ability to perform these initial functions throughout its WMA.

This process of delegation should begin with *financial and administrative functions* such as the registration of water users and making and collecting water user charges. Once financial and administrative capacity has been created, *water resource management functions* may follow, based on the particular priorities outlined in the catchment management strategy. Finally, once the CMA has demonstrated capacity to fund and

exercise these water management functions, the powers and duties of a *responsible authority* may be delegated to the CMA, which relate to the ability to authorise, license and regulate water use.

Based on this, the progressive delegation of functions can be separated into four phases, namely the initial, financial, management and responsible authority phases.

Financing Catchment Management Agencies

The National Water Act and the *Pricing Strategy for Raw Water Charges* provides the financial framework within which CMAs operate. The two main sources of funding for CMAs are user charges (for water resources management) and parliamentary appropriations (through DWAF). The intention is that CMAs are largely financed through user charges on water resources management.

Currently, the Pricing Strategy seems to be (understandably) oriented towards the collection of charges by DWAF, and is not entirely appropriate for CMAs in its existing form. However, it provides the space for appropriate adaptation for this purpose. The key issues raised by the Pricing Strategy in terms of CMA financing, and which require greater attention, are:

- The requirement that the Reserve allocation be covered by charges on other use may not be consistent with the fiscal theory of user charges, because the Reserve may be interpreted as a collective public service that should be funded through general taxation.
- The application of charges is currently constrained to consumptive use of water, but this is being extended to other users, including waste discharge.
- The differentiation of user charges between users requires greater resolution, to address various issues, such as assurance of supply and the benefit obtained from water resources management.
- The proposal that DWAF subsidies to a WMA are based on the portion of unallocated water is appropriate for DWAF regional offices, but may not be appropriate for CMAs in a highly developed WMA with significant management requirements.
- The appropriate division of user charges between the CMA and DWAF regional office, based on responsibility for functions, requires clarification.
- The basis for estimating inter-WMA financial transfers for water transfers (the portion of the costs in the donor WMA) needs to be revisited, because there are costs associated with the use and discharge of water in the receiving WMA, that are not incurred in the donor WMA.

In summary, the Pricing Strategy provides a good basis for recovering the costs of water resources management, particularly from the perspective of DWAF. However, this needs to be adapted for application to the financing of a CMA. In particular, the approach and conditions for DWAF financial support to a CMA for establishment and operation requires clarity. The need of a CMA for financial support during its establishment (particularly for start-up capital expenses) and initial operation (in first 5 years) is unquestioned. However, medium term support may also be required, particularly in less developed WMAs.

The issue of CMA borrowing is a highly problematic issue that has not been resolved. A distinction should be made between short-term borrowing, to cover initial capital and operating costs against cash-flow, and long-term borrowing associated with water resource infrastructure development. Short-term borrowing should be capped relative to income, and this will likely be the case automatically when the CMA applies for overdraft

and loan facilities from private financial institutions. Although, the NWA permits CMAs to raise funds for and manage water resource infrastructure development, this introduces several complexities.

Firstly, the skills required to raise finance and project manage this type of development are completely different from those required to manage water resources. This is more appropriately performed by organisations that are set up for this purpose, such as DWAF, water boards and water user associations. Secondly, the required budgets (and associated water use charges) are far in excess of the water resource management budget, which will possibly shift the focus of the organisation from resource management to resource development.

Catchment Management Agency Costs

A CMA's costs are largely associated with staff salaries (or payment of services where these are outsourced). The following table highlights possible ranges in remuneration costs for the four phases of CMA evolution, with estimates of the costs associated with the governing board, overheads and monitoring. This was based on the estimation of the staff complement required to perform the functions during each phase. It excludes the external consultancy costs, as these are likely to vary considerably between CMAs.

Possible ranges operating costs (R 000/annum).

	Initial	Financial	Management	Authority
Governing board	400	500	500 - 600	500 - 600
Remuneration	1 900	3 800	6 600 - 10 500	9 100 - 11 400
Overhead	400	700	1 100 - 1 800	1 400 - 1 800
Monitoring	-	-	800 - 3 000	1 000 - 4 000
<i>Total</i>	<i>2 700</i>	<i>5 000</i>	<i>9 000 - 15 900</i>	<i>12 000 - 17 800</i>

In addition to these operating costs, the CMA will require capital expenditure (both during establishment and on an ongoing basis), for items such as information technology, communications, buildings, vehicles and library. Where short-term loans are taken to cover these capital costs, these must be repaid with interest over an agreed period. These capital costs do not include the costs of water resource infrastructure development and operation, which is covered by the user charge for water resource development, and must therefore be kept separate for accounting purposes.

Calculating User Charges for Water Resources Management

The following process is proposed for estimating user charges for water resources management.

Step 1: Estimate registered water use

Water use charges can only be raised from registered water users, therefore this must be estimated for the different sectors over time (ten years).

Step 2: Estimate the total costs

The capital and operating costs of the CMA establishment and functioning must be estimated (over time), taking account of any subsidies or grants to the CMA.

Step 3: Allocate functional cost components to water use

The benefit received from a water resource management function must be linked to each water user group, which enables the unit cost per user group to be calculated.

Step 4: Set user charges

User charges should be set through a process of negotiation with user groups (based on the unit costs), so that the CMA cash flow is managed, and considering the financial affordability of the charges for the users, willingness to pay these charges, and possible implications for default.

Step 5: Reconcile income and expenditure

The annual and cumulative cash-flow projection provides the basis for reconciling of CMA income versus expenditure.

The preceding steps, when implemented within the framework of the CMA Financial Model, provide the basis for effective CMA financial planning and the setting of user charges.

Likely Range for User Charges

Preliminary analysis of the probable CMA costs and registered water use in various WMAs indicates that the user charge for water resources management during the initial phase of CMA evolution would be about 0.3 cents/m³. However, it is likely that only about 80% of municipal and industrial users and 30% of agricultural users would register and pay in the initial phase, which implies that a charge of between 0.5 and 1 cent/m³ is more likely during this phase. Assuming the same charge for all user sectors, this may increase to between 1.3 and 1.9 cents/m³ for full CMA functioning (the responsible authority phase), and may be higher if the levels of non-registration and non-payment are significant.

It may be appropriate to differentiate the charges for irrigation and forestry from those for municipal and industrial use. Despite this, the above analysis indicates that it is very unlikely that the domestic and industrial user charges for water resources management will be greater than 10 cents/m³, while the charges for irrigation and forestry are likely to be between 0.5 and 2.5 cents/m³. This implies that the user charge for water resources management applied to irrigated agriculture would be between R40 and R200 per hectare, while forestry charges would be about R5 to R25 per hectare.

It should also be noted that current DWAF estimates of the charge that must be paid to DWAF, where all functions are performed by DWAF, ranges from about 0.25 cent/m³ for forestry to about 1 cent/m³ for domestic and industrial users. This would reduce as functions were transferred to the CMA, but must be added to the charge required to cover the CMA's operating cost.

Recommendations

The document provides a useful background reference to financing CMA establishment and functioning, and highlights areas where the Pricing Strategy needs to be engaged. The CMA financial model provides a valuable tool to support the CMA business planning process and the calculation of user charges for water resources management.

DWAF has identified the need to formulate a policy and guidelines for the financing of CMAs, based on the Pricing Strategy, and has initiated a project to do this. It must address the issues raised in this document, namely:

- The conditions and mechanisms for financial support to CMA establishment and operation by DWAF, taking account of the theoretical basis for user charges.
 - Detailed guidelines on the allocation of the costs of different water resource management functions to users.
 - Financial management systems and procedures to ensure efficient CMA operation.
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