

**GUIDELINES ON THE VIABILITY STUDY FOR
THE ESTABLISHMENT OF A CATCHMENT
MANAGEMENT AGENCY**

In support of the Proposal to the Minister

**Integrated Water Resource Management
Strategies, Guidelines and Pilot Implementation in Three
Water Management Areas, South Africa**

**Department of Water Affairs and Forestry
South Africa**

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PREFACE

The National Water Act (36 of 1998) provides for the progressive establishment of Catchment Management Agencies (CMAs) throughout South Africa. A significant milestone in the process leading towards the establishment of a CMA is the Proposal to the Minister. The viability of the proposed CMA represents an important component of this Proposal, and should address:

- Proposed functional evolution of the CMA, including functions to be delegated or assigned;
- Proposed CMA institutional arrangements and relationships with other bodies;
- Organizational design considerations, in performing the proposed functions;
- Financial viability of the CMA, indicating sources of funding for the predicted expenditure; and
- Acceptability of the CMA to stakeholders, based on awareness and support.

This guideline document provides background, indicates issues that should be considered, and outlines an approach to assessing the four elements of CMA viability. It should be noted that the viability study precedes the appointment of the CMA governing board, which will in turn be required to develop a business plan for the CMA operation, within 6 months of its appointment. As such the viability study provides a strategic framework for the CMA operation, not a business plan. It therefore provides an assessment of the CMA viability based on specified assumptions, and highlights critical requirements for a viable and sustainable CMA as proposed.

At the time of writing this guideline, four draft Proposals and/or viability studies for CMA establishment had been compiled, namely the Nkomati, Crocodile(west) Marico, Breede and Mvoti to Mzimkulu water management areas. Each of these studies provided insight into the nature and content of a viability study, reflecting the highly diverse situations in the various WMA's of South Africa, and their important contribution to the development of these guidelines is acknowledged.

DOCUMENT INDEX

DOCUMENTS DEVELOPED FOR THE ESTABLISHMENT AND OPERATION OF WMI

PRE CMA ESTABLISHMENT

Process

1. Implementation of CM in SA. The National policy, Aug 2001
2. Guide 1 in the CMA/ WUA guide series: Establishing a Catchment Management Agency (CMA), Aug 2001
3. Guide 2 in the CMA/ WUA guide series: The Catchment Management Agency as an organisation, Aug 2001
4. *CMA financing policy*
5. *Guide to CMA financing*
6. Roles and functions of institutions involved in water resource management, Feb 2002

Proposal

1. CMA proposal development: proposal framework and evaluation criteria, Dec 2001
2. **Guidelines on the viability study for the establishment of CMA, Feb 2002**
3. Advisory Committee for the establishment of CMA governing board, Oct 2001

Participation

1. Guide 4 in the CMA/ WUA guide series: Public participation for Catchment Management Agencies and Water User associations, Aug 2001
2. *Evaluation criteria for public participation in the establishment process*
3. *Empowerment of rural poor and black women*
4. *Communications strategy for Directorate CM and for development of initial tools for communicating to the rural poor*

PRE WUA ESTABLISHMENT/TRANSFORMATION

Process

1. Guide 3 in the CMA/ WUA guide series: Establishing a Water User Association (WUA), Aug 2001
2. Guide on transformation of Irrigation Boards into water User Association, Aug 2001

Participation

1. Empowerment of the poor through agricultural WUA, Feb 2002

POST CMA ESTABLISHMENT FOR DWAF PURPOSES/AUDITING

1. Monitoring the Water Management Institutions, January 2002
2. *Criteria for delegation of functions*
3. *Indicators for a sustainable CMA*

OPERATION OF A CMA***Institutional***

1. Guidelines for the CMA structure, Organisational-guidelines-remuneration for board members- CEO Feb 2002
2. *Interrelationships between WMI Feb 2002*
3. HR handbook for Catchment Management Agencies, Feb 2002
4. Guidelines on business plans
5. *Training needs for governing board members*

Financial

1. Guide for CMA financial management

Water resource strategy

1. Development of a Generic Framework for a Catchment Management Strategy, Jan 2001
2. Minimum requirements for development of CM strategies
3. Guidelines for publication and consultation of CM strategies

ACRONYMS

CMA	- catchment management agency
CMS	- catchment management strategy
DWAF	- Department of Water Affairs and Forestry
DWAF RO	- DWAF: Regional Office
IWRM	- integrated water resources management
NWA	- National Water Act (Act No 36 of 1998)
NWRS	- national water resources strategy
RQO	- resource quality management
WDCS	- waste discharge charge system
WMI	- water management institution
WRM	- water resources management
WS	- water services
WSA	- water services authority
WSDP	- water services development plan
WSI	- water services institution
WSP	- water services provider
WUA	- water user association

1 INTRODUCTION

1.1 Purpose of this Guideline Document

The National Water Act (36 of 1998) provides for the progressive establishment of Catchment Management Agencies (CMAs) throughout South Africa. A significant milestone in the process leading towards the establishment of a CMA is the proposal to the Minister, as required by Section 77 of the National Water Act (NWA). A key element this proposal relates to the viability of the proposed CMA, which should address the following components of Section 77:

- (c) *The proposed functions of the CMA, including functions to be assigned and delegated to it;*
- (d) *How the proposed catchment management agency will be funded;*
- (e) *The feasibility of the proposed CMA in respect of technical, financial and administrative matters;*

In order to support these components of the proposal, the viability study must engage and make proposals on the following:

- ❑ The progressive delegation of functions to the CMA, which reflect the water resources management (WRM) priorities in the WMA, together with a preliminary assessment of whether these functions would be redelegated and/or contracted out to other organisations.
- ❑ The evolution and transformation of the institutional arrangements in the WMA, focusing on the way in which cooperative governance will be fostered with other water management institutions (including neighbouring CMAs) and organs of state.
- ❑ The human, financial, administrative and infrastructural resources required to perform these functions, and an outline of the proposed organisational structure for the CMS, together with an evaluation of whether the necessary capacity exists in different water management institutions (or other organisations) in various parts of the WMA.
- ❑ The user charges (and possibly financial support) required to cover the costs of water resources management in the WMA (under the Raw Water Pricing Strategy), based on an estimate of sectoral water use, together with an evaluation of the current and possible future registration of water use in the WMA.
- ❑ The mandate that the CMA has from stakeholders (including water users) in terms of ensuring participatory management of water resources in the WMA. This provides the linkage to the consultation process and requires stakeholder input and acceptance of the approach and recommendations of the viability study.

This information should enable a holistic assessment to be made of the viability of the CMA, taking account of issues around technical (WRM priorities and functions), administrative (institutions and organisation) and financial (water use charges and financial support) feasibility, as well as social acceptability.

This guideline document provides background, indicates issues that should be considered, and outlines an approach to assessing the five elements of CMA viability. It should be noted that the viability study precedes the appointment of the CMA governing board, which will in turn is required to develop a business plan for the CMA operation, within 6 months of its appointment. As such the viability study should provide a strategic framework for the CMA operation, not a business plan.

It therefore avoids specifying the details of the CMA operation to the degree that the autonomy of the CMA Governing Board may be jeopardized, but rather provides an indication of the viability based on specified assumptions. On the other hand, the viability study should be based on stakeholder participation (reflecting local interests and conditions), and therefore stakeholder support for the proposal and CMA viability may be conditioned on the institutional and financial proposals. It is in the CMA Governing Board's interest as stakeholder representatives and being responsible for building the CMA legitimacy that the strategic framework outlined in the proposal is carried through into the CMA business plan and operation.

1.2 Structure of the Document

The report addresses the five elements of viability sequentially in separate Chapters, highlighting key issues and considerations. This starts with the functional evolution, the institutional arrangements and the organisational considerations in **Chapters 3 to 5**. This is followed by the financial viability and social acceptability in **Chapters 6 and 7**. However, this is preceded by a discussion of the purpose, nature and principles of the viability study in **Chapter 2**. Finally, the outline of the process and approach to the viability study is presented in **Chapter 8**, including the linkage with the interim implementation plan required as part of the Proposal to the Minister.

2 OVERVIEW OF THE VIABILITY STUDY

2.1 Purpose of the Viability Study

Primarily the viability study should support the Proposal to the Minister. However, it should be noted that the real issue is not whether a CMA should be established, nor what catchment area the CMA should be responsible for. Rather it should propose the type of CMA that is needed in the WMA and assess the conditions for this CMA to be viable and sustainable. Furthermore, it should be developed in partnership with the stakeholders in the WMA, thereby fostering stakeholder understanding and support of the need for a CMA.

2.2 Interpretation of CMA Viability

As highlighted in the Introductory Chapter (above) there are five main elements to CMA viability.

- *Technical viability*: relates to the WRM priorities and functional delegation to the CMA and should consider whether this is executable, practical, coherent and a priority for the WMA.
- *Institutional viability*: relates to the establishment of the CMA and its relationships with other bodies, and should consider whether this is legitimate, has a mandate, will provide leadership and will facilitate coordination, to promote IWRM and participatory management in the WMA.
- *Organisational viability*: relating to the organisational functioning and resources of the CMA and should consider whether this is functional, effective, efficient, professional and integrated.
- *Financial viability*: relates to the CMA costs, financing and sources of funding and should consider whether this is affordable, administerable, sustainable and customer-client oriented.
- *Social viability*: relates to the stakeholder support for the CMA and should consider whether this is credible, acceptable, provides a champion for WRM and is responsive to stakeholder expectations.

2.3 Principles

The establishment of CMAs in South Africa reflects a significant change in the approach to WRM, from the past. This represents a major opportunity to give effect to the new paradigm captured in both the government transformation and WRM policies and legislation. The viability study must therefore assess the degree to which the establishment of the proposed CMA (together with the other statutory and non-statutory bodies that make up the WRM institutional environment) will achieve the following principles¹:

- The democratic government must contribute to *social and economic development* and the *eradication of poverty* in South Africa.
- The NWA and policy requires *equity, sustainability* and *efficiency* in the access and use of water resources and the activities of the institutions established for their management.
- *Transformation* of the public service (Batho Pele) and the *new paradigm* (and functions) of WRM (NWA and policy), requires institutional, organisational and cultural transformation from the way in which water resources were managed in the past.
- In particular this implies a paradigm shift to an approach based on *integrated water resources management* (IWRM), *stakeholder involvement/participation* in decision-making (empowerment of citizens), and *cooperative governance*.

¹ These principles underlie the DWAF Mission and Vision, the National Water Policy and the National Water Act.

- CMAs (and other water institutions) must develop a *service delivery orientation* (Batho Pele), which must reflect a *commercial orientation* to the business of water resources management (taking account of government's social objectives for the water sector).

These principles imply that as an institution, the CMA must:

- Develop legitimacy as the key WRM institution in the WMA, with a social development focus, based on equity, sustainability and efficiency;
- Entrench the required paradigm shift to IWRM in the institutional arrangements and organisational structure, as the organisation evolves to perform additional functions;
- Facilitate cooperation between organisations involved in WRM and participation of stakeholders in WRM decision making;
- Be institutionally focused, organisationally efficient and customer services oriented, in performing delegated WRM functions, while considering the various interests of water users and stakeholders in the WMA; and
- Be representative of the demographics in the WMA, in the governing board, the staff and contracted organisations, while developing and retaining adequate management, technical capacity to perform its functions.

2.4 Evaluating Viability

As there are currently no CMAs in existence, it is difficult to clearly indicate the character or nature of a viable CMA. However, experience with other water sector bodies as well as other public sector agencies indicate that the issues highlighted in the interpretation of viability above should be considered. This is done in each of the following sections, which highlight the considerations for assessing viability as well as the risks and challenges to the CMA viability.

Fundamentally, the viability study is a risk analysis for the proposed CMA. Therefore CMA viability should be assessed in terms of the degree to which potential risks have been mitigated and challenges have been addressed. Each of the following Chapters addressing the various elements of viability culminates in a generic overview of the most likely risk areas. These should be evaluated, together with any other specific risk areas. Where the CMA will need to address the risk area through strategies or interventions, this should be highlighted as a condition or constraint on the CMA viability.

3 FUNCTIONAL EVOLUTION

3.1 Background to the Delegation and Assignment of Functions

The 1997 *White Paper on a National Water Policy for South Africa* states that the National Government is “custodian of the nation’s water resources and its powers in this will be exercised as a public trust”. In exercising its mandate, DWAF must reconcile, integrate and coordinate diverse and often conflicting interests of different stakeholders, within the framework of sustainable and equitable utilisation of South Africa’s water resources.

Apart from the initial functions, all other functions must be delegated or assigned to the CMA. The progressive delegation of functions should reflect the management priorities in the WMA and the CMA’s demonstrated capacity and available resources to perform its existing and proposed functions.

Once all of the relevant powers and duties have been assigned or delegated to a CMA, a fully functional CMA should be performing the following functions:

- ❑ Development of a catchment management strategy (CMS) in accordance with the national water resources strategy, as well as financial and business planning for the CMA.
- ❑ Responsible authority functions of authorising water use (through licencing, etc). Immediately after establishment, the CMA needs to entrench itself as the key WMR institution in the WMA, and therefore it should become actively involved in the control, verification and management of water use, set and collect water use charges, and act as the “post-box” for all authorisation applications.
- ❑ Establish and support water management institutions that have been specified in its catchment management strategy. A CMA must coordinate water related activities of institutions and ensure community participation in WRM, as part of its initial functions.
- ❑ Coordinating the implementation of WRM programmes, projects and activities by other WMIs within the WMA. In some cases, the CMA may also perform these activities, particularly where no other organisation in the WMA has the capacity. Although it is not the primary purpose of a CMA, it may operate and develop water resources infrastructure, as long as this does not impact adversely on the CMA’s core regulatory and coordination functions.
- ❑ Responsibility for information management required for WRM within the WMA (following national requirements), together with the requirement to collect information on behalf of DWAF for national strategic purposes.
- ❑ Auditing within the WMA, including the state of water resources and the activities of other WMIs, in terms of the implementation of the CMS.
- ❑ In addition to these line functions, the CMA will require support (staff) functions, such as secretariat to the governing board and human resources management, as well as administrative, legal and financial support to the technical line functions.

Not all of these functions would be performed in the early part of a CMA’s existence, but would rather be progressively delegated. Similarly, certain CMA functions are likely to be performed by other bodies (outsourced), under delegation or contract.

The requirements for establishing CMAs, together with an overview of evolution of these organisations, have been explored in the *Guides for Establishing CMAs and WUAs*², and this has been taken as the point of departure for this study.

² The reader is referred to Guides 1 and 2 of the DWAF (2000) *Guides for Establishing CMAs and WUAs* and the DWAF (2002) *Guidelines of the CMA structure*, which are obtainable through the DWAF Directorate: Catchment Management.

More detailed background to the types of functions that a CMA is expected to perform in presented in the DWAF *Guidelines on the CMA Structure*.

3.2 Considerations for Functional Evolution

This section addresses the issues that may guide the rate or way in which functions should be assigned or delegated to a CMA. Section 73(4) of the NWA indicates that the “Minister must promote the management of water resources at the catchment management level by assigning powers and duties to catchment management agencies when it is desirable to do so”. It may be desirable to delegate or assign from a national (DWAF) or a CMA perspective³.

Although in practice, decisions around the functional evolution of the CMA will be the responsibility of the CMA governing board in consultation with DWAF, the *Proposal* and associated viability study needs to be based on a plausible sequence of functional delegations to a CMA. Conversely, the social viability (acceptability) of the CMA may depend upon the types and rate of delegations. This evolution should consider the following criteria (each of which is elaborated in the following sections):

- Establish the legitimacy of the CMA as the key WMI in the WMA;
- Reflect the WRM priorities in the relevant WMA (as identified by the stakeholders);
- Focus on those functions that are not necessarily receiving adequate attention by DWAF;
- Include ongoing WRM activities by local bodies;
- Promote integrated, participatory and developmental WRM;
- Consider the likely availability of resources and capacity of the CMA⁴; and
- Follow a coherent, phased and executable evolutionary process.

3.2.1 Establish legitimacy

Every newly established CMA will be entering an existing institutional water sector environment in the relevant WMA, often with powerful and capacitated institutions with their own interests and mandates, including local government, water boards, water user associations and industrial sector bodies. This will require the CMA (at least initially) to focus on building its legitimacy and credibility as the key institution in terms of coordinating and ensuring WRM in the WMA.

Establishing the *legitimacy* of a fledgling CMA will be best served by building relationships with other bodies and stakeholders to establish its coordinating role (to ensure WRM by other bodies) before creating a CMA organisation to perform a multitude of WRM functions internally. Fortunately, the initial functions of a CMA are particularly suited to this role, such as developing the CMS (in association with stakeholders and DWAF), coordinating water related activities of other bodies, enabling stakeholder participation and advising on water related issues.

³ DWAF urgently needs to develop criteria indicating the interpretation of “desirable” in this context.

⁴ The CMA should not be enabled to only select certain functions (i.e. cherry-picking), leaving the less desirable functions for DWAF. However, requiring the CMA to perform particular functions (including those where the CMA is acting as an agent for DWAF in terms of national strategic purposes) may be associated with the need for DWAF to provide financial support for those functions. This policy issue needs to be further elaborated, particularly where the implementation of the Pricing Strategy has not been entirely implemented or effective.

Building legitimacy also requires the CMA to become the “face” of WRM in the WMA, particularly in terms of registration, the submission of water use licence applications and the collection of water use charges (even if this only means acting as a post-box for DWAF). However, the need for the CMA to carefully consider adopting other functions that will require considerable capacity and effort to implement, needs to be weighed against the benefit of performing high profile functions that address the priorities of stakeholder (as outlined below).

3.2.2 *Address water resources management priorities*

The main purpose of a CMA is to delegate WRM to a catchment level and to involve local communities. This implies that the CMA should address the WRM issues, problems and priorities in the various catchments within that WMA, particularly as identified by the local stakeholders. Preferably, this would be based on the CMS, but where this has not been done, the key WRM issues need to be identified during the participation process leading to the establishment of the CMA. This also relates to Section 77(1)(b) of the NWA, which requires the *Proposal* to include “a description of the significant water resources in the proposed water management area, and information about the existing protection, use, development, conservation, management and control of those resources”.

3.2.3 *Focus on functions that are not being adequately performed*

The DWAF Regional Office will continue to perform functions that have not been delegated to the CMA. Therefore the CMA priority should initially be on those WRM functions that are not currently being performed adequately or are more appropriately done at a WMA level, particularly where these functions are required to address the WRM priorities identified by the stakeholders. These may be linked to functions required to build legitimacy, including enabling participation, institutional coordination and the control of water use (possibly in catchments that were not previously defined as government control areas). This does not necessarily mean that the CMA should perform all the functions, but rather that the CMA may promote and coordinate the activities WUA and catchment forums in this regard.

3.2.4 *Include WRM initiatives and activities of local bodies*

Local bodies (particularly catchment forums, local authorities and WUA) may be involved in a range of WRM related activities (which are usually a response to a WRM priority), including awareness and youth programmes, river cleanup projects and monitoring initiatives. Although many of these functions do not require delegation, they are often critical to stakeholder support and involvement, and therefore contribute directly to building the CAM legitimacy in the WMA. Furthermore, they will usually provide significant WRM returns on a relatively small CMA financial and/or resource investment (without which they may not be sustainable). These initiatives should be indicated as functions or activities in the initial phase of the CMA establishment even though they may not require delegation, in order to provide for them in the institutional, organisational and financial proposals.

3.2.5 *Promote integrated, participatory and developmental water resources management*

The social and economic development objectives of government, together with the new WRM paradigm implied by the NWA, requires that the CMA needs to promote *integrated, participatory* and *developmental* water resources management within the WMA. This requires a CMA organisation that reflects and enables these principles to be successfully implemented, in terms of way in which it performs and coordinates WRM. This is particularly important in the period immediately after establishment, when the culture of the CMA is being developed. Therefore functions that promote integration and participation (which are similar to those required to build legitimacy) should generally be adopted before the more traditional WRM activities that may lead to “business-as-usual”.

3.2.6 Reflect capacity and resources

The Minister is required to consider the capacity of a CMA, before delegating or assigning a power or duty to the CMA. Capacity should be read broadly to include skills, finances, infrastructure, organisational functioning and institutional networks. Therefore, the timing of the proposed delegation of functions to the CMA needs to match the capacity requirements of various functions with the likely capacity of the CMA at different stages of its evolution. The following issues should be considered (and are related to the considerations for institutional, organisational and financial viability):

- The costs of performing functions should be as far as possible be covered by the user charges for water resources management that are likely to be collected in the WMA.
- The availability of skills needs to consider the possible transfer of DWAF staff with delegated functions, supported by appropriate capacity building and/or reskilling programmes.
- The capacity of other organisations (particularly WMI) in the WMA

3.2.7 Phased, coherent and executable functional evolution of a CMA

The above discussion highlights the need for the delegation of functions to a CMA to follow a phased evolution. This should provide for a continuous and coherent development of the CMA within the existing institutional environment, which make technical and administrative sense, in terms of the institutional evolution of the CMA. This indicates whether the proposed evolution is both executable and practical, or in other words can be implemented.

The following three generic phases illustrate a progressive transfer of functions to an evolving CMA, which should ensure a stable process of organisational capacity building and institutional development.

- *Develop relationships and legitimacy:* This represents post-CMA establishment, which primarily involves the CMA establishing and legitimising itself as a central player in the existing (and evolving) water sector institutional environment. The emphasis is largely on coordination, advisory and strategic functions (as reflected in the initial and financial functions), which do not require significant resources and capacity, but rather on developing relationships with other organisations (particularly catchment forums, local government and sectoral representative bodies). However, in achieving this objective, there is also a need to monitor, verify and control water use and to collect charges from registered water users (together with DWAF). This stage enables (and in fact requires) the CMA to internalise the paradigm shift to participative, cooperative (governance) and integrated water resource management approach required by the NWA, because the “fledgling” CMA governing board and administration are not distracted or overwhelmed by the detailed operational activities.
- *Build capacity and consolidate:* As the CMA develops an institutional profile and legitimacy in the WMA and has developed a (first-order) catchment management strategy (CMS), the process of delegating the functions and building the capacity required to implement the CMS should begin. During this stage, most of the CMA operational functions (not including the responsible authority functions) should be progressively delegated (or assigned), based on the WRM priorities outlined in the CMS. This enables the CMA to develop WRM capacity, without being distracted or overwhelmed by the significant responsibility of water use authorisation⁵.

⁵ A similar argument may be made for not becoming involved in WRM infrastructure management, until the WRM regulatory functions have been established and implemented by the CMA. However, any decision about the CMA becoming directly involved in WR infrastructure operation, should consider the role of other possible role players.

However, it is important that the CMA takes full responsibility for monitoring compliance for water use authorisation, in order to develop the capacity and understanding required for the responsible authority functions. It should be highlighted, that the delegation of these functions should be phased, in order to allow the CMA to gradually build its capacity. However, coherent groupings of functions (and possibly staff) should be transferred, to enable the CMA to consolidate its operations at each stage.

- *Become fully functional and the responsible authority:* Finally, once the CMA has demonstrated the capacity to perform general WRM functions, including the monitoring and information systems required to manage a WMA, the delegation of responsible authority functions should begin. This may start with routine authorisation, initially for abstraction according to the CMS allocation plan and later for the other water uses. This may be followed by the authorisation of water use involving the relaxation of conditions (from national standards).

3.3 Evaluating the Risks and Viability of the Functional Evolution

A proposed CMA may face the following risks in terms of performing functions as proposed:

- ❑ The actual rate of the functional delegation by DWAF is delayed, due to perceived CMA resource or capacity constraints or an unwillingness by DWAF to lose control.

If the proposed evolution has been coherently developed taking account of the above considerations and in association with the DWAF RO, this risk should have been addressed.

- ❑ Upon establishment, the CMA Governing Board develops a different vision of the CMA evolution, although this may reduce the CMA legitimacy from the perspective of the stakeholders that were involved in the establishment process and development of the *Proposal*.

Once again, if the proposed evolution has been coherently developed taking account of the above considerations, through a meaningful and inclusive consultative process with the relevant stakeholders, this risk should have been addressed.

- ❑ The institutional, organisational and financial requirements to perform the functions as proposed are not put in place.

This depends upon the other elements of CMA viability, and if these have not been adequately developed they will affect the technical viability. Conversely, if the proposed functional evolution is not sound, this will adversely affect the institutional, organisational and/or financial viability.

4 INSTITUTIONAL ARRANGEMENTS

4.1 Introduction

The institutional arrangements⁶ for a CMA tend to be the most contentious component of the viability study, because they indicate the way in which different groups relate to the CMA and the way in which power and influence may be exerted on the CMA itself. There may even be tension between what the stakeholders propose and what the Minister/DWAF may accept, particularly as it impacts on the Governing Board membership.

This Chapter addresses the key institutional issues for the CMA establishment, while the implications for the CMA as an organisation are covered in the next Chapter. However, these are not independent of each other, and must in fact be considered together with the functional evolution and financial implications.

4.2 Considerations for the Institutional Evolution of a CMA

The institutional arrangements that a CMA may adopt to ensure that its functions are performed, should reflect the desired degree of decentralisation and participation of stakeholders in decision making and whether CMA builds operational capacity internally or manages other external bodies to perform its functions. The DWAF *Guidelines for CMA Structure* outlines possible approaches to CMA institutional arrangements. The decision about which approaches to adopt may depend upon the:

- Functions that the CMA is to be responsible for during its evolution;
- Institutional environment that exists in the WMA and that the CMA wishes to develop;
- Type of organisation and capacity that the CMA wishes to develop;
- The evolving relationship between the CMA and DWAF;
- The capacity of other bodies and stakeholders in the WMA; and
- Resources required to perform the functions.

Although in practice, decisions around the institutional and organisational evolution of the CMA will be the responsibility of the CMA governing board through its business plan, a likely scenario is needed for the purposes of the viability study. The following discussion highlights important issues that should be considered in proposing the institutional arrangements.

4.2.1 Functional evolution

The CMA institutional (and organisational) evolution must reflect the proposed (phased) functional evolution (i.e. the CMA structure must follow function). However, it should also provide for gradual and coherent development of the institutional environment, based on building capacity and relationships between the various role players, but with the CMA as the key organisation responsible for providing WRM leadership, planning, coordination and control in the WMA.

The three generic phases described in terms of the functional evolution of the CMA are relevant for the institutional arrangements:

⁶ The institutional arrangements are interpreted as the combination of: legislation and regulations, policies and guidelines, administrative structures, economic and financial arrangements, political processes, customs and key participants in IWRM within and related to the WMA. Therefore, institutions refer to the set of relationships between groups (rules), while organisations refer to the structured cooperation of groups (players).

- *Develop relationships and legitimacy:* This initial period is focused on the establishment of the CMA as a legitimate and central institution for water resources management in the WMA, through the coordination and development of relationships with existing organisations and stakeholders. As such the CMA operates as the coordinator/facilitator of a network of organisations (including catchment forums, local government, and water user associations), each of which have a role in WRM. The network model is particularly appropriate for the functions related to the initial phase of the CMA establishment, possibly supported by a statutory (catchment management) committee structure to institutionalise the networking approach. This inherently participative and decentralised approach facilitates the development of relationships by the CMA and enables WRM functions to be performed without having to build significant capacity within the CMA. However, it is dependent upon effective CMA management team (and some support staff), as well as capacitated stakeholder bodies (particularly catchment forums). The latter requires an institutional development approach to the stakeholder participation process leading to the CMA establishment, rather than more limited consultation. Lastly, CMA legitimacy in the WRM sector will be influenced by the effectiveness of DWAF's implementation of WRM functions that have not been delegated, so a condition of institutional viability is that the DWAF Regional Office performs its functions adequately.
- *Build capacity and consolidate:* Within a couple of years, the CMA should evolve from a relatively small coordinating team into an organisation that is responsible for managing, coordinating and implementing significant WRM activities. The networking-committee approach would be consolidated for the CMA's institutional coordination functions and possibly expanded to address localised WRM priorities, but this would be combined with the development of in-house capacity and possibly outsourcing for many of the delegated CMA functions. This process will result in an increase (probably doubling) in the size and resources of the organisation, possibly including the transfer of some DWAF staff with delegated functions, which will raise a number of transitional and organisational challenges. An important change during this stage is that the CMA would become primarily responsible for delegated functions and would perform them (possibly in collaboration with other organisations), while DWAF would become more responsible for regulatory oversight. However, DWAF would still maintain capacity for the authorisation and management of water use.
- *Become fully functional and the responsible authority:* Further consolidation of the CMA as the key institution for WRM implementation within the WMA takes place during the later phases of the CMA evolution, as it becomes the responsible authority. This phase also represents the culmination of the delegation of functions to the CMA, resulting in a "fully-functioning" CMA, with the DWAF RO taking on the role of institutional coordination, support and oversight (auditing). However, depending upon the WRM priorities in the WMA and the likely resources available to the CMA, the CMA may depend upon DWAF (or external specialist consultants) to provide technical support, as a "draw-down" facility (particularly for more complex technical WRM activities that the CMA does not require full time). An alternative solution is for neighbouring CMAs to share these skills. Once the CMA is performing its responsible authority functions in a consistent and efficient manner across the WMA, the further internal decentralisation of certain functions may be implemented through the establishment of area based catchment management committees.

4.2.2 Existing institutional environment, capacity and resources

The proposed CMA institutional arrangements must engage and reflect the existing institutional environment in the water (and particularly the WRM) sector. Where they exist, partnership may be fostered with capacitated organisations, including water boards, water user associations, local government and sector representative bodies. Similarly, the CMA may depend upon strong functioning catchment forum to facilitate stakeholder participation and to implement certain WRM activities.

In this case, a more decentralised network or committee approach would be appropriate, possibly supported by extensive outsourcing. On the other hand, a CMA in a weak institutional environment will have to focus on institutional development, capacity building and support to these other bodies, which implies a need to build in-house capacity. It would also probably require greater support from DWAF over a longer period of time, because the CMA itself may also suffer from capacity and resources constraints.

4.2.3 Facilitating stakeholder participation

The main purpose of establishing a CMA is to delegate WRM to a WMA level and to involve local communities. The CMA therefore becomes largely responsible for ensuring stakeholder participation in WRM (as required by the NWA), and particularly in the development and implementation of the CMS. The institutional arrangements must fundamentally enable this participation, whether this is through catchment forms or some other means. In some cases, forums are content to provide input to decision making and be vehicles for consultation, but more often than not, they wish to be formalised (possibly as catchment management committees within the CMA) and take on functions. However, not all forums are necessarily suited to this level of formalisation and this may detract from the open participatory nature of most forums.

The resolution of this potential dilemma may be one of the most important elements of the proposal. One solution is to establish a statutory CMC, incorporating forum representatives, the CMA Governing Board and CMA staff, to act as a formal conduit for forum inputs to the CMA and as a management body to ensure forum and CMA operations and activities are aligned. Furthermore, it may be appropriate to recognise and support established wall-to-wall forums within the WMA, to ensure that stakeholder participation is facilitated and extended by the CMA. The degree to which stakeholder participation is incorporated within the institutional arrangements will influence the legitimacy of the CMA and the mandate it has

4.2.4 Role and relationships of the Governing Board

The Minister appoints CMA Governing Board (GB) members according to nominations from sectors and interest groups that have been recommended by the Advisory Committee established under Section 81(3) of the NWA. Therefore, the institutional proposals should not attempt to dictate the composition of the GB, particularly are representative of catchment forums or proposed committees. Rather, the proposed relationship between the GB and these bodies should be outlined, in terms of GB members' responsibilities. This may include representation of the GB on a CMC, establishment of a GB forum portfolio committee and/or designated GB members to be responsible (accountable) for forum functioning and/or stakeholder participation. The CMA GB is likely to provide strategic direction for the CMA, rather than be an executive body. Proposals in terms of CMCs and their operational relationships with the CMA Chief Executive Officer (CEO) and staff should achieve the aims of participatory management, together with an indication of the advisory role that forums and CMCs can play with respect to the CMA GB.

4.3 Evaluating Institutional Risks and Viability

All of these considerations need to be synthesised into institutional proposals about the type of CMA that the stakeholders believe is most appropriate for the WMA, in order to facilitate delegated WMA-based management of water resources and participation by local stakeholders (and communities). This should be linked to the evolving vision for the WMA that would become the basis of the CMS to address WRM priorities.

However, the institutional proposals needs to consider that the CMA may face a range of institutional risks and/or challenges, including:

- Inadequate stakeholder knowledge of and support for the CMA and its approach to IWRM, particularly where some stakeholders have not been adequately engaged during the establishment process.

If the process of developing the institutional arrangements has been inclusive and participative, with a degree of consensus, this issue should have been addressed.

- The CMA is unable to effectively establish its legitimacy in the existing institutional environment, particularly in terms of existing organisations in the water sector that may have vested interests.

An assessment of the involvement and perspectives of existing organisations and their potential support for the CMA should indicate the risk, and a plan must be developed where there is a risk.

- Institutional support provided by DWAF is not sufficient to overcome any capacity limitations of the CMA.

This is a potential problem where the DWAF RO has limited capacity and a strategy for addressing this will need to be developed by the CMA.

- There is inadequate interest and/or capacity in the organisations and forums required for the institutional proposals, and this is not developed before or after the CMA establishment.

The institutional proposals must reflect the likely involvement and capacity of the bodies upon which it depends and where this is limited, an interim and/or ongoing strategy must be developed to ensure this is addressed.

- Inadequate attention is paid to creating an enabling institutional environment in the period before the CMA establishment, which may result in a loss of momentum and energy upon which the institutional proposals may depend. This particularly concerns supporting stakeholder bodies (such as catchment forums), extending participation, empowerment of stakeholders, and developing the vision for the WMA as part of the CMS.

If an interim or implementation plan is developed (as required for the Proposal to the Minister), which identifies and addresses the key institutional risk areas associated with the interim period, together with resources and responsibilities, this should mitigate this issue.

5 ORGANISATIONAL DESIGN

5.1 Introduction

The CMA must be organised to give effect to the institutional proposals and to perform the proposed functions. The organisational proposals⁷ (particularly in terms of the staff requirements) provide an important input into the estimation of CMA expenditure as part of the financial viability analysis. It is therefore necessary to make a general assessment of the probable growth in CMA staff over the five to ten years post establishment. The *Guideline for CMA Structure* provides more detail on the structure and potential staffing of a CMA.

Table 5.1: Range in staff complement during CMA evolution

		Initial	Consolidation	Full functionality
Functional Area	CEO	1	1	1
	Corporate services	3 - 5	4 - 7	5 - 10
	Institutional coordination	3 - 8	5 - 8	7 - 10
	Strategy development	2 - 4	3 - 5	3 - 5
	Water use management*	1 - 5	4 - 10	10 - 25
	Information management**	0 - 5	2 - 12	6 - 18
	Implementation	0 - 2	0 - 7	2 - 6
Staff level	CEO	1	1	1
	Manager	1 - 3	2 - 5	3 - 6
	Senior	2 - 7	6 - 12	10 - 20
	Junior	3 - 12	8 - 18	10 - 28
	Admin	3 - 7	5 - 14	10 - 20
	TOTAL	10 - 30	19 - 50	34 - 75

* Water use management includes the control, authorisation and auditing of all 11 use categories.

** Information management includes water resource monitoring and information systems.

Table 5.1 provides a range of possible staffing requirements at different phases in the CMA evolution, assuming the development of in-house capacity supported by outsourcing of certain functions (such as monitoring) or contracting specialist skills for strategy development, etc. This is only intended to be an indication and more a detailed assessment should be made for the particular situation in the proposed CMA, linked to the proposed functional evolution.

Although it is not necessary to develop detailed organigrams for the CMA as part of the Proposal, it is necessary to allocate staff to particular functional areas (to ensure the proposed functions and institutional arrangements are adequately resourced). It is also necessary to indicate the staff levels (in order to cost the staff complement). Apart from the CEO, Table 5.1 differentiates between managers of sections, seniors (coordinators and specialists), junior technical staff and administrative support (which is adequate for the purposes of the Proposal and viability study).

⁷ Organisational design not only includes structure, but also strategy, processes (systems and procedures), rewards (performance contracts) and people (and skills).

5.2 Organisational Considerations

In developing the organisational component of the proposal and assessing the CMA administrative feasibility, the following issues should be considered.

5.2.1 Institutional and functional evolution

The three generic phases described in terms of the functional evolution of the CMA are relevant for the institutional arrangements:

- *Develop relationships and legitimacy:* The major organisational challenge that the CMA faces at the outset is the need to adopt the new paradigm of integrated and participative WRM, as well as the need to develop a outward looking customer-client services approach to WRM. Every effort should be made to entrench this in the strategy, structure, systems, rewards and staffing of the CMA. This may be facilitated by a focus on institutional coordination and strategy formulation functions through a networking approach. It is most appropriate that the CMA administration consists of a small group of managers and support staff during this initial phase, but with dedicated support to institutional coordination activities (including forum support).
- *Build capacity and consolidate:* As the CMA takes on more functions, the size and resources of the organisation will increase considerable (probably doubling over a couple of years). This poses a number of transitional and organisational challenges, including managing the probable transfer of DWAF staff with the delegation of functions⁸. The complexity and difficulty of this change management process should not be underestimated, particularly in terms of maintaining an organisational culture related to the integration and participative paradigm of WRM, together with a customer-client services approach. It is critical that the evolution of the CMA is linked to a proactive process of organisational change management. At this stage, the CMA administration is likely to consist of a number of small teams, managing a combination of in-house, contracted-in and outsourced services.
- *Become fully functional and the responsible authority:* In order to perform the responsible authority functions, the CMA will need to develop an internal unit for water use authorisation and enforcement (this cannot be outsourced), some of which would be through transfer of staff from DWAF. Once again, the challenge will be to ensure that the CMA reflects the new paradigm in its organisational structure and operation. This is particularly important in terms of the integrated and holistic nature of water use (quantity, quality and instream activity) and resource quality (flow, quality, habitat and biota) as defined in the NWA, in an organisational structure with disciplinary specialists. A possible solution may be for the CMA to appoint generalists and depend upon DWAF RO (or external contracted specialists) to provide technical support.

5.2.2 Organisational efficiency and effectiveness for IWRM

The CMA organisation should be effective in delivering WRM services, which requires adequate human resources, an appropriate structure and sound systems. IWRM implies a need for skilled multi-disciplinary outward-looking teams organised in a flat structure (outsourcing non-core activities where appropriate), rather than a traditional hierarchical inward-looking bureaucracy. Furthermore the CMA organisation must be efficient in performing its functions in an integrated manner and should minimise its costs (and therefore user charges) as far as possible, without impairing its ability to adequately perform these functions. Stakeholders (and particularly water users) will generally resist a CMA organisation that is perceived to be too large or bureaucratic.

⁸ The DWAF Draft National Policy on *Implementation of Catchment Management in South Africa* (DWAF, 2000) states that "DWAF employees performing functions to be transferred should be given preference to be transferred to the CMA. Only having exhausted the existing staff compliment, may external recruitment take place." However, this policy also states that "It must be ensured that the CMAs become focused, lean and efficient organisations rather than more complex incarnations of present DWAF structures."

This is particularly important in the early stages of its evolution, while the CMA builds its legitimacy and capacity, but does not yet necessarily have a stable income base (as the Pricing Strategy is being newly implemented). A balance is needed between developing an organisation that is adequate to perform the functions required to address the WRM priorities and an organisation that becomes too expensive.

5.2.3 Organisational robustness to change

Every CMA will undergo considerable change in the first few years of its existence as it adopts additional functions and responsibilities. It is critical that the early design of the organisation takes this into account, so that the transition is smooth. This needs to consider the probable transfer of DWAF staff with functions (preferably in discrete groups rather than incrementally), as well as the need to gradually build on core CMA units that are functioning in an integrated manner (integration is easier in a small organisation). This transition also needs to be supported by appropriate capacity building and/or reskilling programmes.

5.2.4 Achieving government organisational objectives

The CMA is an organ of state that must implement government policy and objectives in terms of transformation and social and economic development. The CMA as an organisation should:

- Reflect the cultural, organisational and institutional transformation required by the new public service and WRM paradigms, including a customer services orientation and achieving representivity;
- Explicitly give effect to the *developmental* (supporting government social and economic objectives) and *participatory* (empowering stakeholders and communities to become involved in WRM decisions) requirements for WRM;
- Distinguish between (and separate structurally) those functions that are associated with authorisation and regulation (of water use or other institutions) from those functions that are associated with implementation and development (particularly infrastructure and project related).

Once the CMA is established, the CMA will need to develop a Human Resources Strategy and Employment Equity Plan. Furthermore, all staff appointments to the CMA must comply with current labour legislation.

5.3 Evaluating Organisational Viability

The proposed CMA may face a range of organisational risks, including:

- The new paradigm of IWRM (supported by a business approach) is not successfully adopted and implemented by the CMA, in terms of the structure, systems, culture and staff that are appointed.

This is a difficult issue to assess in the viability study, because it is not appropriate to develop a detailed organisational design before the CMA has been established. However, it is critical that these principles are explicitly incorporated into the Proposal, with the understanding that these will be unpacked in the CMA organisational development and business planning process.

- The capacity to staff the CMA is not available, through DWAF staff transfers and/or CMA recruitment, so that the CMA is not able to become an efficient and skilled organisation.

The likely capacity to be transferred from DWAF should be identified and qualitatively evaluated, together with a realistic assessment of the likelihood of recruiting and attracting suitably qualified staff to the WMA. Where there are potential problems, sharing of capacity with neighbouring CMAs or increased remuneration may have to be considered, which will affect the institutional and/or financial viability.

- The requirement for transformation in the CMA staff is not adequately met, resulting in the CMA being perceived not to be an equitable and representative body.

Once again, it is not possible to fully assess this issue before the CMA is established, but the explicit inclusion of transformation principles and the acknowledgement of the requirement for employment equity plans should be highlighted.

- The process of change is not coherently managed as the CMA grows quickly from a small team during the initial stage to a relatively large organisation performing additional different functions.

The proposed rate of functional evolution should be assessed from the perspective of the institutional capacity in the WMA as well as an explicit recognition that this is a potential risk area that needs to be managed. It will also be influenced by the number of the DWAF staff that are expected to be transferred with delegated functions.

6 FINANCIAL VIABILITY

6.1 Background to CMA Financing and the Pricing Strategy

6.1.1 Implications of the Pricing Strategy for CMA financing

Chapter 5 of the NWA and the *Pricing Strategy for Raw Water Charges* provides the financial framework within which CMAs operate. Section 56(2) of the NWA provides for setting of water use charges as part of the *Pricing Strategy* for:

- Funding water resource management,
- Funding water resource development and operation, and
- Achieving the equitable and efficient allocation of water.

The two main sources of funding for CMAs are user charges and parliamentary appropriations (through DWAF)⁹. The intention is that CMAs are largely financed through user charges for WRM. The following issues in the Pricing Strategy should be noted for the purposes of CMA financing¹⁰:

- Schedule 1 allocations, the basic human need and ecological Reserve, international obligations and inter-WMA water exports have first claim on the water in a WMA (as part of the NWRS). The remaining water, including inter-WMA water imports, can be allocated within the WMA and represents the economic use of water. However, certain international obligations and water exports may also generate revenue.
- Based on the resource protection philosophy underlying the NWA, the Pricing Strategy specifies that water use charges are not applicable to the requirements of the ecological and basic needs Reserve. This implies that the other “economic” users of water must cover the costs of catchment management in a WMA.
- The Pricing Strategy only applies to consumptive use of water that may be expressed in volumetric terms, namely:
 - Abstraction of surface or ground water under section 21(a) of the NWA,
 - Evaporative losses associated with storing of water for recreational purposes under section 21(b), and
 - Streamflow reduction activities under section 21(d).
- Charges for waste discharge or disposal are not included, but are being addressed as part of a project to develop a Waste Discharge Charge System (WDCS), although the administrative costs of water quality management may be collected through the existing Pricing Strategy. The WDCS is likely to enable charges to be applied to point source dischargers, based on discharge load. A WDCS is only likely to be implemented by 2004, but other users, such as recreation and instream activities will not be included.

⁹ Money may also be obtained from “any other lawful source for the purpose of exercising its powers and carrying out its duties”, which may include donor funds or loans.

¹⁰ The WRC Report *Guidelines for financing catchment management agencies in South Africa* (Pegram and Palmer, 2001: WRC Report # 1044/1/01) provides a more detailed discussion of the issues around CMA financing. Much of this discussion is derived from this report.

- The strategy distinguishes explicitly between four user sectors¹¹, namely:
 - *Water services authorities*, and by implication water service providers;
 - *Industrial, mining and energy*, and storing water for recreational purposes;
 - *Irrigation*, of agricultural lands; and
 - *Streamflow reduction activities*, which currently only includes forestry.
- Water use charges are only applied to and collected from registered water users, based on average registered use. This simplifies the logistical requirements of setting, billing and collecting user charges, but introduces problems where users have not yet registered. Under Section 21 of the NWA, water use relates to the actual use of the water resource (not the use of water), and therefore the registration is at the point of abstraction or discharge. This introduces complexities for water that is abstracted from one WMA and transferred directly to consumers in another WMA (rather than first being released into the recipient WMA water resources); water use charges can only be collected in the donor WMA.
- The strategy proposes that the users in a WMA will only pay a portion of the total costs of WRM, based on the ratio of allocated (used) water to the total economically utilisable (allocable) water in the WMA. This is an appropriate mechanism for the collection of charges by DWAF, where the relevant costs of the regional offices (and therefore each WMA) are relatively consistent. This facilitates a subsidy to relatively undeveloped WMAs with fewer users and resources. However, this is not relevant for the highly developed WMAs in which the costs of WRM are significantly higher than for undeveloped WMAs.
- Revenue will be split between DWAF and the CMA relative to the activities performed. This is appropriate, particularly in the transitional phase while functions are being transferred from DWAF to CMAs. In practice, the CMA should be performing additional functions that DWAF was not performing, and therefore the CMA cost is likely to be far greater than the estimated DWAF cost. While DWAF continues to collect charges¹², this would include the CMA charges. However, once the CMA is collecting charges, DWAF would estimate the user charges needed to cover the costs (less subsidies) of the remaining DWAF (undelegated) functions, and would bill the CMA for this. The CMA would treat this as a financial input cost, in the same way as the cost of an inter-WMA import or outsourced function.
- The costs of WRM activities may be allocated differently to the user sectors. The pricing strategy indicates that irrigated agriculture will have 90% subsidy on water conservation (and Working for Water), while forestry does not pay this component of the costs. This approach should to be extended for application to a CMA where various functions benefit different users to a greater or lesser extent.
- The financial transfer between two WMAs involved in an inter-WMA transfer is to be based on the relative portion (ratio of export to total available) of the total WRM budget in the donor WMA. This implies that water used in another WMA would be charged the same unit charge as water used in the donor WMA. There are a number of benefits that the residents of a WMA gain from WRM, other than the availability of water supply of adequate quality. Furthermore, the donor catchment does not have to carry the costs associated with as managing the effluent return flow and institutional development for the actual users. A case may be made for the reduction of user charges for water exports, in line with the benefit accrued to the users and the management requirements for the CMAs. However, this should be related to implementation of the WDCS.

¹¹ WARMS distinguishes a far greater number of user categories.

¹² From a logistical perspective, all water use charges applicable to a particular water user should be billed and collected together

- Water use charges for WRM are meant to cover the costs, and not constitute the imposition of a levy, duty or tax. Therefore, the Pricing Strategy prevents users in one WMA from subsidising users in another WMA, although they would have to cover the relevant costs of water management in a donor WMA in the case of inter-WMA transfers. Any grant or subsidy to a WMA should be in the form of a parliamentary appropriation. However, this does not apply to cross-subsidies between catchments or sectors within a WMA.

6.1.2 Implementation of the Pricing Strategy

The current intention is for DWAF to implement the pricing strategy by April 2002, having registered most water users, installed the necessary information management systems, determined the relevant water use charges, set up collection points and trained the required staff. CMAs will be delegated responsibility for setting charges¹³, billing and collection, probably quite soon after their establishment, as water use charges for water resources management represents the main source of funding for CMA operations.

The billing and collection system (also referred to as the AR System or Accounts Receivable System) is utilising the source data populated and subsequently maintained in the Water Use Authorisation and Registration System (WARMS). The WARMS System provides the functionality with which all of the following information could be managed:

- Register (also referred to as Part 1 records) related information: addresses information such as the following:
 - The details related to the “person” who uses water,
 - The details related to property where the relevant water use(s) occurs,
 - The WMA that is applicable to the relevant Register.
- Water Use Numbers (also referred to as Part 2 records) related information: addresses information such as the following:
 - The NWA Section 21 related water use,
 - The type of water source,
 - Water Use Sector (“Purpose”)
 - Scheme Reference (identifying both the applicable Scheme and related Scheme Management Parameter)
 - The intended authorised water use volumes and time periods applicable to such a use
- Reference data, such as the allowed Water Services Provider, Water User Association, WMA, etc.
- Water use charges
- Tariff matching to any specific water use and its related price determining variables

The Accounts Receivable system is being installed to take the WARMS information and generate integrated and itemised invoices (including user charges for water resources management and for water resource infrastructure) for each user, based on the source data populated and subsequently maintained in the Water Use Authorisation and Registration System (WARMS).

DWAF operates three Trading Accounts, whereby goods and services are sold to internal and external clients. In particular, the Water Trading Account (Programme 5) has four sub-programmes. User charges collected by DWAF under the *Pricing Strategy* for WRM are channeled through the so-called Integrated Catchment Management Trading Account.

¹³ The CMA should use the tariff determination models that have been (or are being) established by DWAF in setting charges, with changes to the relevant input fields to reflect their own situation.

This integrates water utilisation, water quality management and water conservation on a catchment basis and is designed to facilitate the eventual financial self-sufficiency of WRM implementation functions (to be delegated to CMAs) from water use charges.

DWAF will set the user charges for water resources management in each WMA, to cover the ICM Trading Account costs of the DWAF Regional Office (RO) from the registered users. Billing will be done by the DWAF RO, with collection points in the DWAF regional, district and area offices (at least one per WMA). Facilities will be made available for water users to pay cash, although electronic systems will be preferred.

6.1.3 Costing CMA expenditure

The cost¹⁴ (or proposed expenditure) of a CMA should be broken down into the following categories:

- *Staff (personnel) costs*: representing the total cost of employment for the CMA personnel;
- *Outsourcing*: to other organisations or contacting-in services;
- *Overheads*: incurred by the CMA; and
- *Capital*: expenditure or repayments;

Staff costs will usually represent the greatest portion of CMA operating costs. The Table 6.1 estimates (include salary, pension and medical aid) are derived from the *Guidelines for financing CMAs in South Africa*, which in turn were based on *The South African Staff Survey*¹⁵.

Table 6.1: Ranges for annual remuneration for different generic staff levels.

Staff	Lower quartile	Median	Upper quartile
CEO	R 320 000	R 375 000	R 430 000
Manager	R 220 000	R 275 000	R 330 000
Senior	R 150 000	R 190 000	R 230 000
Junior	R 90 000	R 115 000	R 140 000
Admin	R 45 000	R 55 000	R 65 000

The payments to external organisations for outsourcing services (such as monitoring and laboratory) or contracting skills (such as CMS development and catchment studies) may account for a considerable portion of the CMA cost, depending upon the institutional models that are proposed for the CMA evolution. Ensuring participation (including empowerment) of local stakeholders is a fundamental responsibility of the CMA.

¹⁴ The *Guidelines for financing catchment management agencies in South Africa* makes the following distinctions:

- *Capital and operating costs*: Capital costs represent occasional expenditure by the CMA on buildings, equipment and machinery, while operating costs are the ongoing expenses required to support the CMA functioning.
- *Establishment and ongoing costs*: There may be once-off costs associated with establishing the CMA, while the recurring capital and operating costs associated with performing its functions are ongoing.
- *Fixed and variable costs*: Fixed costs are those that constant every year, independent of the amount of water used, while variable costs relate to the amount of water used. By their nature, the CMA costs have a negligible variable component, and in fact generally increase during drought periods.

¹⁵ Remuneration varies in different parts of the country and for job description (skill level). The forthcoming DWAF *Guidelines for CMA Organisational Development* provide more accurate breakdown of these values for different positions.

Therefore a dedicated budget item should be allocated to providing financial support to local WRM initiatives (possibly through catchment forums).

The CMA Governing Board and staff overheads (excluding capital repayments) may include service fees, rates, stationary, travel and subsistence, communications and leases. These may be estimated on an itemised basis (for the organisation as a whole) or as a percentage of staff costs, generally ranging between 20% and 35% (depending upon the size and functions of the CMA).

In addition to these operating costs, the CMA will require capital expenditure (both on establishment and on an ongoing basis). Capital costs may be paid in full (if there is surplus budget), or more likely they will require repayment with interest over a 5 to 20 year time-period. Capital expenditure may include communications equipment, vehicles, library, buildings and laboratory equipment.

Table 6.2 indicates a range in these CMA cost items, based on the draft Proposals that have been submitted thus far, together with the above information.

Table 6.2: Possible ranges in CMA expenditure during its evolution

	Initial	Consolidation	Full functionality
Staff costs	R1.6 million – R4 million	R3 million – R7.5 million	R5 million – R10 million
Outsourcing	R500 000 – R4 million	R500 000 – R4 million	R500 000 – R8 million
<i>Participation</i>	R100 000 – R1 million	R100 000 – R1 million	R100 000 – R2 million
Overheads	R600 000 – R1.2 million	R1 million – R2 million	R1.5 million – R2.5 million
Capital repay	R200 000 – R500 000	R200 000 – R500 000	R200 000 – R500 000
TOTAL	R3 million – R10.7 million	R4.8 million – R15 million	R 7.3 million – R23 million

6.2 Considerations for CMA Financing

6.2.1 Organisational, institutional and functional evolution

The basis of the financial costing of the CMA operations must be the organisational evolution, required to perform the proposed functions and to support the institutional arrangements. The preceding section has provided the information necessary to estimate the evolving CMA costs from the organisational evolution.

6.2.2 Water use charges, sponsorship and in-kind contributions

As indicated above, user charges for WRM represent the main source of income for a CMA. However, the CMA should legitimately only collect charges for core WRM functions that have been delegated or assigned by the Minister. This may not cover all the possible CMA (or catchment forum) expenditure on important activities and projects that may support the objectives of WRM, such as youth programmes, bio-monitoring competitions, etc. These projects should be facilitated by CMA staff and seed funds, but may require sponsorship or donor support for full implementation. Furthermore, there is considerable in-kind support provided by stakeholders and other organisations, particularly through the activities of catchment forums that should also be considered in assessing the resource requirements and availability. The Proposal should highlight all of these requirements and sources of support in assessing the viability of the CMA.

The estimation of water use charges and evaluation of financial viability, also needs to consider the user charge being applied by DWAF to cover the Regional Office WRM costs. This portion will decrease with time as functions are delegated to the CMA, but the total charge is likely to increase.

6.2.3 Registered use and non-payment

Water use charges can only be collected from registered users, which makes the viability of any CMA highly dependent upon the registration rate in the WMA. However, there is also the possibility that some users will not pay, either because the charges are unaffordable (related to ability to pay) or are not deemed acceptable (willingness to pay). Care needs to be taken to minimise the likelihood of default, particularly in the initial phases, because this would set a bad precedent for cost recovery. However, possible under-registration and/or non-payment should be considered in the viability analysis.

6.2.4 Differential user charges between sectors

In addressing the non-payment issue, it may be important to vary charges between user groups. In particular the affordability and acceptability of charges to irrigated agriculture should be carefully considered¹⁶. It may be appropriate to consider charging agriculture between 10% and 50% of the equivalent charge for industrial and municipal users. However, this needs to be tested against the later user groups in the WMA.

6.2.5 DWAF support

Financial support from DWAF may be a once-off grant to support establishment process, ongoing (possibly limited time) operating support or subsidies¹⁷. The Proposal for establishing a CMA should to evaluate the need for such financial support and the possible motivation to DWAF.

- ❑ Establishment grants may be considered to cover the total cost of the first year operation (before the CMA has an opportunity to set charges to cover its costs), as well as to contribute to the capital and/or once-off set-up costs of establishing a CMA.
- ❑ Operating support may be claimed under the Pricing Strategy for unallocated water, or else motivated by a situation of financial need (due to inadequate registration, unaffordable charges or the inability to collect waste discharge charges from users that cannot be charge for abstraction).
- ❑ Subsidies provided in terms of Working for Water or support to emerging farmers (over five years).

6.2.6 Considering the economic implications

In assessing the viability and sustainability of the CMA, the economic implications of the charges should be considered. This is critical in the agricultural and forestry sectors, where water use charges represent a significant portion of the input costs to the activity (particularly where charges are now being collected on infrastructure schemes). The economic consequences in these areas are also potentially greater, as these activities often represent the mainstay of poor rural economies. On the other hand, application of charges to municipal and industrial use represents a small portion of the total water costs (usually less than 3%). This is unlikely to have a major economic impact, except for water intensive industries that may introduce recycling and water saving technologies, with associate costs.

¹⁶ Sensitivity must be taken to avoid alienating agriculture during the initial period of collecting charges, because these sectors have not been required to pay these sorts of water charges and the charges may represent a significant portion of their input costs. Furthermore, there is a rural development and employment component to irrigated agriculture that must be taken into account. Finally, the WRM requirements of this sector, the assurance of supply and the impacts of the sector may be lower than for the domestic, industrial and mining sectors.

¹⁷ There is currently little clarity on the issue of financial support from DWAF for WRM costs, either for establishment or on-going CMA costs. However, this is the topic of a DWAF project, which will also address the situation of funding transferred functions (particularly where this has been prompted by DWAF for the CMA to act as DWAF's agent)

6.3 Evaluating Financial Risks and Viability

The financial viability analysis needs to consider whether the CMA can operate on commercial lines (in order to cover its expenditure with income), being viable upon establishment (taking account of any financial support that may be forthcoming) and being financially sustainable over the foreseeable future (about 10 years). There are a number of critical risk areas for the financing of the CMA, any one of which may result in the need for a change in the CMA expenditure or sources of funding, thereby making the CMA less financially viable or sustainable. All of the following issues should be considered, and where they pose a real threat, management solutions need to be found to mitigate their impact:

- ❑ Inadequate registration of water users, thereby limiting the possible revenue and potentially damaging the credibility of the CMA for the registered users.

The registration process has largely been implemented, so the risk of this situation in a particular WMA would be known, and where it is an issue, a strategy must be developed to increase registration.

- ❑ Reductions in water use due to improved enforcement of licence conditions (or compulsory licensing), particularly in water stressed parts of the WMA, or changes in water use patterns through demand management or in response to the application of water use charges, thereby reducing the potential total revenue to the CMA.

The likelihood of the two preceding situations may be assessed, although it is unlikely that the total use would decrease much below the allocatable water within a WMA.

- ❑ Non-payment of charges by registered water users, either due to unaffordable charges and/or non-acceptance of the legitimacy of the charges (willingness to pay).

This is probably the most fundamental issue around the financial viability of a CMA, and is also the most difficult to assess before the CMA is established (and the Pricing Strategy has been implemented). However, once DWAF begins to collect water use charges in 2002, there will be an indication of the level of payment within each WMA.

- ❑ Inability to efficiently implement the administrative components of the billing and collection system, either by the CMA or by DWAF itself, or poor cash-flow management of the billing and collection process, resulting in delayed payment.

This situation will depend upon the effectiveness and degree to which the CMA implements the financial management systems developed by DWAF. Pre-CMA establishment, this can only be indicated at a principle level.

- ❑ Any proposed establishment and/or operational financial support from DWAF or expected sponsorship, donor support and/or in-kind contributions are not forthcoming.

This is a key risk area that can only be assessed by evaluating the degree to which DWAF or the relevant sponsor/donor has been part of and is committed to the process. This would be indicated by budgetary provisions in the relevant organisations' financial planning.

- ❑ The CMA is unable to raise capital loans at low interest rates, due to lack of a financial history.

This should not be an issue, except where the CMA wishes to begin capital development within its first few years of existence, which is contrary to the proposed evolution of the CMA.

7 ACCEPTABILITY AND SOCIAL VIABILITY

The process leading towards the Proposal to establish a CMA should engaged a wide range of stakeholders with diverse backgrounds and interests. Apart from gaining input from these groups, the process should facilitate institutional development, capacity building, empowerment and consensus seeking in developing a robust and coherent vision of the CMA and its functioning. However, there will always be varying perspectives on the CMA, both within those groups that have been part of the process, as well as within groups that have not yet become actively involved. These varying perspectives imply that the social acceptability of the CMA will vary considerably among stakeholders.

Nevertheless, the Proposal needs to have a general mandate from the stakeholders that have been involved in the process. The acceptability and legitimacy of the proposed CMA to stakeholders largely depends upon:

- Perceptions about the service the CMA is likely to provide, relative to the costs of that service to the users.

In practice, the perceived “value for money” of the CMA will only be determined once it is operational and develops a customer services culture. However, if the process of developing the Proposal was participative, the proposed CMA evolution and financing should address stakeholder priorities and be supported by the majority of stakeholders. A distinction should be made between support for establishing a CMA (which is a social viability issue) and the affordability of the associated charges to cover its costs (which is a financial viability issue). The viability study should make an assessment of all these issues, together with the identification of areas where there may be concerns. The development of a CMS by the CMA together with stakeholders, reflecting WRM priorities and stakeholder interests, will also go a long way towards developing buy-in for the CMA.

- Perceptions about the proposed CMA’s ability to facilitate meaningful stakeholder participation, including disadvantaged communities.

The proposed institutional arrangements should facilitate the implementation of participative IWRM from the initial establishment of the CMA, possibly through the involvement of catchment forums. Regardless of the approach, the proposed institutional evolution should address the need to build the legitimacy of the CMA and relationships with stakeholders, and the stakeholder support for institutional evolution of the CMA should be assessed.

- Understanding of the purpose of and needs for CMA, leading towards acceptance of and support for another institution in the water sector.

One of the fundamental purposes of the participation process leading towards the Proposal is that stakeholder awareness and capacity is built in the WMA. The CMA itself should take on this challenge, both in terms of creating awareness and “marketing” itself and through the expansion of stakeholder participation and empowerment.

Where concerns have been raised, these need to be taken into account in the Proposal, either as part of the feasibility proposals or as part of the implementation plan.

The most appropriate way in which to evaluate the social viability of the CMA is to review the public participation process (as described in the Proposal), and the degree to which it was inclusive, representative and transparent. Furthermore, the record of issues and concerns raised (and by whom) at the stakeholder meetings should highlight the level of understanding of the need for the CMA, the potential areas of conflict and therefore the likely support or opposition for the CMA. Finally, the most effective method of addressing acceptability would be a formal (or even informal) survey of people that have been involved in the process of developing a Proposal and/or relevant stakeholders (that may or may not have been involved in the process). This survey should focus on the support for the institutional and financial proposals as being central to the social viability.

8 PROCESS AND APPROACH TO THE VIABILITY STUDY

8.1 Need for Stakeholder Involvement

The Proposal to the Minister should be developed and submitted jointly by the stakeholders and DWAF Regional Office. This requires extensive stakeholder participation in the process leading to the compilation of the Proposal (including the feasibility component). From a process perspective, it is critical that the viability analysis is driven by the stakeholder group responsible for compiling the Proposal, rather than being a technical desk-top study. Although it is important for the team responsible for the viability study to guide this process, there are a number of alternative pathways that may be followed for CMA establishment and evolution, each of which will more or less suit the priorities and conditions in the particular WMA. The viability study should therefore respond to stakeholder priorities and proposals, indicating where there may be problems in terms of DWAF policy or CMA viability.

In order to achieve this level of interaction, it is critical that the viability study is only initiated once the stakeholder participation and institutional development process is well established. This will enable the relatively complex viability issues to be engaged by a representative, empowered and engaged group of stakeholders that have developed a more mature approach to addressing issues and resolving conflicts.

8.2 Outline of the Process

The five elements of CMA viability need to be developed and assessed together, as there should be considerable interaction between them. However, this should be done in the following sequence, but by iterating as the analysis progresses and further information becomes available.

- ❑ The entire CMA evolution is based on the delegation of functions, so this should be done first.
- ❑ Thereafter the institutional proposals should be formulated against this functional evolution.
- ❑ The high-level organisational design should be developed together with the institutional arrangements, considering the requirements to support the functional evolution.
- ❑ Then the financial viability should be assessed, possibly altering the functional and organisational considerations to ensure that the proposals are viable and sustainable.
- ❑ Finally, the social acceptability should be assessed.

Where risks or concerns with any elements of the viability are identified, these should be explicitly addressed (and resolved) as part of the proposals for the CMA to engage once it is established. Alternatively, where urgent attention is required these should be taken up as part of the implementation plan to be addressed in the interim period before the CMA is established.

The following detailed steps outline the basic process of evaluating CMA viability, as outlined in Figure 8.1.

8.2.1 Formulating a Coherent Functional Evolution

- ❑ *Assess WRM priorities:* The early stages of the stakeholder participation process should involve the identification and prioritisation of WRM issues and concerns in the WMA. This should be supported by a situation assessment of the WMA, describing the “significant water resources in the proposed water management area, and information about the existing protection, use, development, conservation, management and control of those resources”.

- ❑ *Prioritise management actions:* The types of management actions and responsible organisations needed to address these WRM priorities should then be identified and prioritised, as the motivation for the functional evolution of the CMA.
- ❑ *Propose the sequence of functions:* Finally, these priorities should be used as the basis for identifying a sequence for the delegation or assignment of functions to the CMA, as well as the functions that should be performed by the CMA, but do not require delegation. This should also engage the possible activities of other bodies (particularly catchment forums). The process of developing a proposed functional evolution should be iterative, changing as information from the institutional, organisational and financial analyses becomes available.

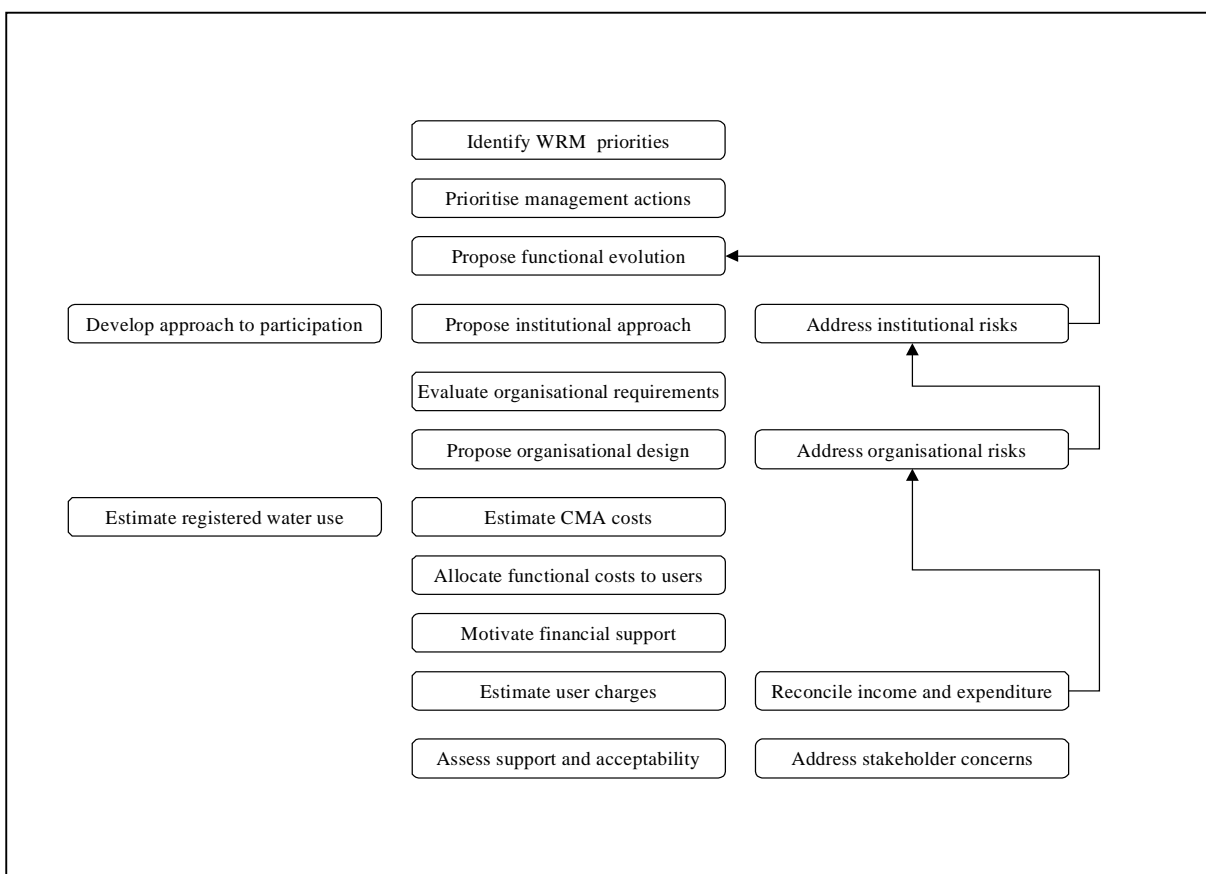


Figure 8.1: Schematic of the process for the viability study

8.2.2 Developing a Coherent Institutional Evolution

- ❑ *Develop an institutional approach to enable stakeholder participation:* The institutional arrangements must enable the CMA to involve stakeholders in WRM, whether this is through catchment forums, catchment management committees or some other mechanism. The most appropriate approach must be identified for the WMA taking account of institutional development and capacity within the WMA.
- ❑ *Propose a CMA institutional evolution:* The participatory approach must be combined with the functional evolution to formulate a proposed institutional evolution for the CMA, taking account of the institutional capacity and resources in the WMA. This will most probably be a hybrid of networking, outsourcing, committees and in-house capacity.
- ❑ *Identify and address institutional risk areas:* Institutional risks should be identified and management solutions proposed to mitigate their impact.

8.2.3 Developing a Robust Organisation

- ❑ *Evaluate the organisational requirements:* The evolving CMA staff and infrastructure requirements to perform the proposed functions and support the institutional arrangements need to be identified. These should be compared to the likely capacity available to the CMA, from DWAF and other sources.
- ❑ *Propose a high-level organisational design:* The staff requirements and other key organisational issues should be proposed, as the basis for the CMA cost estimates, taking account of the government objectives and CMA considerations.
- ❑ *Identify and address organisational risk areas:* Organisational risks should be identified and management solutions proposed to mitigate their impact.

8.2.4 Evaluating CMA Financial Viability

- ❑ *Estimate registered water use:* Water use charges can only be raised from registered water users, therefore registered use must be estimated for the different sectors. Current registration is used as the point of departure for the analysis, while predictions are made about the probable increase in registered users over the next ten years (based on estimates of total water use in the WMA).
- ❑ *Estimate the CMA costs/expenditure:* The capital and operating costs of the CMA establishment and functioning must be estimated for the proposed evolution of staff structure over the next ten years. This includes estimates of staff, overhead, outsourcing and capital costs¹⁸.
- ❑ *Allocate functional cost components to water use:* The benefit received from a WRM function should be linked to the user charge applied to a particular user group. This may consider differences between users that largely abstract water and those that discharge considerable waste, as well as the assurance of supply and impact of the use on water resources (and related management activities).
- ❑ *Identify/motivate financial support:* Possible sources of grants, subsidies, sponsorships and in-kind contributions for the establishment and operation of the CMA should be identified. Where it is deemed appropriate or necessary for CMA viability and/or sustainability, DWAF support should be motivated as part of the Proposal (possibly even are prerequisites for viability). On the other hand, realistically expected sponsorship and in-kind contributions should be highlighted for appropriate functions and activities (in order to build a comprehensive picture of the CMA resource requirements).
- ❑ *Calculate user charges for different scenarios:* The art of setting user charges is to set consistent charges, to ensure the CMA costs are covered and the cash flow is managed. This should take account of any establishment grants and other sources of revenue (including transfers from DWAF) to the CMA. User charges for a particular user sector are assumed to be consistent throughout the WMA. However, in reality, this is a negotiated process between the CMA and the water users. Consideration must be taken of the financial affordability of the charges for the users, willingness to pay these charges, and possible implications for non-payment.
- ❑ *Reconcile income and expenditure based on cash flow:* The annual and cumulative cash flow projection provides the basis for reconciling of CMA income versus expenditure, based on the above information. The income estimate must take account of the expected percentage levels of default, which should be reduced over time.

¹⁸ A financial model is available to provide a structured framework for estimating possible charges related to the proposed CMA evolution (over a ten-year timeframe). This model was initially developed as part of the WRC project to develop *Guidelines for financing catchment management agencies in South Africa* (Pegram and Palmer, 2001: WRC Report # 1044/1/01), but has been substantially revised to reflect the changing policy environment.

Where necessary CMA costs must be reduced, charges must be increased, other financing must be found and/or actions must be taken (with consequent costs) to improve financial administration, reduce non-payment and/or increase registration.

8.2.5 Evaluating Social Viability

- ❑ *Assess support and acceptability of the proposals:* The stakeholder support for the functional, institutional, organisational and financial proposals should be assessed, particularly in terms of the understanding and perceptions about the need for a CMA and its role in WRM.
- ❑ *Propose actions to mitigate stakeholder concerns:* Where stakeholder concerns have been identified, proposals should be made to address these, either by revising the proposals or addressing them in the interim through the implementation plan

8.3 Implications for the Implementation Plan

Although it is not required by the NWA, the DWAF Draft *Outline for the Proposal to the Minister on the Establishment of a CMA* requires the development of an implementation plan. This plan should provide continuity in the participation process between the submission of the Proposal and the establishment of the CMA (and the first meeting of the CMA Governing Board) and should ensure that actions are taken to promote an environment that supports a viable and sustainable CMA. These actions will generally relate to the implementation of interim activities that:

- Address immediate WRM priorities (including the development of a first order CMS);
- Extend stakeholder awareness and participation, particularly for disadvantaged groups, as well as build capacity and empower people to become involved in WRM; and
- Support institutional development, including catchment, to ensure a strong institutional environment for the CMA.

These actions should be incorporated into a plan outlining outputs, responsibilities and timeframes leading up to the establishment of the CMA, linked to the CMS development and associated institutional development processes within the WMA

APPENDIX A: TEMPLATE FOR THE VIABILITY STUDY

The template for the viability study should closely follow the Chapter 3 (Feasibility Study) component of the proposed template for Proposals to the Minister for CMA establishment. This is presented below, with brief notes on the relevant sections and their applicability to the viability study.

Description of WMA < 4 pp

- Use of water by different sectors, indicating estimates of total versus registered use (for the next 5 to 10 years).
- WRM priorities
- Key water resource (and water services) management issues

Proposed Delegation of Functions <5 pp

- Sequence and timeframe for delegation of functions

Proposed Institutional Evolution and Organisational Viability < 8 pp

- Human, administrative and infrastructural resources required to perform proposed functions
- Outline of proposed organisational structure for CMA
- Relationships with other institutions (including contracting or re-delegation of functions).
- Capacity of water management institutions (or other organisations) to support CMA's operation
- Availability of qualified personnel to fill CMA posts
- Possible risk areas for the proposed CMA evolution and possible management actions to mitigate risks.

Financial Viability <5 pp

- Proposed sources of funding
- Financial viability
- Financial model of the CMA's cash flow.
- Possible risk areas and management actions to mitigate these risks

Social Viability <4 pp

- Mandate and support from stakeholders
- Risks associated with proposed institutional-organisational evolution

Summary of requirements for a Viable CMA <4 pp

- Risks for establishment of CMA
- Requirements or conditions to ensure viability and sustainability (highlighting technical, financial and/or infrastructural support required from DWAF/ other organisations.

APPENDIX B: FUNCTIONS OF A CMA

(from Mgeni-Mvoti viability study)

- ❑ Investigate and determine the extent to which any of its powers, duties or functions are currently being carried out by any body or institution within its Water Management Area (WMA) and the desirability of delegating the continued performance of such powers, duties or functions to such body or institution upon such conditions as it may negotiate and deem fit.
- ❑ As to the protection, use, development, conservation, management and control of the water resources in its WMA and subject to the provisions of its CMS;
 - Investigate and advise interested persons thereon.
 - Investigate and determine the steps to be taken to secure the protection, development and conservation of the water resources in its WMA and thereafter arrange for the implementation of such steps in accordance with the degree of priority and the costs attached to each step.
 - Investigate, record and monitor the use of the water resources in its WMA with a view to redressing the results of past racial and gender discrimination and achieving equitable access for all to such water resources.
 - Manage and control the water resources of its WMA with a view to achieving sustainability in both the quantity and the quality of such water resources.
- ❑ Develop a Catchment Management Strategy (CMS) consonant with the National Water Resource Strategy and the relevant provisions of section 6(1) of the Act which CMS shall provide a broad framework within which Catchment Management Plans (CMP) may be drawn up for each of the catchments in its WMA.
- ❑ Manage and control its income and expenditure with such care and efficiency as to ensure that its funds are not overspent yet its functions, powers and duties are exercised effectively.
- ❑ Co-ordinate the related activities of water users and of water management institutions within its WMA with a view to achieving efficiency and efficacy in the conduct of such activities and avoiding duplication or undue overlapping of services.
- ❑ Co-ordinate the implementation of its CMS and its CMPs with the implementation of any applicable development plan in terms of the Water Services Act (Act 108 of 1997).
- ❑ Promote community and sectoral participation in the exercise of its functions and raise the level of public awareness concerning the importance of the work of the CMA.
- ❑ Develop procedures for co-operative governance with all relevant institutions and national, provincial and local government in respect of all issues bearing on water resource quality and quantity including agricultural and developmental Landuse practices and land use planning, pollution control, environmental and ecological factors, health, education and community participation.

- ❑ Accept and receive the delegation or assignment of powers and duties and, subject to the conditions imposed by the Minister or the Director general (including those set out in Schedule 3 to the Act) and subject to the conditions imposed by the Minister, exercise those powers and duties.
- ❑ Draw up CMPs, in terms of its CMS for each catchment in its WMA. In consultation with the communities resident in and the bodies or institutions associated with each such catchment provided that such plans shall be drawn up sequentially in accordance with the degree of urgency or priority for the need for the performance of any of its functions, powers or duties in any specific catchment.
- ❑ Exercise such of the powers and duties set out in Schedule 3 to the Act as may be assigned or delegated to it by the Minister.
- ❑ Exercise such of the powers and duties of a responsible authority set out in Chapter 4 of the Act as may be assigned or delegated to it by the Minister (including the authorisation, licensing and allocation of water use in its WMA).
- ❑ Establish and collect Water Use Charges.
- ❑ Where necessary and desirable develop and operate waterworks.
- ❑ Determine and maintain the required standards for the quality of the water resources in its WMA and maintain the quantity of the Reserve in each of the catchments in its WMA.
- ❑ Audit and monitor regularly all its catchment management activities and the performance of its powers, duties and functions in its WMA.
- ❑ Enforce compliance with the provisions of any law, regulation, rule or directive relating to the protection, use, development, conservation, management or control of the water resources in its WMA (including pollution) by such means as may be deemed appropriate through either its own personnel or any outside agency qualified and equipped to do so or any due process of the law.
- ❑ Draw up contingency plans for the management of the risks of floods, droughts and any other disasters affecting any of the water resources in its WMA.