



**Strategic Framework for mainstreaming
Environmental Management in the South
African Water Sector**

Version 1 (DRAFT)

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Prepared for:

Department of Water Affairs and Forestry

Prepared by:

CSIR Natural Resources and Environment



Department of Water Affairs and Forestry

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Acronyms

CMA	Catchment Management Agency
CEA	Cumulative Effects Assessment
EA&M	Environmental Assessment and Management
EIA	Environmental Impact Assessment
EIP	Environmental Implementation Plan
EMF	Environmental Management Framework
EMP	Environmental Management Plan
DEAT	Department of Environmental Affairs and Tourism
DPLG	Department of Provincial and Local Government
DWAF	Department of Water Affairs and Forestry
IEM	Integrated Environmental Management
IDP	Integrated Development Plan
LCA	Life Cycle Assessment
MEC	Member of the Executive Council
NEMA	National Environmental Management Act
NWA	National Water Act
SEA	Strategic Environmental Assessment
WSA	Water Services Authority
WSDP	Water Services Development Plans

1 Introduction

1.1 *Background to the Strategic Framework*

The Department of Water Affairs and Forestry (DWAF) is the custodian of South Africa's water resources. Their strategic vision includes "A society in which all people enjoy the benefits of clean water and hygienic sanitation services; water used carefully and productively for economic activities which promote the growth, development and prosperity of the nation" (DWAF, 2002). This vision is achieved primarily through the functions and services of the Department's Water Resource Management and Water Services branches. It is recognised that each branch has both impacting and management functions related to their core business activities on the environment. As part of enabling the Department to fulfil its vision, a Water Sector Support Programme, Masibambane, was initiated and is now in Phase III of implementation.

The Masibambane Programme is a partnership between the DWAF, the Department of Provincial and Local Government (DPLG), the South African Local Government Association and the European Union and member states (Swiss Government and Ireland Aid). It aims to assist the Water Sector in contributing effectively to sustainable development in South Africa, and includes six cross-cutting issues, or Sustainability Pillars, necessary for achieving this aim. Environmental management is one of these cross-cutting issues (see Box 1). This document forms the first version of a strategic framework for mainstreaming environmental management into the activities of the Water Sector, with a particular focus on provision of water services. It is a working document, which will be updated as required through stakeholder engagement and expert review.

Box 1: A description of environmental management

Environmental management is not, as the phrase suggests, the management of the environment as such but rather the management of man's interaction with and impact upon the environment. Environmental management is the deliberate and multidisciplinary process of managing environmental resources, which requires the careful preparation, planning and administration of environmental policies and standards. It aims to ensure that environmental concerns are included in all stages of development, so that development is sustainable and does not exceed the carrying capacity of the environment (DEAT, 2006).

In order to practically address environmental management, a variety of Environmental Assessment and Management (EA&M) processes and tools have been developed.

1.2 *Need for a Strategic Framework for mainstreaming Environmental Management*

The DWAF Water Services (i.e. water supply services and sanitation services) mandate is "to ensure effective, sustainable, professional and equitable access to water services for all" (DWAF, 2001). This mandate has strong emphasis on the social environment within the context of a healthy physical environment as well as a sustainable economic focus. It also highlights that there is a move to "provision of total (rural and urban) effective sustainable services...supported by sub-goals such as ensuring free access to basic

services, job creation and poverty alleviation, economic development and spatial planning, and effective and appropriate use, protection and management of water resources” (DWAF, 2001).

A Strategic Framework for mainstreaming Environmental Management in the Water Sector is needed to direct the choice, and co-ordinate the implementation, of practical Water Services projects for achieving the intentions, goals and targets established in existing Water Sector policy, legislation and strategies. As such, version 1 of the Strategic Framework reviews and summarises key Water Sector documents, to highlight areas under Water Services requiring further human and financial input. The ultimate aim of this Strategic Framework is therefore to assist in ensuring the Water Services Department is able to fulfil its mandate regarding environmental management while performing its core business, and in so doing contribute more effectively to the sustainable social-economic development aspirations of South Africa. As a healthy, resilient environment also lays the foundation for succeeding with many of the other cross-cutting areas of the Masibambane Programme, this Strategic Framework is seen as a critically important component.

1.3 Process to develop the Strategic Framework

The development of this Strategic Framework is a work-in-progress, developed in an iterative and consultative manner. Meetings and workshops will be conducted in each region of South Africa, with this version providing the basis for further discussions. Inputs from national and regional government, and the variety of other Water Sector stakeholders will be recorded and taken into consideration in subsequent versions of the Strategic Framework. This process will allow for the broad priority areas identified through this initial review of key legislation, strategies and frameworks to be further populated, strengthened and expanded upon using stakeholder feedback and innovation. These priority areas and associated programmes will form the foundation for practical actions and interventions, co-ordinated by a detailed Implementation Guideline. As the Strategic Framework extends over three years, it is envisaged that a review by Water Sector stakeholders take place approximately half-way through the implementation process, and the learning from this exercise be used to revise and update the Strategic Framework and Implementation Guidelines.

1.4 Links with existing key Water Sector initiatives

Much has been undertaken at a strategic level within the country to plan for and facilitate sound environmental management practice in South Africa, in the hope that the benefits of a healthy environment may be experienced by all members of society into the future. For the purposes of this Strategic Framework, the Constitution of the Republic of South Africa (108 of 1996), the National Environmental Management Act (107 of 1998), the National Water Act (36 of 1998) and the Water Services Act (108 of 1997) provide the starting point for mainstreaming environmental management in the Water Sector. These Acts have given rise to several important strategies and frameworks, each of which is discussed and summarised in this document. In doing so, this Strategic Framework begins where existing initiatives concluded by identifying, describing and prioritising implementation gaps and needs. In the interests of keeping this document as succinct as possible and to prevent the repeat of information, references will be made to relevant Water Sector documents when necessary. Thus, the reader is encouraged to look to these documents should they require any additional information on any aspects referred to.

2 Context

In order to identify and prioritise appropriate projects intended to mainstream environmental management in the Water Sector, a broad understanding of environmental assessment and management (EA&M), and its links to the Water Sector, is required.

2.1 *Environmental Management in the Water Sector*

The South Africa Environment Outlook (DEAT, 2006) reports that ‘some of the most significant drivers of environmental change and users of ecosystem services originate outside of the sectors that are responsible for their management’. Therefore, while ‘environment’ is a core focus of the Department of Environmental Affairs and Tourism (DEAT), environmental management must be seen as an essential part of the core business of the Water Sector, if the Sector is to fulfil its mandate. The Water Sector is defined by the Strategic Framework for Water Services (DWAF, 2003) as including those involved with both water resource management and water services. This definition highlights that a range of stakeholders (government, non-governmental organisations, communities, business) play a role in the Water Sector, and each provides important contributions toward achieving effective environmental management as part of the Water Sector’s functioning. Effective environmental management can be achieved through its mainstreaming into Water Sector activities (see Box 2 for a definition of mainstreaming).

Box 2: What is mainstreaming?

‘Mainstreaming’ in this context refers to the integration of environmental sustainability goals and objectives into all aspects of governance, planning, decision-making and operation, and thereby into all human behaviour. Mainstreaming activities involve a broad range of actors with partnerships among conservation agencies, non-governmental organisations, government, business and communities (adapted from DEAT, 2006).

Government is an important enabler for mainstreaming of environmental management in the Water Sector. In South Africa, three co-dependent spheres of government exist (i.e. national, provincial and local government). The intention is that at the national level, the DWAF is the custodian of the water resource, sector leader, national water policy maker, and regulator. It also aims, jointly with provincial government, to support and strengthen the capacity of local government in the fulfilment of its functions. Local government are responsible for water service provision and local regulation of water services, as well as water resource management, allocations, monitoring and licensing if part of a Catchment Management Agency (CMA).

All three spheres of government (i.e. from strategic to project scales) must therefore, in collaboration with other Sector stakeholders and other government departments, ensure that environmental considerations are included in the Water Sector’s functioning. Poor consideration of the environment in Water Sector activities will impact negatively on the wellbeing of the communities they service, both in the short and longer term. A lack of adequate and appropriate water supply and wastewater disposal and treatment affects human and environmental health, and limits the ability of those affected to attain

sustainable livelihoods. It results in those people being vulnerable to natural, social and economic changes or risks, and prevents those that are poor from breaking the poverty cycle. In addition, water infrastructure has a long life span and thus poor consideration of the environment during Water Sector infrastructure developments can potentially result in continual negative impacts on an area for an extended period of time.

2.2 Environmental Assessment and Management in South Africa

Internationally, EA&M approaches have been developing rapidly in the last century, in an effort to manage the consequences of human activity or development. In South Africa, this has taken the form of the Integrated Environmental Management (IEM) process (Figure 1). Environmental management is an multidisciplinary skill which focuses not only on managing biophysical impacts on the receiving environment but also on maximising social and economic upliftment of communities through efficient service provision that recognises resource constraints.

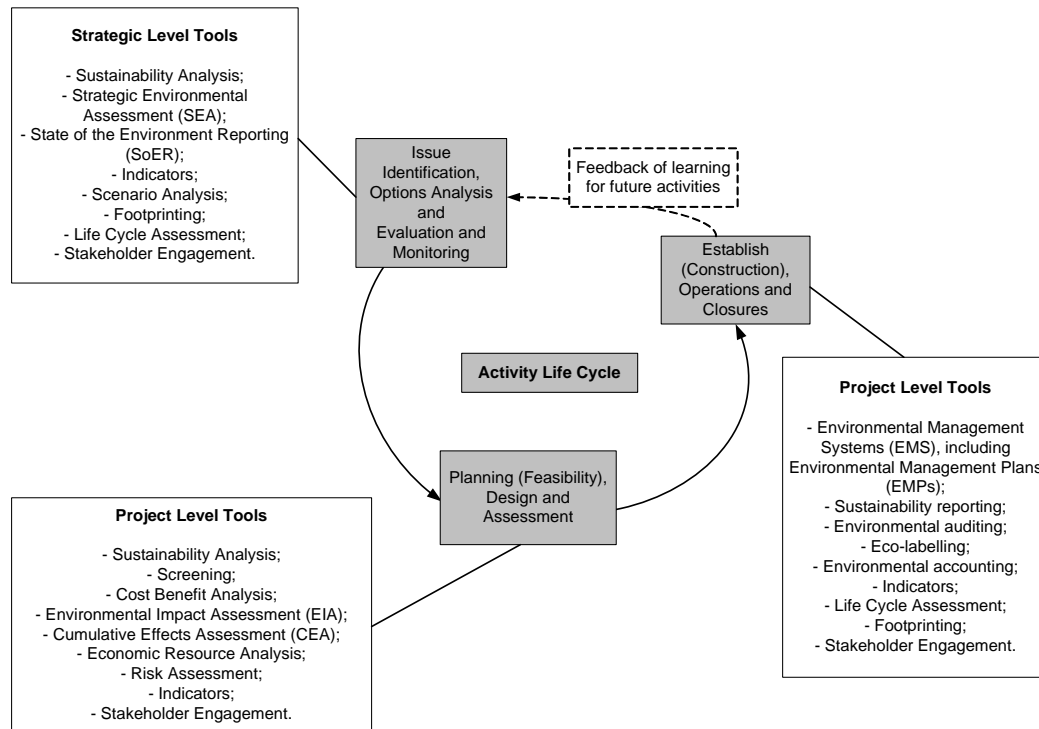


Figure 1: Commonly used tools in the IEM toolbox, at each stage in a typical activity life cycle (adapted from DEAT, 2004)

The initial focus of the IEM toolbox was placed on understanding and mitigating negative impacts of particular developments on the surrounding environment (typically through the Environmental Impact Assessment, or EIA, process). However, experience highlighted that a tiered approach to environmental assessment and management would improve praxis. The tiered approach ‘recognises that alternative environmental assessment and management tools should be implemented dependent on situation requirements’ (DWAF, 2002). In other words, where a broad perspective and strategic, sectoral and/or regional level planning outputs are required, tools such as Strategic

Environmental Assessment can be applied. These should be used to inform the required project level tools. Similarly, the toolbox includes tools that are useful at different stages in an activity/development life-cycle, and therefore must be chosen and applied at the appropriate time. Refer to DWAF (2002) for a more detailed description of the EA&M tools deemed most useful to the Department's activities.

An important point to remember is that all of the tools in the IEM toolbox aim to provide decision makers and project implementers with the information needed to act in a responsible manner, to consider the full range of possible consequences of an activity, and to manage the activity in a way that enhances its value for society. As has been said, those involved with the activity or development should apply the suitable tool(s) according to best practice, in order to achieve the best results. In addition, it is critical that the correct stakeholders are involved in the tool/process applied, as these role-players provide both valuable input during the process and assistance in implementation of its outcomes.

EA&M and natural resource management are underpinned by a well-established policy and legislative framework. The section that follows summarises the Water Sector's responsibilities related to EA&M from current key legislation, strategies and frameworks.

3 Review of key legislation, strategies and frameworks

3.1 Overview

Over the last ten years, the South African government has passed a significant body of legislation geared towards environmental management and protection (Figure 2). The over-arching legislation in this regards is the Constitution of the Republic of South Africa (Act No. 108 of 1996). It is the right of the South African people to a healthy environment and a safe water supply, as per section 24 and 27 of the Constitution respectively, resulting in other legislation such as the National Environmental Management Act (Act No. 107 of 1998), National Water Act (Act No. 36 of 1998) and Water Services Act (Act No. 108 of 1997). These three acts are people-focused but with much emphasis on the protection of the biophysical environment, water as a natural resource and the supply of water and sanitation to the people of South Africa. In response to the national legislation DWAF compiled the First Edition Environmental Implementation and Management Plan in Terms of Chapter 3 of NEMA in December 2001, the Environmental Management Framework in May 2002 and Strategic Framework for Water Services in September 2003 to meet the social, economic and environmental objectives of these three Acts.

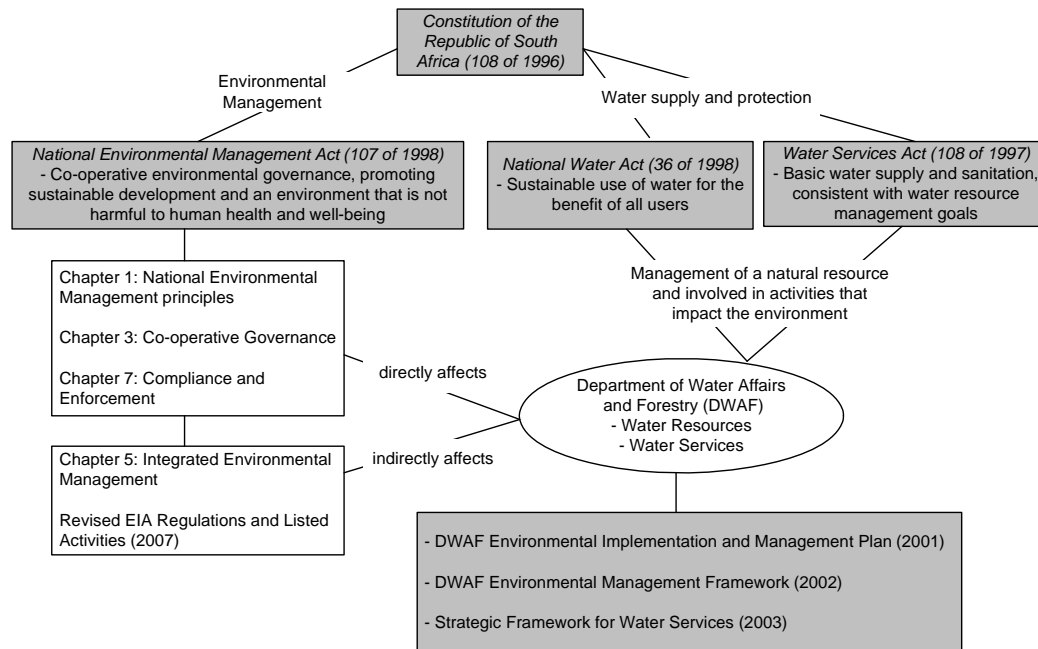


Figure 2: Key legislation and associated strategies and frameworks regarding EA&M in the Water Sector

3.2 Constitution of the Republic of South Africa (Act 108 of 1996)

The Constitution of South Africa is the supreme law of the Republic. The Constitution firmly identifies the environment in the Bill of Rights in Section 24 specifically indicating:

Everyone has the right to an environment that is not harmful to their health or well being; and to have the environment protected for the benefit of present and future generations through reasonable legislative and other measures that

- i. Prevent pollution and ecological degradation
- ii. Promote conservation; and
- iii. Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

With regards to water, section 27 of the constitution states that everyone has the right to have access to sufficient food and water.

As the custodian of water, DWAF in terms of these human rights has an authoritative role to play with regards to management and protection of water resources and ensuring water supply and availability to all South Africans.

3.3 National Environmental Management Act (Act 107 of 1998)

The National Environmental Management Act (NEMA) can be regarded as the most important piece of environmental legislation and is guided by the concept of sustainable development. NEMA was enabled to provide for co-operative environmental governance by establishing principles for decision making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state, and to provide for matters connected therewith. Issues within this Act that are of relevance to DWAF include:

3.3.1 Chapter 1: National Environmental Management Principles

The NEMA principles serve as a general framework for environmental planning, environmental management and environmental decision making. The principles also serve as a guideline to which the state must exercise its environmental functions. Lastly, these principles also serve to guide the interpretation of NEMA itself and any other law relating to the environment. These principles apply to all organs of state that may significantly affect the environment.

Some of the most important principles contained in NEMA are that:

- Environmental management must put people and their needs first;
- Development must be socially, environmentally and economically sustainable;
- There should be equal access to environmental resources, benefits and services to meet basic human needs;
- Government should promote public participation when making decisions about the environment;
- Communities must be given environmental education;
- Workers have the right to refuse to do work that is harmful to their health or to the environment;
- Decisions must be taken in an open and transparent manner and there must be access to information;
- The role of youth and women in environmental management must be recognised;

- The person or company who pollutes the environment must pay to clean it up;
- The environment is held in trust by the state for the benefit of all South Africans;
- The utmost caution should be used when permission for new developments is granted.

3.3.2 Chapter 3: Procedures for Co-operative Governance

This chapter provides a framework for co-operative environmental governance which is in line with the requirement of Chapter 3 of the Constitution. It requires that national Departments whose functions affect the environment prepare environmental management plan (EMPs), while Departments with environmental management functions prepare environmental implementation plans (EIPs). These plans are to be prepared at least every four years. Departments, such as DWAF, that have both impacting and managing functions are required to prepare both sets of plans. The primary purpose of these plans is to co-ordinate and harmonise the environmental policies, plans, programmes and decisions of the various national Departments that exercise functions that may affect the environment or are entrusted with powers and duties aimed at the achievement, promotion, and protection of a sustainable environment, and of provincial and local spheres of government, in order to:

- Minimise the duplication of procedures and functions; and
- Promote consistency in the exercise of functions that may affect the environment.

3.3.3 Chapter 5: Integrated Environmental Management

This chapter promotes the application of appropriate environmental management tools. The general objective of IEM is to:

- Promote the integration of the NEMA principles into environmental decision making;
- Identify, predict, evaluate and mitigate the actual and potential impacts of proposed activities on the environment;
- Ensure that the effects of activities on the environment receive adequate consideration before actions are undertaken;
- Ensure adequate and appropriate opportunity for public participation in decisions that affect the environment;
- Ensure the consideration of environmental attributes in management and decision making which may have a significant effect on the environment;
- Identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management.

Certain activities require authorisation from an authorising body, namely the Minister of DEAT or the relevant provincial environmental Member of the Executive Council (MEC). Environmental assessments are done by means of an environmental impact assessment (EIA). This IEM tool allows for assessment of potential environmental impacts on the environment, socio-economic conditions and the cultural heritage of the proposed activity. DWAF and/or their implementing agents would have to apply for authorisation from DEAT should they require to undertake an activity which is listed in terms of Government Notice 386 and 387 of the NEMA Regulations (Government Notice No. R 386 and 387).

Other IEM tools which DWAF has undertaken include SEAs and EMPs. Both are strategic planning tools and are usually done for a geographical region in which DWAF is planning large infrastructural projects. While SEA is not legislated, as part of IEM the tool provides ideal inputs on environmental opportunities, constraints and impacts for strategic decision making at a national, provincial or local level.

3.3.4 Chapter 7: Compliance, Enforcement and Protection

The Act makes provision the application of the ‘Duty of Care’ principle and remediation of environmental damage. Every person who causes significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring or when this cannot reasonably be avoided or stopped, to minimise and rectify such pollution of the environment. If DWAF is responsible for inflicting serious environmental damage, this clause of the Act would apply to them. The Act also makes provision for criminal proceedings.

3.4 National Water Act (Act 36 of 1998)

The National Water Act (NWA) provides for the fundamental reform of the law relating to water resources in South Africa. As such, it aims to ensure that the principles of sustainability and equity are central to the protection, use, development, conservation, management and control of water resources. This purpose is put into effect through the activities of the complimentary Departments within DWAF, namely Water Resource Management and Water Services.

The NWA provides for water resources management through the development of water management strategies, specifically the national water resource strategy and associated catchment management strategies (including water allocation plans). The national water resource strategy provides for the requirements of the ‘Reserve’ (water set aside for basic needs and ecosystems), international rights and obligations, planning for future water needs, the determination of a classification system for water resources and related resource quality objectives, the establishment of water management areas and management of water within and between these areas. It also sets out principles regarding water conservation and demand management, pollution prevention and promotes the management of water in a holistic and integrated manner.

Catchment management strategies are prepared for each water management area determined by the national water resource strategy, and are implemented by catchment management agencies (CMAs) established by the Minister according to the NWA. These strategies bring effect to the NWA and Water Services Act at the level of the water management area, and should speak to any other relevant national or regional plans for that area. Activities of the water sector should be bound and guided by well-designed catchment management strategies for the area concerned, and these strategies must form a clear framework for Water Services activities.

Of particular relevance to water services, the NWA describes the responsibilities of national government in terms of equitable allocation and beneficial use of water in the public interest. Water use is defined as taking and storing water, activities that reduce stream flow, waste discharges and disposals, controlled activities (those that impact

detrimentially on a water resource), altering of a water course, removing water from underground for certain purposes, and recreation. The NWA therefore provides for the water licensing processes, guiding water quality and quantity conditions and requirements for all of the above uses. All activities and agencies established in the NWA as well as the state of national water resources must be monitored, assessed and reported on in the form of a national information system for water resources. Both Water Resource Management and Water Services Departments are required to provide this information.

3.5 Water Services Act (Act 108 of 1997)

The Water Services Act was developed to provide for the rights of access to basic water supply and basic sanitation. It does so by advising on the setting of national standards and norms for tariffs, the development of water services development plans (WSDPs), and the establishment of a variety of water services institutions and committees. As the responsibility of water services provision has devolved to local authority level, the Water Services Act describes the duty to provide water supply and sanitation at this scale in an efficient, equitable and sustainable manner. District and Local Municipalities, wherever capacity exists, are named as water services authorities and are expected to produce WSDPs for their area of jurisdiction. These WSDPs should speak to any other relevant national or regional plans for that area (particularly Integrated Development Plans, or IDPs), and must provide an understanding of the area in terms of its physical attributes, population, existing water services and water users, and future water use demands. These must be updated regularly.

The Water Services Act makes allowance for a water services authority to either perform the functions of a water services provider itself, or to enter into a written contract with a separate water services provider. It may register water services intermediaries to ensure water services provision. In addition, water boards can be established under the Water Services Act to provide water services to other water services institutions in its service area. In cases where the water services authority is unable to provide water services, the Water Services Act also allows for the formation of water services committees for a period of time. The interaction of all of the above institutions and committees aims to ensure efficient, fair and sustainable provision of water supply and sanitation. As with the NWA, the Water Services Act establishes monitoring programmes. These track the functioning of water service providers, stipulate when interventions are required, and provide other important data on water services to the national information system.

3.6 DWAF Environmental Implementation and Management Plan (2001)

In terms of Chapter 3 of NEMA, DWAF submitted a consolidated EMP and EIP as the Department has activities and functions that both impact and manage the environment. This first edition was proposed in December 2001.

DWAF's impacting activities on the environment include (those only applying to water and sanitation issues are mentioned):

- Functions or interventions required by the Department in order to make water available for the use on a bulk scale through water resource infrastructure planning, development and operation;

- The implementation of water services programmes and projects.

DWAF's management functions with regards to the environment include:

- Functions relating to the protection of water resources, regulation of water use and the development of an appropriate policy and strategy framework for water resource management;
- Creating an enabling environment (i.e. the development of policy and strategy), planning water service provision, monitoring and auditing of activities undertaken by water services institutions, regulations and where needed, intervention.

The document broadly addresses the co-operative mechanisms and arrangements that support alignment around environmental management internally within DWAF and externally with other spheres of government and stakeholders.

The document reports that DWAF complies with the NEMA principles in terms of its mandate, policy and legislative framework. For DWAF to show compliance in future editions of the EIP and EMP it should monitor adherence with the NEMA principles in its activities, programmes and plans.

DWAF has applied the IEM guidelines since their implementation in 1992. This document makes a commitment to align DWAF's activities and functions with the Chapter 2 principles and Chapter 5 of NEMA, to promote environmental compliance and performance. This is addressed by the Department in an Environmental Management Framework (EMF). As stated in NEMA, Departmental EIPs and EMPs should be updated every four years. To date DWAF has not updated their plans.

DWAF further committed to adapt its social, economic and ecological indicators so that the Department report more in the line of environmental sustainability. These indicators could then be used in the National Sustainable Development Strategy, the National State of the Environment Report, as well as measuring the Departments implementation of the EIP and EMP.

3.7 DWAF Environmental Management Framework (2002)

DWAF's Environmental Management Framework (EMF) First Draft completed in 2002 was developed to align IEM principles, environmental assessment processes and other environmental management tools and processes with the functions and responsibilities of DWAF. In doing so, environmental considerations and the associated legal compliance requirements can be efficiently and adequately addressed during all stages of the development processes undertaken through DWAF related functions, activities and projects. The EMF was compiled for specific application in the Water Resource Management branch of the Department. From a national environmental management perspective, the EMF was to help ensure that DWAF abides by the NEMA principles and the IEM provisions of Chapter 5 of NEMA.

In addition, the EMF provides DWAF the information required to abide by international conventions and international environmental considerations, provisions and requirements for water resource projects while also complying with international trends that promote environmental sustainability. The EMF also provides a mechanism through

which policies can be developed, taking into account environmental management principles and also provides a policy screening tool for evaluating the environmental consequences of existing policies. This will ensure that policies which are developed in the DWAF have the greatest opportunity to effect positive environmental change. The EMF thus sets out to ensure that the DWAF is aware of its environmental responsibilities, in doing so the EMF sets out a number of EA&M tools that may be considered when addressing environmental issues of concern (for example, SEA, EIA, Life Cycle Assessment (LCA), Risk Assessment, and Cumulative Effects Assessment (CEA)).

3.8 Strategic Framework for Water Services (2003)

This framework sets out a comprehensive approach with respect to the provision of water services in South Africa. This strategy is fundamental in addressing the constitutional requirement of access of water and sanitation to all. Supplying water and sanitation infrastructure are impacting activities on the environment that, with regards to NEMA and the Constitution, must be sufficiently addressed by the implementing authority. A number of these activities are also regarded as listed activities in terms of NEMA under Government Notice 386 and 387 of the NEMA Regulations (Government Notice No. R 386 and 387).

With regards to water services, DWAF is not involved in operating any water service infrastructure as it is not a water services provider, but will regulate water services and water resources and oversee all water services institutions. Water services authorities have the responsibility for planning, ensuring access to, and regulating provision of water services within their area of jurisdiction. The water services authorities need to ensure environmental management practices as they must provide WSDPs that address the sustainable access to water and promote sustainable livelihoods.

3.9 Revised EIA Regulations and Listed Activities (2006)

In terms of section 24(2) read with section 44 of NEMA, the NEMA Regulations and listed activities were promulgated in April 2006 (Government Notice No. R 385, 386 and 387 respectively). The objective of the Regulations is to establish the procedures that must be followed in the consideration, investigation, assessment and reporting of the activities that have been identified. The Regulations provide for two types of assessment processes:

- Basic assessment process; and
- The scoping and EIA process.

The basic assessment process includes all aspects required by NEMA but in a way that facilitates a concise process, mainly in a checklist type format. The Regulations specifically indicates information the competent authority requires in order to make a decision. Full public participation occurs in this assessment process. Listed activities for which a basic assessment is conducted are provided for in Government Notice No. R. 386. There are activities in this schedule that relate to water specifically with regards to infrastructure for which DWAF and its services providers will need to obtain authorisation.

The scoping and EIA process is a more complex and intensive assessment for activities foreseen to have serious negative impacts on the receiving environment. The process takes place in three broad phases, namely the submission of an application form, a scoping phase and an EIA phase. Public participation occurs in the scoping and EIA phase. The scoping phase is to determine the scope of the EIA that will be conducted and it looks particularly at the issues around the proposed activity, the potential impacts of the activity and the potential alternatives. The authority will review the scoping report and make the necessary decision at this point. Once the scoping report has been accepted the EIA is undertaken. This in-depth process addresses the issues raised in during scoping; assesses alternatives to the proposed activity; assesses all identified impacts and determines the significance of each impact; and formulates mitigation measures. The specifics of each stage are addressed in the Regulations as a guide. Listed activities for which a Scoping and EIA assessment is conducted are provided for in Government Notice No. R. 387. There are activities in this Government Notice that relate to water specifically with regards to infrastructure for which DWAF and its services providers will need to obtain authorisation.

4 Key Water Sector goals and targets

4.1 *Water Sector Departments' mandate and objectives*

The Water Resource Management Department mandate is “to ensure that South Africa’s water resources are protected, used, developed, conserved and controlled in an integrated, sustainable, equitable, efficient and optimal manner, for the benefit of all persons” (DWAF, 2001). This Department is responsible for implementing the National Water Resources Strategy and Catchment Management Strategies. This includes establishing and capacitating water management institutions, the development of a pricing strategy for water use charges, the implementation of water resource protection measures, the development of a strategy for water use licensing, the implementation of water conservation and demand management strategies, and the maintenance of water resource monitoring and information systems. In addition, the Department is involved with the national programme for clearing invasive alien plants (DWAF, 2001).

The Water Services Department (i.e. water supply and sanitation) mandate is “to ensure effective, sustainable, professional and equitable access to water services for all” (DWAF, 2001). The Department is involved with a variety of objectives, including amongst others the provision of direct project implementation support of inherited schemes while promoting the transfer of water services schemes to appropriate water service institutions, the support of Local Authorities in developing capacity to undertake water services provision (as well as Water Services Development Plans), the management of monitoring, auditing and evaluation of water services, and the development of implementation strategies to all which meet health and functional requirements including the protection of the quality of water resources and the promotion of effective water resource management (DWAF, 2001).

4.2 *Water Sector institutional arrangements*

There are three main role players in water sector services, as described by the above legal review: catchment management agencies, water services authorities, and water service providers.

Catchment management agencies (CMAs) are key role players responsible for water resource planning at the catchment level and most water resources management activities in these areas, such as the licensing of water use and discharges where delegated by DWAF, monitoring abstractions and discharges, collecting abstraction and discharge fees, monitoring water quality, and overseeing land-use activities as this affects water management. The CMA is responsible for the development and implementation of a catchment management strategy. This catchment management strategy must take into account the WSDPs and the business plans of water services providers. There is therefore a need for an integrated planning approach between the development of water services and water resources.

A water services authority (WSA) is any municipality that has the executive authority to provide water services within its area of jurisdiction in terms of the Municipal Structures Act 118 of 1998 or the ministerial authorisations made in terms of this Act. Water services authorities have the constitutional responsibility for planning, ensuring access to,

and regulating provision of water services within their area of jurisdiction and have a responsibility to ensure that all people living within their jurisdiction are progressively provided with at least basic water services. They may provide water services themselves and/or contract external water services providers to undertake the provision function on their behalf. Water services authorities are responsible for ensuring that adequate investments are made in water services infrastructure and that these investments are sustainable over time. A WSA must maintain a register of water services assets and put in place a system to manage these assets in terms of the maintenance and rehabilitation plan. WSAs decide on the appropriate technical solutions. WSAs are responsible for securing from DWAF (or CMAs where they are established and where this function is delegated) licences to abstract water from, and to discharge wastewater to, the water resource. (Regional water services providers secure licences directly from DWAF or CMAs.). WSAs may regulate the provision of water services within their local area through by-laws and contracts. There can only be one water services authority in any specific area. WSAs area boundaries cannot overlap.

Water services providers (WSPs) are the organisations that assume operational responsibility for providing water and/or sanitation services. A water services provider can be a bulk services provider, or a retail services provider. The first is any person who has a contract with a water services authority or another water services provider to sell water to, and/or accept wastewater for the purposes of treatment from, that authority or provider. The second is any person who has a contract with a water services authority to assume operational responsibility for providing water services to one or more consumers (end users) within a specific geographic area. All WSPs that provide water services to or on behalf of water services authorities must do so in terms of a service delivery agreement (contract) with the water services authority. The main duty of WSPs is to provide water services in accordance with the Constitution, the WSA and the by-laws of the water services authority, in terms of any specific conditions set by the water services authority in a contract, and in an effective and efficient manner, striving to meet and exceed recognised best-practice benchmarks. Local government is responsible for ensuring water services provision. The provision of water services also includes communication activities related to, amongst other things, gender-sensitive hygiene promotion and the wise use of water.

From Water Sector mandates mentioned above and the Water Sector institutional arrangements, it is clear that the Departments within DWAF must have an integrative approach in order for them to fulfil their functions, and meet their goals and targets successfully.

4.3 Summary of key goals and targets

In light of the above Water Sector mandate and objectives, the key documents described above have developed a range of goals and targets to be achieved. This section summarises the main focus of these goals and targets, and refers the reader to the appropriate document for further detail.

Firstly, the DWAF Environmental Implementation and Management Plan (2001) assesses, in Section 5, DWAF's policy and legislation compliance with the NEMA principles. These principles form important guiding goals for the Water Sector in terms of achieving sustainable water use.

Secondly, the DWAF Environmental Management Framework (2002: 30) summarises specific legal issues, functions and activities that both Water Resource Management and Water Services are responsible for. These relate to aspects of:

- Atmospheric pollution;
- Waste Management;
- Hazardous Wastes;
- Water Consumption and disposal;
- Noise;
- Fauna and Flora (including protected areas and national heritage resources);
- Planning of new activities; and
- General obligations that influence environmental management.

In addition, the Environmental Management Framework (2003: 32-35) lists key international conventions and agreements for which DWAF is responsible. The categories that are monitored under international conventions and agreements are similar to those national responsibilities described above.

Thirdly, the Strategic Framework for Water Services (2003: 64), in Annexure 2, describe the key performance indicators for water service authorities. The indicators monitor the following important aspects:

- Access to services (Access to water and Access to sanitation);
- Quality of services provided (Water quality and Continuity of water supply);
- Free basic services provided (Free basic water and Free basic sanitation);
- Financial performance (Affordability);
- Use of resources (Metering efficiency); and
- Environment (Quality of water discharged).

In addition, the Strategic Framework for Water Services (2003: 41) highlights key principles for water services planning, namely:

- Integrated planning;
- Service provision related to effective demand;
- Support sustainable livelihoods and local economic development;
- Choice of appropriate technology;
- Promotion of a strong and active civil society;
- Water demand management;
- Minimisation of environmental impacts;
- Integration with water resource management; and
- Gender sensitivity.

The goals and responsibilities summarised in this section highlight the areas potentially requiring intervention, in order to be achieved.

4.4 Challenges

The DWAF is faced with the challenge of addressing historical backlogs in water services provision, and high levels of poverty and inequity, in the context of a country aiming for increased social and economic growth and well-being. A key priority is therefore

providing adequate and appropriate levels of water services, while ensuring that these activities are not detrimental to the environment that underpins them. The Water for Growth and Development programme of Masibambane is central to addressing this priority, through its focus on the role of water in broader socio-economic development. This Strategic Framework, aimed at mainstreaming environmental management into the Water Sector, places importance on streamlining its approach and interventions with Water for Growth and Development plans (i.e. to enable sustainable service delivery that balances provision to the poor and to support economic growth).

In terms of environment, the Water for Growth and Development programme has highlighted several key challenges requiring attention:

- Climate change impact;
- Water security and shock mitigation;
- Integrated Water Resource Management (IWRM);
- Sustainable water use;
- Biodiversity and ecological protection; and
- Land use and management.

In addition, challenges to effective implementation of all cross-cutting issues/sustainability pillars in the Masibambane programme include:

- Lack of prioritisation of cross-cutting issues/sustainability pillars by stakeholders;
- No specific mandate to senior managers, so they are seen as an ‘add on’;
- Inadequate or no budget allocated to cross-cutting issues/sustainability pillars;
- Little guidance in terms of strategies for the sector;
- Lack of awareness of the importance and linkage with national and provincial government priorities; and
- Lack of champions for cross-cutting issues/sustainability pillars.

These challenges, linked with the legal review and established goals and targets, play a central role in determining the priority areas for implementation in this Strategic Framework.

5 Priority Areas for mainstreaming Environmental Management

Based on the review of key Water Sector documents, three broad priority areas have been suggested that will assist the DWAF Water Services Department in mainstreaming environmental management into its activities in a practical manner. Within each priority area, projects must be identified in collaboration with stakeholders in the Water Sector.

The three priority areas introduced below have been chosen as they are interconnected, but individually cover important elements of mainstreaming environmental management. As a whole, they work together to ensure the Department's fulfilment and compliance to the key Water Sector documents reviewed. Area 1 involves ensuring that appropriate IEM tools are being effectively employed in the core business of Water Services (i.e. the basic requirement of the Department expressed in policy and law is met). Area 2 deals with improving the institutional, governance and planning arrangements of the Department in fulfilling its mandate as described in the above review. These arrangements are critical as they underpin the practical interventions for mainstreaming environmental management, and if not addressed, can limit success of the other priority areas. Area 3 revolves around supporting a comprehensive approach to environmental management in the Water Sector, so that the Department is able to respond to the broader sustainable development challenges facing South Africa. It aims to facilitate 'business unusual', contributing further to the range of environmental aspects of growth and development in the communities the Department services.

5.1 Area 1: Infusing Environmental Management throughout the Water Services Cycle

This priority area focuses on understanding the core business of the Water Services Sector, how each activity in the Water Services cycle (Figure 3) impacts on the receiving environment, and what EA&M tools are currently being employed and their effectiveness. From this understanding, strategic and practical interventions will be put forward for improving current practice. This priority area fulfils the legislative objectives of NEMA and associated Acts, including the NWA and Water Services Act. It also draws on the DWAF EMF (2002), and Strategic Framework for Water Services (2003).

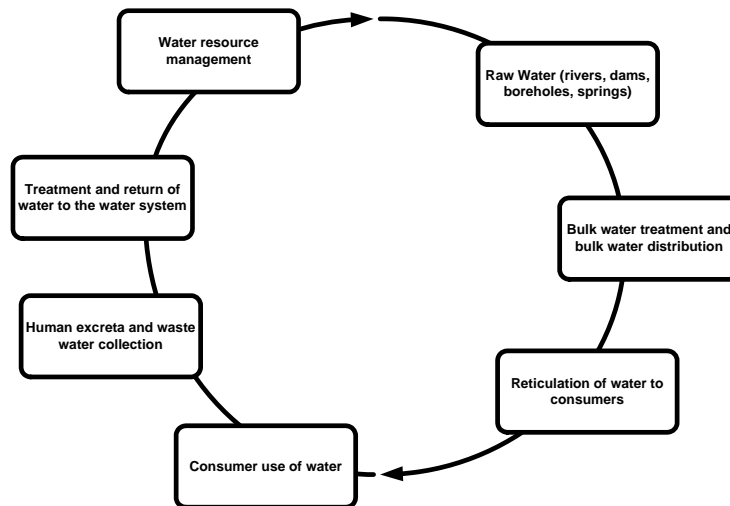


Figure 3: Water Service Cycle (DWAF, 2003)

Potential projects for this priority area presently include:

- Understanding environmental impacts, and initiating appropriate EA&M practice, at each activity in the Water Services Cycle.
- Carbon Reduction Strategies in the Water Services Cycle (to address climate change issues).

5.2 Area 2: Co-operative Governance and Integrated Planning

The Constitution and NEMA strongly advocate for co-operative governance and integrated planning for the achievement of sustainable development goals of South Africa. In the Water Sector, the planning process at the three tiers of government (Figure 4) aims to facilitate co-operative governance using a variety of connected strategies and plans. This priority area focuses on understanding how environmental management is incorporated, how it can add value to the Water Services contribution to achieving common goals (e.g. links with Water Resources Management and DEAT), and how it can be effectively integrated into and across government levels from national to local scale.

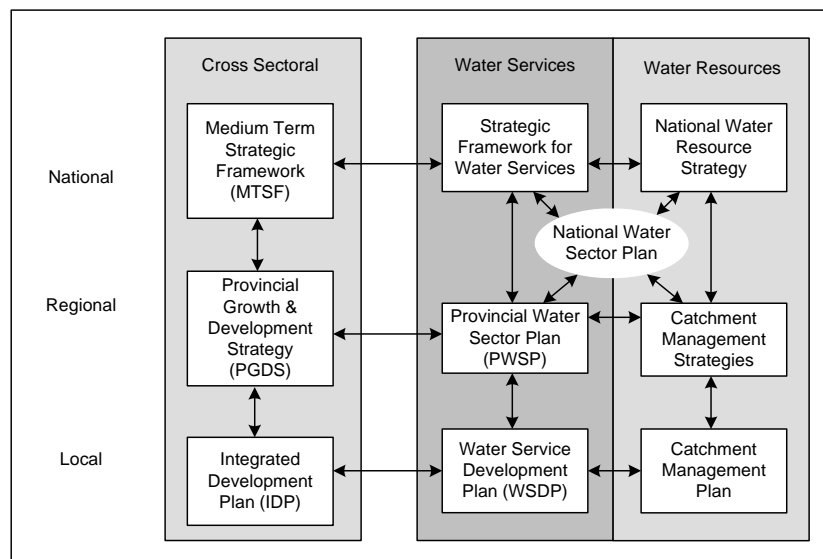


Figure 4: Water Sector Planning at the three tiers of government (DWAF, 2008)

Potential projects for this priority area presently include:

- Understanding how environmental management is currently incorporated in the Water Sector planning, to determine best practice for future integrated planning processes.
- Monitoring and Reporting Framework (including Water Sector Sustainability Indicators and Water Sector Performance Indicators).

5.3 Area 3: Supporting comprehensive Environmental Management at local level

This priority area focuses on ‘business unusual’ related to environmental management, by exploring how the sustainable development challenges faced at the local level (i.e. addressing service backlogs as well as contributing to improving the social and economic development of communities) can be effectively supported by comprehensive environmental management approaches. This priority area has strong links with the Water for Growth and Development Sustainability Pillar objectives, and projects therefore must feed directly from the experiences and learning from each region in order to be relevant and effective.

Potential projects for this priority area presently include:

- Peer review and roll-out of Environmental Impact Management Systems (EIMS) Guidelines
- Other interventions will be highlighted through regional discussions (e.g. Water development projects for poverty alleviation).

6 Conclusion / Way Forward

This Strategic Framework for mainstreaming environmental management in the Water Sector is aimed at directing the choice, and co-ordinating the implementation, of practical Water Services projects for achieving the intentions, goals and targets established in existing Water Sector policy, legislation and strategies. Version 1 outlines the results of the review of key Water Sector documents, and details recommendations for the broad priority areas of intervention that enable the mainstreaming of environmental management into the Department. The priority areas identified in this Strategic Framework will be further unpacked using feedback and collaboration with Water Sector stakeholders, and suggested projects can then be planned and executed through an accompanying Implementation Guideline.

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