

WATER RESOURCES MANAGEMENT WALL CHART

Presenters' Guide



Department of Water Affairs and Forestry

Introduction

This Presenters' Guide is part of the Water Resources Management Wall Chart Presentation Pack. This Guide is to be used by Presenters when presenting water resources management issues using the Wall Chart.

The Water Resources Management Wall Chart Presentation Pack consists of:

WRM wall chart tools

1

Water Resources Management **Wall Chart**

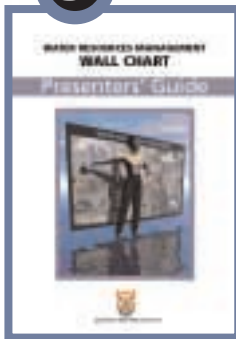


2

'**labels**' which are used to label different strategies, users, plans, institutions and concepts involved in water resources management



3



Water Resources Management Wall Chart **Presenter's Guide**

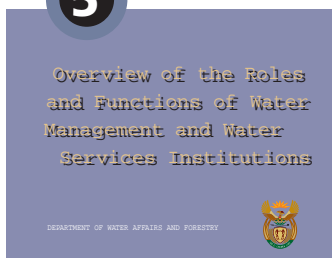
4



Water Resources Management Wall Chart **poster**

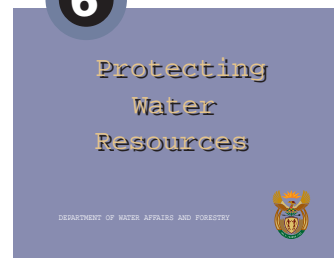
WRM wall chart powerpoint presentations

5



Overview Roles and Functions of Water Management and Water Services Institutions

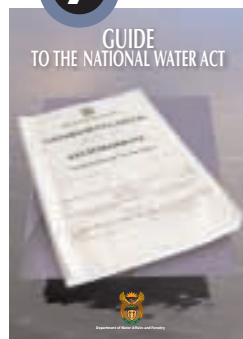
6



Protecting Water Resources

Supporting booklets

7



Guide to the National Water Act (No. 36 of 1998)

8



Brief Introduction to Water Management Institutions

There are seven mini-presentations included in this tool. These are:

A. Water resources management legislation

This presentation describes the purpose, principles and benefits of the National Water Act (No. 36 of 1998).

The booklet “Guide to the National Water Act, No. 36 of 1998” should be used as a handout to participants.

B. Strategies for managing water resources

This presentation describes strategies for managing water resources in line with the principles of the legislation. These strategies include the National Water Resource Management Strategy and Catchment Management Strategies.

A separate Wall Chart has been developed for water services.

C. Institutional roles and functions

This PowerPoint Presentation describes the main roles and functions of water management and water services institutions. The booklet “ Brief introduction to water management institutions” should be used as a handout.

D. Types of water use

This presentation identifies the various types of water use that is regulated by the National Water Act.

E. Regulating water use

This presentation explains the terms and conditions of controlling water use through regulating and licensing.

F. Costs

This presentation explains types of water charges and elaborates on pricing strategies.

G. Protecting water resources



This PowerPoint Presentation addresses how water is classified and protected in order to achieve the balance between protecting and using water resources. This presentation can be used in the wall chart session, or as a stand-alone presentation.

Note: It may not be necessary or possible to cover all of the mini presentations for a given audience in a given session. Presenters should select the mini presentations they want to use in keeping with the information needs of each specific audience. To complete all seven mini presentations interactively should take about five hours. It is important that the Presenter is able to provide regionally specific information and examples of the content covered in the Wall Chart.

The Presenters’ Notes below are divided into these mini-presentations. Each step in the presentation is numbered with clear instructions for the Presenter (in Italics) and content points that should be made.

Wherever a label appears in the guide below, the Presenter should at that point stick the label onto the Wall Chart. Refer to the centre-fold of this Presenter’s Guide, which indicates where the labels should be placed on the Wall Chart.

Introducing the Water Resources Management Wall Chart

1.  Draw the participants' attention to the Wall Chart, where it is stuck visibly on a wall.
2.  Introduce the Wall Chart exercise by saying:

This picture shows an overview of all the aspects of water resource management, and the links between these different aspects. Over the next session, we will be labeling and discussing:

- the principles and objectives of water resources management as reflected in the **legislation**;
- the **strategies** developed to manage water in line with these principles;
- the main roles of **water management institutions**;
- **types** of water use;
- **regulating** water use,
- water **costs and charges** and
- **protecting water resources**.

A

Water Resource Management Legislation

3.

Introduce the first mini presentation by asking the participants the name of the Act that governs water resources management in the country. It's the National Water Act (36 of 1998).

National Water Act

Then ask the participants **why legislation is needed** for water resources and add to their responses from the points below.

- ◆ South Africa is a dry country with low average rainfall
- ◆ Our rivers are small compared to other countries
- ◆ Many of our water resources have been over-used
- ◆ Water is a strategic national resource

4.

"Before we go any further with the legislation that governs water resources, what are 'water resources'?" Show the participants examples of water resources depicted on the wall chart.

- ◆ Water resources are bodies of water such as rivers, streams, wetlands, estuaries and groundwater. 'Surface water' is water that is above the ground. 'Groundwater' is water that is under ground in aquifers.

5.

Then ask the participants why they think the National Water Act is so important. The **reasons** are listed below.

- ◆ The National Water Act is important because it provides a **framework** to:
 - ▶ protect our water resources from being exploited;
 - ▶ ensure that there is enough water for social and economic development;
 - ▶ and ensure there is enough water for the future.
- ◆ The National Water Act also recognises that water belongs to everyone in South Africa, for the benefit of all.

6.

Ask the participants why they think there are two Water Acts, namely the National Water Act and the Water Services Act.

- ◆ The Constitution separates the different powers of the three spheres of government, namely national, provincial and local government. It allocates the management of water resources to national government and the management of water services and sanitation to municipalities (local government).
- ◆ So, its in terms of the **Constitution** that there are two Acts - an Act that deals with sources of water (a national responsibility) and an Act that deals with water services (local responsibility).

7. *“But why was a **new** national Water Act needed?” Based on contributions from the participants, present the **benefits** of the new National Water Act as described below.*

- ◆ The old Water Act was drafted in 1956, and tried to apply European water rules to South Africa. The main feature of the old Water Act was that it gave the right to use water to private landowners, and denied access to the majority of the population who were not landowners. The old Water Act also took an authoritarian approach to water, where government made all the decisions about water resource management.
- ◆ The new Water Act was drafted in 1998 and has improved this situation dramatically by:
 - ▶ Seeing water as a natural resource that all the people in South Africa should have access to
 - ▶ Ensuring that there is more fair (equitable) distribution of water
 - ▶ Ensuring that water for basic human needs and the environment is ‘reserved’ before water is allocated to other uses
 - ▶ Aiming to protect and manage water resources as a whole, so that rivers, dams, wetlands, surrounding land, groundwater, and human impacts on water are managed as one integrated cycle
 - ▶ Promoting the management of water resources at the lowest possible level through representative public participation in decision-making.

8. *Ask the participants: “If the National Water Act aims to look after water resources – what needs to be done to look after water resources?” Water needs to be:*



... in a sustainable way – for the benefit of all.

- ◆ The **purpose** of the National Water Act is to ensure that the country’s water resources (both surface and groundwater) are protected, used, conserved, developed, controlled and managed in a sustainable manner for the benefit of all

Show the NWA principles slide in the “Over view of Roles and Functions” PowerPoint Presentation.

9. *The way water is protected, used, developed, conserved and controlled needs to be done in line with key principles.*



- ◆ **Sustainability, equity and efficiency** are the principles that guide the protection, use, development, conservation, management and control of water resources.
- ◆ **Sustainability** means promoting social and economic development, and at the same time, ensuring that the water environment is protected now and for the future.

- ◆ **Equity** means that everyone has access to water and the benefits of using water. Equity can be ensured by correcting past discrimination in water allocation and enabling the participation of stakeholders and users in decisions that affect them
- ◆ **Efficiency** means that water should not be wasted and should be used to our best possible social and economic advantage

*We have now covered the principles, benefits and reasons for the National Water Act. We will go on to explore **strategies** to protect, use, develop, manage, conserve, and control water resources.*

B

Strategies for Managing Water Resources

10.

*Introduce the second mini presentation by explaining to the participants that this part of the session will cover **how** water resources will be protected, used, developed, conserved, managed and controlled. National government does this through ensuring the development of **water management strategies**. At national level, the water management strategy is called the National Water Resource Strategy (NWRS).*

National Water Resource Strategy

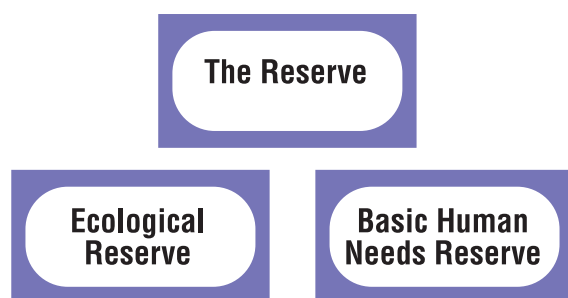
- ◆ The purpose of the national water resource strategy is:
 - ▶ to facilitate the proper management of national water resources
 - ▶ to provide a framework for the protection, use, development, conservation, management and control of water resources for the country as a whole
 - ▶ to provide a framework for managing water at regional or catchment level, in defined water management areas
 - ▶ to provide information about all aspects of water resource management
 - ▶ to identify water-related opportunities and constraints to development

The National Water Act allows the Minister to develop this strategy over time and also tells the Minister what to include in the strategy.

11.

Then, explain **how** the NWRS **allocates** water for different purposes along different streams depicted on the wall chart, labelling the streams as you go.

- ◆ The first requirement of the NWRS is to ensure that there is sufficient water in the “Reserve”. The “**Reserve**” refers to (i) the water that all people need for drinking, preparing food and for personal hygiene (also known as the **Basic Human Needs Reserve**), and (ii) water to ensure the health and habitats that sustain the river or water source itself (also known as the **Ecological Reserve**).
- ◆ The Ecological Reserve says what quantity and quality of water must be left in the water resource to ensure that it remains healthy.



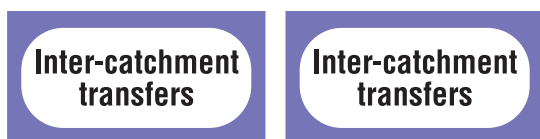
- ◆ The next two requirements of the NWRS are **Water for Strategic Importance** and water required to meet South Africa’s **International Obligations** to neighbouring countries.



- ◆ One of the most important strategic uses is water for national power (electricity) generation, because it is of strategic use to the whole country.
- ◆ We also have treaties and agreements with our international neighbours, which we abide by by releasing the water agreed to in these treaties and agreements.
- ◆ In the NWRS, national government has divided South Africa into nineteen water management areas (WMAs). There are two water management areas shown on this wall chart.



- ◆ Some water management areas are in dry parts of the country and some are in areas with heavier rainfall, so the NWRS also caters for **Inter-Catchment Transfers** from areas of surplus water to areas of less water. For example, large inter-river basin transfer schemes that pump water from the Tugela River in KwaZulu Natal, over the Drakensburg mountains and into the Vaal River in Gauteng.



What remains is water, as you will see in the next step, (5) that can be allocated by the Catchment Management Agency through its catchment management strategy.

12. Introduce the catchment management strategy as follows below.

- ◆ The National Water Act requires that a strategy be developed for each water management area. This strategy is called a **catchment management strategy (CMS)**.



- ◆ The CMA is responsible for developing the catchment management strategy for its water management area.
- ◆ However it will take some time before all 19 CMAs are established. In the meantime, the Minister through the Department of Water Affairs and Forestry acts as the CMA. So either the CMA or the Department of Water Affairs develops the catchment management strategy.
- ◆ Catchment management strategies must be in harmony with the national water resource strategy. In other words the CMS must take into account what is in the national water resource strategy and not conflict with it.

13. To illustrate the point about harmony between the CMS and the NWRS, demonstrate how the requirements of the NWRS are matched in the CMS, and move the labels out of the 'national' body of water into the CMS as shown in the centrefold of this guide.

14.  Then introduce the catchment management strategy as follows below.

- ◆ The CMA is faced with many competing users in its water management area. For example, rural and urban domestic users, industrial users, agricultural users, mining and recreational users.



- ◆ The big challenge for the CMS is to develop an allocation plan that will allocate water among these competing users. The various user groups will be represented on the CMAs Governing Board and through formal participatory mechanisms, so that they can participate in the development of the CMS to ensure equitable allocation. Water allocation should promote the social and economic development of all disadvantaged communities.
- ◆ Around 60% of all water in the country is used for irrigation agriculture. Domestic users use about 11% and mining and large industries use about 8%. Commercial forestry plantations also use about 8%.
- ◆ The **purpose** of a catchment management strategy is to:
 - set principles for allocating water to existing and new water users
 - provide the framework for managing water resources within the water management area
 - ensure that water resources in the water management area are protected, used, developed, conserved, managed and controlled
- ◆ Each CMA will develop a water allocation plan as **part** of its catchment management strategy, based on criteria provided in the Act.
- ◆ The CMAs water allocation plan says how much water each user group will be allocated from the allocatable amount.



- ◆ The CMA does not make the allocation for the Reserve or water reserved for strategic and international use, but must ensure that all people in the WMA are allocated at least a minimum basic water supply.
- ◆ The catchment management strategy should take the following into account:
 - the classification of water resources
 - water resource quality objectives
 - requirements for the Reserve and international obligations
 - the needs of current users and new users
 - all other plans, including the Water Services Development Plans (WSDPs) of municipalities. The WSDP is the water and sanitation part of the Integrated Development Plan, which spells out how municipalities plan to achieve integrated development in their municipal area.



- ◆ The catchment management strategy also:
 - Guides the way water management **institutions** in the water management area should perform their functions.
 - Indicates how the **public** will be enabled to participate in water resources management within the WMA.
- ◆ The catchment management strategy therefore spells out the CMAs plan for the water resources in its water management area and the way these water resources will be managed.
- ◆ Both the national water resource strategy and catchment management strategies have to be **implemented** in order to achieve their purpose. This means that responsible and capacitated **institutions** need to be established.

We have now covered various strategies developed by national government and CMAs to allocate water in line with key principles in the legislation. The next mini presentation will provide an overview of the roles and functions of water management and water services institutions.

C

Roles and Functions of Key Institutions

- 15.** *Introduce the third mini presentation by asking the participants which institutions work together to make all this happen? List these institutions on flipchart paper. Then, using the WRM Wall Chart PP presentation, present the **broad roles and functions** of these water management and water services institutions, labelling the wall chart as you go.*

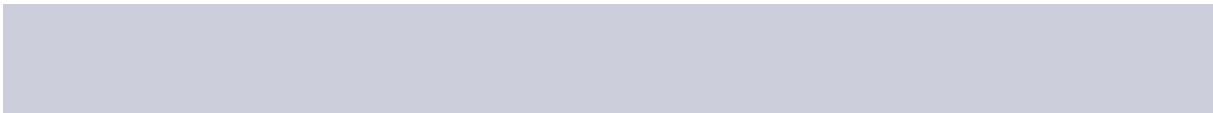
Water Management Institutions



Water Services Authority

Bulk Water Services Provider

Water Services Provider



D

Types of Water Use

16.

Introduce the fourth mini presentation by saying that water users also have roles and responsibilities in protecting water. Ask the participants what “water use” means and add to their comments from the list below. Point out how these types of water use are shown on the Wall Chart.

- ◆ ‘Water use’ means any of these activities:
 - taking water from a water resource to use it (for example abstracting water)
 - storing water (for example in a dam or reservoir)
 - reducing stream flow (for example forestry, where rain water that would have reached rivers is used by the trees)
 - discharging waste or water containing waste into a water resource
 - controlled activities (activities which impact detrimentally on a water resource, for example irrigating with waste water)
 - altering a water course by changing the physical structure of rivers and streams (for example weirs may be built in rivers for trout farming, or rivers or streams may be diverted to make way for industrial development or building a road)
 - pumping groundwater out of mines during the mining process
 - using water for recreation purposes, for example swimming or water sports

Reducing stream flows

Water for recreation

Abstracting water

Pumping groundwater

Discharging waste water

Controlled water use

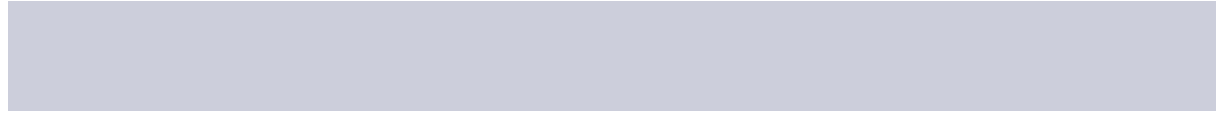
Changing the flow of a water course

Storing water

- ◆ “Water use” means doing anything that has **an impact** on:
 - the source of water
 - the amount of water in the source
 - the quality of water in the source
 - the environment surrounding the source

17. *What are the roles and responsibilities of water users? Add to the participants’ inputs from the list below.*

- ◆ The consumers of water services are responsible for:
 - Paying for the costs of water,
 - Reporting any problems to their Water Services Provider (WSP)
 - Using water efficiently and conserving water
- ◆ New water users must:
 - Apply to the appropriate Regional Office of the Department of Water Affairs and Forestry for a licence; or the costs of the water services (water and sanitation) they receive,
 - Register their water use with their local DWAF office
 - Adhere to the conditions of their water use licenses



E

Regulating Water Use

18. *Ask the participants, “if you were the Minister of Water Affairs and it was your responsibility to ensure that the nation’s water resources are **both** used sustainably **and** used equitably, what would you need to do with all these different types of water use?”*

- ◆ The main way the Minister can ensure sustainability and equity is: (i) to know what water use is happening, and (ii) to control water use through regulation.
- ◆ By regulating water use, the Minister can ensure that:
 - Everyone has access to sufficient water and that water is allocated to advance previously disadvantaged communities (equitable allocation)
 - Beneficial use
 - The environment is protected

19.

How is water use regulated? Present the content below and summarise with slide 20 of the WRM Wall Chart PP Presentation.

- ◆ The National Water Act regulates water use through different types of **authorisations**. These authorisations determine the water use activities that require a licence and those that don't. The bigger the impact of the water use on the water resource, the greater the need for control and regulation through licensing.

- ◆ Water use that does **not need** to be licensed:

Schedule 1

- "Schedule 1": Water use that has a small impact on the resource. For example, water for domestic use at household level, rainwater harvesting off a household roof, small gardening, watering animals, and emergencies such as fire fighting or emergency human consumption

Existing lawful use

- Existing lawful use before October 1999 (i.e. when the NWA came into operation) may be registered with regional DWAF offices and continued without a licence. This is discussed further under licensing.

General Authorisations

- General permission has been granted by the Minister by means of general authorisations published in the Government Gazette, but **only for certain rivers or catchments**. Examples include farmers storing a limited amount of water in a dam, or limited abstraction from these rivers or groundwater sources.

- ◆ Water use that **needs to be licensed**:

Licences

- Users must apply for a licence for any **new water use** that exceeds the limits outlined in Schedule 1 or not covered by general authorisation or existing lawful use. A responsible authority such as DWAF or a CMA may issue water use licenses.

Compulsory Licensing

- At some stage the Minister will publish notices in the Government Gazette requiring all existing and potential users, except for Schedule 1 users and users under general authorisations, to apply for licenses. This is called compulsory licensing. The priority areas for compulsory licensing will be areas where there are water shortages or water pollution is severe.

- Compulsory licensing will be used to:
 - achieve a fair allocation of water from stressed water resources
 - achieve equity in water allocations
 - improve the efficient use of water in the public interest
 - ensure efficient management of the water resource
 - protect water quality

- If users don't register existing lawful use, they may lose their rights to use the water when compulsory licensing is introduced.

F

Costs

20.

*Of course, all of these strategies, processes, institutions and regulations have costs attached. These costs will generally be recovered from the water users by means of **water use charges**.*

Ask the participants for their ideas on how water use charges are determined.

- ◆ How are water use charges determined?

The National Water Act allows the Minister of Water Affairs and Forestry, with the approval of the Minister of Finance, to develop a strategy for calculating water use charges. This strategy is called a **pricing strategy**.

Pricing strategy

- ◆ What is the pricing strategy?

The pricing strategy is established by a notice in the Government Gazette. It is the overall strategy to set water use charges in order to fund:

 - water resource management (for monitoring, allocating, controlling, protecting and conserving water resources)
 - water resource development (for planning, designing, constructing, operating and maintaining water works)
 - use of water works which is the costs of distributing water
 - In addition, charges can be set in order to achieve equitable and efficient water allocation
- ◆ The Minister has already published the pricing strategy in the Government Gazette for taking and storing water, and for stream flow reduction. The pricing strategy for discharging waste is currently in process.
- ◆ The pricing strategy was based on achieving social equity, economic efficiency and ecological and financial sustainability.
- ◆ **Note:** The pricing strategy only applies to (i) the use of untreated water, and (ii) tariffs that are set by DWAF or CMAs. The pricing strategy does not address treated water supplied in bulk and distributed to households. Treated water is dealt with in the Water Services Act, 1997.

21.

Close this mini presentation by presenting the **types of water charges** section below.

- ◆ The current pricing strategy allows for the following types of water charges:

Water resource management charge

- **Water resource management charge** to cover the costs of activities such as registering users, issuing licences, setting the Reserve, the flow in the rivers, testing the quality of the water, pollution control and managing water conservation.
- All registered and licensed water users will be billed a water resource management charge. The charge may differ between different types of users and between different WMAs.

Water resource development charge

- **Water resource development charge** to fund the costs of planning, designing, constructing and operating and maintaining water supply schemes, such as the dams, canals, tunnels, and so on that are used to store or supply water. This charge includes capital and operating costs.
- Government will only bill users for the water resource development charge if the users are supplied from a government water scheme, but private developers of schemes such as water user associations may also levy this charge on users that they supply water to.

Economic charge

- Charges for achieving efficient allocation of water (**economic charge**) relates to incentives and disincentives to promote water conservation and enhanced productive use of water (for example irrigation of high value crops)

Charge for discharging waste

- Charge for **discharging waste** is a charge for discharging wastewater or effluent into a river and is a “polluter pays” charge.

This concludes the Water Resources Management Wall Chart session. Ensure that all participants get copies of the relevant materials so that they can refer back to the content covered in this session.

Please note that there is a separate presentation on Protecting Water Resources, which can be included in the wall chart session.