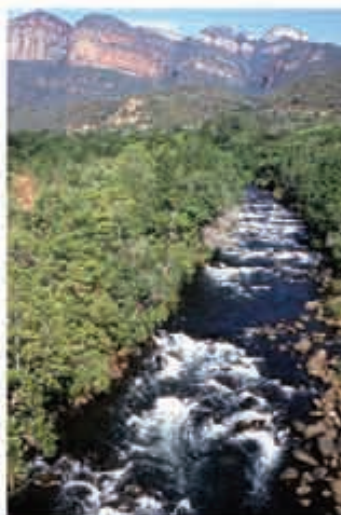


DEVELOPMENT OF THE WATER RESOURCE CLASSIFICATION SYSTEM (WRCS)

Proceedings of the WRCS Stakeholder workshop held on Thursday 26 October 2006 at the Blue Valley Country Estate, Midrand, and on Friday 27 October 2006 at the Tropicana Hotel, Durban - February 2007



1st Edition

Chief Directorate
Resource Directed Measures

Volume
5



water & forestry

Department:
Water Affairs and Forestry
REPUBLIC OF SOUTH AFRICA

THE DEVELOPMENT OF THE WATER RESOURCE CLASSIFICATION SYSTEM (WRCS)

**First Edition: February 2007
Volume 5**

**Proceedings of the WRCS Stakeholder Workshop held
on Thursday 26 October 2006 at the Blue Valley Country Estate,
Midrand, and on Friday 27 October 2006 at the Tropicana Hotel, Durban**

Chief Directorate: Resource Directed Measures

**Technical Guidelines for
DEVELOPMENT OF THE WATER RESOURCE CLASSIFICATION SYSTEM
(WRCS)**

First Edition

Department: Water Affairs and Forestry

Development of the Water Resource Classification System (WRCS)
February 2007
First Edition
Department: Water Affairs and Forestry
Private Bag X313
Pretoria 0001
Republic of South Africa
Chief Directorate: Resource Directed Measures
Water Resource Classification
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By Chief Directorate: Resource Directed Measures

Preface

The Water Resource Classification System (WRCS) was established in response to the South African National Water Act of 1998. The WRCS is a set of guidelines and procedures that, when applied to a specific catchment, will ultimately assist in the process of maintaining a balance between protecting our national water resources and using them to meet economic and social goals. The procedures are to be applied as part of a consultative 'Classification Process', the final outcome of which is a decision about the set of desired characteristics for each of the water resources in a given catchment.

The Classification Process sets a 'Class', which defines objectives for every significant water resource—watercourse, surface water, estuary, or aquifer. There are three classes, ranging from the minimally used to the heavily used. These objectives describe the desired condition of these resources and the extent to which they can be utilised.

The Classification Process is not carried out in isolation, but is integrated within the overall planning for water resource protection, development and use. A key component of classification is therefore the ongoing process of evaluating options with stakeholders in which the economic, social and ecological trade-offs will be clarified and decided upon.

Volumes 1 to 5 of these reports build on an earlier version of the classification system and meet the terms of reference as set out in the inception report (DWAF, 2005a). The development of the new system was completed in twelve months using the Olifants/Doring catchment as a 'proof of concept' catchment. The Olifants/Doring system was chosen for two reasons: 1) A recent Reserve determination study had provided much of the required information. 2) Most of the WRCS project team had been involved in the determination study.

It was initially planned that once the draft WRCS had been developed, it would be tested, refined and possibly streamlined using two other, more complex catchments (such as Thukela and Incomati). This turned out not to be possible. The description of the classification procedure has therefore been left as generic as possible so that future applications of the WRCS can build on and improve the procedures and guidelines presented in these volumes.

The classification system regulations will be developed from these volumes.

Acknowledgements

The following persons and organisations are thanked for their contributions to this project.

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ACRONYMS

| | |
|---------|---|
| AD | Assistant Director |
| BID | Background Information Document |
| CD: RDM | Chief Directorate: Resource Directed Measures |
| CMA | Catchment Management Agencies |
| CMS | Catchment Management Strategy |
| CSIR | Council for Scientific and Industrial Research |
| DD | Deputy Director |
| DEaT | Department: Environment and Tourism |
| DG | Director-General |
| DLA | Department: Land Affairs |
| DLG | Department: Local Government |
| DoA | Department: Agriculture |
| DWAF | Department: Water Affairs and Forestry |
| EGSAs | Ecosystem Goods, Services and Attributes |
| ELU | Existing Lawful Use |
| ESBC | Ecological Sustainability Base Configuration (scenario) |
| EWRs | Ecological Water Requirements |
| GIS | Geographic Information System |
| I&AP | Interested and Affected Parties |
| IBTs | Inter Basin Transfers |
| IDP | Integrated Development Plan |
| IUAs | Integrated Units of Analysis |
| IWRM | Integrated Water Resources Management |
| ISP | Internal Strategic Perspective |
| KZN | KwaZulu-Natal |
| MC | Management Class |
| NDSD | National Department of Social Development |
| NWA | National Water Act |
| NWRS | National Water Resource Strategy |
| RDM | Resource Directed Measures |
| RQOs | Resource Quality Objectives |
| SAEON | South African Environmental Observatory Network |
| WDCS | Waste Discharge Charge System |
| WMA | Water Management Area |
| WPCO | Water Pollution Control Officer |
| WRCS | Water Resource Classification System |
| WUA | Water User Association |

1 INTRODUCTION

1.1 The Water Resource Classification System (WRCS)

The WRCS is required by the National Water Act (NWA) (No. 36 of 1998), and consists of a set of guidelines and procedures for determining the different classes of water resources (Chapter 3, Part 1, Section 12). Desired characteristics of the resource are represented by a Management Class (MC) which outlines the attributes required of different water resources by the resource custodian (Department: Water Affairs and Forestry (DWAF)) and by society.

The WRCS will be used in a consultative process (i.e. the Classification Process) to classify the water resources within a geographic region in order to facilitate finding a balance between protection and use of the water resources. The actual process of *applying* the WRCS procedures described in this volume to a catchment is called the Classification Process i.e. establishing the MC. The economic, social and ecological implications of choosing a MC need to be established and communicated to all Interested and Affected Parties (I&AP) during the Classification Process.

The outcome of the Classification Process will be the setting of the MC, Reserve and Resource Quality Objectives (RQOs) by the Minister or delegated authority for every significant water resource (watercourse, surface water, estuary, or aquifer) under consideration. This will be binding on all authorities or institutions when exercising any power, or performing any duty under the NWA. This MC, which will range from Minimally to Heavily used (Table 1.1), essentially describes the desired condition of the resource, and concomitantly, the degree to which it can be utilised. In other words, the MC of a resource sets the boundaries for the volume, distribution and quality of the Reserve and RQOs, and therefore informs the determination of the allocatable portion of a water resource for use. This has considerable economic, social and ecological implications.

Table 1.1 Proposed water resource classes

| |
|---|
| Class I: Minimally used |
| The configuration of ecological categories of the water resources within a catchment results in an overall water resource condition that is minimally altered from its pre-development condition. |
| Class II: Moderately used |
| The configuration of ecological categories of the water resources within a catchment results in an overall water resource condition that is moderately altered from its pre-development condition. |
| Class III: Heavily used |
| The configuration of ecological categories of the water resources within a catchment results in an overall water resource condition that is significantly altered from its pre-development condition. |

1.2 7-step classification procedure

A 7-step procedure to recommending the class of a resource (the outcome of the Classification Process) is proposed (Figure 1). The seven steps which may be embedded in other DWAF processes are:

Step 1: Delineate the units of analysis and describe the status quo of the water resources:-

- a. Describe the present-day socio-economic status of the catchment;
- b. Divide the catchment into socio-economic zones;
- c. Identify a network of significant resources, describe the water resource infrastructure and identify the water user allocations;
- d. Define a network of significant resources and establish the biophysical and allocation nodes.
- e. Describe communities and their wellbeing;

- f. Describe and value the use of water;
- g. Describe and value the use of aquatic ecosystems;
- h. Define the Integrated Units of Analysis (IUA);
- i. Develop and/or adjust the socio-economic framework and the decision-analysis framework; and
- j. Describe the present-day community wellbeing within each Integrated Unit of Analysis.

Step 2: Link the value and condition of the water resource:-

- a. Select the ecosystem values to be considered based on ecological and economic data;
- b. Describe the relationships that determine how economic value and social wellbeing are influenced by the ecosystem characteristics and the sectoral use of water; and
- c. Define the scoring system for evaluating scenarios.

Step 3: Quantify the Ecological Water Requirements and changes in non-water quality Ecosystem Goods, Services and Attributes:-

- a. Identify the nodes to which Resource Directed Measures data can be extrapolated and make the extrapolation;
- b. Develop rule curves, summary tables and modified time series for all nodes for all ecological categories; and
- c. Quantify the changes in relevant ecosystem components, functions and attributes for each ecological category for each node.

Step 4: Determine an Ecologically Sustainable Base Configuration scenario and establish the starter configuration scenarios:-

- a. Determine an Ecologically Sustainable Base Configuration (ESBC) scenario that meets feasibility criteria for water quantity, water quality and ecological needs;
- b. Incorporate the planning scenarios (future use, equity considerations and existing lawful use); and
- c. Establish the Resource Directed Measures configuration scenarios.

Step 5: Evaluate scenarios within the Integrated Water Resource Management (IWRM) process:-

Steps 5 and 6 form part of the 'Larger Process' where the economic, social and ecological trade-offs will be made. Trade-offs will also need to be made between Existing Lawful Use (ELU) and equity considerations. Emerging from this 'Larger Process' will be the recommended MC, Reserve and RQOs, CMS, allocation schedule, modelling system and the monitoring, auditing and compliance strategy. A number of key questions will need to be addressed in this 'Larger Process'. These include:

- at what level will the trade-offs be negotiated?
- in what institutional setting will they be negotiated?
- what types of scenarios will inform the process of negotiation?; and
- since the recommended MC, Reserve, RQOs, CMS and allocation schedule will impact on specific groups of people in different ways, what processes will guide decisions about who benefits and who pays the social and economic cost?

These key questions should be framed (and assessed) in the context of equity, efficiency and sustainability as required by the NWA, and by the core objectives of the present government which are, amongst others, to halve poverty and unemployment by 2014, to reduce the regulatory burden on small and medium businesses, and to eliminate the second economy¹. Step 5 should

¹ www.info.gov.za/issues/asgisa/.

therefore contribute to meeting government's objective of '...reduce(ing) inequality and virtually eliminating poverty'.² To address these objectives and to fit within the larger DWAF institutional context, Classification Procedure Step 5 needs to include the following sub-steps:

- a. Run a yield model for the Ecologically Sustainable Base Configuration scenario and other scenarios and adjust the scenarios if necessary;
- b. Assess the water quality implications (fitness for use) for all users;
- c. Report on the IUA-scale ecological condition and aggregate impacts for each preliminary scenario;
- d. Value the changes in aquatic ecosystems and water yield;
- e. Describe the macro-economic and social implications of different catchment configuration scenarios;
- f. Evaluate the overall implications at an Integrated Unit of Analysis-level and a regional-level; and
- g. Select a subset of scenarios for stakeholder evaluation.

Step 6: Evaluate the scenarios with stakeholders:-

- a. Stakeholders evaluate scenarios and agree on a short-list; and
- b. Recommend classes for the Integrated Units of Analysis.

Step 7: Gazette the class configuration:-

- a. Populate the Integrated Water Resource Management summary template and present to the Minister or his/her delegated authority;
- b. Decision by the Minister or his/her delegated authority on the Integrated Unit of Analysis classes, nested ecological category configurations, Reserve(s), allocation schedule(s) and the Catchment Management Strategy;
- c. Set the resource quality objectives;
- d. Gazette Integrated Unit of Analysis classes, nested ecological category configurations, Reserve(s) and resource quality objectives; and
- e. Develop a plan of action for implementation of the recommended scenario which must include a monitoring programme.

1.3 Objective of this report

This document is one of a series of 5 volumes comprising the set: Development of the Water Resource Classification System. Volumes 1 to 4 (Dollar *et al.*, 2007 (Volume 1); Brown *et al.*, 2007 (Volume 2); Turpie *et al.*, 2007 (Volume 3) and Joubert *et al.*, 2007 (Volume 4)) represent the supporting documentation for the procedures and guidelines for the WRCS (see Dollar *et al.*, 2007, Figure 1.1). This volume (Volume 5) has as its objective to document the proceedings and issues raised by stakeholders on the WRCS position paper (DWAF, 2006) (Appendix A) that was presented at two stakeholder workshops held on Thursday 26 October and Friday 27 October 2006 at the Blue Valley Country Estate, Midrand and the Tropicana Hotel, Durban respectively. The workshops were attended by 24 and 38 participants at Midrand and Durban respectively (see Appendix B for a full list of participants).

The objectives of the workshop were to:

- present an overview of the position paper (DWAF, 2006 – Appendix A) on the development of the WRCS; and
- provide an opportunity for the stakeholders to raise potential issues of concern and to provide comment on the development of the WRCS.

² www.info.gov.za/issues/asgisa/.

The issues raised by participants and the responses provided by DWAF and the technical team during these workshops have been captured in the Issues and Response Report (Appendix C). Stakeholders who attended these workshops will be requested to verify the correctness of their comments, issues of concern and suggestions. The corrected/adjusted comments will be incorporated into the final version of this document.

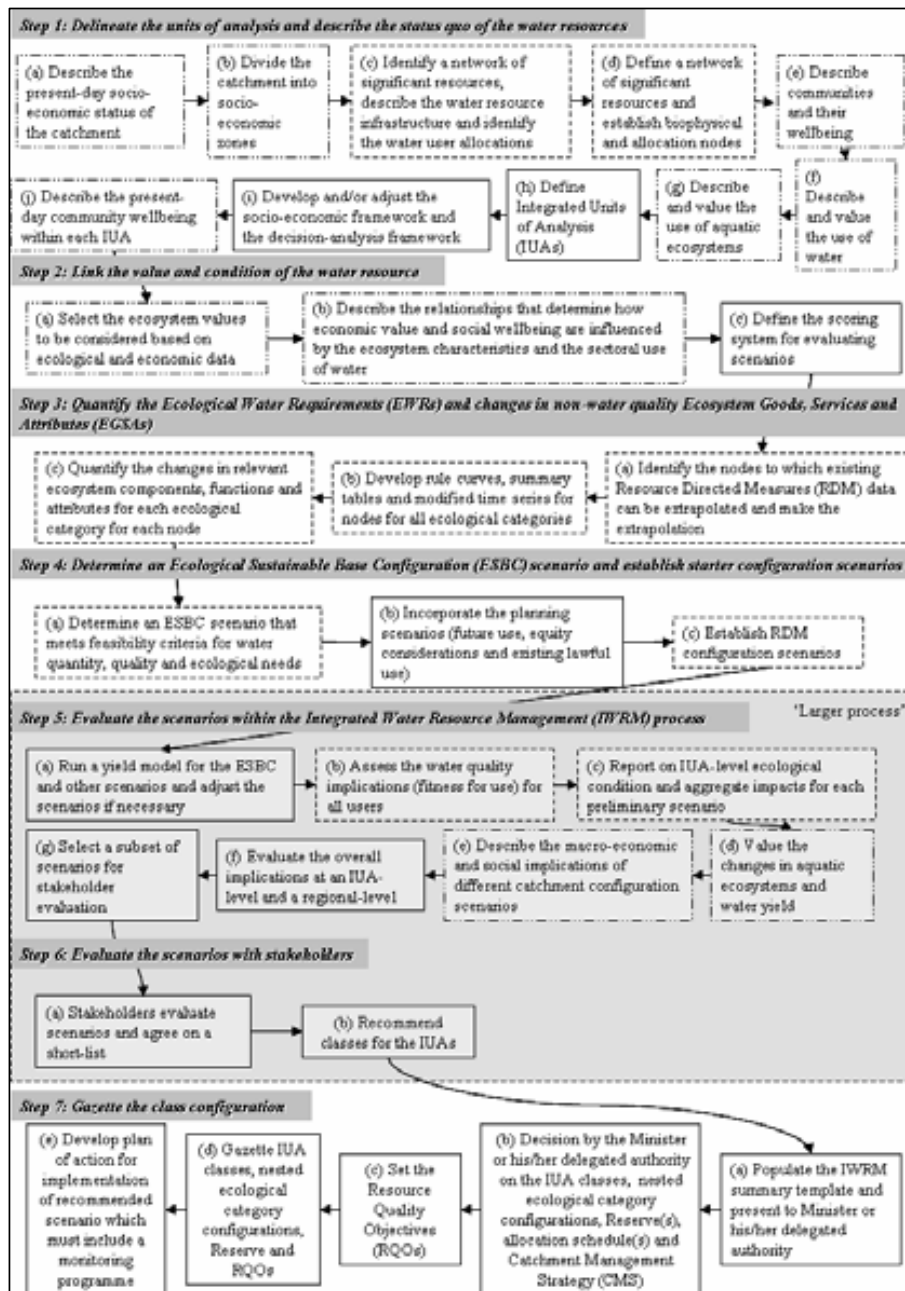


Figure 1 Outline of the 7-step classification procedure

2 OVERVIEW OF THE STAKEHOLDER WORKSHOPS

2.1 Welcome, objectives and introduction

Mr Solly Manyaka, in his capacity as facilitator of the workshops, welcomed all stakeholders and extended a word of appreciation to the stakeholders for the time that they had taken to attend the workshops. He said that one of the benefits of attending the workshops was the opportunity they provide for networking. He introduced the project team and requested that participants introduce themselves and state which organisation they represent. He also circulated an attendance register, requesting that participants complete it to ensure that their contact details were captured correctly on the stakeholder database. He assured participants that they would receive a set of draft proceedings including an Issues and Response Report (Appendix C) after the workshop. The purpose of distributing the draft set of proceedings to the stakeholders is to verify that the stakeholders comments are correctly captured.

Mr Solly Manyaka informed stakeholders that DWAF's policy on stakeholder engagement seeks to ensure that they are afforded an opportunity to participate in government's policy development processes. He stated that the WRCS stakeholder workshops were aimed at providing stakeholders with an opportunity to contribute to the process of developing the WRCS, and that a total of 244 key stakeholders (Table 2 **Error! Reference source not found.**) had been identified and invited to the workshops. Their details were captured on a dedicated stakeholder database. He also informed stakeholders that a Background Information Document (BID) (Appendix D) had been distributed to stakeholder some four months prior to the stakeholder workshops, with the view to inform stakeholders about the development of the WRCS. He said that it was important to get the views of the different sectors, e.g. mining, research etc. on the developing WRCS.

Comment [U@1]: Can we find the exact date that these were sent out and insert?

Table 2 Stakeholder participation

| | | |
|--------------------------------------|-----------------------------|-----|
| No. of stakeholders invited | | 244 |
| No. of stakeholders responded | Gauteng - 27 Durban - 30 | 57 |
| No. of stakeholders attended | Gauteng - 24 Durban - 38 | 62 |

Mr Solly Manyaka explained that his role as facilitator was to outline the workshop procedure, to create an opportunity and environment that would ensure that everyone gets an opportunity to participate, and to ensure that the workshop was productive. He also informed participants that as an independent facilitator, he had no decision-making powers or vested interests in the project. He asked participants to focus on issues rather than individuals, and to work through him so that they can meet the objectives of the workshop. He outlined the workshop programme and presented the workshops' objectives as follows:

- present an overview of the position paper (DWAF, 2006 – Appendix A) on the development of the WRCS; and
- provide an opportunity for the stakeholders to raise potential issues of concern and to provide comment on the development of the WRCS.

2.2 Presentation by the Chief Director: Resource Directed Measures (CD: RDM)

Mr Harrison Pienaar (CD: RDM, DWAF) presented the background to the WRCS (Appendix E). A summary of the presentation is given below.

2.2.1 Legal framework

Mr Harrison Pienaar explained the legal framework (of) and context to the WRCS through Figure 2.



Figure 2 Legal framework to the WRCS

2.2.2 Contextualizing classification

Mr Harrison Pienaar informed stakeholders that the WRCS consists of a set of guidelines and procedures for determining different classes of water resources. The WRCS will be used (later) in a (consultative) process (the Classification Process) to help facilitate the IWRM process. The desired characteristics of water resources are represented by MCs. The MC sets the boundaries for the volume, distribution and quality of the Reserve and RQOs. He said that the potential implications of a MC need to be established and communicated to all I&APs.

2.2.3 Guiding principles

Mr Harrison Pienaar said that WRCS is guided by 11 principles. A few key principles were highlighted. These include:

- sustainability;
- legally defensible and scientifically sound;
- implementability; and
- transparency.

2.2.4 What will be gazetted?

Mr Harrison Pienaar stated that the gazetted WRCS will provide a definition of the classes that are to be used and the procedures to be followed to recommend a MC. The WRCS will be published in the Government Gazette for comments for not less than 60 days. He assured

stakeholders that all comments received during the gazetting process will be recorded and considered.

2.2.5 Proposed MCs

Mr Harrison Pienaar presented the proposed MCs which are given in **Error! Reference source not found.**

2.2.6 Functional considerations

Mr Harrison Pienaar stated that the implementation of IWRM is a process that spans several sectors with equally strong mandates. DWAF as sector leader is the trustee of Nation's water resources (and therefore both the WRCS and the Classification Process should be viewed within this context) and therefore has a mandate with regards IWRM. He said that beyond IWRM environment, WRCS has bearing on a range of broader processes. Cooperative governance is therefore required to facilitate effective implementation of IWRM. This requires co-operation of all three spheres of government, stakeholder participation and engagement with civil society. The WRCS therefore needs to be founded on a consensus-seeking, participative approach, and on co-operative governance.

2.2.7 Supporting documentation

Mr Harrison Pienaar informed stakeholders that guidelines and supporting documentation had been developed as part of the WRCS project. These include among others:

- a 4-volume set of guidelines for implementing the WRCS;
- a Geographic Information System (GIS) database; and
- a decision-analysis tool.

2.2.8 Integrating socio-economic and ecological goals

Mr Harrison Pienaar stated that DWAF's motto is to 'ensure some, for all, forever, together'. He said that the NWA has brought a paradigm shift to the approach and implementation of IWRM. The NWA promotes:

- economic efficiency;
- social equity; and
- ecological sustainability.

Mr Harrison Pienaar said that in attempting to simultaneously redress past inequities in water allocation and to ensure equity between generations, an acceptable and integrated decision-making process was required – the WRCS. Linking water resource management to sustainable water services provision was therefore critical.

2.2.9 Why this position paper?

Mr Harrison Pienaar stated that the WRCS must be developed in consultation with all relevant stakeholders. The position paper (Appendix A) represents DWAF's initial position with respect to the development of the WRCS, and provides the basis for initial stakeholder consultation.

2.2.10 WRCS project – the way forward

In presenting the way forward, Mr Harrison Pienaar said that there are various documents that must be delivered by this project in support of both WRCS and other DWAF IWRM initiatives. It is envisaged that a phased approach to the Classification Process will be embarked on once the WRCS is in place.

2.3 Presentation by Dr Evan Dollar (Project Leader) on the 7-step classification procedure

Dr Evan Dollar presented the 7-step classification procedure (Appendix E).

3 SUMMARY, NEXT STEPS AND CLOSURE

Following a period of discussion in which stakeholder issues and concerns were heard and noted (Appendix C), the facilitator stated that the next step was to produce the minutes of the workshops and to distribute these to all stakeholders who participated in the workshops. He warned that some issues might not have responses at this stage, but that an updated Issues and Response Report (Appendix C) would be distributed to stakeholders. He requested stakeholders to convey the information shared at the workshop to any other interested stakeholders and invited them to contact the stakeholder consultation office with any further questions or concerns. A response form was distributed to the workshop participants who were asked to evaluate the efficacy of the WRCS workshop in informing the participants of the proposed WRCS. The responses have been captured and are presented in Appendix F.

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**Department: Water Affairs and Forestry
Chief Directorate: Resource Directed Measures
Republic of South Africa**



**A DRAFT POSITION PAPER ON THE DEVELOPMENT OF A
WATER RESOURCE CLASSIFICATION SYSTEM (WRCS)**

DRAFT DISCUSSION DOCUMENT

OCTOBER 2006

Version control

| Version | Date | Comment |
|-----------|-----------------|--|
| Version 1 | 13 January 2006 | Draft submitted to CD: RDM |
| Version 2 | 31 January 2006 | Revised draft submitted to CD: RDM |
| Version 3 | 19 May 2006 | Revised draft submitted to CD: RDM following PSC comments on 8 February 2006 |
| Version 4 | 26 June 2006 | Revised draft submitted to CD: RDM following PSC comments on 1 June 2006 |
| Version 5 | 7 August 2006 | Revised document following comments from CD: RQS and DWAF: Free State and project team |
| Version 6 | 18 August 2006 | Revised document following comments from CD: IWRP and CD: RPW |
| Version 7 | 28 August 2006 | Revised document following comments from PSC on 24 August 2006 |
| Version 8 | 24 October 2006 | Revised document with revised 7-step classification procedure |

Draft

PREFACE

The Rio Declaration on Environment and Development, Agenda 21 and the Statement of Principles for the Sustainable Management of Forests were adopted by 178 countries at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992. Chapter 18 of Agenda 21 deals with the protection of the quality and supply of freshwater resources and the application of integrated approaches to their development, management and utilisation. South Africa's approach to integrated water resource management (IWRM) is guided by Agenda 21. The Department: Water Affairs and Forestry (DWAF) as custodian of the nation's water resources is mandated to protect, use, develop, conserve, manage and control the nation's water resources in a sustainable and equitable manner for the benefit of all South Africans.

Sustainability encompasses both the long- and short-term protection of water resources to ensure that they can be developed and used effectively into the future. The protection principles are contained in Chapter 3 of South Africa's National Water Act (NWA) (Act 36 of 1998). The Reserve, the Water Resource Classification System (WRCS) and Resource Quality Objectives (RQOs) are protection-based measures that together form the Resource Directed Measures (RDM). These measures are in various stages of development and implementation. The NWA requires that all significant water resources in South Africa be classified to determine the quantity and quality of water necessary for ecosystem functioning, and to ensure that they are maintained in a minimum state of health related to an acceptable level of functioning. Classification, however, goes beyond identifying the minimum requirements for ecosystems and human needs, and involves choosing a level of protection between this minimum and complete protection.

Classification thus affects both ecosystem health and the amount of economic activity that relies on water supply, and therefore has considerable socio-economic implications. It is also inherently political, as past inequalities necessitate redress in terms of access to, use of, and benefit from water resources for previously disadvantaged communities. To meet the above requirements the WRCS seeks to provide the guidelines and procedures for determining the desired characteristics of a water resource (represented by a Management Class (MC)) to help facilitate informed decision-making.

This document presents a draft framework for the proposed WRCS that is being developed. It highlights the legal basis for the WRCS, draws a distinction between the WRCS and the process of classification (Classification Process), and outlines the principles being used to guide the development of the system. It also discusses the need for, and development of a system that integrates economic, social and ecological goals using a proposed seven-step procedure. Further, it considers the issues raised by a wide range of stakeholders during an extensive public consultation process for the National Water Resource Strategy (NWRS) and the subsequent intradepartmental processes. This document serves as the basis for the stakeholder consultation during the development of the WRCS.

Comment on this paper

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ACRONYMS

| | |
|--------|--|
| ASGISA | Accelerated Growth-South Africa |
| CBA | Cost-Benefit Analysis |
| CMAs | Catchment Management Agencies |
| CMS | Catchment Management Strategy |
| DWAF | Department: Water Affairs and Forestry |
| EGSAs | Ecosystem Goods, Services and Attributes |
| ELU | Existing Lawful Use |
| ESBC | Ecologically Sustainable Base Configuration (scenario) |
| EWRs | Ecological Water Requirements |
| GIS | Geographic Information System |
| I&APs | Interested and Affected Parties |
| IUA | Integrated Units of Analysis |
| IWRM | Integrated Water Resource Management |
| MC | Management Class |
| MCDA | Multi-Criteria Decision-Analysis |
| NWA | National Water Act |
| RDM | Resource Directed Measures |
| RQOs | Resource Quality Objectives |
| SDCs | Source Directed Controls |
| WDCS | Waste Discharge Charge System |
| WMA | Water Management Area |
| WRCS | Water Resource Classification System |

1 INTRODUCTION

1.1 What is the Water Resource Classification System (WRCS)?

The WRCS, which is required by the National Water Act (NWA) (No. 36 of 1998), is a set of guidelines and procedures for determining the different classes of water resources (Chapter 3, Part 1, Section 2(a)). The desired characteristics of the resource are represented by a Management Class (MC). The MC outlines those attributes that the custodian (Department: Water Affairs and Forestry (DWAF)) and society require of different water resources.

The WRCS will be used in a consultative process (i.e. the Classification Process) to classify water resources to help facilitate a balance between protection and use of the nation's water resources, i.e. to recommend a MC. The economic, social and ecological implications of choosing a MC will need to be established and communicated to all Interested and Affected Parties (I&AP) during the Classification Process.

The outcome of the Classification Process will be the setting of the MC and Resource Quality Objectives (RQOs) by the Minister or delegated authority for every significant water resource (river, estuary, wetland and aquifer) under consideration. This will be binding on all authorities or institutions when exercising any power, or performing any duty under the NWA. This MC, which may range from Natural to Heavily Used/Impacted (**Table 1**), essentially describes the desired condition of the resource, and concomitantly, the degree to which it can be utilised. In other words, the MC of a resource sets the boundaries for the volume, distribution and quality of the Reserve and RQOs, and thus the potential allocable portion of a water resource for off-stream use. This has considerable economic, social and ecological implications.

1.2 What will be gazetted?

Section 12 of the NWA provides that the Minister must prescribe a system for classifying water resources. This requires gazettement of the WRCS. The gazetted WRCS will provide a definition of the classes that are to be used and the procedures to be followed to recommend a class. The NWA requires that the WRCS be published in the Government Gazette for comments for a period of not less than 60 days. All comments received will be recorded and considered. The National Assembly and National Council of Provinces may require information on how particular comments are addressed. It is anticipated that the WRCS will be submitted for gazettement early in 2007. This is to ensure that there is sufficient time to process the WRCS through DWAF line functions up to the Minister for approval before publication in the Government Gazette can take place.

In addition to the gazetted WRCS, supporting documentation will be developed to be followed to recommend a class. This documentation will be sanctioned by DWAF, but will not be gazetted.

As soon as reasonably practicable after the Minister has prescribed a system for classifying water resources the Minister must, subject to subsection (4), by notice in the *Gazette*, determine for all or part of every significant water resource –

- (a) a class in accordance with the prescribed classification system;
and
- (b) resource quality objectives based on the class determined in terms of paragraph (a)

1.3 What will the supporting documentation look like?

The supporting documentation may comprise:

- A manual for implementing the WRCS, including:
 1. Protocol(s) for a systematic approach for describing the ecological/biophysical implications of different scenarios.
 2. Protocol(s) for a systematic approach for describing the social implications of different scenarios.
 3. Protocol(s) for a systematic approach for predicting changes in economic value due to the implications of different scenarios.
 4. Checklist(s) to ensure that the appropriate economic, social and ecological criteria are considered in the Classification Process.
 5. Procedure(s) for generating class scenarios.
 6. Procedure(s) for the aggregation and presentation of economic, social and ecological data at a catchment-level for alternative scenarios.
 7. A protocol for an integrated decision-analysis tool.
 8. A template for delivering the required information on the economic, social and ecological implications of different scenarios to the Minister or delegated authority for a decision on a MC.
- A Geographical Information System (GIS) database including:
 1. A database of national- and regional-level context information for classification.
- A decision-analysis tool.

1.4 What is currently being used to classify water resources?

At present, a preliminary classification system using A to F ecological categories has been used for preliminary Reserve determinations (**Table 2**).

1.5 Why develop this document?

Given the strategic importance of the WRCS, it is essential that it be developed in consultation with all relevant stakeholders. This is in line with the spirit of legislation that calls for stakeholder participation, and is specifically called for by the NWA. This document reflects the position of DWAF with respect to the proposed WRCS, and provides the basis for the initial engagement with stakeholders.

Note

The WRCS is in the process of being developed. It does not currently exist. This paper presents the framework and context that will guide the development of the proposed WRCS.

Glossary Box 1

Resource Quality Objectives refer to numerical or descriptive statements (in terms of water quality and quantity) of conditions (goals) that should be met in the water resource.

The **Reserve** consists of two parts; the basic human needs and the ecological reserve. The basic human needs reserve provides for the essential needs of individuals served by the water resource in question and includes water for drinking, for food preparation and for personal hygiene. The ecological reserve relates to the water required to protect aquatic ecosystems and the water resource. The Reserve refers both to the quantity and quality of the water in the resource, and will vary depending on the class of the resource. The basic human needs reserve will be abstracted from the resource, while the ecological reserve will remain in the resource.

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Table 1 National Water Resource Strategy¹ proposed water resource MCs

| | |
|---|---------------------------------|
| Class I | Natural |
| <ul style="list-style-type: none"> • Human activity has caused no or minimal changes to the historical natural structure and functioning of biological communities (animals and plants), hydrological characteristics or the bed, banks and channel of the resource (ecological category A); • chemical concentrations are not significantly different from background concentration levels or ranges for naturally occurring substances; • safe for contact recreation and most water uses, including sensitive uses; • can be used for basic human needs with minimum treatment; and • the resource should be: <ol style="list-style-type: none"> 1. situated in a national or international heritage site or wilderness area; 2. of compelling biodiversity importance; 3. a protected site under the Ramsar Wetlands Convention; 4. situated in an area that has economic importance for tourism or the harvesting of medicinal plants; 5. have social and/or cultural significance; and 6. an area designated as Natural under other legislation. <p>Other classes will be defined in terms of the degree of deviation from the Natural Class.</p> | |
| Class II | Moderately used/impacted |
| <ul style="list-style-type: none"> • Resources that are slightly to moderately altered from their natural condition due to the impacts of human activity and water use; • retain a high degree of ecological function and integrity (ecological category B to high C); • safe for some recreation and non-sensitive water uses; and • can be used for basic human needs with conventional treatment. | |
| Class III | Heavily used/impacted |
| <ul style="list-style-type: none"> • Resources that are significantly changed from the Natural class reference conditions due to the impacts of human activity and water use but are nevertheless ecologically sustainable; • where there are pressing social and economic reasons to permit uses that will cause limited, short-term and reversible degradation of the resource, cases will be considered on their merits within the framework of long-term sustainability; • retain at least some ecological function, but probably highly modified from Natural (ecological category D); • safe for some non-contact recreation and some non-sensitive water uses; and • may require advanced treatment to meet basic human needs requirements. | |
| Class IV Unacceptably degraded resources | |
| <ul style="list-style-type: none"> • Unacceptably degraded resources as a result of over-exploitation; and • MC set at one class up with the aim to rehabilitate this resource to at least one higher class. | |

¹ www.dwaf.gov.za/Documents

Table 2 Ecological integrity status categories

| Category | Ecological integrity status |
|-----------------|---|
| A | Unmodified, natural; the resource base reserve has not been decreased – the resource capability has not been used. |
| B | Largely natural with few modifications; the resource base reserve has been decreased to a small extent. A small change in natural habitats and biota may have taken place, but the ecosystem functions are essentially unchanged. |
| C | Moderately modified; the resource base reserve has been decreased to a moderate extent. Changes of natural habitat and biota have occurred but the basic ecosystem functions are still predominantly unchanged. |
| D | Largely modified; the resource base reserve has been decreased to a large extent. Large changes in natural habitat, biota and basic ecosystem functions have occurred. |
| E | Seriously modified; the resource base reserve has been seriously decreased and regularly exceeds the resource base. The loss of natural habitat, biota and basic ecosystem functions are extensive. |
| F | Critically modified; the resource base reserve has been critically decreased and permanently exceeds the resource base. Modifications have reached a critical level and the resource has been modified completely with an almost total loss of natural habitat and biota. In the worst instances, the basic ecosystem functions have been destroyed and the changes are irreversible. |

2 INSTITUTIONAL ARRANGEMENTS FOR THE WRCS

2.1 What are the key institutional considerations for the development of the WRCS and the Classification Process?

As mentioned previously, the WRCS seeks to help facilitate a balance between resource protection and resource development and utilisation. A complex institutional environment is constructed around this balance, both in terms of the systems and processes of integrated water resource management (IWRM), and the division of roles and responsibilities between DWAF and the Catchment Management Agencies (CMAs).

The WRCS is, necessarily, an integral component of the IWRM environment. Accordingly, the Classification Process does not occur in isolation, but is fundamentally linked to other processes in the integrated planning of water resource protection, development and utilisation, and in the management and control of water use (**Figure 1**). In particular, the Classification Process and the Catchment Management Strategy (CMS) are iterative, while the proposed MC has significant implications for water allocation, Compulsory Licensing and the Waste Discharge Charge System (WDCS). A key component of IWRM is therefore an iterative process of evaluating scenarios with stakeholders where the economic, social and ecological trade-offs will be made, and out of which will emerge the allocation schedule, installed modelling system, MC, Reserve, RQOs and the CMS (**Figure 1**). This process is referred to as the 'Larger Process'.

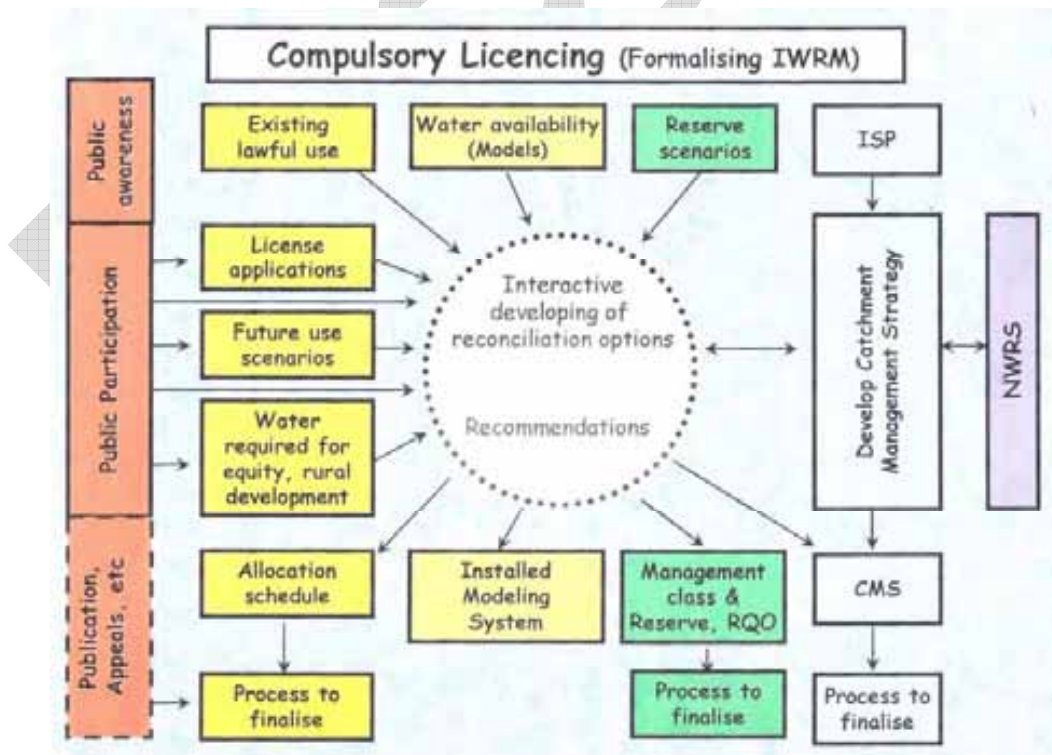


Figure 1 The determination of the MC, Reserve and RQOs forms part of the overall compulsory licensing process with DWAF

Given the complex and interrelated nature of the IWRM process, careful consideration of the linkages between the evolving WRCS and the 'Larger Process' is required. As a result, the institutional arrangements to support such linkages are an important element of the evolving WRCS.

Institutionally, the IWRM environment is complicated by the institutional change process within DWAF; the decentralisation of roles and responsibilities, and the establishment of CMAs. Once decentralisation is complete, the institutional and management arrangements to support the WRCS and the Classification Process will follow the division of roles and responsibilities between DWAF and the CMAs. DWAF assumes custodianship of the resource and of the broad strategic objectives of IWRM (including the WRCS and Classification Process) through oversight and regulation of the resource and its management, and through support to the CMAs. The CMAs are fundamentally responsible for management of the resource. Accordingly, the CMAs develop recommendations on the class, which are assessed and reviewed by DWAF for ultimate consideration and gazetting by the Minister. Before decentralisation is complete, DWAF both acts as custodian of the resource and manages the resource, which includes developing recommendations on the class.

Beyond the IWRM environment, the WRCS has bearing on a range of broader processes, given the wider socio-economic, political and ecological implications of the class. Accordingly, cooperation with all three spheres of Government, participation of stakeholders and engagement with civil society is required to ensure appropriateness and acceptability of the WRCS and, ultimately, of the proposed class. This implies that the WRCS process is founded on consensus-seeking, participation and cooperative governance to ensure socio-economic balance and sustainability in addition to the technical elements of ecological sustainability. The institutional arrangements and, importantly, the capacity for implementation of the WRCS must take cognisance of this socio-economic imperative.

Accordingly, the key institutional issues in terms of the evolving WRCS should focus on:

- creating an enabling environment, both in terms of the enabling legislation and the institutional environment, to ensure integration with associated systems and processes in IWRM;
- clarifying the roles and responsibilities of different groups and institutions in the Classification Process, considering the process of institutional change; and
- developing appropriate institutional arrangements and the requisite capacity for implementation, particularly in the CMAs, to enable cooperative governance, participation and stakeholder consultation, and to support the technical processes of the WRCS.

Glossary Box 2

Integrated Water Resource Management can be defined as a participatory planning and implementation process, based on sound science, which brings together stakeholders to determine how to meet society's long-term needs for water and coastal resources while maintaining essential ecological services and economic benefits (USAID http://www.usaid.gov/our_work/environment/water/what_is_iwrm.html).

Catchment Management Agencies are statutory bodies established by a notice in the Government Gazette, with jurisdiction in a defined water management area (WMA). A CMA therefore manages water resources and coordinates functions of other institutions involved in water-related matters within WMAs. A CMA begins to be functional once a governing board has been appointed, and is then responsible for specified initial functions, as well as any other functions delegated or assigned to it.

A **Catchment Management Strategy** may be defined as an overall plan or campaign to handle the affairs of a WMA to achieve specific objectives.

Waste Discharge Charge System aims to attach a cost to the use of water resources for disposal or discharge of waste.

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3 WRCS GUIDING PRINCIPLES

3.1 What are the main guiding principles that will inform the scope and intent of the WRCS?

Given the aforementioned context, it is prudent to define an acceptable set of principles, based on sound scientific knowledge, and informed by the spirit and letter of the South African Constitution to guide the WRCS and Classification Process. This will help make the process open, transparent and reasonably predictable, and will also reduce the level of potential contestation. The following principles were identified for the evolving WRCS during Phase 1 of the project:

3.1.1 Principle 1: Balance and trade-off for optimal use

The chosen MC should balance protection of the resource with its utilisation in line with societal norms and values. Utilisation of the resource provides economic and social benefits; it also has the potential, however, to compromise ecosystem integrity, which has economic and social costs. This balance will require trade-offs. The WRCS should therefore broadly outline the implications of different MCs to facilitate informed decision-making.

3.1.2 Principle 2: Sustainability

The principle reason for the protection of water resources is to maintain ecosystem integrity at a level that ensures the continued delivery of desired ecosystem goods, services and attributes for use. The WRCS therefore needs to provide a framework to help facilitate the sustainable use of water resources. It is also recognised that there is a sustainability baseline that if crossed, could result in the non-delivery of the goods, services and attributes necessary for economic growth, poverty alleviation and the redress of historical inequality. As there is a degree of uncertainty as to the exact position of this baseline, and as the risks of exceeding the limits of sustainability are considerable, a cautious approach will be adopted.

3.1.3 Principle 3: National interest and consistency

A MC of a resource may produce solutions that are acceptable at a local-level, but are sub-optimal when considered at a national-level. Catchment-level decisions therefore need to be evaluated against national-level interests (and where appropriate, international-level constraints e.g. international obligations). The WRCS should also outline a clear intention with respect to the characteristics of different MCs and provide for consistency in this regard.

3.1.4 Principle 4: Transparency

Stakeholders should be consulted both in the development of the WRCS and in the process of classifying the nation's water resources. The approach should be legitimate and transparent, and ensure that the evaluation method used for determining trade-offs is fair. As the MC has considerable economic, social and ecological implications, stakeholders will need to be informed in a meaningful way of the potential impacts on and risks (and benefits) of the WRCS to them. Further, stakeholders will need to be informed about the level

of uncertainty that accompanies many of the economic, social and ecological predictions inherent in the Classification (and 'Larger') Process.

3.1.5 Principle 5: Implementability

The WRCS needs to be used, at reasonable cost, by trained DWAF/CMA staff at an operational level. The institutional and transactional costs associated with making a decision on the MC should be as low as possible. The WRCS should also be sufficiently robust to make a decision in the light of imperfect knowledge. The final outcome of the Classification Process should take into consideration the impacts of existing entitlements to use water (for both abstraction and disposal) as well as regional- and national-development objectives.

3.1.6 Principle 6: Interdependency of the hydrological cycle

All components of a water resource are linked. As such, the WRCS needs to account for the interlinkages between all resources dependent on water; rivers, aquifers, wetlands and estuaries.

3.1.7 Principle 7: Legally defensible and scientifically robust

The WRCS should be legally defensible and scientifically robust. It should be based on sound socio-economic and ecological principles in line with IWRM goals. The WRCS and Classification Process should be legally defensible, apply due diligence in the decision-making process, and prevent legal liability accruing to DWAF or the stakeholders. It should also be consistent with South Africa's international obligations and other environmental legislation both at a national- and an international-level. The guidelines should indicate the best available tools and data sets to be used in the Classification Process. These will need to be regularly updated to account for developments in science and technology.

3.1.8 Principle 8: Management scales

The scale at which the WRCS is applied should be appropriate to the problem at hand. The end result of the Classification Process will be the recommendation of a MC. The implications of this will need to be understood, implemented and checked at multiple scales.

3.1.9 Principle 9: Auditable and enforceable

The WRCS needs to be auditable and enforceable to ensure that it is operationalised. Thus, the regulator will need to ensure that a transparent, permanent record of the procedures, information and logic used for classifying a particular resource is created and maintained. The outcomes of the WRCS also need to be monitored and enforced.

3.1.10 Principle 10: Lowest level of contestation and the highest level of legitimacy

Given the strategic importance of the WRCS, the principle of lowest level of contestation and highest level of legitimacy should be applied. This requires consultation with, and the highest level of buy-in from, internal (DWAF) and external strategic stakeholders and I&APs.

3.1.11 Principle 11: Utilisation of existing tools, data and information

The WRCS will use existing tools, data and information wherever possible. Where applicable, existing tools, data and information will be modified or extended to meet the requirements of the WRCS. Unless there is an urgent need to do so, no new tools, data or information will be developed or collected.

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4 INTEGRATION OF ECONOMIC, SOCIAL AND ECOLOGICAL GOALS IN THE MANAGEMENT CLASS

4.1 Why is there a need to consider the economic, social and ecological implications of a MC?

The NWA calls for the efficient, equitable and sustainable use of the nation's water resources. These economic, social and ecological goals respectively, are embodied in DWAF's official motto, '*ensuring some, for all, for ever, together*'. The economic goal of efficiency relates to maximising economic returns from water resources, or achieving the maximum net benefit. The social goal of equity seeks to allocate and distribute the costs and benefits of utilising the resource fairly, while the ecological goal of sustainability seeks to promote the use of resources in a way that meets the needs of current generations, but does not compromise the economic opportunities and social wellbeing of future generations. These goals are also consistent with government's Accelerated and Shared Growth-South Africa (ASGISA)² strategy that takes the position that without interventions targeted at reducing South Africa's historical inequalities, growth is unsustainable. In the context of IWRM, this involves allocating water for historic redress as a legal imperative, and contributing to eliminating the second economy.

Given this context, it is clear that these economic, social and ecological goals are potentially conflicting, and are not easy to solve simultaneously. It is also clear that trade-offs³ will need to be made in the Classification and 'Larger' Process (and reflected as a MC and allocation schedule respectively) that will require a suitable, integrated, analytical decision-making system. For example, if the resource is not protected, most water resources will be allocated to consumptive use. On the other hand, overprotection has lost opportunity costs in the form of lost economic production and societal welfare. An optimal balance is therefore required that maximises societal welfare and effectively deals with the core issues of redressing historical inequality and reducing poverty. This balance requires trading-off the value of water as a direct input to economic production and, for example, the costs associated with the use of the resource to dissipate waste, the socio-economic costs of environmental damages, and the potential health risks and cost that overuse, stream flow reduction activities and dry land agriculture may have on other users. These costs (negative externalities) and benefits (goods and services that a functioning resource contributes to economic production e.g. fish, reeds, water purification and flood attenuation), however, are seldom accounted for in conventional economic analyses. It is proposed that these costs and benefits and trade-offs need to be considered both in the Classification and 'Larger' Process.

² www.info.gov.za/issues/asgisa/

³ The trade-offs, however, are also influenced by the characteristics of the resources themselves and by scale.

5 BACKGROUND TO THE ENVISAGED CLASSIFICATION PROCESS

5.1 What is the Classification Process?

The WRCS should be designed to deliver on the outcome of the Classification Process – information for the Minister or delegated authority to set the MC and RQOs of a resource. As mentioned earlier, the Classification Process, which is nested within (and informs and influences) the ‘Larger Process’, will require a wide range of complex trade-offs to be assessed and evaluated at a number of scales. These trade-offs will include those between use and protection (which may or may not be conflicting), between downstream impacts and upstream uses and *vice versa*, between possible use of resources within a catchment and between catchments, and between possible resource use between different parts of the country. Decisions on these trade-offs will have different implications for different stakeholders at local-, regional- and national-levels, and will thus be inherently complex and contestable. It is proposed, however, that the primary scale for the Classification Process be the river basin scale (catchment) which provides a practical, understandable spatial unit within which socio-economic and ecological trade-offs can be made. Catchment-level decisions may, however, be sub-optimal when placed in the context of broader national-interest, so catchment-level decisions may need to be evaluated against national- and regional-level constraints and/or opportunities. It is therefore proposed that the Classification Process focus initially on finding a balance between protection and use at a catchment-scale, through within catchment trade-offs, but that the final decision-making process around a MC find an appropriate balance between national-, regional- and catchment-scale socio-economic implications of a MC and biodiversity, and between national-, regional- and catchment-scale biodiversity and sustainability considerations of a MC. The WRCS should therefore take cognisance of national- and regional-level considerations (and possible trade-offs) at multiple scales.

5.2 What tools/processes can be used to help facilitate a decision on the desired MC of a resource

It is proposed that in addition to existing DWAF tools, a hybrid Cost-Benefit Analysis (CBA) and Multi-Criteria Decision-Analysis (MCDA) tool be utilised to help facilitate a decision on the MC of a resource. The hybrid tool should incorporate the benefits of a conventional CBA tool and the utility of a MCDA tool. The hybrid CBA/MCDA tool should help facilitate the Classification Process at a number of levels: first, in selecting a subset of flow scenarios for detailed analysis from a broad range of scenarios. Second, through identifying the criteria that are required for evaluation, and third, through evaluating (scoring and weighting) the criteria that have been chosen, and comparing the consequences of different scenarios. MC scenarios will need to be assessed and aligned with existing DWAF approaches and methodologies for water resources/catchment planning, system management, compulsory licensing, source directed controls (SDCs) and related management instruments (including command and control, economic instruments (e.g. WDCS) and through system operation and/or resource rehabilitation (i.e. as part of the ‘Larger Process’)).

Glossary Box 3

Cost-Benefit Analysis is a technique designed to determine the feasibility of a project or plan by quantifying its costs and benefits.

Multi-Criteria Decision-Analysis evaluates or 'scores' alternatives from different perspectives (criteria), weighting and combining these scores to obtain an overall ranking of alternatives. Selection of the criteria against which scenarios are evaluated, the relative weights of those criteria and the scoring are done by representative stakeholders.

Source Directed Controls refer to measures that define the limits and constraints which must be imposed on the use of water resources. They are primarily designed to control water use activities at the source of impact through tools such as standards and situation-specific conditions in water use authorisations issued to individual water users.

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6 OUTLINE OF THE ENVISAGED CLASSIFICATION PROCEDURE

6.1 What steps are proposed for the Classification Procedure?

A seven-step procedure to recommending the MC of a resource (the outcome of the Classification Process) is proposed (**Figure 2**). The seven steps which may be embedded in other DWAF processes are:

6.1.1 Step 1: Delineate units of analysis and describe the status quo; including:

- a. Describe present socio-economic status of the catchment.
- b. Divide catchment into socio-economic zones.
- c. Identify a network of significant resources, describe water resource infrastructure and identify water user allocations.
- d. Define a network of significant resources and establish biophysical nodes.
- e. Describe communities and their wellbeing.
- f. Describe and value the use of water.
- g. Describe and value the use of aquatic ecosystems.
- h. Define Integrated Units of Analysis (IUAs).
- i. Develop and/or adjust the socio-economic framework and the decision-analysis framework.
- j. Describe present-day community wellbeing within each IUA.

6.1.2 Step 2: Link value and condition; including:

- a. Rationalise the choice of ecosystem values to be considered based on ecological and economic data.
- b. Describe the relationships that determine how economic value and social wellbeing are influenced by ecosystem characteristics and the sectoral use of water.
- c. Define the scoring system for scenario evaluations.

6.1.3 Step 3: Quantify Ecological Water Requirements (EWRs) and changes in non-water quality Ecosystem Goods, Services and Attributes (EGSAs); including:

- a. Identify nodes to which Resource Directed Measures (RDM) data can be extrapolated and extrapolate.
- b. Develop rule curves, summary tables and modified time series for nodes for all categories.
- c. Quantify the changes in relevant ecosystem components, functions and attributes for each category for each node.

6.1.4 Step 4: Set Ecological Sustainability Base Configuration (ESBC) scenario and establish starter catchment configurations; including:

- a. Set ESBC scenario and screen for water quantity, quality and ecological feasibility.
- b. Incorporate planning scenarios Incorporate planning scenarios (future use, equity considerations, existing lawful use etc.).
- c. Establish RDM catchment configuration scenarios.

6.1.5 Step 5: Evaluate scenarios within the Integrated Water Resource Management (IWRM) process

Steps 5 and 6 form part of the 'Larger Process' where the economic, social and ecological trade-offs will be made. Trade-offs will also need to be made between existing lawful use (ELU) and equity considerations. Emerging from this 'Larger Process' will be the recommended MC, RQOs and Reserve, CMS, allocation schedule, modelling system and the monitoring, auditing and compliance strategy. A number of key questions will need to be addressed in this 'Larger Process'. These include:

- at what level will the trade-offs be negotiated?
- in what institutional setting will they be negotiated?
- what types of scenarios will inform the process of negotiation?; and
- the recommended MC, Reserve, RQOs, CMS and allocation schedule will impact on specific groups of people, so the key question will be who benefits and who pays the social and economic cost?

These key questions should be framed (and assessed) in the context of equity, efficiency and sustainability as required by the NWA, and by the core objectives of the present government which are, amongst others, to '...halve poverty and unemployment by 2014', reduce the regulatory burden on small and medium businesses and eliminate the second economy⁴. Step 5 should therefore contribute to meeting government's objective of '...reduce(ing) inequality and virtually eliminating poverty'⁵. Step 5 will therefore include:

- a. Run yield model for ESBC and Other catchment configuration scenarios and adjust if necessary.
- b. Assess water quality implications (fitness for use) for all users.
- c. Report on ecological condition and aggregate impacts per IUA for each scenario.
- d. Value changes in aquatic ecosystems and water yield.
- e. Describe macro-economic and social implications of different catchment configuration scenarios.
- f. Evaluate overall implications at an IUA-level and a regional-level
- g. Select a subset of scenarios for stakeholder evaluation.

6.1.6 Step 6: Evaluate scenarios with stakeholders; including:

- a. Stakeholders evaluate scenarios and agree on short-list.
- b. DWAF recommends IUA classes.

6.1.7 Step 7: Gazette class configuration; including

- a. Populate IWRM summary template and present to Minister or delegated authority.
- b. Minister decides on IUA classes, nested category configurations, Reserve(s), allocation schedule(s) and Catchment Management Strategy (CMS).
- c. Recommend Resource Quality Objectives Incorporate Reserves and (RQOs).
- d. Gazetted IUA classes, nested category configurations and RQOs.
- e. Develop plan of action for implementation of recommended scenario.

⁴ www.info.gov.za/issues/asgisa/

⁵ www.info.gov.za/issues/asgisa/

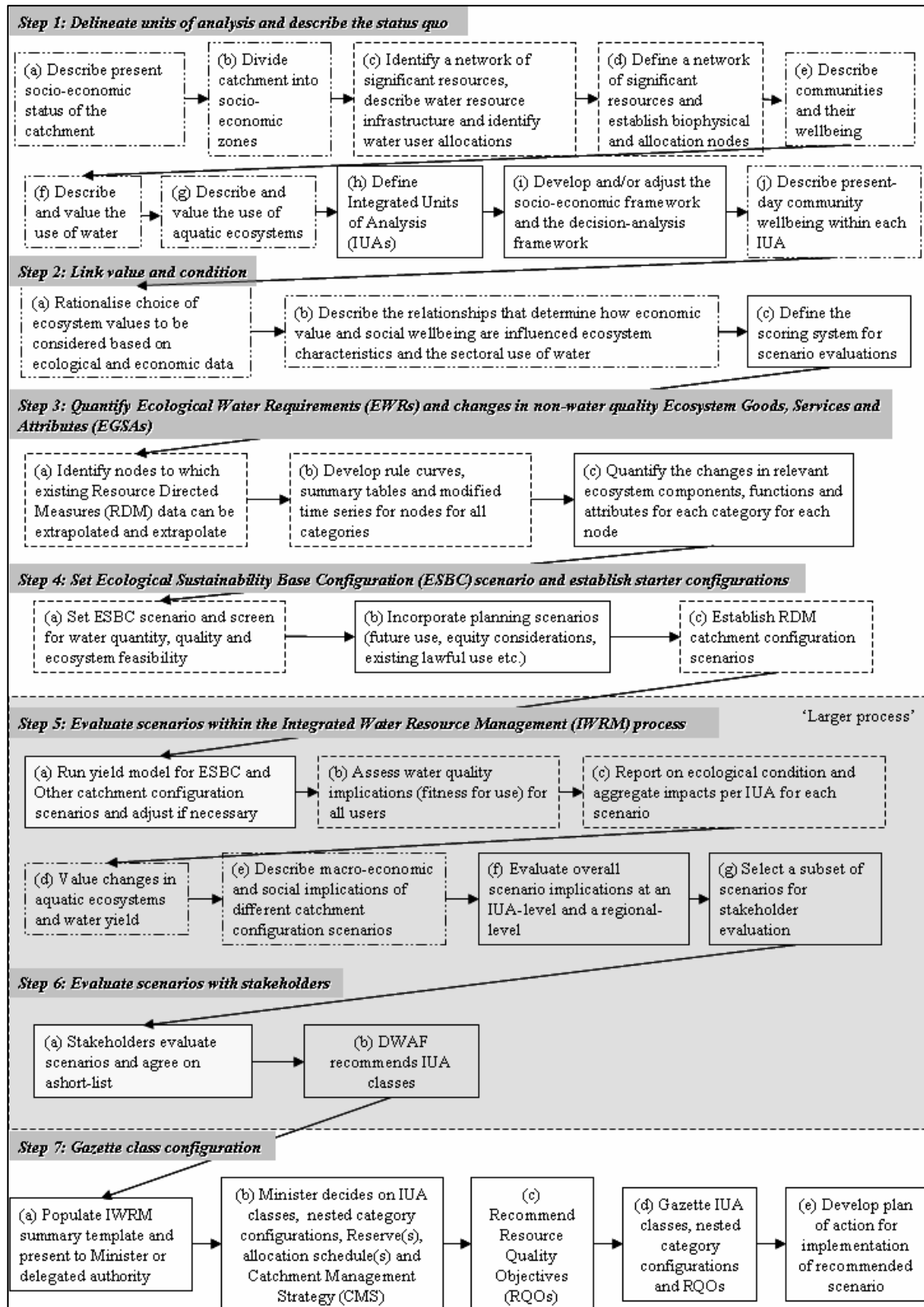


Figure 2 Proposed seven-step classification procedure (note that Steps 5 and 6 form part of the 'Larger Process')

6.2 How are the guidelines and procedures going to be developed for each of the steps?

Guidelines and procedures will be recommended for Steps 1 to 4 and 7 of the WRCS. For Steps 5 and 6, guidelines and procedures will be recommended for how the WRCS can inform, contribute and influence the 'Larger Process', out of which will emerge the recommended class, RQOs and Reserve. The guidelines will be refined over time based on experience in practical situations.

Glossary Box 4

Present Ecological State refers to the current state or condition of a resource in terms of its various components, i.e. drivers (physico-chemical, geomorphology, and hydrology) and biological response (fish, riparian vegetation and aquatic invertebrates).

Reference condition refers to the condition of a site, river reach or delineation prior to anthropogenic change.

Ecosystem, goods, services and attributes or 'goods and services' or 'EGSAs' for short, are essentially alternative names for the 'stocks' 'processes' and 'organisation' of ecosystems from which humans (directly) derive utility. It is important to note that these are described in the same physical terms no matter what they are called collectively.

Existing Lawful Use is defined in the NWA as a temporary authorisation to continue with water use:

- which took place at any time during a period of two years immediately before 1st October 1998; or
- which has been declared an existing lawful water use under Section 33, and, which was authorised by or under any other law before that date.

Compulsory Licensing comprises:

- verification of existing water use;
- determination of water resource availability;
- classification of the water resource;
- setting of resource quality objectives;
- determination of the Reserve;
- development of components of the catchment management strategy;
- calling for and evaluation of licence applications;
- preparation of water allocation schedules and undertaking public consultation on them;
- announcing water use allocations in the Government Gazette; and
- issuing licences.

7 PROJECT SCOPE AND OBJECTIVES

7.1 What are the objectives of the WRCS project?

The WRCS project has two main objectives. These are:

1. To provide definitions of the classes that are to be gazetted.
2. To develop guidelines for the procedures to be followed to recommend a class.

7.2 What is the scope of the WRCS project?

The scope of the WRCS project is determined by the key information that the Minister or delegated authority requires for a decision on the MC of a resource. The WRCS should be designed to develop the methods to generate this information when used in the Classification Process. The scope of the socio-economic tasks should be guided by the coarse-scale trade-offs between ecological and other allocations of water involved in alternative class scenarios. This will require focussing on the methods to evaluate the ecological costs and benefits for inclusion in the decision-process, assuming that data on consumptive uses are relatively easy to access. The scope of the ecological tasks of the project should be guided by the key ecological implications of classification that have measurable socio-economic impacts and on the ecological sustainability baseline.

7.3 What specialist input is required to meet the objectives of the WRCS project?

In addition to existing DWAF processes that will be used to meet the objectives of the WRCS project, a multidisciplinary, integrated team will be required. The following major specialist components are involved:

1. Economic.
2. Social.
3. Ecological.
4. Water resources assessment.
5. Groundwater.
6. Technical.
7. Decision-analysis.

Two cross-cutting themes are part of the approach:

1. The development of organisational and institutional relationships and processes.
2. Stakeholder process.

8 PHASED APPROACH TO THE DEVELOPMENT OF THE WRCS

8.1 How long will it take to develop the WRCS?

The development of the proposed WRCS will occur in three major phases, each with clear outputs. These are:

- Phase 1: Initiation (complete).
- Phase 2: Development of the WRCS on a test catchment (Olifants/Doring) (1 November 2005 to 31 October 2006).
- Phase 3: Gazetting process.

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APPENDIX C ISSUES AND RESPONSES

| ISSUES, QUESTIONS, CONCERNS, COMMENTS | | COMMENTATOR(S) | RESPONSE/RECOMMENDATION |
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| 1. | DEFINITIONS | | |
| 1.1 | That the definition of a significant resource be clarified. | Priya Moodley, Zitholele Consulting (Gauteng). | A significant water resource may include a watercourse, surface water, estuary, or aquifer that is deemed to be significant from an economic, social and ecological perspective. |
| 1.2 | That whether the system is adaptable – i.e. can the system be reviewed if it is shown that it needs to be changed after say 5 years. | Priya Moodley, Zitholele Consulting (Gauteng). | The Water Resource Classification System (WRCS) will be gazetted in such a way that new tools, methods, information etc. can be incorporated into the WRCS as and when required. All regulations can be amended if required. |
| 1.3 | That we have some examples of different classes of rivers. | Nikisi Lesufi, Chamber of Mines (Gauteng). | At present, as the WRCS has not been gazetted, only preliminary classes have been set as part of the preliminary Reserve determination processes. |
| 1.4 | That the word 'scenarios' be replaced by the word 'alternatives'. | Martin Ginster, Sasol (Gauteng). | Noted with thanks. |
| 1.5 | That it be clarified whether the term resource refers mainly to surface water such as rivers, or whether it also includes groundwater. | Jay Reddy, DWAF KwaZulu-Natal (KZN). | In terms of the National Water Act (NWA), the WRCS should include all significant water resources. Water resources are defined in the NWA as any watercourse, surface water, estuary or aquifer. |

| ISSUES, QUESTIONS, CONCERNS, COMMENTS | COMMENTATOR(S) | RESPONSE/RECOMMENDATION |
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| 1.6 That we use the term 'unacceptably degraded' instead of 'unacceptably degraded'. | Lin Gravelet-Blondin, DWAF (KZN). | The National Water Resource Strategy (NWRS) proposed the term 'unacceptably degraded'. The WRCS project proposes that this term not be used, as you would not want to manage for an unacceptably degraded resource. The three classes proposed are 'minimally used', 'moderately used' and 'heavily used'. |
| 2. INSTITUTIONAL ARRANGEMENTS | | |
| 2.1 That the relationship between the WRCS and the Waste Discharge Charge System (WDCS) be clarified. | Tony Pitman, Johannesburg Water (Gauteng). | The WDCS will need to take account of the class and resource quality objectives. |
| 2.2 That it be explained how the WRCS relates to other DWAF (IWRM) processes because the Classification Process will have major implications for different stakeholders and other processes currently conducted by DWAF. | Heine Hoffman, Eskom (Gauteng); Werner Booyesen, Agri Limpopo (Gauteng). | The Classification Process and Compulsory Licensing process are inextricably linked, and therefore the Classification Process will not occur in isolation (i.e. will need to take into account Existing Lawful Use and the WDCS). |
| 2.3 That there seems to be a missing link between the illegal users and the classification system. The classification system needs to be linked to current legal use and the WDCS. | Werner Booyesen, Agri Limpopo (Gauteng). | See response to query 2.2. |
| 2.4 That once the system is in place and classification is done, there is a need to ensure that it is implemented. There is also a question of who will police the class. | Graham Root, Ntibane Bushveld Hideaway (KZN). | The class will be binding on all authorities or institutions when exercising any power, or performing any duty under the NWA. |

| ISSUES, QUESTIONS, CONCERNS, COMMENTS | COMMENTATOR(S) | RESPONSE/RECOMMENDATION |
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| 2.5 That the Classification Process and the concept of paying for water be explained because as emerging farmers, we are required to have water licenses before we can be assisted. We have done so and received two certificates for lawful water use with different dates, but now we are sitting with huge bills for water that we haven't used. | Siyabulela Mamkeli, Sparrow Mkhonto Co-operative (KZN). | DWAFF will try to ensure that prices charged for use be clearly defined and appropriately reflected. The water allocation reform process aims to address this concern. |
| 2.6 That as farmers in the Eastern Cape, we have lost R400 000 of grant money and we would like to also know who is responsible to check for previous owners of water users. | Siyabulela Mamkeli, Sparrow Mkhonto Co-operative (KZN). | DWAFF officials at the workshop assisted Mr. Mamkeli with his concern. Please contact the KwaZulu-Natal or Eastern Cape Regional offices on 031 336 2700 and 043 604 5400 respectively for further assistance in this regard. |
| 2.7 That it be explained how the process to classify water resources will be aligned with Compulsory Licensing and the WDCS. | Mogale Matseba, DWAFF (KZN). | See response to query 2.2. |
| 3. STAKEHOLDER INVOLVEMENT | | |
| 3.1 That it be clarified whether stakeholder involvement will occur at each step of the classification procedure. | Tony Pitman, Johannesburg Water (Gauteng). | Stakeholders will be involved from the start of the Compulsory Licensing process. The Classification Process will form part of the Compulsory Licensing process, and therefore the stakeholders will also be involved from the start of the Classification Process. |
| 3.2 That care should be taken to avoid stakeholder fatigue in the Classification Process. | Dr Angus Patterson, SAEON (Gauteng). | Noted with thanks. |
| 3.3 Could stakeholders be sent an electronic version of the presentation? | Tony Pitman, Johannesburg Water (Gauteng). | Please submit this request in writing to the Chief Director: Resource Directed Measures. |

| ISSUES, QUESTIONS, CONCERNS, COMMENTS | COMMENTATOR(S) | RESPONSE/RECOMMENDATION |
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| 3.4 That it be explained what the public participation process of the WRCS entails. | Hendrik du Toit, DWAF (Gauteng). | There are two components of public participation for the WRCS project. The first is public participation in the development of the WRCS. The second is the public participation process that is required during the Classification Process. Both are required by the NWA. |
| 3.5 That the concept of stakeholders be defined because many of the stakeholders are not at a level of literacy to understand water resource management or IWRM. | Jay Reddy, DWAF (KZN). | Noted with thanks. |
| 3.6 That there are many DWAF officials attending the workshop today and one would like to know as to how many private individuals have been invited to this workshop. | Graham Root, Ntibanane Bushveld Hideaway (KZN). | 244 key stakeholders were identified and invited to the workshops. These included representatives of different sectors of society that are directly or indirectly affected by the WRCS, including local and provincial government. 57 stakeholders responded to the invitation, while 62 stakeholders attended the workshops. |
| 3.7 That whether stakeholders' comments will be taken into account after they have been submitted. | Siyabulela Mamkeli, Sparrow Mkhonto Co-operative (KZN). | All comments will be considered in the development of the WRCS. |
| 3.8 That whether stakeholders are encouraged to participate in prioritising the various scenarios. | Kim Hodgson, Umgeni Water (KZN). | Yes, this forms part of Step 6 of the classification procedure. |
| 3.9 That the term stakeholder is a broad term. One would like to know what institutional structures will be created to facilitate their engagement. | Jay Reddy, DWAF (KZN). | No institutional structures will be created. Existing institutional structures such as Water User Associations will be utilised. |
| 3.10 That it would appear that the process has a lot of opportunity for people to participate. | Graham Root, Ntibanane Bushveld Hideaway (KZN). | Correct. |

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| 3.11 That whether comments will be evaluated during the 60 days available for comment. | Graham Root, Nitbane Bushveld Hideaway (KZN). | Yes, all comments will be assessed and considered. |
| 4. CLASSIFICATION PROCESS AND PROCEDURE | | |
| 4.1 That whether the classification system applies to all resources. | Priya Moodley, Zitholele Consulting (Gauteng). | The WRCS will consider all significant resources. |
| 4.2 That how do the Management Classes speak to the Reserve and ecological categories A to F. That the various classes of water be written into the gazetted system so that the process can go on. | Dr Gail Nussey, Sasol Mining (Gauteng). | The Reserve forms part of the classification procedure. The ecological categories A to F will be used to compute the class using a set of criteria. |
| 4.3 That the timescale for the Classification Process be communicated to stakeholders. | Tony Pitman, Johannesburg Water (Gauteng); Heine Hoffman, Eskom (Gauteng). | The estimated time required for the Classification Process will be two years. However, as the Classification Process forms part of the larger Compulsory Licensing process, the time required to gazette a class will be influenced by the 'larger process'. The time scale required for the 'larger process' is as yet undetermined. |
| 4.4 That what would trigger a resource to be classified (i.e. initiate the Classification Process). | Priya Moodley, Zitholele Consulting (Gauteng); Clemens Kiessig, Barberton Mines (KZN). | This would be determined on a case-by-case basis, but could for example be initiated based on the level of 'stress' in the catchment. |
| 4.5 That whether the WRCS includes groundwater and how would the WRCS deal with the water that gets pumped from the mines and gets discharged into rivers. | Hennie Pretorius, Goldfields (Gauteng). | The WRCS considers both surface water and groundwater. The WRCS would need to consider mine water decanting on a case-by-case basis. |

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| 4.6 That whether the classification system will allow for poor quality groundwater. | Hennie Pretorius, Goldfields (Gauteng). | The WRCS would need to consider all reasonable scenarios on a case-by-case basis. |
| 4.7 That what is likely to be the time scale for the Classification Process. | Tony Pitman, Johannesburg Water (Gauteng); Dr Patsy Sherman, Coastal and Environmental Services (Gauteng). | See response to query 4.3. |
| 4.8 That there is a need to dovetail classes and ecological categories and that different categories be established for different classes. | Felix Reinders, Institute for Agricultural Engineering (Gauteng). | See response to query 4.2. |
| 4.9 That there be upstream and downstream linkages in the Classification Process that need to be coordinated. | Felix Reinders, Institute for Agricultural Engineering (Gauteng). | The WRCS was designed to accommodate upstream-downstream linkages. |
| 4.10 That the Classification Process is a crucial task that needs to take place at a catchment-level through the Catchment Management Agencies (CMAs). | Werner Booysen, Agri Limpopo (Gauteng). | The Classification Process will be a function carried out by DWAF. |
| 4.11 The issue is who will pay for the actual Classification Process and whether there would be some incentive for the production of food. | Werner Booysen, Agri Limpopo (Gauteng). | DWAF will pay for the Classification Process. The WRCS does not cater for incentives. |
| 4.12 That there may be some resistance when it comes to paying for it, and that people don't enjoy paying for other peoples scenarios. | Dr Angus Patterson, SAEON (Gauteng). | Noted with thanks. |

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| 4.13 That DWAF will have to establish a strong relationship with the Department of Environmental Affairs and Tourism (DEaT) to ensure that the process is sustainable. | Eskom (Gauteng). | Noted with thanks. |
| 4.14 That whether the intent is to look at units of demarcations, and if so, that these be close to quaternary catchments. | Eskom (Gauteng). | Spatial units will be defined as part of the Classification Process. These will take cognisance of the catchment's hydrography. |
| 4.15 That it be clarified whether there will be a re-evaluation of the class if the (socio-economic) trends change in a catchment. | Norman Ward, DWAF (KZN). | The NWA does not make provision for the re-evaluation of a class. |
| 4.16 That whether the WRCS takes into account inter basin transfers (IBTs). | Martin Ginster, Sasol (Gauteng). | IBTs need to be factored in during Step 1 of the classification procedure (Delineate units of analysis and describe the status quo). |
| 4.17 That whether all Class I rivers will be declared in terms of the Biodiversity Act. | Dr Gail Nussey, Sasol Mining (Gauteng). | This is a legal question that will need to be answered by DEaT. |
| 4.18 That in the Position Paper, 4 classes are mentioned and in the workshop only 3 classes are mentioned. Clarity is required on the number of classes proposed. | Dr Patsy Sherman, Coastal and Environmental Services (Gauteng). | The Position Paper presented the four classes proposed by the NWRS. The three classes proposed for the WRCS were agreed at a workshop held on 30 August 2006. |
| 4.19 That whether it is possible to have more than 4 resource classes. | Norman Ward, DWAF (KZN). | See response to query 4.17. |
| 4.20 That a clarification on compliance with water licensing be given to stakeholders. | Hennie Pretorius, Goldfields (Gauteng). | This does not relate directly to the WRCS, but please contact the Chief Director: Water Use on 012 336 7238 for further information in this regard. |

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| <p>4.21 That whether DWAF will issue licenses for every municipality for their storm water system and canals. If so, has someone considered the impossibility and impact thereof on the staff and capacity of the region? It is also impossible to expect that every municipality (be it local or district) is actually going to have that capacity themselves. The danger is that we will end up with things like having canals that are sitting in an unacceptably degraded state (such as in parts of the Mgeni system) and yet they are probably never going to improve and we would have to accept that unacceptable as acceptable in certain circumstances. Although it might come down to a moderately used or even heavily used class they won't, not in 50 years, approve.</p> | <p>Hugh Dixon-Parker, DWAF (KZN).</p> | <p>This does not relate directly to the WRCS, but please contact the Chief Director: Water Use on 012 336 7238 for further information in this regard.</p> |
| <p>4.22 That the Internal Strategic Perspective (ISP) process is able to give a lot of information which could help with the Classification Process.</p> | <p>Lin Gravelet-Blondin, DWAF (KZN).</p> | <p>Noted with thanks.</p> |
| <p>4.23 That whether the nodes of Step 1 of the procedure are inter-dependent or independent, and whether one looks at the nodes sequentially and if so, from which end.</p> | <p>Hugh Dixon-Parker, DWAF (KZN).</p> | <p>The nodes need to be linked to each other in the sense that water flows from the top of the catchment to the bottom of the catchment. This requires a catchment-level assessment, as what happens at the top of the catchment has the potential to affect everything lower down.</p> |

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| 4.24 That in the process of gazetting, either the Director-General's (DGs) office or the Minister's office will say what are the responses that are coming in? They will evaluate at that stage and decide maybe to extend it for another 30 days. The other thing to facilitate the information that they need to review or look at, will that be available on the internet, intranet, hard copies or website? DWAF needs to bear in mind the calibre of stakeholders in order to have the information available to all interested and affected parties. | Jay Reddy, DWAF (KZN). | Noted with thanks. |
| 5. GUIDING PRINCIPLES | | |
| 5.1 That some guidance is required on what to do in the process. | Dr Patsy Sherman, Coastal and Environmental Services (Gauteng) | Once the WRCS guidelines have been signed off by DWAF, they will become available for public comment. |
| 5.2 That it be clarified whether DWAF officials will be expected to improve on their work once the classification system has been signed off. | Pat Reddy, DWAF (KZN). | Noted with thanks. |
| 5.3 That how will compliance be monitored, and whether there are any implementation guidelines available yet. | Kim Hodgson, Umgeni Water (KZN). | Once the WRCS guidelines have been signed off by DWAF, they will become available for public comment. Compliance with the class will need to be monitored. |
| 5.4 That it be clarified how people become registered as water users. | Graham Root, Ntiban Bushveld Hideaway (KZN). | Please contact the KwaZulu-Natal Regional on 031 336 2700 for further information in this regard. |

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| 5.5 That it be explained what does the WDCS do for water quality if it is applied to industry. | Clemens Kiessig, Barberton Mines (KZN). | Please contact the Acting Director: Resource Protection and Waste on 012 336 6707 for further information in this regard. |
| 5.6 That at what scale will the Classification Process take place. | Pat Reddy, DWAF (KZN). | The primary scale at which classification will occur will be the catchment-level. |
| 5.7 That who will implement the classification system once the Minister has approved it. | Kim Hodgson, Umgeni Water (KZN). | DWAF is custodian of the resource, and therefore will ultimately be responsible for implementing the WRCS. |
| 5.8 That good quality water should not be used to dilute waste water. | Lin Gravelet-Blondin, DWAF (KZN). | Noted with thanks. |
| 6. INTEGRATION OF SOCIAL, ECONOMIC AND ECOLOGICAL GOALS | | |
| 6.1 That one of the concerning aspects of inter-basin transfers is that future economic opportunities, jobs and infrastructure are often exported. Is that taken into account in your socio-economics? | Hugh Dixon-Parker, DWAF (KZN). | The macro-economic analysis which forms part of the classification procedure will need to consider these issues. |
| 6.2 That whether issues pertaining to agricultural potential are taken into account in these processes. | Hugh Dixon-Parker, DWAF (KZN). | See response to query 6.1. |
| 6.3 That a time frame of 60 days was mentioned in terms of responding to the proposed class in the government gazette, and whether the appeal period is contained within the 60 day period. | Graham Root, Ntibane Bushveld Hideaway (KZN). | There is no appeal against the setting of the class (also the Reserve and quality objectives) once it has been set. However, there is, like any administrative decision, always a review by the courts as far as that is concerned. |
| 6.4 That whether classification will change in terms of orders of magnitude and financial implications in the case of a resource like St. Lucia which has world heritage status. | Hugh Dixon-Parker, DWAF (KZN). | The WRCS will honour all existing international agreements. |

Development of a National Water Resource Classification System (NWRCS)

BACKGROUND INFORMATION DOCUMENT (BID)

PURPOSE OF THIS DOCUMENT

The purpose of this Background Information Document (BID) is to notify Interested and Affected Parties (I&APs) of the Department of Water Affairs and Forestry's (DWAF) project to develop a National Water Resource Classification System (NWRCS) for South Africa.

The document provides a brief description of the proposed approach to the NWRCS and outlines the background and process to be followed that will result in the gazetting of the NWRCS. I&APs will have numerous opportunities during the development of the NWRCS to raise issues of concern, comment on and review reports, and assess how their issues and concerns are being addressed.

Comments can be sent to the project manager or the public participation office at the contacts below.

Public participation office and return address for comments:

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INTRODUCTION

BACKGROUND

The National Water Act (No. 36 of 1998) requires that the nation's water resources be protected, used, developed, conserved, managed and controlled in an equitable, efficient and sustainable manner to meet the needs of present and future generations. The NWA requires that all significant water resources in South Africa be classified to facilitate a balance between protecting and utilising the nation's water resources. The NWRCS represents the first step in the protection process.

The protection process goes beyond identifying the minimum requirements for basic human needs and ecosystem functioning, and involves choosing a level of protection between this minimum and complete protection. The NWRCS therefore has significant socio-economic implications in that the balance between the level of protection and use not only affects ecosystem health, but also the amount of economic activity that relies on water supply. The NWRCS will also need to account for redress due to past structural inequalities that were the result of decades of discrimination and misadministration of the resource.

WHAT IS THE NWRCS?

The NWRCS is a set of guidelines, rules and procedures for determining the desired characteristics of a water resource (represented by a Management Class (MC)) that is required to promote consensus, transparency and accountability in water resource management decision-making. The MC represents a vision for the water resource; this vision is expressed by specific attributes of that MC. The MC represents those attributes the custodian [Department: Water Affairs and Forestry (DWAF)] and society at large demand of different water resources. The MC will be given effect to by different waste discharge and disposal controls, regulations on controlled activities, water use allocations, protection mechanisms and water pricing policies. The NWRCS therefore needs to account for user requirements, and as such, the protection of water resources is focused on protection for use. The NWRCS must also allow stakeholders to contribute meaningfully to the process of classification, and must promote nationally consistent decision-making aimed at balancing utilisation and protection of the nation's water resources.

OBJECTIVES OF THE PROJECT

The NWRCS will therefore provide the guidelines, tools and procedures for selecting and/or deriving appropriate resource quality objectives (RQOs) for a specific water resource, depending on the management class (MC) that is recommended for that resource. Given this context, the study has five main objectives, namely:

- The development and delivery of a gazetted NWRCS for the water resources of South Africa;
- The refinement of the principles which underpin the NWRCS;
- The development of a procedure for determining the integrated economic, social and ecological values and implications of choosing a MC;
- The development of guidelines for the best available tools to be used in support of determining the MC; and
- The development of an appropriate stakeholder involvement process.

SUMMARY POSITION ON THE NWRCS AS INTERPRETED FROM THE NWA

The guidelines, tools and procedures for classifying the water resources of South Africa (National Water Resource Classification System; NWRCS) will be used in a consultative process to classify water resources (Classification Process) to facilitate a balance between protection and use. The economic, social and ecological implications of choosing a class need to be exposed and communicated to all Interested and Affected Parties (I&AP). The outcome of the Classification Process will be a Management Class (MC) for every significant water resource (river, estuary, wetland and groundwater), which will be binding on all authorities or institutions when exercising any power, or performing any duty under the NWA. This MC, ranging from Natural to Heavily Used/Impacted essentially describes the desired ecological condition of the resource, and conversely, the degree to which it can be utilised. In other words, the MC of a resource determines the volume, distribution and quality of the Reserve, and thus the potential allocable portion of a water resource for off-stream use. This has considerable economic, social and ecological implications.

RATIONALE FOR THE PROJECT

Sustainable development requires balancing the demand for economic development with the protection of natural resources that provide the goods and services necessary for economic growth. This requires achieving a balance between viewing water as a commodity, i.e. use of water to promote economic growth, create jobs and eradicate poverty; and viewing water as part of the fabric of ecosystems or the resource, i.e. water required to support ecosystem or resource functions reliant, in part, on natural processes.

The DWAF as the custodian of the nation's water resources is mandated to allocate water to stimulate economic growth and development, and to promote equity, while at the same time ensuring long-term sustainable utilisation of the resource. One of the goals of water resource management in South Africa is to protect ecosystem resilience, to avoid the risk of irreversible damage and therefore loss of capability to meet human needs in the future.

A balance must be found between utilisation and protection of aquatic resources nationally, regionally and locally.

Ultimately, the value society places on the resource will determine the extent to which resource capability will be drawn down, and thus the risk of irreversible change. This means that some resources may be afforded more protection than others, i.e. some resources may become 'work horses', while others may be targeted for protection.

Distinction between the NWRCS and the classification process

National water resource classification system:

A system that provides the tools, guidelines and procedures for determining different Classes of water resources that is consistent with the letter and spirit of the NWA.

Classification Process:

The process of utilising the NWRCS to determine the MC and RQOs of all or part of the water resources considered to be significant.

NWRCS PRINCIPLES

The development of the NWRCS represents the first stage of the protection process, and it should therefore provide a framework within which welfare and public benefit can be maximised by balancing protection and utilisation of the resource. The following principles will guide the NWRCS and Process.

Principle 1: Equity, sustainability and optimal use

The principle reason for protection of resources is to maintain ecosystem integrity at a level that ensures the continued delivery of desired ecosystem goods and services for use. The NWRCS needs to provide a framework to ensure equity, sustainability and the optimal use of water resources.

Principle 2: Balance and trade-off

The chosen MC should balance protection of the resource with its utilisation in line with societal norms and values. Utilisation of the resource provides economic and social benefits; it also has the potential, however, to compromise ecosystem integrity, which also has economic and social costs. As such, the NWRCS should seek to maximise benefit for public and private use, which will require trade-offs. The NWRCS should therefore clearly outline the implications of different MCs.

Principle 3: National interest and uniformity

The MC of a resource may produce solutions that are acceptable at a local level, but are sub-optimal when considered at a national level. Catchment-level decisions therefore need to be evaluated against national-level constraints. The NWRCS must also outline a clear intention with respect to the characteristics of different MCs and provide for uniformity in this regard.

Principle 4: Transparency

Stakeholders should be involved both in the development of the NWRCS and in the process of classifying water resources. The approach should be legitimate and transparent and ensure that the valuation method used for determining trade-offs is acceptable to all. As the MC has considerable economic, social, political and ecological implications, stakeholders will need to be informed in a meaningful way of the potential impacts and risks of the NWRCS on them, and the level of uncertainty that accompanies many of the economic, social and ecological predictions inherent in the Classification Process.

Principle 5: Implementability

The NWRCS must be sufficiently user-friendly to be used, at reasonable cost, by trained DWAF/CMA staff at an operational level. The institutional and transactional costs associated with making a decision on the MC should be as low as possible. The NWRCS must also be sufficiently robust to make a decision in the light of imperfect knowledge. The final outcome of the Classification Process must take into consideration the impacts of existing entitlements to use water (for both abstraction and disposal) as well as regional development objectives.

Principle 6: Interdependency of the hydrological cycle

All components of a water resource are linked. As such, the NWRCS needs to account for the interlinkages between all ecosystems dependent on allocable water (aquatic systems and terrestrial aquifer dependent systems); rivers, groundwater, lakes, wetlands and estuaries.



Principle 7: Legal defensible and scientific robust

The NWRCS must be legally defensible and scientifically robust. Scientifically, it must be based on sound ecological principles in line with the integrated ecosystem approach to water resource management. Legally, the NWRCS and process must be defensible, apply due diligence in the decision-making process and prevent legal liability accruing to DWAF or the stakeholders. It must also be consistent with South Africa’s Constitution, existing international obligations arising from treaties and protocols and other environmental legislation at both a national and international level at both the national and international level. The guidelines should indicate the best available tools and data sets to be used in the Classification Process. These will need to be regularly updated to account for developments in science and technology.

Principle 8: Scale

The scale at which the NWRCS is applied will need to suit the problem at hand. The end result of the Classification Process will be the selection of a MC. The implications of this will need to be understood, implemented and audited at multiple scales.

Principle 9: Sustainability bottom-line and precautionary approach

It is recognised that there is sustainability baseline that if crossed, could result in the non-delivery of the goods and services necessary for economic growth, poverty alleviation, equity and the maintenance of the ecological integrity of the environmental sink. As there is a degree of uncertainty as to the exact position of this bottom line, and as the risks

exceeding the limits of sustainability are considerable, the precautionary principle will be applied.

Principle 10: Auditable and enforceable

The NWRCS needs to be auditable and enforceable to ensure that it is operationalised. Thus, the NWRCS should ensure that a permanent record of the flow-related information used for classification of a particular system and the pathway used to develop the flow scenarios is transparent, from raw data through to a final scenario. The outcomes of the NWRCS also need to be monitored and/or enforced.

Principle 11: Lowest level of contestation and the highest level of legitimacy

Given the strategic importance of the NWRCS, the principle of lowest level of contestation and highest level of legitimacy will be applied. This requires consultation and the highest level of buy-in from internal (DWAF) and external strategic stakeholders and I&APs. The NWRCS methodology will be rolled out in a phased manner, starting with a consolidated team position on the NWRCS, followed by rollout to internal stakeholders, followed by strategic external stakeholders and finally to the broader public.

Principle 12: Utilisation of existing tools, data and information

The NWRCS will use existing tools, data and information wherever possible. Where applicable, existing tools, data and information will be modified or extended to meet the requirements of the NWRCS. Unless there is an urgent need to do so, no new tools, data or information will be developed or collected.

INTEGRATING ECOLOGICAL, POLITICAL, ECONOMIC AND SOCIAL GOALS IN THE NWRCS

In recent years, following the development of welfare economics and ecological, environmental and resource economics, three main policy goals for water resource management have emerged: efficiency, equity and sustainability. These economic, social and ecological goals, respectively, are embodied in the motto of the water policy ‘some, for all, for ever’. (Figure 1).

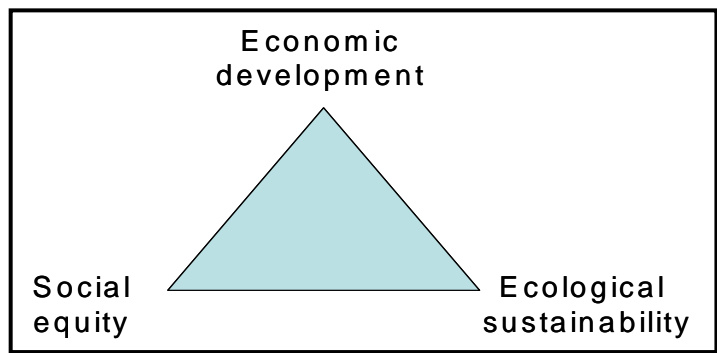
The goal of efficiency relates to maximising economic returns to aquatic resources, or achieving the greatest possible net benefit. This can also be seen as fulfilling the goal of economic development. The goal of equity is to

ensure that the economic benefits obtained from aquatic ecosystems, and the costs incurred in water supply development, are distributed fairly.

Social goals include meeting basic human needs for water and the delivery of aquatic ecosystem goods and services. Social goals are also concerned with the optimal allocation of resources in terms of the equitable distribution of costs and benefits among members of society.

The goal of sustainability recognises the limits to resources in the light of population growth and economic development, and promotes the use of resources in such a way as not to compromise the economic opportunities and social well being of future generations. Ecological goals include meeting national and international biodiversity conservation obligations as well as ensuring an acceptable state of health of resources in the short- and long-term.

However, economic, social and ecological goals are potentially conflicting and are not simple to solve simultaneously. A number of trade-offs will therefore have to be considered in the Classification Process that will require a suitable, integrated analytical and decision-making system (the NWRCS).



PROPOSED PUBLIC PARTICIPATION PROCESS

The purpose of the public participation process in the development of the NWRCS is to involve stakeholders by obtaining their inputs to ensure that public issues and concerns are understood and considered at every stage in the development of the NWRCS. The process that will be followed is detailed below:

attended, comment sheets returned etc, thus providing an ongoing record of participation activities. In addition, comments by stakeholders are recorded on the database, linked to the name of the person who made the comment, and key word searches can be done. The following sectors of water users, potential water users and

KEY STAKEHOLDERS MEETINGS

Three key stakeholders' meetings are envisaged during the process to develop the NWRCS. These meetings will be by invitation only, however, based on the suggestions made by stakeholders themselves.

The meetings will assist to focus stakeholders' and the authorities' minds on potential issues that may have a bearing on the development of the NWRCS. These meetings will also be instrumental in focussing the technical studies on issues that could constitute a potential fatal flaw to the process of developing the NWRCS.

UPDATING THE EXISTING STAKEHOLDERS DATABASE AND VERIFYING STAKEHOLDERS CONTACT DETAILS

To date, the DWAF has conducted several public participation processes throughout the country. Existing, recent stakeholder mailing lists will be used as far as possible to avoid duplication of effort and cost. Existing lists will be verified for accuracy and representivity by cross-checking that all relevant sectors are included.

An electronic database is developed which automatically code every mailing to stakeholders, with fields created for every meeting

| Sectors of water users, potential water users and other stakeholders to be considered for the mailing list. | |
|--|--|
| <ul style="list-style-type: none"> • Government (national, provincial and local) • Traditional leaders • Conservation and environmental bodies • NGOs (environmental and development-focused) • Commerce and business • Industry • Mining • Agriculture • Forestry • Transport | <ul style="list-style-type: none"> • Civil society • Local communities leaders in addition to tribal leaders • Researchers and consultants • Local media (print and broadcast) • Water management institutions • Education bodies • Health bodies • Tourism and recreation • DWAF personnel in the National as well as Regional Offices |

other stakeholders are examples of who will be considered for the mailing list:

PROGRESS FEEDBACK TO ALL STAKEHOLDERS

After every key stakeholders meeting, all key stakeholders on the database will receive a personalised letter to ensure that they are aware of the opportunity to comment, to thank those who commented to date, and to confirm the next steps in the process.

WHO IS DOING THE WORK?

The scope and complexity of this project requires a multi-disciplinary team with expertise in several areas including ecology, economics, hydrology, decision-analysis, modelling, social theory and practice, stakeholder

involvement, groundwater and institutional issues. ESJ Dollar Consulting, supported by a multi-disciplinary team of service providers, manages the project while Zitholele Consulting conducts the public participation process.



Ukuveliswa kweNkqubo yokuHlelwa kweMithombo yaManzi kuZwelonke (iNWRCS)

UXWEBHU LWENKCAZELO YEMEKO (I-BID)

INJONGO YOLU XWEBHU

Injongo yolu Xwebhu lweNkcazelo yeMeko (iBID) kukwazisa amaQela Achaphazelekayo Nanomdla (ii-I&AP) ngeprojekthi yeSebe leMicimbi yaManzi namaHlathi (iDWAF) yokuvelisa iNkqubo yokuHlelwa kobuTyebi baManzi kuZwelonke (iNWRCS) yaseMzantsi Afrika.

Olu xwebhu lunikela ingcaciso engephi ngenemeko ekhokelele kwiNWRCS, luchaza ukuba yintoni iNWRCS, oko kusetyenziswayo ngoku ukuhlela ubutyebi bamanzi, lunikela ingqiqo-siseko yale projekthi, imigaqo esisikhokelo, ibe lwandlala inkqubo ecetywayo yokubandakanya abo banebango. Ii-I&AP ziza kuba nethuba xa kuveliswa le nkqubo lokuphakamisa imiba ezixhalabisayo, zithethe ngeengxelo zize zizihlole, kwaye ziphonononge indlela imiba nezinto ezizixhalabisayo ezisingathwa ngayo.

Amagqaba-ntshintshi angathunyelwa kumphathi-projekthi okanye kwiofisi yokubandakanywa kwabo banebango kwiindlela zoqhagamshelwano ezingezantsi.

Iofisi yothatho-nxaxheba loluntu neadresi yokubuyisela amagqaba-ntshintshi:

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INGABULA-ZIGCAWU

IMEKO

iNational Water Act (iNWA) (No. 36 ka-1998) ithi imithombo yamanzi yelizwe mayikhuselwe, isetyenziswe, iphuhlise, ilondolozwe, iphathwe ize ilawulwe ngendlela elinganayo, efanelekileyo nezinzileyo. Kanjalo iNWA ithi yonke imithombo yamanzi eMzantsi Afrika mayihlelwe ukuze kube lula ukulinganisa ukukhuselwa kwemithombo nokusetyenziswa kwayo. iNWRCS sezinye sezixhobo ezibalulekileyo zokufezekisa oko kulingana.

YINTONI iNWRCS?

iNWRCS, eyimfuneko ngokweNWA, luhlu lwezikhokelo neenkqubo zokumisela iimpawu ezinqwenelekayo zomthombo wamanzi, kwaye imelwa luDidi lokuPhathwa (iMC). I-MC ithi thaca ezo mpawu zifunwa ngumgcini [iSebe: iMicimbi yaManzi naMahlathi (iDWAF)] kunye noluntu kwimithombo eyahlukahlukeneyo yamanzi. iNWRCS le iza kusetyenziswa (kamva) kwinkqubo yokubonisana ukuze kuhlelwe imithombo yamanzi ngokweendidi (iNkqubo yokuHlela) ukunceda ekwenzeni lula ukulingana phakathi kokukhuselwa kokusetyenziswa kwemithombo yamanzi elizwe. Kuba kufuneka kumiselwe iintsingiselo zoqoqosho, zentlalo nezendalo engqongileyo ngokukhethwa kweMC zize zichazelwe zonke ii-I&AP kwiNkqubo yokuHlela.

Isiphumo seNkqubo yokuHlela siya kuba kukuba uMphathiswa okanye lowo amphathise igunya uya kumisela iMC neeNjongo zoMgangatho weMithombo (iiRQO) kumthombo ngamnye obalulekileyo wamanzi (umlambo, ichweba, indawo enamanzi negxobho) eziya kubophelela onke amagunya okanye amaziko xa esebenzisa naliphi na igunya, okanye esenza nawuphi na umsebenzi oyimfanelo ngokweNWA. Le MC, esenokuqalela kweyeMvelo ukuya kuleyo iSetyenziswe Kakhulu/Ephazamisekileyo, ngokusisiseko ichaza imeko enqwenelekayo ngomthombo lowo, ize ngokwahlukileyo, ibonise nezinga onokusetyenziswa ngalo. Ngamany' amazwi, iMC yomthombo imisela imida yomthamo, ukusasazwa nomgangatho woMthombo neeRQO, yaye ngoko namathuba okuba inxalenye yomthombo isetyenziselwe ezinye iinjongo. Oku kunefuthe elikhulu kwezoqoqosho, kwezentlalo nakwezendalo.

IINJONGO ZEPROJEKTHI YENWRCS

Iprojekthi yeNWRCS ineenjongo eziyintloko ezintandathu. Zezi:

- Ukuveliswa kwenkqubo yokumisela imigaqo neentsingiselo ezidibeneyo zoqoqosho, zentlalo nezendalo zeMC.

- Ukusulungekiswa kwezikhokelo ezixhasa iNWRCS.
- Ukuveliswa kwezikhokelo zezona zixhobo neendlela ezingcono ezifumanekayo zokusetyenziswa ukuxhasa ukumiselwa kweMC.
- Ukuveliswa kwenkqubo efanelekileyo yokubandakanya abo banebango.
- Ukuveliswa nokunikezelwa koyilo lweNWRCS elungele ukufakwa kwigazethi ligqiza lomthetho.
- Ukunceda ukudibanisa iNWRCS kwisigunyaziso esibanzi seDWAF sokuphathwa ngokudibeneyo kwemithombo yamanzi (iiWRM).

YINTONI ESETYENZISWAYO KUNGOKUNJE UKUHLELA IINDIDI ZEMITHOMBO YAMANZI?

Kungokunje, inkqubo engumzekelo wokuhlela kusetyenziswa iindidi zezendalo u-A ukuya ku-F ukwenzela ukumisela okokuqala iMithombo enguvimba. Kodwa, kufuneka iNWRCS edibanisa iimfuneko zezendalo nezabasebenzisi kwiiMC, nevumela ukuhlolwa kweentshingiselo zentlalo noqoqosho kwizigqibo zokuphathwa kwamanzi.

Iingqwalasela zeziko zeWRCS

Njengoko iNWRCS iyinxalenye yesigunyaziso seDWAF sokujonga i-IWRM, iNkqubo yokuHlela ayizihambeli yodwa ibe inxibelelene nezinye iinkqubo ezininzi ekucwangciseni ngokudibeneyo ukukhuselwa kwemithombo yamanzi, uphuhliso nosetyenziso, nokuphathwa nokulawulwa kokusetyenziswa kwamanzi. Ngokomzekelo, iNkqubo yokuHlela nesiCwangciso-qhinga sokuPhathwa kweNgingqi Eziqokelela amanzi (iCMS) ziyaphindwaphindwa, ngoxa iMC ecetywayo inefuthe kwaye ingumkhombandlela kwinkqubo yokwabiwa kwamanzi, inkqubo yokuNyanzeliswa kweLayisenisi neNkqubo yokuHlawulisa ngokuKhutshwa kweNkukuma (iWDCS).

Kanjalo iNWRCS inefuthe kwiinkqubo ezibanzi ezahlukahlukeneyo, ibe ngenxa yoko intsebenziswano iyimfuneko kuwo omathathu amabakala obuRhulumente, abo banebango abafanelekileyo noluntu ngokubanzi.

INGQIQO-SISEKO YEPROJEKTHI

I-NWA ifuna kulinganiswe imfuneko yophuhliso loqoqosho nokukhuselwa kobutyebi bemvelo obubonelela ngeempahla neenkonzoz eziyimfuneko ekukhuleni kwezoqoqosho. Oku kubangela kufuneka kubekho ukulingana phakathi kokujonga amanzi njengento yokurhweba, okt. ukusetyenziswa kwamanzi ukuphakamisa uqoqosho, ukudala imisebenzi nokuphelisa intlupheko; nokujonga amanzi njengexalenye yesakhiwo seenkqubo zezendalo engqongileyo okanye ubuncwane, okt. amanzi ayafuneka ukuxhasa ezendalo engqongileyo okanye ukusetyenziswa kobuncwane okusekelwe, ngokuyinxenye, kwiinkqubo zemvelo.

I-DWAF njengomgcini wemithombo yamanzi eli lizwe igunyaziswe ukwaba amanzi ukuze kuvuselelwe ukukhula koqoqosho nophuhliso, nokukhuthaza ukulingana, ngoxa ngaxeshanye iqinisekisa ukusetyenziswa okuzinzileyo kwexesha elide kobu buncwane. Enye yeenjongo zeIWRM eMzantsi Afrika kukukhusela ukuxhathisa kwenkqubo yezendalo engqongileyo, ukuphepha ingozi yomonakalo ongenakuze ulungiswe kuze ngolo hlobo kuphelise amandla okuhlangabezana neemfuno zabantu kwixa elizayo.

Ngoko ke kumele kubekho ukulingana phakathi kokusetyenziswa nokukhuselwa kwemithombo yamanzi kuzwelonke, kwiingingqi nasekuhlaleni.

Phofu ke, ekugqibeleni ixabiso uluntu elilibeka kumthombo lowo liya kumisela izinga amandla aloo mthombo aya kutsalwa ngawo, ngaloo ndlela kubekho ingozi yotshintsho olungenakulungiswa. Oku kuthetha ukuba eminye imithombo isenokukhuselwa ngakumbi kuneminye, okt. eminye imithombo 'isenokusetyenziswa kakhulu', ngoxa eminye isenokukhuselwa.

Umahluko phakathi kweNWRCS neNkqubo yokuHlela

Inkqubo yokuHlelwa kweMithombo yaManzi kuZwelonke:

Inkqubo ebonelela ngezikhokelo nemigaqo yokumisela iindidi ezahlukahlukeneyo zemithombo yamanzi evisisana noko kubhalwe nokuthethwa yiNWA.

Inkqubo yokuHlela:

Inkqubo yokusebenzisa iNWRCS ukumisela iMC neeRQO zayo yonke okanye iinxalenye zemithombo yamanzi egqalwa ibalulekile.

IMIGAQO YE-NWRCS

Kuphawulwe imigaqo elandelayo yeNWRCS eguquguqukayo ukunceda ukwenza le nkqubo ibe selubala, icace ize iqondakale kusengaphambili, nokunceda ukunciphisa iqondo lezinto ezinokubangela unguqulwano:

Umgaqo 1: Ukulingana nokuniselana ukwenzela usetyenziso olulolona lulungileyo

I-MC etyunjiweyo ifanele ilinganise ukukhuselwa kobuncwane nokusetyenziswa kwabo ngokuvisisana nemikhuba nemigaqo yoluntu. Ukusetyenziswa kobuncwane kuzisa iinzuzo zoqoqosho nezentlalo. Kodwa ke, kungayenza buthathaka inkqubo yezendalo engqongileyo, nto leyo edala iindleko kwezoqoqosho nakwezentlalo. Oku kulingana kuza kufuna ukuniselana. Ngoko ke iNWRCS ifanele ichaze ngokucacileyo iintsingiselo zeeMC ezahlukahlukeneyo ukuze kube lula ukwenziwa kwezigqibo zobulumko.

Umgaqo 2: Uzinzo

Isizathu esiyintloko sokukhuselwa kwemithombo yamanzi kukulondoloza ukuthembeka kwezendalo engqongileyo kwizinga eliqinisekisa ukuhanjiswa ngokuqhubekayo kweempahla zenkqubo yezendalo enqwenelekayo, iinkonzo neempawu ukuze zisetyenziswe. Ngoko ke iNWRCS kufuneka inikele isakhelo sokwenza lula ukutyenziswa okuzinzileyo kwemithombo yamanzi. Kwakhona kuyaqondakala ukuba kukho umda wozinzo ongathi ukuba uye watsitywa, uphumele ekubeni zingahanjiswa iimpahla, iinkonzo neempawu eziyimfuneko ekukhuleni kwezoqoqosho, ukupheliswa kwentlupheko nokulungiswa kokungalingani okungokwembali. Njengoko kukho ukungaqiniseki okuthile ngokona kuma kukuko kwalo mda, nanjengoko

ingozi zokutsiba imida yozinzo zinkulu, kuza kusetyenziswa umgaqo wokulumkela iingozi¹.

Umgaqo 3: Umdla nokuvisisana kuzwelonke

I-MC yobuncwane isengavelisa izisombululo ezamkelekileyo ekuhlaleni, kodwa zingalungi kangako xa ziqwalaselwa kuzwelonke. Izigqibo zeengingqi ke ngoko kufuneka ziphononongwe kuthelekiswa nomdla kazwelonke (yaye ukuba kufanelekile kuthelekiswa neenzima zamazwe ngamazwe umz. iimbopheleleko esinazo ngakwamanye amazwe). Kanjalo iNWRCS ifanele itha injongo ecacileyo mayela neempawu zeeMC ezahlukahlukeneyo ize ibonise ukuvisisana kule nkalo.

Umgaqo 4: Ukucaca ngokuphandle

Kufanele kuboniswane nabo banebango ekuvelisweni kweNWRCS nakwinkqubo yokuhlela imithombo yamanzi yelizwe. Le ndlela ifanele ise semthethweni kwaye icace ngokuphandle, yaye kuqinisekiswa ukuba indlela esetyenziswayo yoniselwano ayindlel' indlela icala elithile. Njengoko iMC ineentsingiselo ezinkulu kwezoqoqosho, ezentlalo nezendalo engqongileyo, abo banebango kuza kufuneka baziswe ngendlela ecacileyo ngefuthe neengozi (neenzuzo) ezinokuziswa yiNWRCS kubo. Ngapha koko, abo banebango kuza kufuneka baziswe ngezina lokungaqiniseki okuhambisana nezinto ezininzi ezinokubakho kwezoqoqosho, kwezentlalo nakwezendalo ngokusekelwe kwiNkqubo yokuHlela.

¹ Umgaqo wokulumkela ingozi yindlela eyamkelwa lihlabathi lonke ethi makusetyenziswe ubulumko ekwenziweni kwezigqibo xa ezona ntsingiselo zekhondo eliyilwayo okanye zomgaqo-nkqubo omtsha wokungenelela zingaziwa.

Principle 5: Ukuphumeza

I-NWRCS kufuneka isetyenziswe, ngendleko esengqiqweni, ngabasebenzi abaqeqeshiweyo beDWAF/CMA ekwenziweni kwezinto. Indleko yeziko nosetyenziso enxulumene nokwenziwa kwesigqibo ngeMC ifanele ibe phantsi kangangoko kunokwenzeka. Kanjalo iNWRCS ifanele ibe namandla ngokwaneleyo ukuba kungenziwa ngayo isigqibo ngenxa yolwazi olungagqibelelanga. Isiphumo sokugqibela seNkqubo yokuHlela sifanele siqwalasele ifithe kumalungelo akhoyo okusetyenziswa kwamanzi (kokubini ukuthatyathwa nokulahlwa) kwakunye neenjongo zophuhliso zengingqi nezikazwelonke.

Umgaqo 6: Uxhomekeko lomjikelo wenkqubo yamanzi

Zonke iinxalenye zemithombo yamanzi zinxibelelene. Ekubeni kunjalo, iNWRCS kufuneka iqwalasele unxibelelwano olukhoyo phakathi kwayo yonke imithombo exhomekeke emanzini; imilambo, amachweba, amadike namagxobho.

Umgaqo 7: Ukukhuseleka emthethweni namandla ngokwezenzululwazi

I-NWRCS ifanele ikhuseleke emthethweni kwaye ibe namandla ngokwezenzululwazi. Ifanele isekelwe kwimigaqo ephilileyo yezentlalo noqoqosho nezendalo ngokuvisisana neenjongo zeIWRM. I-NWRCS neNkqubo yokuHlela zifanele zikhuseleke emthethweni, kusetyenziswe inyameko efanelekileyo ekwenziweni kwezigqibo, yaye ithintele ubutyala obunokubekwa iDWAF okanye abo banebango. Kanjalo ifanele ivisisane neembopheleleko uMzantsi Afrika onazo ngakwamanye amazwe nomthetho wezendalo kokubini kuzwelonke nakumazwe ngamazwe. Izikhokelo zifanele zibonise ezona zixhobo zingcono zikhoyo noluhlu lolwazi omalusetyenziswe kwiNkqubo yokuHlela. Ezi kuza kufuneka zihlaziye rhoqo kuqwalaselwa inkqubela yezenzululwazi nobugcisa.

Umgaqo 8: Imilinganiselo yokuphatha

Umlinganiselo esetyenziswa ngawo iNWRCS ufanele ufanelane nengxaki ephethweyo. Isiphumo seNkqubo yokuHlela siya kuba sisindululo seMC. Iintsingiselo zoku kuya kufuneka ziqondwe, ziphunyezwe zize zihlolwe ngemilinganiselo emininzi.

Umgaqo 9: Ukuvakala nokuba nokunyanzeliswa

I-NWRCS kufuneka ivakale yaye ibe nokunyanzeliswa ukuze kuqinisekise ukuba iyasebenza. Ngaloo ndlela, umlawuli kuza kufuneka aqinisekise ukuba kudalwa ingxelo ecacileyo, nesisigxina yemigaqo, ulwazi nengqiqo esetyenzisiweyo ukubeka umthombo othile kudidi oluthile yaye loo ngxelo iyagcinwa. Nezigqibo zeNWRCS kufuneka zibekw' esweni zize zinyanzelise.

Umgaqo 10: Iqondo elilelona liphantsi longquzulwano neqondo elilelona liphezulu lokuba semthethweni

Ngenxa yokubaluleka okungokwesicwangciso-qhinga kweNWRCS, kufanele kusetyenziswe umgaqo weqondo elilelona liphantsi longquzulwano neqondo elilelona liphezulu lokuba semthethweni. Oku kufuna ukuba kuboniswane kunye, nokwamkelwa okukwiqondo elilelona liphezulu, ngaphakathi (iDWAF) nabanebango ngaphandle kunye neel&AP.

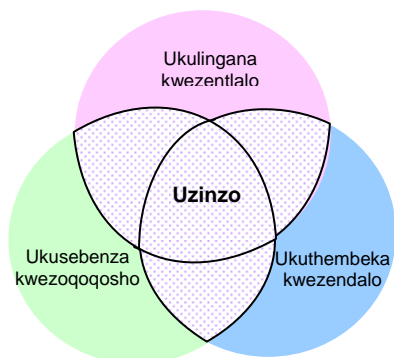
Umgaqo 11: Ukusetyenziswa kwezixhobo, ulwazi nenkcazelo ekhoyo

I-NWRCS iza kusebenzisa izixhobo, ulwazi nenkcazelo ekhoyo nanini na kunokwenzeka. Apho kusebenzayo, izixhobo, ulwazi nenkcazelo ekhoyo iza kulungiswa okanye inatysiswe ukuze ihlangabezane neemfuneko zeNWRCS. Ngaphandle kokuba kukho imfuneko engxamisekileyo yokwenza oko, akukho zixhobo, ulwazi okanye inkcazelo entsha eza kuveliswa okanye iqokelelwe.

UKUDIBANISA I INJONGO ZOQOQOSHO, ZENTLALO KWINWRCS

Kwiminyaka yakutshanje, emva kokuveliswa kwenzululwazi yezentlalo, yezendalo, okusingqongileyo nobutyebi belizwe, kuvele imigaqo-nkqubo emithathu yeenjongo zeIWRM: ukusebenziseka, ukulingana nokuzinza. Ezi njongo zoqoqosho, zentlalo nezendalo, ngokwahlukahlukeneyo, ziqukiwe kwisaci esisesikweni seDWAF 'okuthile, kwabo bonke, ngonaphakade, sikunye' (iSazobe 1).

Injongo yoqoqosho yokusebenziseka ihlobene nokufunyanwa kwenzuzo enkulu yezoqoqosho kwimithombo yamanzi, okanye



iSazobe 1

Iinjongo eziphambili zoqoqosho lwentlalo nezendalo ezifakwe kwiNWA

ukuzisa eyona nzuzo enkulu enokufumaneka. Kanjalo oku kunokubonwa njengokufezekisa injongo yophuhliso loqoqosho. Injongo yentlalo yokulingana kukuqinisekisa ukuba iinzuzo zoqoqosho ezifumanekayo ngokusetyenziswa kwemithombo yamanzi, neendleko ezithi zibekho ngokuphuhlisa kwezixhobo zamanzi, zabiwa ngokungenamkhethe. EMzantsi Afrika, oku kufuneka kwenziwe kujongwe imfuneko esemthethweni yokunciphisa intlupheko nokulungisa ukungalingani okungokwembali.

Injongo yozinzo kwezendalo iyayiqonda imida yobuncwane ngenxa yokwanda kwabemi nophuhliso loqoqosho, yaye ikhuthaza ukusetyenziswa kobuncwane ngendlela yokuba kungonakaliswa amathuba oqoqosho nentlalo-ntle yesizukulwana sangoku nezexesha elizayo. Iinjongo zezendalo zisenokuquka nokukhawulelana neembopheleleko zikazwelonke nezamazwe ngamazwe zokulondoloza izinto zobomi ezintlobontlobo kwakunye nokuqinisekisa imo eyamkelekileyo yempilo yemithombo kwixesha elifutshane nelide.

Phofu ke, ezi njongo zoqoqosho, zentlalo nezendalo kungenzeka zingqubane ibe akukho lula ukuzisombulula ngaxeshanye. Ngoko ke kuza kufuneka kuqwalaselwe iindlela zokunyanzelana kwiNkqubo yokuHlela eziza kufuna inkqubo yokwenza isigqibo efanelekileyo, edibeneyo nehlatutya zonke iinkalo (iNWRCS).

INKQUBO YOKUBANDAKANYA ABO BANEBANGO

Ukukhuselwa kobutyebi bamanzi kuhlobene ngokusisiseko nokusetyenziswa, ukuphuhlisa, ukulondolozwa, ukuphathwa nokulawulwa kwabo. UMthetho uthi makuboniswa “noluntu ngokubanzi” xa kusekwa imigaqo eyilelwe ukwanelisa iimfuneko zamanzi asemgangathweni zabasebenzisi bamanzi, kungakhang kutshintshwe iimpawu zemvelo zamanzi asemgangathweni zokukhuselwa kobutyebi bemithombo yamanzi. Injongo yokubandakanya abo banebango ekuvelisweni kweNWRCS kukufumana igalelo labo ukuze kuqinisekise ukuba imiba nezinto ezibaxhalabisayo ziyaqondwa ibe ziyaqwalaselwa ekuvelisweni kweNWRCS. Iinkcukacha zenkqubo eza kulandelwa zibekwe ngezantsi:

UKUHLAZIYA UVIMBA WOLWAZI WABO BAKHOYO BANEBANGO NOKUNGQINA IINKCUKACHA ZOKUQHAGAMSHELANA NABANEBANGO

Ukuza kuthi ga ngoku, iDWF iqhube iinkqubo eziliqela nabanebango kulo lonke ilizwe. Kusetyenziswe uluhlu lokuthumelela abanebango olukhoyo nolwakutshanje kangangoko kunokwenzeka ukuze kuphetshwe ukuphindwa-phindwa kwemizamo nendleko. Uluhlu olukhoyo luye lwaqinisekiswa ukungqina ukuchana nokumela ngokuhlolwa ngokubanzi ukuba onke amacandelo afanelekileyo aqukiwe.

Kuveliswe uvimba wolwazi we-elektroniki oza kuthi ugcine ngokuzenzekelayo yonke uthethwano nabanebango – ngomlomo, ngefoni, nge-elektroniki nolubhaliweyo. Kudalwe imihlaba yazo zonke

iintlanganiso eziqhutyiweyo namaphepha amagqabantshintshi abuyisiweyo, njalo njalo. Oku kuza kubangela kubekho ingxelo eqhubekayo yemisebenzi yothatho-nxaxheba. Ukongeza koko, okuthethwa ngabo banebango kuza kufakwa kuvimba wolwazi kuze kunxityelelaniswe negama lomntu lowo uthethileyo. Uluhlu olungezantsi lubonisa amacandelo abasebenzisi bamanzi, abo kungenzeka bawasebenzise nabanye abanebango njengomzekelo yabo kucingwe ngabo kuluhlu lokuthunyelelwa.

INTLANGANISO NABANEBANGO EKUJOLISWE KUBO

Kuza kuqhutywa iintlanganiso nabanebango ekujoliswe kubo ngathuba lithile kuAgasti okanye ngoSeptemba ka-2006. Kule ntlanganiso kuza kuba abamenyiweyo kuphela.

Le ntlanganiso iza kunceda ukutsolisa iingqondo zabo banebango kunye nezabasemagunyeni kwimiba enokubakho nenokuba nefuthe ekuvelisweni kweNWRCS. Ezi ntlanganiso ziya kuba kwazizixhobo zokutsolisa ekuvelisweni kwendlela yobugcisa yemiba engaba sisiphako esonakalisayo ekuvelisweni kweNWRCS.

IMPENDULO YENKQUBELA KUBO BONKE ABANEBANGO

Emva kwentlanganiso kunye nabanebango, bonke abanebango abangundoqo nabakuvimba wolwazi baza kufumana ileta ebhekiswa kubo ukuqinisekisa ukuba banolwazi ngethuba lokuphosa izwi, yokubulela abo bathe baphosa izwi ukuza kuthi ga ngoku, nokuqinisekisa ngamanyathelo alandelayo kule nkqubo.

Amacandelo abasebenzisi bamanzi, abo basenokuba ngabasebenzisi bamanzi nabanye abanebango bokuqwalaselwa kuluhlu lokuthunyelelwa.

- | | |
|--|---|
| <ul style="list-style-type: none"> • Urhulumente (kazwelonke, wephondo nowasemakhaya) • Iinkokeli zemveli • Amaqumrhu olondolozo nawezendalo • Ii-NGO (ezijoliswe kwezendalo nakuphuhliso) • Ezorhwebo noshishino • Ezemveliso • Imigodi • Ezolimo • Amahlathi • Ezothutho • Imibutho yoluntu | <ul style="list-style-type: none"> • Iinkokeli zasekuhlaleni ukongeza kwiinkokeli zemveli • Abaphandi nabacebisi • Amajelo eendaba asekuhlaleni (ashicilelayo nasasazayo) • Amaziko okuphathwa kwamanzi • Amaqumrhu ezemfundo • Amaqumrhu ezempilo • Ezokhenketho nolonwabo • Abasebenzi beDWF kuZwelonke nakwiiOfisi zeNgingqi |
|--|---|

NGUBANI OWENZA UMSEBENZI?

Umda nokuntsonkotha kwale projekthi kwenza kube yimfuneko ubukho begqiza elikhulu elinobuchule kwiinkalo eziliqela kuquka ezoqoqosho, inzululwazi yezentlalo, ezendalo engqongileyo, ukuvavanya kobutyebi bamanzi, amanzi asemhlabeni, uhlalutyo lwemizekelo nezigqibo. Izihloko ezibini ezixananazileyo zikwayinxenye yendlela esetyenziswayo; ukuveliswa kobuhlobo neenkqubo zombutho namaziko, nenkqubo yabo banebango ekujoliswe kubo.

IBhunga loPhando lwezeNzululwazi neMveliso (iCSIR), iSouthern Waters ER&C, iAnchor Environmental Consultants, iYunivesithi yaseKapa neYunivesithi yaseRhodes, zixhaswa liqela elivela kwiinkalo ezininzi lababoneleli ngeenkonzo, ziphethe iprojekthi ngoxa iZitholele Consulting iqhuba inkqubo yokubandakanya abo banebango.

Ntshetsopele ya Mokgwa wa Tlhopiso ya Disebediswa tsa Setjhaba tsa Metsi

TOKOMANE YA NALANE YA TLHAHISO-LESEDING (BID)

SEPHEO SA TOKOMANE ENA

Sepheo sa Tokomane ya Nalane ya Tlhaliso-leseding ke ho tsebisa ba nang le thahasello ba bile ba ameha [Interested and Affected Parties (I&APs)] ka letsema la Lefapha la Ditaba tsa Metsi le Meru Lekaleng L la Ditaba tsa Metsi le Meru (DWAF)] la ho ntshetsa pele mokgwa wa tshebetso ya setjhaba ya hlophiso ya disebediswa tsa metsi e leng National Water Resource Classification System (NWRCS) bakeng sa Afrika Borwa.

Tokomane ena e fana ka tlhaloso e totobetseng ya motheo ho NWRCS, e hlalosa seo NWRCS e leng sona, se sebediswang ha jwale ho hlophisa disebediswa tsa metsi, e fana ka mabaka a bohlokwa a projeke, melao ya yona ya tataiso, e bile e hlakisa mesebetsi e sisintsweng ya ho kenngwa ha ba amehang. I&APs e tla ba le monyetla nakong ya ntshetsopele ya NWRCS ho hlalosa dintlha tsa ngongoreho, ho tshwaela le ho sheba botjha ditlaleho, le ho hlaloba hore ditaba le dingongoreho tsa bona di rarollwa jwang.

Ditlhaliso di ka romelwa ho mookamedi wa projeke kapa kantorong ya ho kenngwa ha ba amehang dibakeng tse ka tlase.

Kantoro ya seabo sa setjhaba le aterese bakeng sa ditlhaliso:

Elizma Engelbrecht
Zitholele Consulting (Pty) Ltd
Lebokose la Poso 6002
Halfway House, 1685
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Dipatlisiso ka NWRCS:

Mamogala Kadiaka
Lefapha la ditaba tsa metsi le meru
Lebokose la poraebete X313
TSHWANE, 0001
Nomoro ya mohala : (012) 336 8956
Fax: (012) 336 7575
Email: kadiakam@dwaf.gov.za

SELELEKELA

MOTHEO

Molao wa Naha wa Metsi (No. 36 wa 1998) o hloka hore disebediswa tsa metsi tsa naha di tshireletswe, di sebediswe, di ntshetswe pele, di bolokwe, di okamelwe di be di laolwe ka mokgwa o lekanang, o sebetsang ebile e le wa nako e telele. Molao wa Naha wa Metsi o boela o hloka hore disebediswa tsohle tsa metsi tse bohlokwa Afrika Borwa di hlophiswe ho thusa ho bebofatsa tekatekano dipakeng tsa tshireletso le tshebediso ya disebediswa. NWRCS ke e nngwe ya disebediswa tsa bohlokwa tsa ho fihlella tekatekano ena.

NWRCS KE ENG?

NWRCS, e hlokwang ke NWA, ke sete ya mehato ya tataiso le melao bakeng sa ho nka qeto ka mekgwa e hlokwang ya sesebediswa sa metsi, mme se emetswe ke Management Class (MC). MC e totobatsa matshwao ao e bang mohlakomedi [Lefapha: Ditaba tsa metsi le Meru {Water Affairs and Forestry (DWAF)}] le setjhaba ba a hloka a disebediswa tse fapaneng tsa metsi. NWRCS e tla sebediswa (ha mamorao) mosebetsing o tswelang pele wa pontshano ya ho hlophisa disebediswa tsa metsi (Mosebetsi o tswelang pele wa Tlhopiso (Classification Process)) ho thusa ho nolofatsa tekatekano dipakeng tsa tshireletso le tshebediso ya disebediswa tsa metsi a setjhaba. Ditshisinyo tsa moruo, tsa setjhaba le tse amanang le tikoloho tsa ho kgetha MC di tla hloka ho thewa le ho bolellwa bohle ba nang le thahasello le ba amehang nakong ya Mosebetsi wa Tlhopiso.

Sepheho sa Mosebetsi wa Tlhopiso e tla ba Letona kapa baromuwa ba hae ho bea MC le Lipheo tsa Boleng ba Disebediswa e leng Resource Quality Objectives (RQOs) bakeng sa sesebediswa se seng le se seng sa bohlokwa sa metsi (noka, mateano a noka le lewatle, mokgwabo le mohlodi wa metsi) tse tla be di tlama bohle ba ikarabellang kapa dibaka tsohle ha ho sebediswa matla afe kapa afe, kapa ho phetha mosebetsi ofe kapa ofe o ka tlasa NWA. MC ena, e ka tlohang ho tsa Tlhaliso ho ya ho tse sebedisitsweng ha Boima, e hlalosa maemo a hlokehang a sesebediswa, mme ka ho tshwanang, boemo boo e bang e ka sebediswa. Ka mantse a mang, MC ya sesebediswa e beha meedi bakeng sa moqeqeko, phepele le boleng ba Risefe le di-RQO, mme kgonahalo ya karolo e ajhwang ya sesebediswa sa metsi bakeng sa tshebediso ya molatswana. Sena se na le tshwaetso e kgolo ho tsa moruo, tsa setjhaba le tsa maemo a tikoloho.

DIPHEO TSA PROJEKE YA NWRCS

Projeke ya NWRCS e na le dipheo tse tseheletseng tsa bohlokwa. Tsona ke:

- Ntshetso pele ya mokgwa wa ho sheba ho kopanngwa ha boleng ba moruo, setjhaba le tikoloho le ditshisinyo tsa MC.
- Tlhakiso ya mehato ya tataiso e tshcheditseng NWRCS.
- Ntshetso pele ya mehato ya tataiso bakeng sa disebediswa tse tswileng matsoho tse fumanehang le mekgwa e ka sebediswang ho tshheheta ho nkuwa ha qeto ka MC.
- Ntshetso pele ya mosebetsi o nepahetseng wa ho kenngwa ha ba amehang.
- Ntshetso pele le ho iswa ha moralo wa NWRCS o loketseng ho etswa tokomane ya setjhaba ke sehlopha sa ba molao.
- Ho thusa ho kopanya NWRCS ho taelo e batsi ya bolaodi bo kopantsweng ba sesebediswa sa metsi [intergrated water resource management (IWRM)].

HA JWALE HO SEBEDISWA ENG HO HLOPHISA DISEBEDISWA TSA METSI?

Ha jwale, mokgwa wa nakwana wa tlhopiso o sebedisang A ho isa ho F wa mehato ya maemo a tikoloho o a sebediswa bakeng sa ho lelekela diqeto tsa Risefe. Le ha ho le jwalo, ho na le tlhoko ya NWRCS e kopanyang tse amanang le tikoloho, ditlhokahalo tsa mosebetsi ho di-MC, mme e dumella tlhahlobo ya ditshisinyo tsa moruo wa setjhaba le tse amanang le tikoloho diqetong tsa bolaodi ba metsi.

Tadimisiso ya NWRCS

Jwalo ka ha NWRCS e etsa karolo ya IWRM ya taelo ya DWAF, Mosebetsi wa tlhopiso ha o etsahale o le mong, mme o hoketswe mesebetsing e meng e mengata mororong wa ho kopanngwa ha tshireletso ya sesebediswa sa metsi, ntshetso pele le tshebediso, le bookamedi le taolo ya tshebediso ya metsi. Mohlala, Mosebetsi wa Tlhopiso le Mokgwa wa Tsamaiso ya Mehlopi e leng Catchment Management Strategy (CMS) di sebetse mmoho, ha Tsamaiso ya mehlopi yona e ama le ho tsebisa ka tshebetso e tswelang pele ya kabo ya metsi, tshebetso e tswelang pele ya ho fana ka dilakesense e tlamang, le mokgwa wa tefiso wa ho qhala dikgwerekgwere.

Hape NWRCS li na le kameho holima litshebetso tse nammeng, mme qetellong, tshebedisano-mmoho, le likarolo tsohle tse tharo tsa mmuso, batho ba amehang, le setjhaba ka kakaretso di a hlokeha.

MABAKA A BOHLOKWA POROJEKENG

NWA e hloka tekanyo ya ditseko tsa ntshetso-pele ya moruo le tshireletso ya disebediswa tsa tlhaho tse fanang ka thepa le ditshebeletso tse hlokaahlang bakeng sa kgolo ya moruo. Sena se hloka phetho ya tekano dipakeng tsa ho sheba metsi e le matsapa a ho phahamisa kgolo ya moruo, tlhahiso ya mesebetsi le phediso ya bofuma; le ho sheba metsi jwalo ka karolo ya mokgwa o itseng wa puisano dipakeng tsa setjhaba le tikoloho e sa pheleng kapa mesebetsi ya sesebediswa e itshetlehleng, hanyane, mesebetsing ya tlhaho.

DWAF jwalo ka mohlokomedi wa disebediswa tsa metsi a setjhaba e laelwa ho aba metsi ho tsosa morolo kgolong le ntshetso-peleng ya moruo, le ho phahamisa tekatekano, ha ka lehlakoreng le leng ho netefatswa tsebediso e ntle ya nako e telele ya sesebediswa. E nngwe ya dipheo tsa IWRM Afrika Borwa ke ho tshireletsa poelo ya setlwaeding ya mokgwa o itseng wa puisano dipakeng tsa setjhaba le tikoloho e sa pheleng, ho qoba kotsi ya tshenyoo e sa lokiseheng mme jwale e be tahlehelo ya kgonahalo ya ho fihlella ditlhoko tsa batho kamoso.

Ho tlamehwa ke hona ho fuman tekano dipakeng tsa tsebediso le tshireletso ya disebediswa tsa metsi, maamong a setjhaba, a tikoloho le a lehae.

Pheletsong, le ha ho le jwalo, boleng boo setjhaba se bo behang ho sesebediswa bo tla etsa qeta ka nako eo bokgoni ba sesebediswa bo ralwang fatshe, ebe ka mokgwa oo ho ba le kotsi ya phetoho e ke keng ya lokiswa. Sena se bolela hore disebediswa tse ding di ka nna tsa fuwa tshireletso ho feta tse ding, k.h.r. disebediswa tse ding di ka nna tsa sebediswa haholo ha tse ding di ka hlwauwa bakeng sa tshireletso. Kaha dipehelo tsa tswelopele e bolokehileng di hlakile, molawana wa tlhokomediso o tla sebediswa.

Phapang dipakeng tsa NWRCS le Mosebetsi wa Tlhophiso

MOKGWA- TLHOPHISO wa METSI A SETJHABA

Mokgwa o fanang ka mehato ya tataiso le mekgwa ya molao ho netefatsa maemo a fapaneng a disebediswa tsa metsi, o itshetlehleng ka dikateng le moya wa NWA.

Mosebetsi wa Tlhophiso:

Mokgwa wa ho sebedisa NWRCS ho etsa qeto ka MC le di-RQO wa disebediswa tsohle, kapa tse itseng, tsa metsi tse nkuwang e le tsa bohlokwa.

MELAWANA YA TATAISO YA NWRCS

Melawana e latelang ya tataiso e ile ya hlwaelwa NWRCS e ntseng e tswela pele ho thusa hore mesebetsi e bulehe, e bonaletse mme e be e ka hakannngwang le ho thusa ho fokotsa boemo ba kgonahalo ya ngangisano:

Molawana wa tataiso 1: Tekanyo le kgwebisano bakeng sa tsebediso e babatsehlang

MC e kgethuweng e tlameha ho lekanya tshireletso ya sesebediswa le tsebediso ya sona ho latela mekgwa le meetlo ya naha. Tsebediso ya sesebediswa e fana ka melemo ya moruo le ya naha. E boetse e na le bokgoni ba ho tela tshpahalo ya puisano dipakeng tsa naha le tlhohleho tikolohong, e nang le ditjeo tsa moruo le naha. Tekanyo ena e tla hloka dikgwebisano. Kahoo NWRCS e tshwanela ho lokodisa ditshisinyo tse fapaneng tsa di-MC ho nolofatsa ho nkuwa ha diqeto ho fupereng tsebo.

Molawana wa tataiso 2: Poloko ya nako e telele

Lebaka la molao wa tataiso bakeng sa tshireletso ya disebediswa tsa metsi ke ho boloka seriti sa *ecosystem* boemong bo tla netefatsa phumantsho e tswelang pele ya dintle tsa *ecosystem*, ditshebeletso le matshwao a itseng a hlokaahlang bakeng sa kgolo ya moruo, ho fediswa ha bofuma le tokiso-botjha ya ho se lekane nakong e fetileng. Jwalo ka ha ho na le qeaqeo ya boemo boo e leng bona ba motheo ona, mme jwalo ka ha dikotsi tse fetang tekanyo tsa poloko ya nako e telele di hlomphe, molao wa tataiso wa tlhokomediso¹ o tla sebediswa.

Molawana wa tataiso 3: Ditabatabelo tsa naha le botsitso

MC ya disebediswa e ka hlahisa ditharollo tse amohelang boemong ba mahae, empa di molemo haholo ha di shejwa boemong ba naha. Diqeto tse boemong ba pokello ya metsi di batla ho hlahlojwa mabapi le ditlhoko tse boemong ba naha (moo ho hlokaahlang matla a tshwanelehileng boemong ba matjhaba, mohl. Diqobello tsa matjhaba). NWRCS e tshwanela ho boela e totobatsa maikemisetso malebana le di-MC le ho fana ka botsitso ntlheng ena.

Molawana wa tataiso 4: Ponaletso

Ho tshwanela hore ho buisanwe le ba amehang ntshetso peleng ya NWRCS le mesebetsing wa ho hlophisa disebediswa tsa metsi tsa naha. Mokgwa wa ho sebeta o tshwanela ho ba molaong mme o bonaletse, o tiise hore tsela ya ho sheba boleng e sebediswang ho nka diqeto ke e tshpahetseng jwalo ka ha MC e na le ditshisinyo tse shebang moruo, naha le tikoloho ya diphoofolo le dimela, ba amehang ba tla hloka ho tsebiswa ka kgonahalo ya ditlamorao le dikotsi (le melemo) ya NWRCS ho bona. Ho feta moo, ba amehang ba tla hloka ho tsebiswa ka boemo ba qeaqeo bo tsamaisanang le boholo ba bolepi ba moruo, naha le *tikoloho ya diphoofolo le dimela*, tse ke keng tsa arohannngwa le Mosebetsi wa Tlhophiso.

¹ Molawana wa tlhokomediso ke moetlo o kgothaletsang ho ba hlakolosi ho etseng liqeto ha holo ha lilla-morao tsa tsela e shebuweng kapa mokgwa oa tokiso o motjha di sa tsejwe.

Molao wa tataiso 5: Ho ka kenngwa tshebetsong

NWRCS e hloka ho sebediswa, ka theko e kgonehang, ke basebetsi ba rupelletsweng ba DWAF/CMA boemong ba tshebetso. Ditjeo tsa mokgatlo le ditefello tse amanang le ho nkwa ha qeto ho MC di tlameha ho ba tlase ka hohle kamoo ho ka kgonahalang ka teng. NWRCS e tlameha ho ba le matla a lekaneng, ho etsa qeto ntlheng ya tsebo e fokolang. Sepheho sa makgaolakang sa Mosebetsi wa Tlhophiso se tshwanela ho sheba ditlamorao tse teng tsa ditokelo tsa ho sebedisa metsi (ho tlosa le ho fetisa) esitana le maikemisetso a ntshetso pele ya lebatowa le ya naha.

Molao wa tataiso 6: Tshehetso e kopanetsweng ya phetapheto ya tshebediso ya metsi

Dikateng tsohle tsa sesebediswa sa metsi di a kopanngwa. Kahoo, NWRCS e lokela ho ikarabella ka dikamano dipakeng tsa disebediswa tsohle tse itshetlehleng ka metsi; dinoka, mehlodi ya metsi, mekgwabo le mateano a noka le lewatle.

Molao wa tataiso 7: Tshireletso ka molao le matla a saense

NWRCS e tshwanela ho itshireletsa ka molao mme e be matla haholo ka saense. E tshwanela ho tsepama melaong ya tataiso ya moruo wa naha o tsitsitseng ho ya ka diphihlollo tsa IWRM. NWRCS le Mosebetsi wa Tlhophiso di tshwanela ho itshireletsa ka molao, di ikitlaetse mosebetsing wa ho nka diqeto, di be di thibele mekitlane ya semolao e eketsehang ho DWAF kapa ho ba amehang. E tlameha ho tsepama ditlamong tsa Aforika Borwa tsa matjhaba le molaong o mong wa tikoloho boemong ba naha le ba matjhaba. Mehato ya tataiso e tshwanela ho supa disebediswa tse teng tse ntle, le disete tsa *data* tse tla sebediswa Mosebesting wa

Ihophiso. Tsena di tla hloka ho ntlafatswa kgafetsa ho ikarabella ntshetso peleng ya saense le thekenoloji.

Molao wa tataiso 8: Sefutho sa Bolaodi

Sefutho seo NWRCS e sebetsang ka sona se tshwanela hore e be se loketseng bothata bo teng ha jwale. Sepheho sa Mosebesting wa Tlhophiso e tla ba tshisinyo ya MC. Ditshisinyo tsa sena di tla tlameha ho utlwisiswa, ho kenngwa tshebetsong le ho hlahlojwa ka mekgwa e mengata.

Molao wa tataiso 9: Ho hlahlobeha le ho qobelleha

NWRCS e tlameha ho hlahlobeha le ho qobelleha ho tiisa hore e a sebediseha. Kahoo, molaodi o tlameha ho tiisa hore ponaletso, rekoto ya ka nako tsohle ya mehato ya molao, tlhahiso-leseding le tokodiso tse sebedisitsweng ho hlophisa sesebediswa se itseng e a thewa e be e bolokwe e le boemong bo bottle. Sepheho sa NWRCS se tshwanela ho qobellwa se be se behwe leihlo.

Molao wa tataiso 10: Boemo bo tlase ba qothisano ya lehlokwa le boemo bo hodimodimo ba mokgwa o amohelohileng

Ha re sheba bohlokwa ba NWRCS, mohato wa tataiso wa boemo bo tlase ba qothisano ya lehlokwa le boemo bo hodimo ba mokgwa o amohelohileng bo tlameha ho sebediswa. Sena se hloka puisano le, boemo bo phahameng ba ho reka dinyehlisetsong, tsa kahare (DWAF) le leano la tse kantle la ba amehang di-I&AP.

Molao wa tataiso 11: Tshebediso ya disebediswa tse teng, *data* le tlhahiso-leseding

NWRCS e tle sebedisa disebediswa tse se ntse di le teng, *data* le tlhahiso-leseding di tla fetolwa kapa di eketswe ho kgahlanyetsana le le ditlhokahalo tsa NWRCS. Ntle ha eba ho na le tlhoko e potlakileng ya ho etsa jwalo,ha ho disebediswa tse ntjha, *data* kapa tlhahiso-leseding e tla ntshetswa pele kapa e bokellwe.

HO KOPANNGWA HA MAIKEMISETSO A MORUO, LE A SETJHABA HO NWRCS

Dilemong tsa morao, ho latela ntshetso pele ya moruo wa thekolohelo le *tikoloho ya diphoofolo le dimela*, moruo wa tikoloho le sesebediswa, maano a mararo a sehlooho a IWRM a utollotswe: a sebetsang, tekatekano le a nako e telele. Maikemisetso ana a moruo, a naha le a tikoloho ya diphoofolo le dimela a kenyeleditsweng lepetjont la mmuso la DWAF '*tse ding, tsa bohle, ka ho sa feleng, mmoho*' (Setshwantsho: 1).

Maikemisetso a moruo o sebetsang e amana le kgodiso ya dipolelo tsa moruo ho tswa disebedisweng tsa metsi, kapa ho atleha ho fumana kuno e hodimodimo ho ya kamoo ho kgonahalang. Sena se ka boela sa bonwa e le ho kgotsofatsa maikemisetso a ntshetso pele ya moruo.

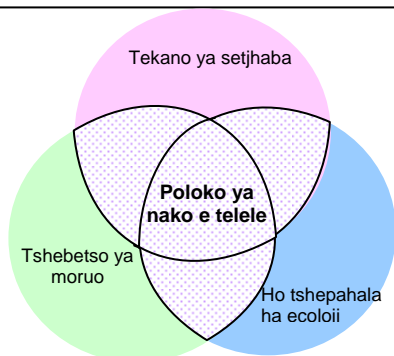


Figure 1 Dipheo-pheo tsa moruo wa thekolohelo le tikoloho tse fumanwang ho NWA

Maikemisetso a moruo o sebetsang e amana le kgodiso ya dipolelo tsa moruo ho tswa disebedisweng tsa metsi, kapa ho atleha ho fumana kuno e hodimodimo ho ya kamoo ho kgonahalang. Sena se ka boela sa bonwa e le ho kgotsofatsa maikemisetso a ntshetso pele ya moruo. Sepheo sa setjhaba sa tekatekano ke ho tiisa hore melemo ya moruo e tswang tshebedisong ya disebediswa tsa metsi, ditjeo tse fumanwang ntshetso peleng ya phumantsho ya metsi, di ajwa ka ho lekana. Kwano Aforika Borwa, sena se tshwanela ho etsuwa boemong ba bohlokwa ba molao ho fokotsa bofuma le ho lokisa ho se lekane ha nako e fetileng.

Sepheo sa nako e telele sa tikoloho ya diphoofolo le dimela se shebane le ho lekanyetswa disebediswa ka lebaka la kgolo ya setjhaba le ntshetso pele ya moruo, e be e phahamisisa tshebediso ya disebediswa ka tsela e sa tlo tlohela menyetla ya moruo le ntlafalo ya setjhaba ya meloko ya kajeno le ya kamoso. Maikemisetso a tikoloho ya diphoofolo le dimela a ka nna a kenyeletsa ho kopana le tlameho ya paballo ya naha le ya matjhaba ya *biodiversity* le ho tiisa boemo bo setjhaba sa meloko ya kajeno le ya kamoso. Maikemisetso a tikoloho ya diphoofolo le dimela a ka nna a kenyeletsa ho kopana le tlameho ya paballo ya naha le ya matjhaba ya *biodiversity* le ho tiisa boemo bo amohelohileng ba bophelo ba disebediswa ha nakwana esita le ka nako e telele.

Le ha ho le jwalo, dipheo tsa ekonomy, tsa phedisano-mmoho le tsa tikoloho ya diphoofolo le dimela di ka kgohlana. Ha ho le jwalo ho lokela ho tadingwe dithekisetsano tse mmalwa Tlhophisong, tse tla batla mokgwa tsheka-tsheko o kopantseng le ho hlahlobisisa.

MOSEBETSI WA HO KENNGWA HA YA AMEHANG

Tshireletso ya disebediswa tsa metsi e amana le ho sebediswa ha tsona, ntshetso pele, paballo, bolaodi le taolo. Molao (Act) o qosa hore ho buisanwe le "setjhaba ka kakaretso"ho theweng ha mehato ya tsamaiso e raletsweng ho kgotsofatsa ditlhoko tsa boleng ba metsi tsa basebedisi ba metsi ntle le ho fetola mekgwa ya tshireletso ya sesebediswa sa tlhaho sa boleng ba metsi. Sepheo ke sa mosebetsi wa ho kenngwa ha ya amehang ntshetso peleng ya NWRCS. Tsela e tla latelwa e totobaditswe ka tlase:

NTLAFATSA DATABASE YA MOTHO YA AMEHANG LE HO NETEFATSA MOKGWA WA HAE WA DIKGOKAHANO

Ho fihlela jwale, DWAF e se e entse mesebetsi e mengata ya ba amehang naha ka bophara. Manane a moraorao a diaterese tsa ba amehang a sebedisitswe ho qoba phetapheto e sa hloka halang ya matsapa le ditjeo. Manane a teng jwale a netefaleditswe ho nepahala le kemedi ka ho hlahlobisisa hore mekgatlo yohle e tshwanelehileng e kenyeleditswe.

Database ya komporo e se e entswe e tla hatisa ka boyona dikgokahano tsohle tsa ba amehang – puo ya molomo, fonofono le ho ngotsweng.

Dibaka di se di entswe tsa kopano e nngwe le e nngwe mme pampitshana ya ditlahiso e se e kgutlisitswe. Sena se tla fana ka rekoto ya diketsahalo. Ho eketsa moo, ditlahiso ka ba amehang di

tla hatiswa ho database mme di nyalanywe le mabitso a ba etsang ditlahiso. Tafole e ka tlase ke ya mekgatlo ya basebedisi ba metsi, ba ka kgonang ho sebedisa metsi le ba bang ba amehang e le mohlala wa ba shebetsweng ho ba lenaneng la diaterese.

KOPANO E LEBELETSWENG YA BA AMEHANG

Kopano ya ba amehang e tla tshwarwa nengneng ka Phato kapa Lwetse ya 2006. Kopano ena e tla bitswa ka dimemo feela. Kopano e tla thusa ho tjhorisa dikelello tsa ba amehang le baokamedi dinthong tse ka nnang tsa amana le ntshetso pele ya NWRCS. Dikopano di tla boela di thusa tjjhadimong

ya mokgwa wa tshebetso o sebediswang dinthong tse ka nnang tsa senya ntshetso pele ya NWRCS.

HO TLALEHELA BA AMEHANG KA TSWELOPELE

Ho latela kopano ya ba amehang, bohle ba amehang ba ka sehloohong, ba fumanehang ho *database* ba tla fumana mangolo ho netefatsa hore ba a tseba ka monyetla wa ho etsa ditlahiso, ho leboha bao ba entseng ditlahiso ho fihlela jwale, le ho netefatsa mehato e tla latelwa mosebetsing.

Mekgahlelo ya Basebedisi ba Metsi, Bao e ka bang Basebedisi ba Metsi, le ba bang ba amehang, ba lokelang ho elwa hloko sebakeng sa lenane la mangolo.

- | | |
|--|--|
| <ul style="list-style-type: none"> • Mmuso (wa naha, wa diporofinsi, le wa selehae) • Babusi ba setsho • Mekgatlo ya Paballo ya naha le diphoofolo le ya tikoloho • Mekgatlo e ikemetseng (e shebaneng le tikoloho le ntsetsopole) • Thekiso le kgwebo • Industeri • Merafo • Temo • Meru • Dipalangwang | <ul style="list-style-type: none"> • Sechaba • Babusi ba metse ba tlatsa Babusi ba merabe • Bafuputsi le baeletsi ba tsa kgwebo • Baphatlalatsi ba selehae (bangodi le seyalemoya) • Ditsi tsa tsamaiso ya metsi • Ditsi tsa Thuto • Ditsi tsa Bophelo • Bohahlaudi le Boithabiso • Basebetsi ba DWAF, dikantorong tsa naha le tsa ditikoloho |
|--|--|

KE MANG YA ETSANG MOSEBETSI?

Bongata le bothata ba porojeke ena bo hloka sehlopha sa batho ba tsebisang dintho tse ngata, dikarolwaneng tse ngata tse kenyeletsang moruo, saense ya phedisano-mmoho, tikoloho ya diphoofolo le dimelai, tekolo ya disebediswa tsa metsi, metsi a mobung, mokgwa wa tshebetso le tshekatsheko ya diqeto. Mefuta e mmedi ya mokotaba ke karolo ya mosebetsi; ntshetso pele ya dikamano le mosebetsi, esita le tebello ya mosebetsi wa ba amehang.

Kansele ya tsa Mahlale le Phuputso ya Industeri(CSIR), Southern Waters ER&C, Anchor Environmental Consultants, Univesithi ya Cape Town le Univesithi ya Rhodes, ba tsheheditse ke sehlopha sa ditsebi tse fanang ka ditshebeletso, ba tsamaisa projeke ha Zitholele Consulting e shebane le ho kenngwa mosebetsing ha ba amehang.

Ontwikkeling van 'n Nasionale Waterhulpbronklassifikasiesistelsel (NWHKS) AGTERGRONDINLIGTINGSDOKUMENT (AID)

DOEL VAN HIERDIE DOKUMENT

Die doel van hierdie Agtergrondinligtingsdokument (AID) is om Belanghebbende en Geaffekteerde Partye (B&GP's) in kennis te stel van die Departement van Waterwese en Bosbou (DWB) se projek om 'n Nasionale Waterhulpbronklassifikasiesistelsel (NWHKS) vir Suid-Afrika te ontwikkel.

Hierdie dokument gee 'n kort beskrywing van die agtergrond van die NWHKS, beskryf wat die NWHKS is, hoe waterhulpbronne tans geklassifiseer word, gee die beweegredes vir die projek en die riglynbeginsels daarvan, en sit die beoogde belanghebbertebetrokkenheidsproses uiteen. B&GP's sal tydens die ontwikkeling van die NWHKS die geleentheid kry om kwellinge te opper, kommentaar te lewer op en verslae te lees, en te sien hoe hulle kwessies en kwellinge hanteer word.

Kommentaar kan aan die projekbestuurder of die belanghebbertebetrokkenheidskantoor by die adresse hieronder gestuur word.

Openbaredeelnemerkantoor en adres vir kommentaar:

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INLEIDING

AGTERGROND

Die Nasionale Waterwet (NWW) (No. 36 van 1998) bepaal dat die nasie se waterhulpbronne op 'n billike, doeltreffende en volhoubare manier beskerm, gebruik, ontwikkel, bewaar, bestuur en beheer moet word. Die NWW bepaal ook dat alle beduidende waterhulpbronne in Suid-Afrika geklassifiseer moet word om 'n balans tussen hulpbronbeskerming en -gebruik te help fasiliteer. Die NWHKS is een van die belangrikste hulpmiddels om hierdie balans te bewerkstellig.

WAT IS DIE NWHKS?

Die NWHKS, wat deur die NWW vereis word, is 'n stel riglyne en prosedures vir die bepaling van die gewenste kenmerke van 'n waterhulpbron, en word deur 'n Bestuursklas (BK) verteenwoordig. Die BK sit die hoedanighede uiteen wat die bewaarder [Departement van Waterwese en Bosbou (DWB)] en die samelewing van verskillende waterhulpbronne vereis. Die NWHKS sal (later) in 'n raadplegingsproses gebruik word om waterhulpbronne te klassifiseer (Klassifikasieproses) om 'n balans tussen beskerming en gebruik van die nasie se waterhulpbronne te fasiliteer. Die ekonomiese, maatskaplike en ekologiese implikasies sal bepaal moet word en tydens die Klassifikasieproses aan alle B&GP's gekommunikeer moet word.

Die uitkoms van die Klassifikasieproses sal wees dat die Minister, of haar gedelegeerde gesag, die BK en Hulpbrongehalte-oogmerke (HGO's) vir elke beduidende waterhulpbron (rivier, riviermonding, vleiland en akwifer) stel, wat bindend sal wees op alle owerhede of instellings wanneer enige bevoegdheid uitgeoefen of enige plig kragtens die NWW verrig word. Hierdie BK, wat kan wissel van Natuurlik tot Swaar Gebruik/Geïmpakteer, beskryf in wese die gewenste toestand van die hulpbron en, omgekeerd, die mate waarin dit benut kan word. Met ander woorde, die BK van 'n hulpbron sit die perke vir die volume, verspreiding en gehalte van die Reserwe en HGO's uiteen, en derhalwe die potensiële toewysbare gedeelte van 'n waterhulpbron vir stroomafgebruik. Dit het aansienlike ekonomiese, maatskaplike en ekologiese implikasies.

OOGMERKE VAN NWHKS-PROJEF

Die NWHKS-projek het ses hoofogmerke. Dit is:

- Die ontwikkeling van 'n prosedure vir die bepaling van die geïntegreerde ekonomiese, maatskaplike en ekologiese waardes en implikasies van 'n BK.
- Die verfyning van die riglyne wat die NWHKS stut.
- Die ontwikkeling van riglyne vir die beste beskikbare hulpmiddels en metodes wat gebruik moet word ter ondersteuning van die bepaling van die BK.
- Die ontwikkeling van 'n gepaste belanghebbertebetrokkenheidsproses.
- Die ontwikkeling en lewering deur 'n regspan van 'n konsep-NWHKS wat vir afkondiging gereed is.
- Om die NWHKS by die DWB se breër geïntegreerde waterhulpbronbestuur (GWHB)-mandaat te help integreer.

HOE WORD WATERHULPBRONNE TANS GEKLASSIFISEER?

'n Prototipe klassifikasiesistelsel wat A tot F ekologiese kategorieë gebruik, word tans vir voorlopige Reserwebepalings gebruik. Daar is egter 'n behoefte aan 'n NWHKS wat ekologiese en gebruikervereistes in BK's integreer en ondersoek van die sosio-ekonomiese en ekologiese implikasies van waterbestuursbesluite moontlik maak.

Institusionele oorwegings vir die NWHKS

Aangesien die NWHKS deel uitmaak van die DWB se GWHB-mandaat, vind die Klassifikasieproses nie in isolasie plaas nie en is dit gekoppel aan talle ander prosesse in die geïntegreerde beplanning van die beskerming, ontwikkeling en benutting van waterhulpbronne, en in die bestuur en beheer van watergebruik. Byvoorbeeld, die Klassifikasieproses en Opvangsbestuurstrategie (OBS) is herhalend, terwyl die beoogde BK die watertoewysingsproses, die Verpligte Lisensieringsproses en die Afvalstortingvorderingstelsel (ASVS) beide beïnvloed en inlig.

Die NWHKS het ook betrekking op 'n reeks breër prosesse, en gevolglik is samewerking met al drie regeringsfere, toepaslike belanghebbers en die breër burgerlike samelewing nodig.

BEWEEGREDES VIR DIE PROJEK

Die NWW vereis 'n balans tussen die vraag na ekonomiese ontwikkeling en die beskerming van natuurlike hulpbronne wat die goedere en dienste verskaf wat vir ekonomiese groei nodig is. Dit bepaal dat daar 'n balans moet wees tussen die siening van water as 'n kommoditeit, d.w.s. die gebruik van water om ekonomiese groei te bevorder, werk te skep en armoede uit te wis, en die siening van water as deel van die wese van ekosisteme of die hulpbron, d.w.s. water wat nodig is om ekosisteme- of hulpbrons funksies te steun wat, deels, van natuurlike prosesse afhanklik is.

DWB as bewaarder van die nasie se waterhulpbronne het die mandaat om water toe te wys om ekonomiese groei en ontwikkeling te stimuleer en billikheid te bevorder, en terselfdertyd die langtermyn volhoubare benutting van die hulpbron te verseker. Een van die doelwitte van die GWHB in Suid-Afrika is om ekosistemeveerkragtigheid te beskerm, om die risiko van onomkeerbare skade en daardeur verlies van vermoë om in die toekoms in menslike behoeftes te voorsien, te vermy.

Daar moet dus nasionaal, regionaal en plaaslik 'n balans gevind word tussen benutting en beskerming van waterhulpbronne.

Uiteindelik sal die waarde wat die samelewing op die hulpbron plaas egter die mate waarin hulpbronvermoë afgetrek word en derhalwe die risiko van onomkeerbare verandering, bepaal. Dit beteken dat sommige hulpbronne meer beskerming as ander kan kry, d.w.s. sommige hulpbronne kan 'werkesels' word, terwyl ander vir beskerming geteiken word.

Onderskeid tussen die NWHKS en die Klassifikasieproses

Nasionale Waterhulpbronklassifikasiesistelsel:

'n Stelsel wat die riglyne en prosedures vir die bepaling van verskillende klasse waterhulpbronne verskaf in ooreenstemming met die letter en gees van die NWW.

Klassifikasieproses:

Die proses om die NWHKS te benut om die BK en HGO's te bepaal van al, of 'n deel van, dié waterbronne wat beduidend beskou word.

NWHKS-BEGINSELS

Die volgende beginsels is geïdentifiseer vir die ontwikkeling van die NWHKS om die proses oop, deursigtig en redelik voorspelbaar te help maak, en om die vlak van potensiele betwisting te help verminder:

Beginsel 1: Balans en kompromis vir optimale gebruik

Die gekose BK moet 'n balans vind tussen beskerming van die hulpbron en die benutting daarvan in ooreenstemming met samelewingsnorme en -waardes. Benutting van die hulpbron bied ekonomiese en maatskaplike voordele. Dit het egter ook die potensiaal om ekosistemeintegriteit in gevaar te stel, wat ekonomiese en maatskaplike koste inhou. Hierdie balans sal kompromieë verg. Die NWHKS moet dus die implikasies van verskillende BK's duidelik uiteensit om ingeligte besluitneming te fasiliteer.

Beginsel 2: Volhoubaarheid

Die vernaamste rede vir die beskerming van waterhulpbronne is om ekosistemeintegriteit te handhaaf op 'n vlak wat die volgehoue lewering van ekosisteme-goedere, -dienste en -hoedanighede vir gebruik verseker. Die NWHKS moet dus 'n raamwerk verskaf om die volhoubare gebruik van waterhulpbronne te help fasiliteer. Dit word ook besef dat daar 'n volhoubaarheidsbasislyn is wat, as dit oorgesteek word, die nie-lewering van die goedere, dienste en hoedanighede wat vir ekonomiese groei, armoedeverligting en die herstel van historiese ongelykhede noodsaaklik is, tot gevolg kan hê. Aangesien daar 'n mate van onsekerheid oor die presiese plek van hierdie basislyn is, en aangesien die risiko's wat die perke

van volhoubaarheid oorskry aansienlik is, sal die voorsorgbeginsel¹ toegepas word.

Beginsel 3: Nasionale belang en konsekwenheid

'n BK van 'n hulpbron kan oplossings bied wat op plaaslike vlak aanvaarbaar is, maar op nasionale vlak suboptimaal is. Opvangsvlakbesluite moet dus geëvalueer word teen belange op nasionale vlak (en, waar toepaslik, beperkings op internasionale vlak, bv. internasionale verpligtinge). Die NWHKS moet ook 'n duidelike voorneme ten opsigte van die kenmerke van verskillende BK's uiteensit en vir konsekwenheid in hierdie verband voorsiening maak.

Beginsel 4: Deursigtigheid

Belanghebbers moet in beide die ontwikkeling van die NWHKS en in die proses van klassifisering van die nasie se waterhulpbronne geraadpleeg word. Die benadering moet legitiem en deursigtig wees, en verseker dat die waardasiemetode wat vir die bepaling van kompromieë gebruik word, billik is. Aangesien die BK aansienlike ekonomiese, maatskaplike en ekologiese implikasies het, sal belanghebbers op 'n betekenisvolle manier ingelig moet word van die potensiele impak op en risiko's (en voordele) van die NWHKS vir hulle. Verder sal belanghebbers ook ingelig moet word oor die vlak van onsekerheid wat met baie van die ekonomiese, maatskaplike en ekologiese voorspellings inherent in die Klassifikasieproses gepaard gaan.

¹ Die voorsorgbeginsel is 'n internasionaal-aanvaarde norm wat op omsigtigheid in besluitneming dui wanneer die presiese implikasies van 'n waargenome tendens of nuwe beleidsingryping onbekend is.

Beginsel 5: Uitvoerbaarheid

Die NWHKS moet, teen redelike koste, deur opgeleide DWB/OBA-personeel op 'n bedryfsvlak gebruik word. Die institusionele en transaksionele koste wat met die neem van 'n besluit oor die BK gepaard gaan, moet so laag moontlik gehou word. Die NWHKS moet ook robuus genoeg wees om 'n besluit in die lig van onvolkome kennis te kan neem. Die finale uitkoms van die Klassifikasieproses moet die impak van bestaande aansprake op water (vir beide onttrekking en wegdoening) asook regionale en nasionale ontwikkelingsoogmerke in ag neem.

Beginsel 6: Interafhanklikheid van die hidrologiese siklus

Alle komponente van 'n waterhulpbron is verweef. As sulks moet die NWHKS verantwoording doen van die verweefdheid van alle hulpbronne wat van water afhanklik is: riviere, akwifere, vleilande en riviermondings.

Beginsel 7: Regtens verdedigbaar en wetenskaplik robuus

Die NWHKS moet regtens verdedigbaar en wetenskaplik robuus wees. Dit moet gebaseer wees op gesonde sosio-ekonomiese en ekologiese beginsels in ooreenstemming met GWHB-doelwitte. Die NWHKS en Klassifikasieproses moet regtens verdedigbaar wees, die nodige noulettendheid in die besluitnemingsproses aan die dag lê en voorkom dat regs aanspreeklikheid die DWB of die belanghebbers toeval. Dit moet ook strook met Suid-Afrika se internasionale verpligtinge en ander omgewingswetgewing, beide op nasionale en internasionale vlak. Die riglyne moet die beste beskikbare hulpmiddels en datastelle wat in die Klassifikasieproses gebruik gaan word, aandui. Dit sal gereeld bygewerk moet word om vir ontwikkelings in die wetenskap en tegnologie voorsiening te maak.

Beginsel 8: Bestuursmaatstawwe

Die maatstawwe wat op die NWHKS toegepas word, moet by die betrokke probleem pas. Die eindresultaat van die Klassifikasieproses sal die aanbeveling van 'n BK wees. Die implikasies hiervan sal teen veelvuldige maatstawwe verstaan, geïmplementeer en nagegaan moet word.

Beginsel 9: Ouditbaarheid en afdwingbaarheid

Die NWHKS moet ouditbaar en afdwingbaar wees om te verseker dat dit in werking gestel kan word. Die reguleerder sal dus moet toesien dat 'n deursigtige, permanente rekord van die prosedures, inligting en logika wat vir die klassifisering van 'n bepaalde hulpbron gebruik word, geskep en gehandhaaf word. Die uitkomstes van die NWHKS moet ook gemonitor en afdwing word.

Beginsel 10: Laagste vlak van betwisting en hoogste vlak van legitimiteit

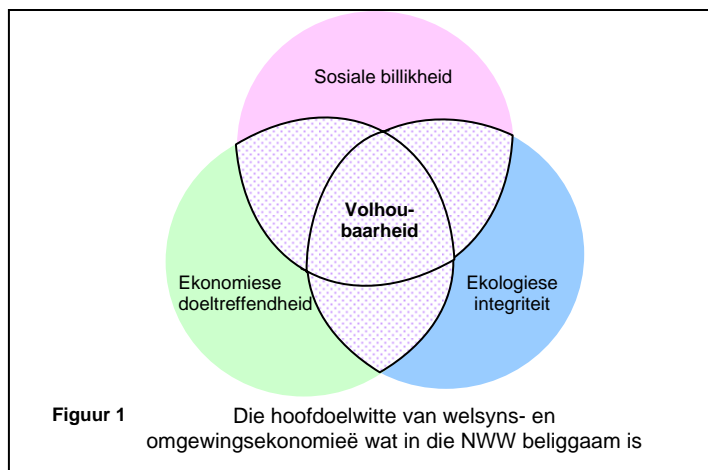
Gegewe die strategiese belangrikheid van die NWHKS, moet die beginsel van laagste vlak van betwisting en hoogste vlak van legitimiteit toegepas word. Dit verg raadpleging met, en die hoogste vlak van inkoop van, interne (DWB) en eksterne strategiese belanghebbers en B&GP's.

Beginsel 11: Benutting van bestaande hulpmiddels, data en inligting

Die NWHKS sal, waar moontlik, bestaande hulpmiddels, data en inligting gebruik. Waar van toepassing, sal bestaande hulpmiddels, data en inligting aangepas of uitgebrei word om aan die vereistes van die NWHKS te voldoen. Tensy daar 'n dringende noodsaaklikheid daarvoor is, sal geen nuwe hulpmiddels, data of inligting ontwikkel of ingesamel word nie.

INTEGREER EKONOMIESE, MAATSKAPLIKE DOELWITTE IN DIE NWHKS

In onlangse jare, na die ontwikkeling van welsynsekonomeë en ekologiese, omgewings- en hulpbronekonomeë, het drie hoofbeleidsdoelwitte vir GWHB ontstaan: doeltreffendheid, billikheid en volhoubaarheid. Hierdie ekonomiese, maatskaplike en ekologiese doelwitte is onderskeidelik beliggaam in DWB se amptelike leuse '*some, for all, for ever, together*' (Figuur 1).



Die ekonomiese doelwit van doeltreffendheid hou verband met die maksimalisering van ekonomiese opbrengste uit waterhulpbronne, of die bereiking van die grootste moontlike netto voordeel. Dit kan ook gesien word as bereiking van die doelwit van ekonomiese ontwikkeling. Die maatskaplike doelwit van billikheid is om te verseker dat die ekonomiese voordele wat uit die benutting van waterhulpbronne afkomstig is, en die koste wat vir watervoorsieningsontwikkeling aangegaan word, billik verdeel word. In Suid-Afrika moet dit geskied in die konteks van die regs noodsaaklikheid van armoedeverligting en die herstel van historiese ongelykhede.

Die doelwit van ekologiese volhoubaarheid besef die perke op hulpbronne in die lig van bevolkingsgroei en ekonomiese ontwikkeling, en bevorder die gebruik van hulpbronne op so 'n manier dat dit nie die ekonomiese geleenthede en maatskaplike welsyn van beide huidige en toekomstige geslagte in gevaar stel nie. Ekologiese doelwitte kan ook die nakoming van nasionale en internasionale biodiversiteitsbewaringsverpligtinge en die versekering van 'n aanvaarbare toestand van hulpbronne oor die kort en lang termyn insluit.

Hierdie ekonomiese, maatskaplike en ekologiese doelwitte is egter potensieel strydig en nie maklik om gelyktydig op te los nie. 'n Aantal kompromieë sal dus in die Klassifikasieproses oorweeg moet word wat 'n geskikte, geïntegreerde analitiese en besluitnemingsproses (die NWHKS) sal verg.

DIE BELANGHEBBERBETROKKENHEIDSPROSES

Die beskerming van waterhulpbronne hou fundamenteel verband met die gebruik, ontwikkeling, bewaring, bestuur en beheer daarvan. Die Wet vereis raadpleging met “die breë samelewing” by die daarstel van prosedures wat ontwerp is om aan die watergehaltevereistes van watergebruikers te voldoen, sonder om die natuurlike waterhaltekenmerke van die hulpbronbeskerming van die waterhulpbron beduidend te verander. Die doel van die belanghebbertebetrokkenheidsproses in die ontwikkeling van die NWHKS is om hulle insette te verkry om te verseker dat belanghebbers se kwessies en kwellinge verstaan en oorweeg word in die ontwikkeling van die NWHKS. Die proses wat gevolg sal word, word hieronder uiteengesit:

BYWERKING VAN BESTAANDE BELANGHEBBERDATABASIS EN VERIFIËRING VAN BELANGHEBBERS SE KONTAKBESONDERHEDE

Tot dusver het die DWB verskeie belanghebbertebetrokkenheidsprosesse regdeur die land gedoen. Bestaande, onlangse belanghebbertebetrokkenheidsposlyste is so ver moontlik gebruik om duplisering van werk en koste uit te skakel. Bestaande lysste is vir akkuraatheid en verteenwoordigendheid geverifieer deur te kruiskontroleer dat alle relevante sektore ingesluit is.

'n Elektroniese databasis is ontwikkel wat outomaties alle korrespondensie van belanghebbers – mondeling, telefonies, elektronies en skriftelik – aanteken. Velde is geskep vir elke vergadering wat bygewoon en

kommentaarblaaie wat teruggestuur is, en so meer. Dit sal 'n deurlopende rekord van deelnemingsaktiwiteite verskaf. Daarbenewens sal kommentaar deur belanghebbers ook op die databasis aangeteken word en gekoppel word aan die naam van die persoon wat die kommentaar gelewer het. Onderstaande tabel gee 'n lys van die sektore van watergebruikers, potensiële watergebruikers en ander belanghebbers as voorbeelde van wie vir die poslys oorweeg is.

VERGADERING VAN GETEIKENDE BELANGHEBBERS

'n Vergadering van geteikende belanghebbers sal iewers in Augustus of September 2006 gehou word. Hierdie vergadering is slegs op uitnodiging. Die vergadering sal belanghebbers en die

owerhede help om hulle gedagtes op potensiële kwessies te fokus wat met die ontwikkeling van die NWHKS verband kan hou. Die vergaderings sal ook instrumenteel wees om te fokus op die tegniese benadering wat ontwikkel word oor kwessies wat 'n potensiële fatale fout in die ontwikkeling van die NWHKS kan daarstel.

VORDERINGSTERUGVOER AAN ALLE BELANGHEBBERS

Na die vergadering van belanghebbers sal alle sleutelbelanghebbers op die databasis 'n brief ontvang om seker te maak dat hulle bewus is van die geleentheid om kommentaar te lewer, dié te bedank wat tot dusver kommentaar gelewer het en die volgende stappe in die proses te bevestig.

Sektore van water gebruikers, potensiële water gebruikers en ander belanghebbendes wat vir die poslyste in ag geneem word.

- Regering (nasionaal, provinsiaal en plaaslik)
- Tradisionele leiers
- Bewaring- en omgewingsliggame
- NRO's (omgewing- en ontwikkeling-gefokus)
- Handel en besigheid
- Nywerheid
- Mynbou
- Landbou
- Bosbou
- Vervoer
- Burgerlike samelewing
- Plaaslike gemeenskapsleiers benewens stamleiers
- Navorsers en konsultante
- Plaaslike media (gedrukte en uitsaamedia)
- Waterbestuursinstellings
- Opvoedkundige liggame
- Gesondheidsliggame
- Toerisme en ontspanning
- DWB-personeel in die nasionale asook in streekkantore

WIE DOEN DIE WERK?

Die omvang en kompleksiteit van hierdie projek verg 'n multidisziplinêre span met kundigheid op verskeie terreine, insluitende die ekonomie, sosiale wetenskappe, ekologie, waterhulpbronbeoordeling, grondwater, modellering en besluitontleding. Twee temas wat daarvoor heen sny, maak ook deel van die benadering uit: die ontwikkeling van organisatoriese en institusionele verhoudings en prosesse, en 'n proses van geteikende belanghebbers.

Die Wetenskaplike en Nywerheidsnavorsingsraad (WNNR), Southern Waters ER&C, Anchor Environmental Consultants, die Universiteit van Kaapstad en Rhodes Universiteit, gesteun deur 'n multidisziplinêre span diensverskaffers, bestuur die projek, terwyl Zitholele Consulting die belanghebbertebetrokkenheidsproses hanteer.

Ukwenziwa koHlelo lukaZwelonke lokuBeka ngeMikhakha iNgcobo yezaManzi (i-NWRCS)

UMBHALO OQUKETHE IMININGWANE EYISISEKELO (i-BID)

INHLOSO YALO MBHALO

Inhloso yalo Mbhalo Oqukethe Iminingwane eyisiSekelo (iBackground Information Document) (iBID) ukwazisa amaqembu anentshisekelo kanye nathintekayo (Interested and Affected Parties) (ama-I&APs) ngephrojekthi yoMnyango wezaManzi nezaMahlathi (i Department of Water Affairs and Forestry) (i-DWAF) yokwenzela iNingizimu Afrika uHlelo lukaZwelonke lokuBeka ngeMikhakha iNgcobo yezaManzi (iNational Water Resource Classification System) (i-NWRCS).

Lo mbhalo unikeza incazelo emfushane ngesisekelo se-NWRCS, uchaza ukuthi iyini i-NWRCS, yini esetshenziswayo njengamanje ukufaka ngaphansi kwemikhakha ethile izingcebo zezamanzi, unikeza izizathu ezesekela le phrojekthi, imigomo eyihlalela indlela, futhi wenza uhloko lwenqubo ehlongozwayo yokubandakanywa kwalabo abathintekayo. Abanentshisekelo nabathintekayo (ama-I&APs) bazoba nethuba lokuveza izingqinamba ezibakhathazayo, baphawule futhi babukeze imibiko, bese behlola nokuthi izingqinamba nokukhathazeka kwabo kubhekwana kanjani nakho.

Imibono ingathunyelwa kumphathi wephrojekthi noma ehhovisi elibhekene nokubandakanywa kwabathintekayo ezindaweni okuthintanwa kuzo ezingezansi.

Ihovisi lokubamba komphakathi iqhaza kanye nekhele lokubuyisela imibono:

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ISINGENISO

ISISEKELO

UMthetho kaZwelonke wezaManzi (iNational Water Act) (i-NWA) (unombolo 36 ka-1998) udinga ukuthi ingcebo yesizwe yezamanzi ivikelwe, isetshenziswe, ithuthukiswe, ilondolozwe, iphathwe futhi ilawulwe ngendlela enokulingana, eyimpumelelo kanye nekwazi ukuqhutshekiselwa phambili. UMthetho kaZwelonke wezaManzi (i-NWA) ubuye udinge ukuthi yonke ingcebo esemqoka yezamanzi eNingizimu Afrika ihlelwe ngokwemikhakha ukusiza ukuletha ukulingana phakathi kokuvikelwa nokusetshenziswa kwengcebo. Uhlelo lokubeka ngemikhakha ingcebo yezamanzi (i-NWRCS) lungolunye lwamathulusi asemqoka okufinyelela lokhu kulingana.

IYINI I-NWRCS?

I-NWRCS, edingwa yi-NWA, yiqoqo lomhlahlandlela kanye nezinqubo ezilandelwayo ukuze kutholwe izimpawu ezifiswayo zengcebo yezamanzi, futhi imelwe yisiGaba sokuPhatha (iManagement Class) (i-MC). I-MC iveza lezo zimpawu umgcinzinto [uMnyango: ezaManzi nezaMahlathi (iDepartment: Water Affairs and Forestry)(i-DWAF)] kanye nomphakathi abazidingayo ngengcebo eyehlukene yezamanzi. I-NWRCS izosetshenziswa (ngokuzayo) kunqubo yokubonisana ukuhlela ngokwemikhakha ingcebo yezamanzi (iClassification Process) ukusiza ukuletha ukulingana phakathi kokuvikelwa nokusetshenziswa kwengcebo yesizwe yezamanzi. Imiphumela engahle ivele yezomnotho, ezokuhlalisana kanye neyobudlelwane phakathi kwezinto eziphilayo nendawo yazo eziphila kuyo ons yokukhetha isiGaba lokuphatha (i-MC) kuzodingeka itholakale bese kwaziswa bonke abanentshisekelo nabathintekayo (ama-I&APs) ngesikhathi seNqubo yokuHlela ngokweMikhakha.

Umphumela weNqubo yokuHlela ngokweMikhakha kukuba ukuthi uNgqongqoshe noma isiphathimandla sakhe esibekiwe, abeke isiGaba lokuPhatha (i-MC) kanye neziNhlolo zeSimo seNgcobo (amaResource Quality Objectives) (ama-RQOs) ngayo yonke ingcebo esemqoka yezamanzi (umfula, isizalo somfula, amaxhaphozi kanye namadwala akwazi ukugcina amanzi) okuzoba nezibopho kuzo zonke iziphathimandla noma izinhlangano lapho zisebenzisa noma yimaphi amandla noma zenza noma yimuphi umsebenzi ngaphansi koMthetho kaZwelonke wezaManzi (i-NWA). Leli isiGaba sokuPhatha (i-MC), esingasuka kulokho okungokweMvelo siye kokuSetshenziswa kaKhulu, empeleni sichaza isimo esifiswayo sengcebo leyo, futhi ngakolunye uhlangathi, izinga esingasetsheziwa sifike kulo. Ngamanye amazwi, isiGaba sokuPhatha (i-MC) sengcebo ethile sibeka imingcele ngobungako, ukusatshalaliswa kanye nangesimo esihle sokuKhona oKongiwe kanye nangezinhloso zeSimo seNgcobo (iReserve and RQOs) bese ngenxa yalokho sibeke imingcele ngengxenywe yengcebo yezamanzi ekwazi ukwabelwa ukusetshenziswa kwezinye izindawo ezingekho lapho esuka khona amanzi. Lokhu kunemiphumela ebonakalayo yezomnotho, ezokuhlalisana neyobudlelwane phakathi kwezinto eziphilayo nendawo yazo eziphila kuyo.

I ZINHLOSO ZEPHROJEKTHI YE- NWRCS

Iphrojekthi ye-NWRCS inezinhloso eziyisithupha ezisemqoka. Lezo zinhloso yilezi:

- Ukwenziwa kwenqubo ezolandelwa yokuthola amagugu ahlanganisiwe ezomnotho, ezokuhlalisana kanye nawobudlelwane phakathi kwezinto eziphilayo nendawo yazo eziphila kuyo kanye nemiphumela yesiGaba sokuPhatha (i-MC).
- Ukuphucukiswa kwemihlahlandlela eyesekelo i-NWRCS.
- Ukwenziwa kwemihlahlandlela yamathulusi nezindlela ezilandelwayo okuyizona ezinhle kuzo zonke ezitholalayo ekuxhaseni ukutholwa kwesiGaba sokuPhatha (i-MC).
- Ukwenziwa kwenqubo efanele yokubandakanywa kwabathintekayo.
- Ukwenziwa nokulethwa kwe-NWRCS esazodingidwa esilungele ukufaka encwadini yezaziso zombuso yiqembu lezomthetho.
- Ukusiza ukufaka ihlanganise i-NWRCS egunyeni lokuphathwa okubanzi ngokuthe xaxa kwengcebo yezamanzi lwe-DWAF (iwater resource management (i-RM)).

YINI ESETSHENZISWAYO NJENGAMANJE UKUHLELA NGOKWEMIKHAKHA INGCEBO YEZAMANZI?

Njengamanje kusetshenziswa uhlelo olusebenza njengomfuziselo wokuhlongozwayo olusebenzisa imikhakha ephathelene nobudlelwane phakathi kwezinto eziphilayo nendawo yazo eziphila kuyo obusuka ku-A kuye ku-F lusetshenziselwa ukutholwa okwenziwa kusaqalwa kwezinto eziKhona. Kodwa-ke kunesidingo sokuthi kube nohlelo lukazwelonke lokubeka ngokwemikhakha (i-NWRCS) oluhlanganisa izidingo zobudlelwane phakathi kwezinto eziphilayo nendawo yazo eziphila kuyo nezabasebenzisi esiGabeni sokuPhatha (i-MC), futhi noluvumela ukuhlolisiswa kwemiphumela yezinqumo zokuphathwa kwamanzi kwezokuhlalisana kwezomnotho kanye nakubudlelwane phakathi kwezinto eziphilayo nendawo yazo eziphila kuyo.

Izinto okumele zicatshangelwe izinhlangano yi-NWRCS

Njengoba i-NWRCS iyingxenywe yegunya le-IWRM ye-DWAF, iNqubo yokuBeka ngokweMikhakha (iClassification Process) ayenzi i-hamba yodwa futhi ixhume nezinye izinqubo eziningi ekuhlweni okuhlanganisiwe kokuvikelwa, ukuthuthukiswa nokusetshenziswa kwengcebo yezamanzi, kanye nasekuphathweni nasekulawulweni kokusetshenziswa kwamanzi. Ukwenza isibonelo, iNqubo yokuBeka ngokweMikhakha (iClassification Process) neSu lokuPhatha kweNdamo okuQoqelwa kuyo (iCatchment Management Strategy) (i-CMS) kuyaziphindaphinda, kuthi isiGaba sokuPhatha (i-MC) esihlongozwayo senze kokubili ukuba nomthelela nokuhlomisa inqubo yokwabiwa kwamanzi, inqubo eyiMpoqo yokuThola iLayisense kanye noHlelo lokuKhiswa kweMfucuzo (iWaste Discharge Charge System) (i-WDCS).

I-NWRCS ibuye ibe nomthelela ohlwini lwezinqubo ezithe xaxa, futhi ngenxa yalokho ukubambisana phakathi kwayo yomithathu imikhakha kaHulumeni, abathintekayo abafanele kanye nomphakathi wezakhamuzi ngokubanzi kuyadingeka.

IZIZATHU EZESEKELE IPHROJEKTHI

UMthetho kaZwelonke wezaManzi (i-NWA) udinga ukuthi kube nokulinganiswa kokufuneka kokuthuthukiswa kwezomnotho kanye nokuvikelwa kwezingcebo zemvelo ezinikeza izimpahla nokusizakala okudingekayo ukuze kube nokukhula kwezomnotho. Lokhu kudinga ukuthi kufinelelwe ukulingana phakathi kokubuka amanzi njengento ekwazi ukudayiswa, okungusethenziswa kwamanzi ukukhuthaza ukukhula kwezomnotho, ukwakha imisebenzi nokuqeda ubuphofu; kanye nokubuka amanzi njengengxenywe yomnyombo wohlelo lwezinto eziphilayo nendawo ezikuyo noma wengcebo, okusho ukuthi njengamanzi adingekayo, ukuxhasa uhlelo lwezinto eziphilayo nendawo eziphila kuyo noma imisebenzi yengcebo enengxenywe yayo eyencike kuzinqubo zemvelo

I-DWAF njengomgcinizinto wengcebo yesizwe yezamanzi, igunyazwe ukuthi yabe amanzi, ukukhuthaza ukukhula nokuthuthukiswa kwezomnotho, nokukhuthaza ukulingana, kuthi ngasikhathi sinye iqinisekise ukusethenziswa kwengcebo okukwazi ukuqhubekiswa esikhathini eside. Enye yezinjongo ze-IWRM eNingizimu Afrika ukuvikela ukukwazi ukubhekana nezimo ezinzima kohlelo lwezinto eziphilayo nendawo eziphila kuyo, ukugwema ukubekeka engcupheni ngomonakalo ongenakulungiswa kanye nangenxa yalokho ukulahleka kwekhono lokuhlangabeza izidingo zesintu ngokuzayo.

Ngakho-ke kufanele kutholakale ukulingana phakathi kokusethenziswa nokuvikelwa kwengcebo yezamanzi kuzwelonke, ezifundeni kanye nasezindaweni eziseduze.

Kodwa-ke ekugcineni, igugu elibekwa ngumphakathi kuleyo ngebo lizokhombisa ukuthi ikhono lengcebo liyodonselwa phansi kangakanani, bese ngalokho kuba nokubekeka engcupheni okungasenkulungiswa. Lokhu kusho ukuthi ezinye izingcebo zingahle zinikezwe ukuvikelwa okuthe xaxa kunezinye, ngamanye amagama ezinye izingcebo ziyokuba "izinkunzi ezifakwa ejokeni", lapho ezinye zibe zibhekelle ukuthi zivikelwe.

Ukwehlukana phakathi kwe-NWRCS neNqubo yokuBeka ngeMikhakha

Uhlelo lukaZwelonke lokuBeka ngeMikhakha iNgebo yezaManzi:

Uhlelo oluhlizeka ngemihlahlandlela nezinqubo ezilandelayo zokuthola izigaba ezahlukene zengcebo yezamanzi ezihambisana nezinkambiso nomoya we- NWA.

Inqubo Yokuhlela:

Inqubo yokusebenzisa i-NWRCS ukuthola i-MC nama-RQO azo zonke noma engxenywe yazo zonke izingcebo zezamanzi ezithathwa njengezisemqoka.

IMIGOMO YE-NWRCS

Kubonakale imigomo elandelayo yohlelo lokubeka ngokwemikhakha ingcebo yezamanzi (i-NWRCS) eguqukayo ukusiza ukwenza inqubo ivuleke, ibonakale ngokungafihli lutho futhi ikwazi nokuthi kukwazi ukubonela phambili izinto ngayo, kanye nokusiza ukwehlisa izinga lokubangwa okungahle kube khona:

Umgomo 1: Ukulinganisa nokusebenzisana ukuze kube nokusebenziseka ngokugcwele

IsiGaba sokuPhatha (i-MC) esikhethiwe kumele silinganise ukuvikelwa kwengcebo nokusethenziswa kwayo kuhambisane nezinkambiso namagugu omphakathi. Ukusethenziswa kwengcebo kuletha inzuzo kwezomnotho nakwezokuhlalisana. Kubuye kube nekhono, kodwa-ke, lokubeka esimweni esingasihle ukusebenza ngokugcwele kohlelo lwezinto eziphilayo nendawo eziphila kuyo, okuba nezindleko zezomnotho nezokuhlalisana. Lokhu kulinganiswa kuzodinga ukuthi kube nokusebenzisana. Uhlelo lokubeka ingcebo yezamanzi ngokwemikhakha (i-NWRCS) ngakho-ke kumele lubeke ngokucacile imiphumela yeziGaba zokuPhatha (ama-MC) ezahlukene zokuthi zisize ekuthathweni kwezinqumo okwesekelwe ekuthini kube nolwazi oludingekayo.

Umgomo 2: Ukukwazi ukuqhubekiselwa phambili

Isizathu esiphambili sokuvelwa kwezingcebo zezamanzi ukugcina ukusebenza ngokugcwele kohlelo lwezinto eziphilayo nendawo eziphila kuyo ezingeni eliqinisekisa ukulethwa okuqhubekayo kwezimpahla zezinto eziphilayo nendawo eziphila kuyo, izinsizakalo kanye nezimpawu ezisethenziswayo. Uhlelo lokubeka ngokwemikhakha ingcebo yezomnotho (i-NWRCS) ngakho-ke ludinga ukuhlizeka ngohlaka lokusiza ukulethwa ukusethenziswa kwezingcebo zezamanzi ngendlela ekwazi ukuthi iqhutshekiswe phambili. Kuyemkelwa futhi ukuthi kunephuzu lokulinganisa elibekiwe lokuthi izinto zikwazi ukuqhubekiselwa phambili okuyokuthi uma kweqelwe ngale kwalo, lokho kube nomphumela wokuthi kungakwazeki ukuthi kulethwe izimpahla, izinsizakalo nezimpawu ezidingekayo ukuze kube nokukhula kwezomnotho, ukudanjiswa kobuphofu nokulungiswa kokungalingani okwenziwa yisikhathi okwakuphilwa kuso ngaphambilini. Njengoba kunezinga lokungaqiniseki mayelana nendawo okuyiyona ngempela yaleli phuzu lokulinganisa elibekiwe, futhi nanjengoba izingozi zokweqela ngale kwemikhawulo yokukwazi ukuthi izinto

ziquhutshekiswe phambili zizinkulu, kuzosethenziswa umgomo wokuvikela ezimweni ezingaba yingozi¹.

Umgomo 3: Intshisekelo nokusebenza ngokufanana kwezinto kuzwelonke

IsiGaba sokuPhatha (i-MC) kwengcebo ethile kungahle kuveze izixazululo ezemukelekile ezingeni lendawo eseduze kepha ezingaphansi kwezinga elihle uma sezibhekwa ezingeni likazwelonke. Ngakho-ke izingqomo eizithathwa endaweni eseduze kudingeka zihlaliswe ziqhathaniswe nezintshisekelo ezisezingeni likazwelonke (kuthi nalapho kufanele khona ziqhathaniswe nezithiyo ezisezingeni lamazwe ngamazwe, isib. Izibopho zamazwe ngamazwe) Uhlelo lukazwelonke lokubeka ngemikhakha ingcebo yezamanzi (i-NWRCS) kumele lubeke ngokucacile inhloso mayelana nobunjalo beziGaba zokuPhatha (ama-MC) ezehlukene bese luletha ukusebenza ngokufanana mayelana nalokhu.

Umgomo 4: Ukuveza konke obala

Abathintekayo kumele kubonise nabo kukho kokubili ukwenziwa kwezinhlelo zikazwelonke zokubeka ngokwemikhakha ingcebo yezamanzi (i-NWRCS) kanye nakunqubo yokufaka emikhakheni izingcebo zezwe zamanzi. Indlela esethenziswayo kumele ibe ngefanele neveza konke obala, futhi iqinisekise ukuthi indlela elandelayo yokuhlola esethenziswa ukuthi kube nokusebenzisana ibe ngelungele bonke. Njengoba isiGaba sokuPhatha (i-MC), sinemiphumela emikhulu yezomnotho, ezokuhlalisana neyezinto eziphilayo nendawo eziphila kuyo, abathintekayo kuzodingeka baziswe ngendlela eqondisisekayo ngemiphumela engahle ivele kanye nezingozi (nokusizakala) kohlelo lukazwelonke lokubeka ngokwemikhakha ingcebo yezamanzi (i-NWRCS) kubo. Ngaphezu kwalokho, abathintekayo kuzodingeka baziswe ngezinga lokungaqiniseki elihambisana nokubikezelwa phambili okutholakala kuNqubo yokuFaka ngeMikhakha (Classification Process) mayelana nezomnotho, ezokuhlalisana kanye nokwezinto eziphilayo nendawo eziphila kuyo.

¹ Umgomo wokuvikela ezimweni ezingaba yingozi uyinkambiso eyemukeleka kumazwe ngamazwe ekhuthaza ubuhlakani ekuthatheni izingqomo lapho imiphumela enembayo yokuqhubeka kwezinto okubonakalayo noma ukungenelela kwenqubomgomo entsha kungaziwa.

Umgomo 5: Ukukwazi ukuthi okuthile kwenzeka

Uhlelo lukazwelonke lokubeka ngemikhakha ingcebo yezamanzi (i-NWRCS) ludinga ukuthi lusetshenziswe ngokwezindleko ezemukelekayo ngabasebenzi abaqeqeshiwe be-DWAF/CMA ezingeni okwenziwa kulo umsebenzi. Izindleko ezihambelana nokuthathwa kwesinqumo ngesiGaba sokuPhatha (i-MC) zenhlango nezezinqumo ezenziwayo kumele zibe phansi ngokusemandleni. Uhlelo lukazwelonke lokubeka ngemikhakha ingcebo yezamanzi (i-NWRCS) lumele lwakheke ngendlela enomfutho ngokwenele ukuthi kuthathwe isinqumo noma kunolwazi olungaphelele kahle. Umphumela wokugcina weNqubo yokuFaka ngeMikhakha (iClassification Process) kumele ucabangele imiphumela yamagunya akhona njengamanje okusebenzisa amanzi (esetshenziselwa kokubili ukudonswa kanye nokulahlwa) kanye nezinhlozo zesifunda nezikazwelonke zokuthuthukiswa.

Umgomo 6: Ukwencika kokuthile kokunye emzungezweni wamanzi

Zonke izinto eziqokethwe yingcebo yezamanzi zixhumene. Ngenxa yalokho, uhlelo lukazwelonke lokubeka ngemikhakha ingcebo yezamanzi (i-NWRCS) kudingeka lukwazi ukuphendulela konke ukuxhumana okukhona phakathi kwazo zonke izingcebo ezencike emanzini, emifuleni, emadwaleni abamba amanzi, emaxhaphozini kanye nasezizalweni.

Umgomo 7: Ukukwazi ukuvikeleka ngokomthetho nokuba nomfutho ngakwezesayensi

Uhlelo lukazwelonke lokubeka ngemikhakha ingcebo yezamanzi (i-NWRCS) kumele lukwazi ukuvikeleka ngokomthetho futhi lube nomfutho ngakwezesayensi. Kumele lwesekelwe kumigomo esimeme yezokuhlalisana kwezomnotho kanye neyezinto eziphilayo nendawo eziphila kuyo ngokuhambelana nezinjongo ze-IWRM. Uhlelo lukazwelonke lokubeka ngemikhakha ingcebo yezamanzi (i-NWRCS) nenqubo yokuBeka ngeMikhakha (iClassification Process) kumele zikwazi ukuvikeleka ngokomthetho, zisebenzise izindlela ezifanele zokuhlola izinto kunqubo yokuthathwa kwezinqumo, futhi zivimbele ukuba necala ngokwasemthethweni okuzolethwa ku-Mnyango wezaManzi nezaMahlathi (i-DWAF) noma kwabathintekayo. Kumele kubuyele kuhambisane nezibopho zamazwe ngamazwe kanye neminye imithetho eshayiwe yezendawo okuphilwa kuyo yaseNingizimu ndawo zombili ezingeni likazwelonke nelamazwe ngamazwe. Imihlahlandlela kumele ikhombise amathulusi atholalayo okuyiwona amahle kunawo wonke kanye namaqoqo emidati okuzosetshenziswa kuNqubo yokuBeka ngeMikhakha (iClassification Process).

Umgomo 8: Izikali zokuphatha

Isikali okusetshenziswa kuso uhlelo lukazwelonke lokubeka ngemikhakha ingcebo yezamanzi (i-NWRCS) kumele kube ngesifanele inkinga ekhona ngaleso sikhathi. Umphumela ovela ekugcineni weNqubo yokuBeka ngeMikhakha (iClassification Process) uzoba yisincomo sesiGaba sokuPhatha (i-MC). Imiphumela yalokho kuzodingeka iqondiswe, isetshenziswe futhi ihloliswe ezikalini ezininginingi.

Umgomo 9: Ukukwazi ukucutshungulwa nokuphoqwa

Uhlelo lukazwelonke lokubeka ngemikhakha ingcebo yezamanzi (i-NWRCS) ludinga ukuthi lukwazi ukucutshungulwa futhi luphoqwe ukuninisekisa ukuthi lwenziwe ukuthi lusebenze. Ngakho-ke, umuntu obhekele ukulandelwa kwezinto kuzodingeka aqinisekise ukuthi kwakhiwe futhi kugcinwe irekhodi eliveza konke obala, elihlala unomphela lezinqubo ezilandelwayo, ulwazi kanye nomqondo osetshenziswe ukubeka ngokwemikhakha ingcebo ethile. Imiphumela yohlelo lukazwelonke lokubeka ngemikhakha ingcebo yezamanzi (i-NWRCS) kuzodingeka iqashelwe futhi iphoqelwe.

Umgomo 10: Izinga eliphansi kunawo wonke lemibango kanye neliphakeme kuwo wonke lokwemukeleka

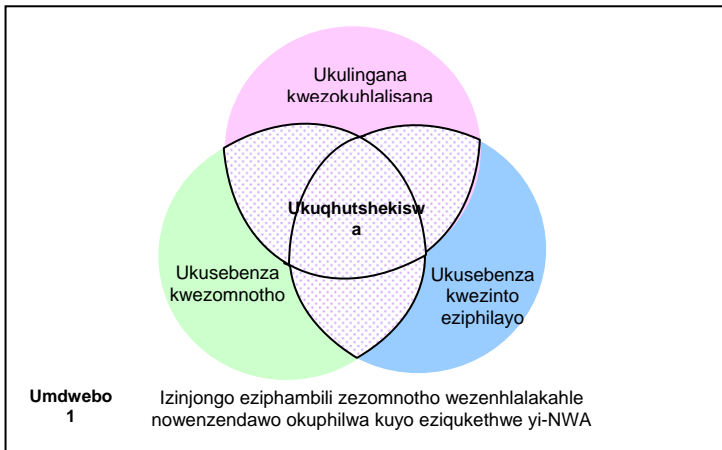
Njengoba kunokubaluleka kohlelo lukazwelonke lokubeka ngemikhakha ingcebo yezamanzi (i-NWRCS), kumele kusetshenziswe umgomo wezinga eliphansi kunawo wonke lemibango neliphakeme kunawo wonke lokwemukeleka. Lokhu kudinga ukubonisana, kanye nokuvumelana okusezingeni eliphakeme kuwo wonke lwabathintekayo abangaphakathi (i-DWAF) kanye nabangaphandle okusetshenziswana nabo ngesu kanye nabanentshisekelo (ama-I&APs).

Umgomo 11: Ukusetshenziswa kwamathulusi, imidati kanye neminingwane ekhona

Uhlelo lukazwelonke lokubeka ngemikhakha ingcebo yezamanzi (i-NWRCS) luzosebenzisa amathulusi, imidati kanye nolwazi oselukhona kuyo yonke indawo lapho lokho kukwazi ukuthi kwenzeka khona. Lapho kukwazi ukuthi kusebenze khona, amathulusi, imidati nolwazi osekukhona kuzogqulwa noma kwelulwe ukhulungabeka izidingo zohlelo lukazwelonke lokubeka ngemikhakha ingcebo yezamanzi (i-NWRCS). Ngaphandle kokuthi kube nesidingo esiphuthumayo, akunamathulusi, imidati noma ulwazi olusha okuzokwenziwa noma kuqoqwe.

UKUFAKA IZINJONGO ZEZOMNOTHO NEZOKUHLALISANA KU-NWRCS

Eminyakeni esanda kwedlula, kulandela ukwenziwa kwezomnotho ezibhekela inhlalakahle kanye nezomnotho zezinto eziphilayo nendawo eziphila kuyo, ezendawo kanye nezengcebo, kuye kwavela izinjongo ezintathu ezisemqoka ze-IWRM: ukusebenza ngempumelelo, ukulingana nokukwazi ukuqhutshiselwa aphambili. Lezi zinjongo zezomnotho, ezokuhlalisana nezezinto eziphilayo nendawo eziphilakuyo, ngokulandelayo kwazo, zitholakala kusiqubulo sangokomthetho soMnyango weMvelo nezaMahlathi (i-DWAF) esithi 'some, for all, for ever, together' (Umdwebo 1).



Injongo yezomnotho yokusebenza ngempumelelo ihambelana nokugcwalisa ngokuphelele inzuzo yezomnotho ngengcebo yezamanzi, noma ukufinyelela inzuzo enkulu ngokusemandleni engahle ibe khona. Lokhu kungabuyele kuthathwe njengokufeza injongo yokuthuthukiswa kwezomnotho. Injongo yezokuhlalisana yokulingana kuqinisekisa ukuthi ukusizakala kwezomnotho okutholakele ngokusebenzisa ingcebo yezamanzi, nezindleko ezivilele ekuthuthukiseni ukutholakala kwamanzi kwabiwa ngendlela engenakuchema. ENingizimu Afrika, lokhu kudingeka kwenziwe esimweni semiyalo esemthethweni yokwehliswa kobuphufu nokulungisa ukungalingani kwangesikhathi esedlule.

Injongo yokuqhutshiselwa phambili kwezinto eziphilayo nendawo eziphila kuyo iyakwemukela ukuba nomkhawulo kwezingcebo uma kuqhathaniswa nokukhula kwenani labantu abakhona kanye nokuthuthukiswa kwezomnotho, futhi ikhuthaza ukusetshenziswa kwezingcebo ngendlela engezukubeka eubini amathuba eozomnotho nokuphatheka kahle kweozokuhlalisana kwazo zombili izizukulwane ezikhona njengamanje nezizayo. Izinjongo zezinto eziphilayo nendawo eziphila kuyo zingabuyele zibandakanye nokuhlangukuba izibopho zikazwelonke nezamazwe ngamazwe zokulondolozwa kwezinto ezahlukene eziphilayo kanye nokuqinisekisa ukuba khona kwesimo sempilo yezingcebo ezemukelekayo esikhathini esiseduze nesisekude.

Kodwa-ke, lezi zinjongo zezomnotho, ezokuhlalisana nezezinto eziphilayo nendawo eziphila kuyo zinekhono lokungqubuzana futhi akalula ukuzixazulula ngasikhathi sinye. Kuzodingeka kubhekwe inani lokusebenzisa kuNqubo yokuHlela (iClassification Process) ezodinga uhlelo lolufanele, oluhlangene nolucubungulisayo lokuthathwa kwezinqumo (i-NWRCS).

INQUBO YOKUBANDAKANYWA KWABATHINTEKAYO

Ukuvikelwa kwezingcebo
 zezamanzi kwesekelwe
 kwahlobana
 nokusetshenziswa,
 ukuthuthukiswa,
 ukulondolozwa, ukuphathwa
 nokulawulwa kwazo.
 UMthetho udinga ukubonisana
 "nomphakathi ngokubanzi"
 ekusunguleni izinqubo
 ezilandelwayo ezenzelwe
 ukwenelisa izidingo zesimo
 esihle samanzi zabasebenzisi
 bamanzi, ngaphandle
 kokuguqula ngendlela enkulu
 izimpawu zemvelo zesimo
 samanzi zokuvikelwa
 kwengcebo yezamanzi.
 Inhloso yokubandakanywa
 kwabathintekayo ekwenziweni
 kohlelo lukazwelonke
 lokubeka ngemikhakha
 ingcebo yezamanzi (i-
 NWRCS) ukuthola imibono
 yabo ukuqinisekisa ukuthi
 izingqinamba zabathintekayo
 ziyaqondiswa futhi
 ziyabhekela ekwenziweni
 kohlelo lukazwelonke
 lokubeka ngemikhakha
 ingcebo yezamanzi (i-
 NWRCS). Inqubo ezolandelwa
 izochazwa ngezansi:

**UKUFAKA OKUSHA
 ESIKHUNGWENI
 SEMININGWANE
 YABATHINTEKAYO
 NOKUQINISEKISA
 NGEMININGWANE
 YOKUXHUMANA
 NABATHINTEKAYO**
 Kuse kube manje i-DWAF
 isiyenze izinqubo eziningi
 zabathintekayo kulo lonke
 izwe. Izinhla zokubhalela
 abathintekayo ezikhona,
 ezisanda kwenziwa ziye
 zasetshenziswa ngokusemandleni ukugwema
 ukuphindaphindwa
 kokwenziwayo nezindleko.
 Izinhla ezikhona ziye
 zaqinisekiswa ukubheka
 ukunemba nokumelwa
 kwabantu ngokuhlola
 nxazonke ukuthi yonke
 imikhakha efanele iye
 yafakwa.

Isikhungo seminingwane se-
 elekhtronikhi esizovele
 siqophe yonke okuvela
 kwabathintekayo-okwenziwa
 ngomlomo, ucingo, i-
 elekhtronikhi nokubhaliwe –
 siye senziwa. Kwenziwe

izindawo zemihlangano yonke
 engenelwe namakhasi
 emibono abuyisiwe nokunye
 njalonzalo. Lokhu kuzonikeza
 irekhodi elihlala likhona lezinto
 ezenziwayo ukubamba iqhaza.
 Ukwengeza lapho, imibono
 yabathintekayo izoqoshwa
 esikhungweni seminingwane
 bese ixhunywa egameni
 lalowo muntu ophawulile.
 Ithebula elinegzansi lenze uhla
 lwemikhakha yabasebenzisi
 bamanzi, abangahle babe
 ngabasebenzisi bamanzi
 nabanye abathintekayo abaye
 bacatshangelwa uhla
 lwababhalelwayo.

khona ezingaba nomthelela
 ekwenziweni kohlelo
 lukazwelonke lokubeka
 ngemikhakha ingcebo
 yezamanzi (i-NWRCS). Le
 mihlangano izobuye isebenze
 ekugxiliseni indlela
 yokwenziwa kwezinto
 kwezobuchwepheshe
 eyakhiwayo mayelana
 nezingqinamba ezingahle zibe
 yiphutha elibulalayo
 ekwenziweni kohlelo
 lukazwelonke lokubeka
 ngemikhakha ingcebo
 yezamanzi (i-NWRCS).

**UKUBUYISELWA
 KWEMIBONO
 NGOKUQHUBEKA KWEZINTO
 KWABATHINTEKAYO**
 Ngemuva komhlangano
 wabathintekayo, bonke
 abathintekayo abasemqoka
 bazothola incwadi ebhekiswe
 kubo ngqo ukuqinisekisa
 ukuthi bayazi ngethuba
 lokuphawula, lokubonga labo
 abaye baphawula kuze kube
 yileso sikhathi, nokuqinisekisa
 isinyathelo esilandelayo
 kunqubo.

**UMHLANGANO
 WABATHINTEKAYO
 OKUQONDIWE KUBO**
 Umhlangano wabathintekayo
 okuqondiswe kubo uzobanjwa
 ngesikhathi esithile kuNcwaba
 noma kuMandulo ngo-2006.
 Lo mhlangozi uzongenelwa
 ngesimemo sodwa.
 Umhlangano uzosiza
 ukugxilisa izingqondo
 zabathintekayo
 nezeziphathimandla mayelana
 nezingqinamba ezingahle zibe

Imikhakha yabasebenzisi bamanzi, abangahle babe ngabasebenzisi bamanzi nabanye abathintekayo okumele bacatshangelwe ohlwini lwababhalelwayo.

- | | |
|--|--|
| <ul style="list-style-type: none"> • UHulumeni (kazwelonke, wesifunda nowendawo) • Abaholi bendabuko • Izinhlangano zokulondolozwa nezendawo okuphilwa kuyo • Ama-NGO (ezindawo okuphilwa kuzo nabhekene nezokuthuthukiswa) • Ezokuthengiswa nezamabhizinisi • Ezezimboni • Ezezimayini • Ezolimo • Ezamahlathi • Ezezinto zokuhamba • Umphakathi wezakhamuzi | <ul style="list-style-type: none"> • Abaholi bemiphakathi yendawo ukwengeza kubaholi besizwe • Abacwaningi nezazi ezingochwepheshe • Abezindaba basendaweni (amaphephaandaba nemisakazo) • Izinhlangano zokuphathwa kwamanzi • Izinhlangano zezemfundo • Izinhlangano zezempilo • Ezokuvakasha nezokungcebeleka • Abasebenzi be-DWAF emaHhovisi kaZwelonke nawesiFunda |
|--|--|

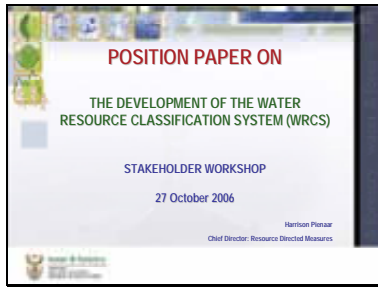
NGUBANI OWENZA UMSEBENZI?

Ukhalo nokushuba kwale
 phrojekthi kudinga iqembu
 elizigabaziningi
 elinobuchwepheshe
 ezindaweni eziningi
 kubandakanya ezomnotho,
 isayensi yezokuhlalisana,
 ebudlelaneni bezinto
 eziphilayo nendawo eziphila
 kuyo, ukuhlolwa kwengcebo
 yezamanzi, amanzi
 asemhlabathini, ukufanekisa,
 kanye nokucutshungulwa
 kwezinqumo. Izindikimba
 ezivundla ndawo zonke nazo
 ziyingxenyendelela
 elandelwayo; ukuthuthukiswa
 kobudlelwane bokuhlelwa
 kwezinto nokwezinhlangano
 nezinqubo ezilandelwayo,
 kanye nenqubo eqondiswe
 kwabathintekayo.

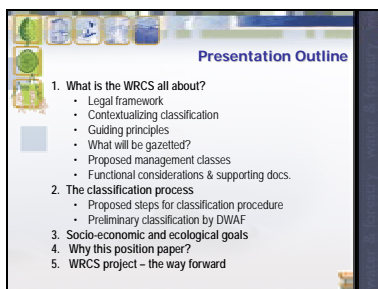
UMkhandlu
 wezokuCwaningwa
 kwezeSayensi nezeziMboni
 (iCouncil for Scientific and
 Industrial Research)
 (CSIR), neSouthern Waters
 ER&C, Anchor
 Environmental Consultants,
 Inyuvesi yaseKapa
 neNyuvesi yaseRhodes,
 abaxhaswa iqembu
 elizigabaziningi labahlinzeki
 bezinsizakalo, liphethe le
 phrojekthi kuthi
 abakwaZitholele Consulting
 basebenze ngenqubo
 yokubandakanywa
 kwabathintekayo.

APPENDIX E PRESENTATION OF MR HARRISON PIENAAR

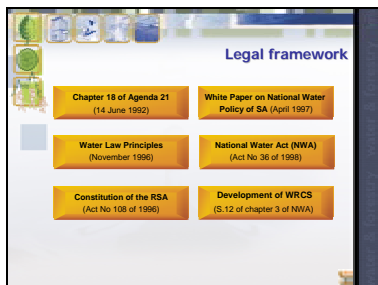
Slide 1



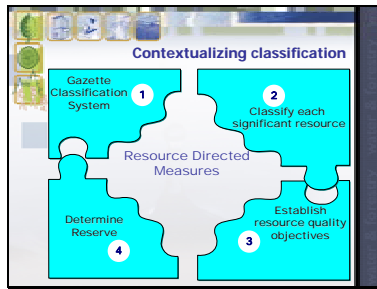
Slide 2



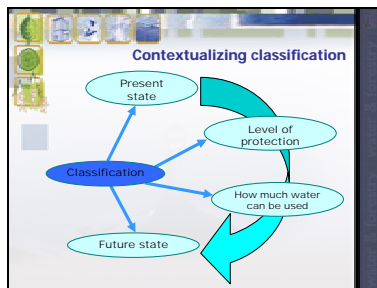
Slide 3



Slide 4



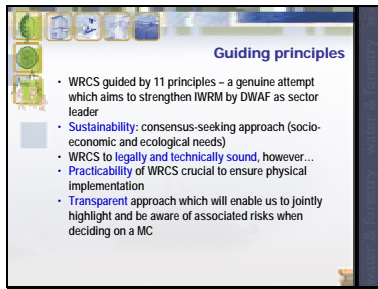
Slide 5



Slide 6

-
- The slide, titled "Contextualizing classification", contains a bulleted list of points:
- WRCS consist of set of guidelines and procedures for determining different classes of water resources
 - The desired characteristics of water resources are represented by management classes (MCs)
 - WRCS will be used (later) in a (consultative) process (the Classification Process) to help facilitate IWRM
 - Possible implications of a MC need to be established and communicated to interested and affected parties
 - MC sets the boundaries for the volume, distribution and quality of the Reserve through RQOs...
 - And thus the potential allocable portion of a water resource in each catchment, once requirements for the Reserve are determined

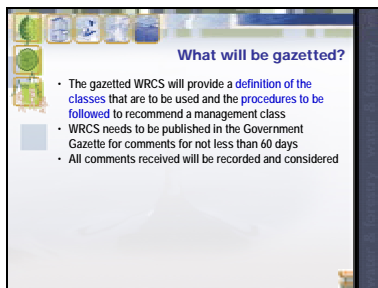
Slide 7



Guiding principles

- WRCS guided by 11 principles – a genuine attempt which aims to strengthen IWRM by DWAF as sector leader
- **Sustainability**: consensus-seeking approach (socio-economic and ecological needs)
- WRCS to **legally and technically sound**, however...
- **Practicability** of WRCS crucial to ensure physical implementation
- **Transparent** approach which will enable us to jointly highlight and be aware of associated risks when deciding on a MC

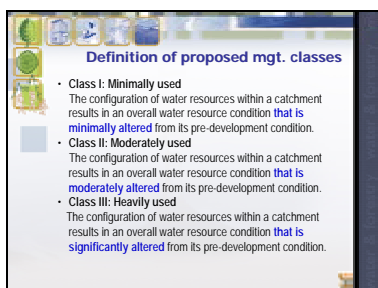
Slide 8



What will be gazetted?

- The gazetted WRCS will provide a **definition of the classes** that are to be used and the **procedures to be followed** to recommend a management class
- WRCS needs to be published in the Government Gazette for comments for not less than 60 days
- All comments received will be recorded and considered

Slide 9



Definition of proposed mgt. classes

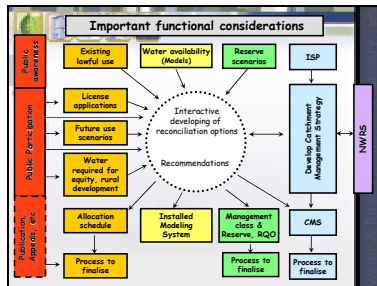
- **Class I: Minimally used**
The configuration of water resources within a catchment results in an overall water resource condition **that is minimally altered** from its pre-development condition.
- **Class II: Moderately used**
The configuration of water resources within a catchment results in an overall water resource condition **that is moderately altered** from its pre-development condition.
- **Class III: Heavily used**
The configuration of water resources within a catchment results in an overall water resource condition **that is significantly altered** from its pre-development condition.

Slide 10

NB functional considerations

- Implementing integrated water resources management (IWRM) spans across several sectors with...
- Equally strong mandates
- Cross-sectoral roles and responsibilities, often not well defined
 - DWAF (primarily water resource management)
 - DEAT (biodiversity conservation)
 - NDALA (land management)
 - DPLG (development planning across government)
- Initiatives mostly reflect needs specific to one dept. or sector
- Collaboration between depts. or sectors easily complicated
- Cooperative governance inevitable to facilitate effective implementation of IWRM
- DWAF has strong mandate wrt. IWRM

Slide 11

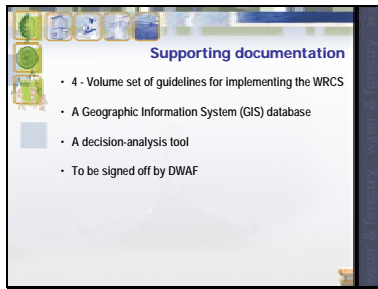


Slide 12

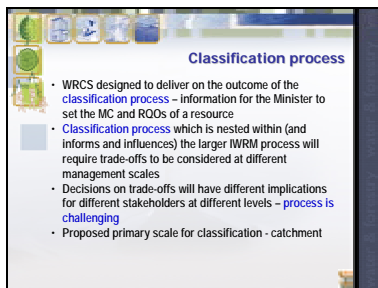
NB functional considerations

- DWAF as sector leader is the trustee of water resources (both WRCS and classification process viewed within this context)
- Beyond IWRM environment, WRCS has bearing on a range of broader processes
- Requires co-operation of three spheres of government, stakeholder participation and engagement with civil society
- WRCS therefore needs to be founded on consensus-seeking and participative approach, co-operative governance inevitable

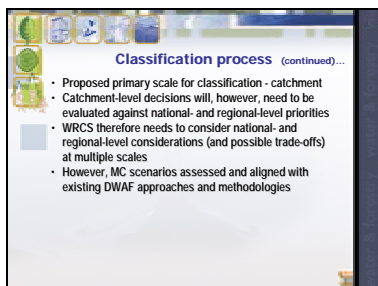
Slide 13



Slide 14



Slide 15



Slide 16

Classification process (continued)...

Proposed 7-step procedure

1. Biophysical aspects
2. Socio-economic status and trends
3. Delineation of water resource units
4. Functional relationship between resource units
5. Develop alternate scenarios & outline their possible implications
6. Evaluate with stakeholders and make recommendation
7. Authority makes decision on management class

Slide 17

Classification process (continued)...

Preliminary classification by DWAf

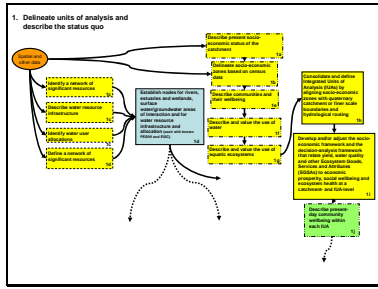
| Management | Ecological classification |
|--------------------------|---------------------------|
| Natural | A |
| Moderately used/impacted | AB, B, BC, C |
| Heavily used/impacted | CD, D |
| Unacceptably degraded | EF, F |

Slide 18

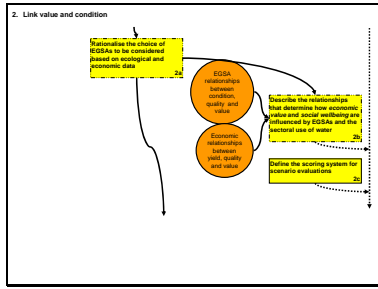
Socio-economic & ecological goals

- DWAf's motto 'ensuring some, for all, forever, together'
- NWA - paradigm shift to implement IWRM
 - Economic efficiency
 - Social equity
 - Ecological sustainability
- Goals require an acceptable and integrated decision-making process - the WRCS in support of achieving this
- Redressing past inequities in water allocation and ensuring equity between generations simultaneously a challenge in itself
- Linking water resource management to sustainable water services provision therefore critical

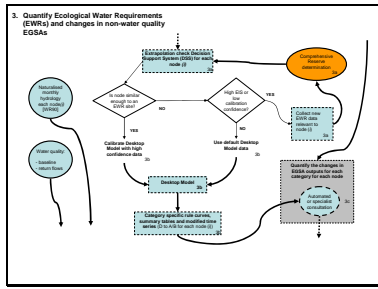
Slide 19



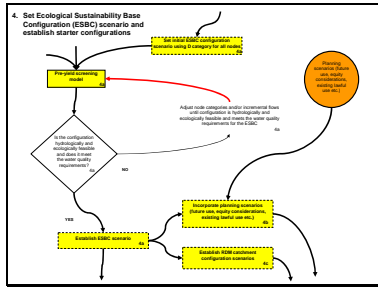
Slide 20



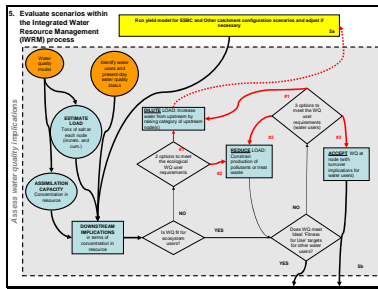
Slide 21



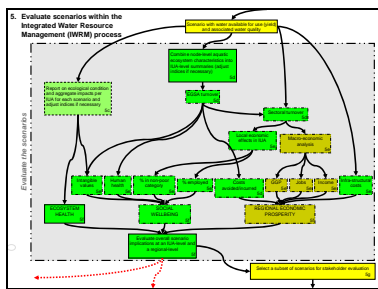
Slide 22



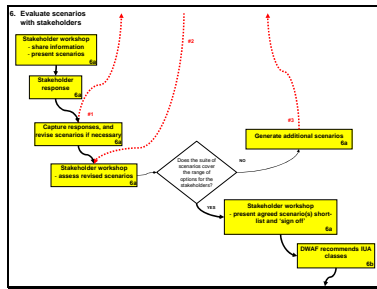
Slide 23



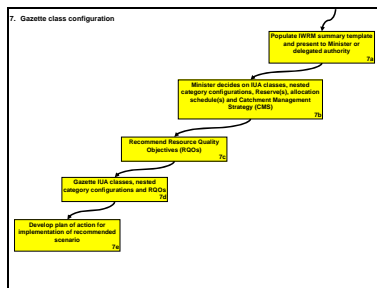
Slide 24



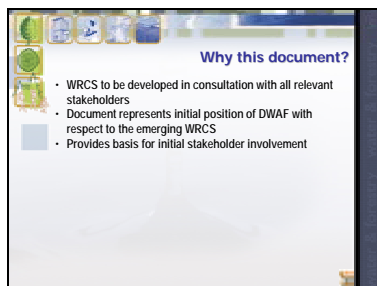
Slide 25



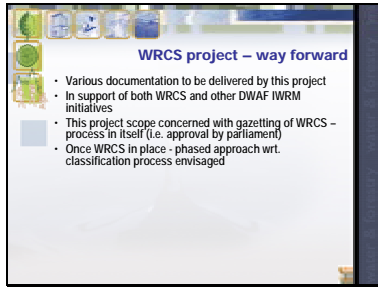
Slide 26



Slide 27



Slide 28



Slide 29



APPENDIX F EVALUATION OF WRCS WORKSHOPS

| Response no. | Did the presentation help you expand your understanding of the WRCS? | Would you say that you now understand the Classification Process? | What are your comments on the economic, social and ecological goals? | Do you understand now why this position paper was developed? | Do you think that the Department's next steps in the process are in the right direction? |
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| MIDRAND | | | | | |
| 1. | Yes. | Yes. | | Yes. | Almost. Technical – OK. Lawful – Not. |
| 2. | Yes. | Yes. | I have a problem with definitions of the different MC's, particularly Class I. It is not clear what the definition entails. Do you have to satisfy all 6 points or only one (same)? This should be clarified. | Yes. | Yes. |
| 3. | Yes. | Much better. | These are very important. We must ensure that the ecological and social aspects do not over shadow the economic aspects, i.e. don't kill the goose that lays the golden eggs. | Yes. | Yes. |
| 4. | Yes. Please, we need to be involved in other water matters also – not only the water services guys from Local Government – please involve the environmental guys also! | Yes, broadly. I hope that air quality issues will form part of the load analysis and load target determination processes, due to the integrated nature of all environmental media. | Seems fine. I hope that economic issues do not transpire to be the only or final bottom line, due to pressure from stakeholders. | Yes. Please provide us with copies of the diagram. | Yes. Please capacitate Local Government also to manage/promote the attainment of RQO. Water issues are mainly managed currently by engineers, and not in an integrated manner! |

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| 5. | Yes. | Yes, although it still looks like a very complex process. | The integration of the three tiers is essential and well incorporated into the process. | Yes. | Yes, although I think the time frame to finalise the process is underestimated. This also applies to the execution of the gazetting process. (Day to day running after being promulgated). |
| 6. | Yes it does, particularly with the understanding of classification of rivers that were related to us. | Partly yes, as some are new to me. | I think it will boost our economy and also improve the social life of our people, particularly in the rural areas. | Yes, just for consultation purposes with all stakeholders to familiarise them with the process in place. | Yes, bearing in mind the big events that will be hosted in solo. |
| 7. | Yes, the presentation has expanded my understanding in the sense that the explanation of why we need to classify the resource was presented adequately. | Classification processes are complex. I still need to read through the draft and understand all the steps thereof. | | The position paper was developed in order to protect the resources against pollution and degradation for present and future use. | Yes, however, this process should be accelerated to achieve the Department's objective of protecting the resources. |
| 8. | Yes, especially on the classification part. | Yes, but I think there should be guidelines that explain the classification process and procedures only. | There should be a balance between them so that water resources can be managed on a sustainable manner. | Given the importance of WRCS it is essential for this to be developed on consultation with the stakeholders, so that we can manage water resources in an integrated manner. | Yes. |
| 9. | It helped me to understand the guiding principles and also the classification system or procedure. | I do know the classification process and procedure. I also know the Classes I, II and III and the 7-step procedure. | It is good to maximise the economic value from water resources. The resource must be utilised fairly, bearing in mind the motto of some for all, for ever. | The position paper was developed to provide definitions of the classes that are to be gazetted. It also developed the guidelines to be followed to recommend a class. | There are three major phases that I think will give out clear outputs. |
| 10. | Yes. | No. | The process proposed for evaluating trade-offs is too | Yes. | No. |

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| 11. | Yes, significantly. | Mostly, the practical application will determine success. | complex. The impact on economic activity if social and ecological considerations are over estimated will be negative if it makes continuing business too expensive. It could be socially counter-productive in ensuring growth and subsequently creating employment. | Most definitely. | Regarding gazetting the WRCS to the Minister – little choice. Determining classes and process followed – crucial. |
| 12. | Yes, Harrison projected his knowledge excellently and gave a good explanation and insight into the WRCS. | Yes, it is now much clearer to me; it is however a pity that so few stakeholders were present, especially from the different sectors. The "executive summary" gave the complexity of the process. | This is important and maximising returns should be a primary goal but it can be in conflict with the social and ecological considerations. | Yes, it gave a good basis and with the comments received, the process will be relatively easier. | Yes, but the people tasked to run with the project must be knowledgeable and do the classification consistently and objectively. |
| 13. | Yes. | <ul style="list-style-type: none"> No – details are still not clear. What will be used as "basis"? Will the preliminary water quality guidelines for the different catchments be used – even if industry does not "agree" with/to them? | | | |
| 14. | Yes, especially the 7 step presentation. | Yes. | I think there should be a balance between all the sectors. | Yes. | Yes. |
| 15. | Yes. | Not too well. I am still | All should be included. | Yes. | Yes, but the level concerns me, |

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| | | confused about non point sources and planning issues for development – how will all that be addressed. | | | most of the time National level, not practical and local level needs to be scaled down. |
| 16. | Yes, the presentation assisted in clarifying some issues that were latent. | I have a better understanding. | I would like to see that stakeholders have input to the supporting documentation. From an Eskom perspective we would like to be part of the development of these protocols/supporting documentation. | Yes, it attempts to provide the Department's position and thinking on the whole system and process. | Yes, the Department just needs to be mindful that this process may take quite long. An anticipated time scale for the whole process would be helpful. |
| 17. | Partially, since I was late for the whole presentation, but the slide presented during my presence gave me a better understanding. | In essence I'm satisfied with the way the presenter was explaining the process. | It will only take place if every stakeholder interested should comply with legal requirements. Secondly the philosophy that says "polluter pays" will create conflict due to water allocation, water quality objectives (CMA). | Yes, due to the scarcity of water in years to come. We need to use water effectively. Again liaise with other countries overseas and check how did they determine their processes and try to match. (I'm not saying copy them). | Yes, and unless the Department took our comments into consideration and I also recommend that you invite Labour to participate into the whole process. |
| 18. | Yes, indeed. (Very much required). | Yes, better. | Will give input in writing to Zitholele. | Yes. | Yes. |
| DURBAN | | | | | |
| 1. | Definitely. | Not fully, but a far better understanding than at the beginning of the workshop. | Glad to see the bigger picture is considered when decisions are being taken. | Yes – to ensure sustainability. | Yes. |
| 2. | Yes. | Yes, but I think this system needs to be well managed to work properly. | | Yes. | Yes. |
| 3. | Very much. | To take ownership. | More involvement of other | Yes. | Yes. |

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| 4. | Yes. | Yes. | parties. Excellent. The three sectors need to benefit. | Yes, very good. | Yes, very excited! Can't wait to see this implemented. |
| 5. | Yes. | | | Yes. | Not well. |
| 6. | Yes, a little bit. | Still need more presentation for clarity. | They were considered but need to expand more on the economic part of it. | Yes. | Yes. |
| 7. | To some degree. | Yes. | Too much emphasis on ecology at the expense of economics – the policy is ok; it is in the bias of those specialists who determine reserves – e.g. Mooi River. | Yes. | Yes. |
| 8. | Yes, but next time, show me a diagram indicating how WRCS fits in amongst other processes in the Department. Understanding WRCS without knowing its link to WDGS for example, is fruitless. | Yes, and I suggest that certain steps are already being done/done in other projects (e.g. ISPs etc.) and these must be well investigated and the process flow diagram must state this clearly. How important is WMS in this process? | I am glad that decisions are going to be based on sustainability, but which exercises are “desktop” and which requires field investigation and lengthy monitoring? | Yes. | Yes, but regional offices need to be constantly kept informed on process and progress. |
| 9. | Yes. | Yes, fairly complex process that seems very time consuming, however, it will allow for legal defensibility and scientific robustness. | Agree – vital components to achieve sustainability in keeping with DWAF's vision of management, use, conservation and protection of water resources. | Yes, provides guidelines as to how to undertake the classification of significant water resources. | Yes, need to be regular updates, i.e. newsletter, email etc. |
| 10. | Yes. | Yes, understand the theory behind the classification but not all at the implementation. | | Yes, hopefully the classification will aid in determining the reserve and issuing of license will speed up. | Uncertain. |
| 11. | Yes, I was well informed. | I have an idea. | Involvement of everyone (especially Non- | Yes. | Yes, continuous consultation is very helpful. |

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| 12. | Yes. | Yes. | Governmental Organisations). | Yes. | Yes. |
| 13. | Yes. | Yes. | | Yes. | Not sure. |
| 14. | Yes. | Yes, I do understand, but I think it would help to have the relevant documents available at the regions. | Brilliant idea to consider all these. | Yes, public and different stakeholders' engagement is important. | Yes. |
| 15. | Yes it did, however, considering the fact that the topic is quite intensive and a bit technical, it was a lot to incorporate. Maybe one should consider a more "user-friendly" presentation that can be comprehended by the people at a local level. | Yes I do. | | | |
| 16. | Yes, the presentation has been an eye opener. | Yes, at first it was not, but now I have a better understanding of the whole classification process. | | Yes. | Of course the very relevant direction. |
| 17. | The presentation is good, but it also raised concern about evaluation and monitoring as it is not very clear who will take key responsibility. | Partly, as the technical approaches are not familiar to me. | The integration approach seem classic. The concern comes again on implementation and monitoring. | To some extent, however representation of stakeholders seems to be a problem. DLA, DLG, DoA and DEaT were not present as key stakeholders. | Not sure, I feel there is a need for more interaction with other abovementioned stakeholders before finalization and gazetting. |
| 18. | Yes. | Yes. | St. Lucia and Kosi Bay and the areas above and around them need protecting. Be it at the expense of economic considerations. | Yes. | Yes. |

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| 19. | Yes, it helped as well as all the comments and questions. I believe it will add value to the process. | At least I can say I do although it would be nicer to have more workshops to be clear that I understand this as it is. | Although the scenarios will take everything in consideration for MC determination, there will be biasness with regards to qualitative value. | Yes, I now do. | There is a need to capacitate more stakeholders on what WRCS is about. |
| 20. | From the presentations done today, I can just say that I fully understand the WRCS. | | Creating a balance between the three aspects is still a problem and a challenge. Do you place more value on the ecology or economic? It is not yet clear how the trade-offs will have to happen. | From my understanding it was developed to give opportunity to stakeholders to comment on the whole WRCS as well as to lay down the basic principles of the WRCS. | The Department is heading towards the right direction, but my concern is the Public Participation Process. There are quite a number of academic institutions around the area, but none of them were represented. Only one Water User Association (WUA) was represented, not enough effort was done. Make sure that important stakeholders do attend and participate. |
| 21. | Partly. | Not really. | They must be realistic when implemented redressing the imbalances of the past. Too technical for us water users. | The intentions I do, but don't understand why these processes are not filtered down to the historically disadvantaged individuals. Especially the rural community. | Yes, but the level of public, private sector representation to be improved. |
| 22. | Yes. | Yes. | It covers the whole spectrum on how resources need to be classified. It covered integration and wide considerations through sustainable development. | Yes, long overdue! | Yes. More involvement of stakeholders and the region should assist in achieving the end objective. |
| 23. | Yes, however alignment must be made with other processes already taking | Capacity building should be implemented before process is gazetted for | A balancing act should be taken in terms of or the final product of WRCS. Future | Yes. | See comment 1 (one). |

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| | place in the Department, i.e. WDCS, Compulsory Licensing, Pricing Strategy etc. | comment. Review period should be considered for process and must be linked to the licensing process. | water users linked to municipal Integrated Development Plan (IDP) should be taken into consideration. Small scale farming to stimulate agricultural growth should be prioritised in rural communities to alleviate poverty. | | |
| 24. | Yes. | Fair understanding of the concept as well as technical work involved. | It looks as though all three important aspects that are main drivers as far as sustainability are fairly addressed and looked into quite extensively. | Yes. | It looks like it is a difficult, long process that needs resources. Concern if they are available/will be available at the regions particularly. |
| 25. | Yes, especially the link between the ecological integrity status, categories and management, which I believe each ecological status deserve relevant management class. | Partly yes, but the technicalities of classifying states for resources, delineation of catchment with social-economic situation which to me is very complex, unless you reduce your scale you working with and I believe primary catchments will be suitable for delineation. | No comments. | Yes, I do understand. | Yes. |
| 26. | Yes. | Partially, at an overview level, I understand the process, however, at a more detailed level, the process is not totally clear. | These considerations are well-balanced in the WRCS. | Stakeholder involvement and participation. | Gazetting classification system. See a need for extra resources in the region to implement. |
| 27. | Yes, the presentation was educative and eye opening. | Partly. The IWRM process is complicated. | These were addressed but the question of water from boreholes was not touched. Licensing and pricing of water use needs to be | Yes. It was important for the Position paper to be developed because it provided the background preceding the workshop. | Yes, but it would be good to involve more stakeholders from the actual water users. |

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| 28. | Yes, the WRCS is a much better thumb suck than ever used before. | Overview yes, but will need to work through e.g. case study in order to flesh out bones. Lots of close-ups necessary to be able to show and tell/drive the process. | looked at. Necessary but problematic to achieve trade-offs. | Yes. Need to present at various Fora e.g. Catchment Management Fora. | Yes. Dire need to provide resources to region to operationalise. Cost to regional office for just this workshop = 16+ man days at DD, AD and WPCO levels and presenters. |
| 29. | Yes it also showed how much DWAF needs to fill vacant positions so that the mandates that we have to fulfil are done. DWAF needs to hire more specialists to perform IWRM – not work using business as usual. Yes. | Not quite. I would need to see more case studies with models that show different scenarios. However, this session has helped in giving me an idea of the complexity and need for multi-specialised teams within DWAF. Fairly. | | Yes, to start the process of awareness – but it needs to be simplified for our stakeholders to participate in a meaningfully cause. | Yes. |
| 30. | | | I would like to hear more clarity. | Relatively. | Yes. |