

NATIONAL WETLAND MANAGEMENT FRAMEWORK FOR SOUTH AFRICA



Department of Agriculture, Land Reform & Rural Development
Department of Forestry, Fisheries & Environment
Department of Water & Sanitation



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ACRONYMS

Acronym	Meaning
ABS Africa	Advisory on Business and Sustainability Africa
ARC	Agricultural Research Council
CSIR	Council for Scientific and Industrial Research
DALRRD	Department of Agriculture Land Reform and Rural Development
DEA	Department of Environmental Affairs
DEADP	Western Cape Department of Environmental Affairs and Development Planning
DEDEA	Department of Economic Development and Environmental Affairs
DEDECT	North West Department of Economic Development, Environment, Conservation and Tourism
DENC	Northern Cape Department of Environmental Affairs and Nature Conservation
DFFE	Department of Forestry, Fisheries and the Environment
DMRE	Department of Mineral Resources and Energy
DWA	Department of Water Affairs
DWS	Department of Water and Sanitation
EIA	Environmental Impact Assessment
EPA	Environmental Practitioner Agency
GDARD	Gauteng Department of Agriculture and Rural Development
IWRM	Integrated Water Resources Management
LEDET	Limpopo Department of Economic Development, Environment and Tourism
METT	Management Effectiveness Tracking Tool
MTPA	Mpumalanga Tourism and Parks Agency
NBA	National Biodiversity Assessment
NEMA	National Environmental Management Act (Act 107 of 1998)
NFEPA	National Freshwater Ecosystem Priority Areas
NGOs	Non-Governmental Organisation
NPOs	Non-Profit Organisation
NRM	Natural Resources Management
NWA	National Water Act (Act 36 of 1998)
NWC	National Wetland Committee
NWF	National Wetland Framework
NWMF	National Wetland Management Framework
NWP	National Wetland Policy
PAES's	Protected Areas Expansion Strategies
PCAs	Provincial Conservation Agencies
PSC	Project Steering Committee
RQOs	Resource Quality Objectives
SACNASP	South African Council for Natural Scientific Professions
SAEON	South African Environmental Observation Network
SANBI	South African National Biodiversity Institute
SANParks	South African National Parks
SUDS	Sustainable Urban Drainage Systems
SWSAs	Strategic Water Source Areas
WMA	Water Management Area
WRC	Water Research Committee
WUL	Water Use License

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1 INTRODUCTION

1.1 The importance of wetlands

Wetlands are considered one of the world's most productive ecosystems in the world on par with coral reefs and rainforests (US: EPA, 2020). Although they cover only 6.5% of the earth's surface, they account for a disproportionately high level of global ecosystem services (40%) (US: EPA, 2020). They have been referred to as "biological supermarkets", providing large volumes of food to a plethora of animal species (US: EPA, 2020). They play host to a diverse range of plants and microbes in addition to the mammals, insects, fish, amphibians and birds that call wetlands home for some or all of their life cycle (US: EPA, 2020). According to *The Economics of Ecosystems and Biodiversity for Water and Wetlands*, wetlands have among the highest value per hectare per year, exceeding temperate forests and grasslands (Russi, *et al.*, 2013). They play an integral role in water cycles from the local to the global scale and represent ecological infrastructure that can perform a number of essential functions which range from carbon sequestration and water quality enhancement (through toxicant and nutrient removal and sediment trapping) to flood protection and streamflow regulation by acting as sponges in the landscape (Edwards *et al.*, 2018). Aside from these vital life supporting services, they provide harvestable resources (food, crafts, medicine, fodder) possess intrinsic aesthetic value and form an inherent part of many people's cultures, creeds, heritage and customs. Their aesthetic appeal and high level of biodiversity in turn means they contribute significantly to tourism and recreation.

Within South Africa which is considered a semi-arid country that has an average annual rainfall of roughly 497mm (far below the world average of 860mm) and conversely high rates of evaporation, and a high level of population growth, water resources are threatened by increasing anthropogenic pressures (DWS, 2018). Nearly all the rivers in southern Africa have been manipulated by storage dams or water transfer schemes, over exploitation, degradation or pollution (DWS, 2018). Against this backdrop, and according to global standards, South Africa is considered a water-scarce country and is on the verge of being classified as water stressed (DWS, 2018). Moreover, on its current projected trajectory (based on trends in water use and population growth) it is anticipated that South Africa will reach the limits of its available freshwater resources before the year 2050 (DWS, 2018). Even more concerning is the fact that there is already less water per person available than in countries considered to be much drier such as Namibia and Botswana (DWS, 2018).

Although wetlands are estimated to comprise < 5% of the area within South Africa the supporting and provisioning services wetlands can provide in this context are vital (SANBI, 2019). Even the smallest wetland can be an invaluable resource for people living nearby providing water for domestic use, crops and livestock or by providing a source of food (e.g. fish), and serving as a safety-net via the resources they provide during the dry season. However, in spite of the numerous benefits wetlands provide and the recognition they have received in national legislation, wetlands continue to decline in extent and condition.

1.2 Context of wetland management in South Africa

Wetlands were once considered valueless wastelands that needed to be converted to other uses in order to improve their usefulness to people. In response, many governments around the world, including South Africa, were still providing farmers with incentives to convert their wetlands for agriculture as recently as the 1970s. South Africa joined the Ramsar Convention in 1975, and whilst momentum was initially slow, this signalled an important shift in policy direction.

A pivotal response by the government to this state of affairs was the establishment in 2002 of a national wetland rehabilitation programme, known as Working for Wetlands. The decision to create such a programme came about through the convergence of several driving forces. It drew on objectives in environmental, biodiversity, water and agriculture policies, and capitalised on the growing recognition that wetland degradation is not necessarily permanent, and that it is possible to reinstate at least some ecosystem services through rehabilitation. It was also pushed forward through active lobbying and support of the non-governmental Mondi Wetlands Project who were instrumental in raising awareness on wetland management and in lobbying government to begin experimenting in this direction.

Wetlands now feature prominently in the mandates of several National Departments including the Department of Water and Sanitation (DWS), Department of Fisheries Forestry and Environment (DFFE) and Department of Agriculture, Land Reform and Rural Development (DALRRD). Significant progress has also been made in developing an enabling legislative environment for wetland management and protection.

Significant progress has also been made in some sectors, perhaps most notably the forestry sector where, following the declaration of forestry as a stream flow reduction activity, forestry companies have removed large areas of timber from wetland and riparian areas. Participation of stakeholders has also increased significantly through platforms such as the National Wetlands Indaba, which started in 1998 and continues to be a platform for scientists, stakeholders, educators and conservationists to share their collective experience and wisdom about our country's wetlands. This platform is now supported by a suite of wetland forums in each province. Another important milestone was the establishment of the South African Wetland Society in 2012 which was established to build and promote excellence, professionalism and ethics in the Wetland Community of Practice of South Africa.

Despite the advances made, wetlands are amongst the most threatened and least protected of all South Africa's ecosystems with 88% of wetland ecosystem types classified as threatened and most loss occurring in urban and commercial agricultural contexts (Figure 1). Although a large proportion of wetland loss took place in the last century, this declining trend continues in a post-democratic South Africa, despite our progressive environmental and water resource legislation. Given that wetlands are essential ecological infrastructure, there is a clear need to reverse this trend and to strengthen the management, restoration and protection of these ecosystems in order to secure the key benefits they provide to society.

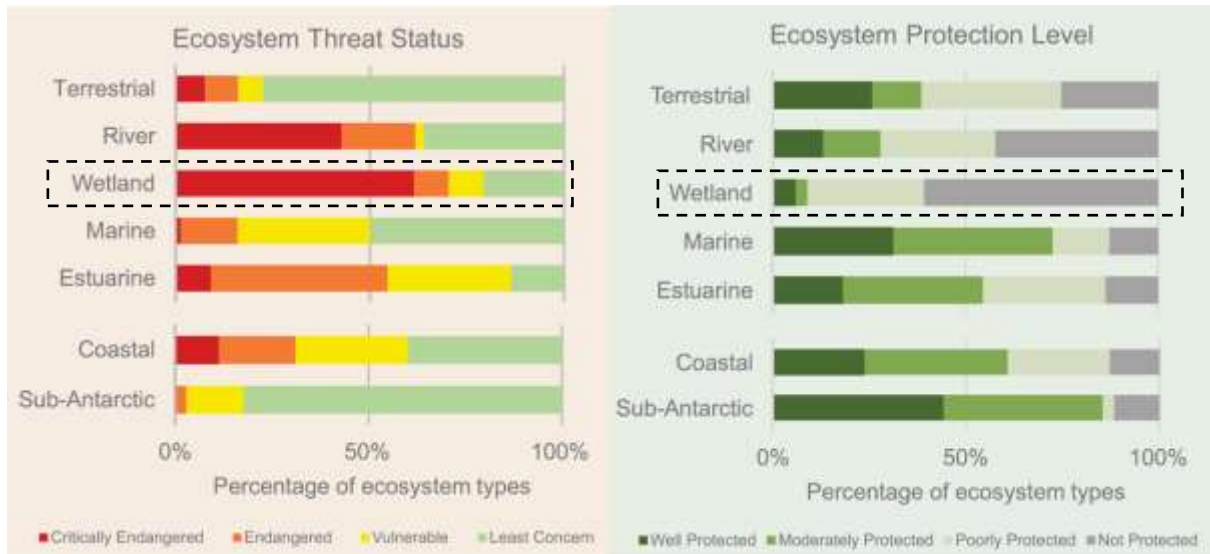


Figure 1. The graph on the left, ecosystem threat status across all realms, shows that inland wetland ecosystem types are amongst the most threatened whilst the graph on the right, ecosystem protection level, shows that they also have low levels of protection (SANBI, 2019).

In order to address this practical and institutional challenges, a number of draft strategic documents have been produced by the departments dealing with water, environment and agriculture over the past years (Figure 2). These included a position paper and discussion document produced by the Agricultural Research Centre on behalf of the DALRRD and, a wetland position paper and draft wetland policy by DWS. In 2018, the DFFE through the Branch of Biodiversity and Conservation conducted a situational analysis on existing wetland related legislation and policies. The assessment noted that the provisions for the management of wetlands was fragmented and that there was no coordinated approach for the effective implementation of wetland protection, management, and conservation. The assessment recommended that an integrated/joint national policy on wetlands be developed that would address the mandates for wetland management, conservation and protection of the three key departments, i.e., DFFE, DWS and DALRRD. This recommendation was similarly voiced during the 2017 National Wetland Indaba.

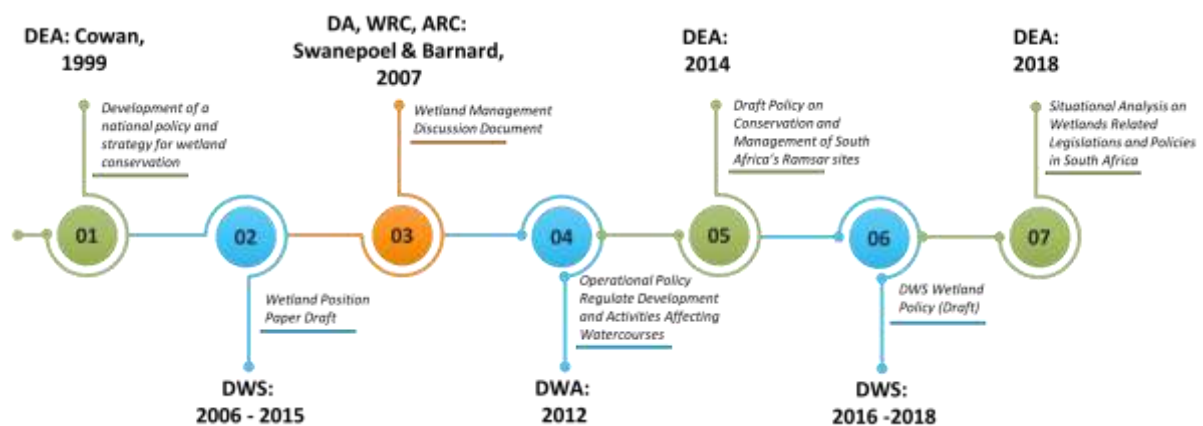


Figure 2. Timeline showcasing reviews and syntheses done thus far within the ambit of developing a more coordinated approach to wetland governance.

Another key document prepared in recent years was the document entitled "Wetland Offsets: A Best Practice Guideline for South Africa" (SANBI & DWS, 2016). This guideline was developed to aid in the consistent application of wetland offsets in South Africa and includes a number of principles that are relevant to the development of a National Wetland Policy.

1.3 Developing an effective policy response

In 2019 the recommendation to develop a joint National Wetland Policy was adopted by the three departments. The "Wetland Policy Project" was then conceptualized as a 4-phase project with an aim of having a gazetted policy in place by 2023 (Figure 3). Phase 1 has been completed and the project has therefore progressed into the phase in which a draft policy and implementation plan is being developed.

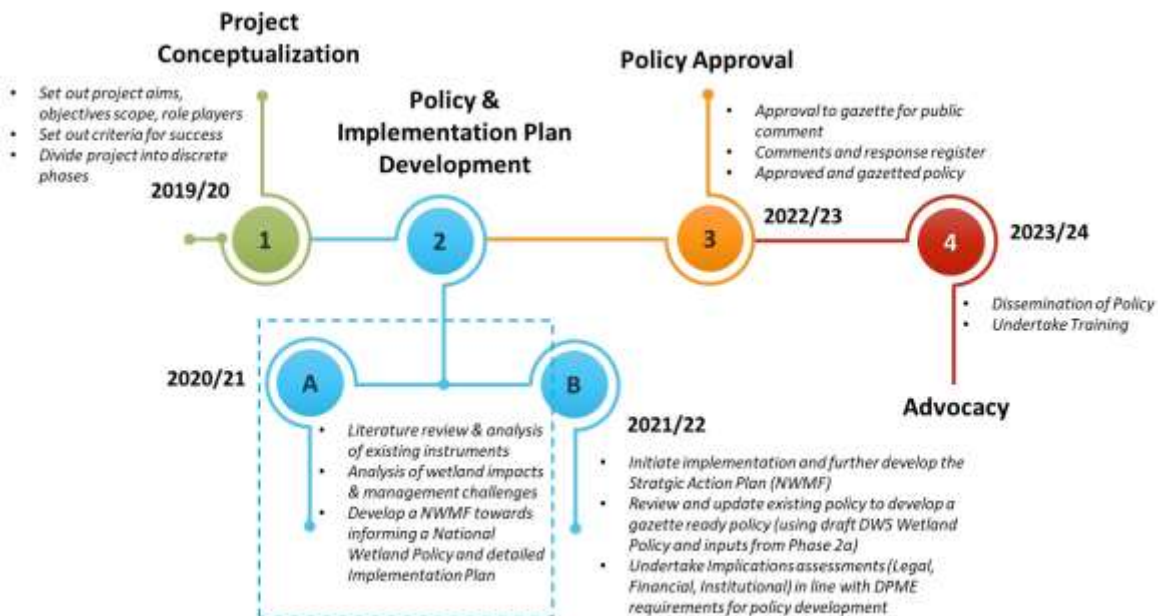


Figure 3. Overview of the different phases involved in the project entitled "Wetland Policy Project" with the phase that focuses on the development of the NWMF indicated.

Many other countries have chosen to develop national wetland policies in response to similar wetland governance challenges experienced - associated with fragmented legislation and disparate mandates. A review of selected international literature was therefore identified as an important aspect to include as part of Phase 2A to benchmark and learn from these experiences. It is also recognized that the development of policy must be founded on credible and objective evidence if it is to receive support from the Department: Performance Monitoring and Evaluation. As such, the scope of work for Phase 2A also includes appropriate information gathering to better understand wetland impacts and management challenges so as to inform policy direction. The intended outcome of Phase 2A is the development of a National Wetland Management Framework (NWMF) that provides a sound basis against which to pursue further wetland policy development. This will then be used as a basis for

updating the draft DWS wetland policy to develop a 'gazette ready' joint national wetland policy and initiating the implementation and further refinement of a Strategic Action Plan developed as part on the NWMF.

2 DEVELOPMENT OF THE NWMF

This project commenced in September 2020 with the appointment of Eco-Pulse Environmental Consulting Services. The project inception phase was completed with active engagement of the Project Steering Committee (PSC) made up of representatives from DWS, DFFE and DALRRD. A step-wise approach was developed to guide the development of the framework which culminates in a series of National Stakeholder Consultations that will be used to update and finalize this report (Figure 4).

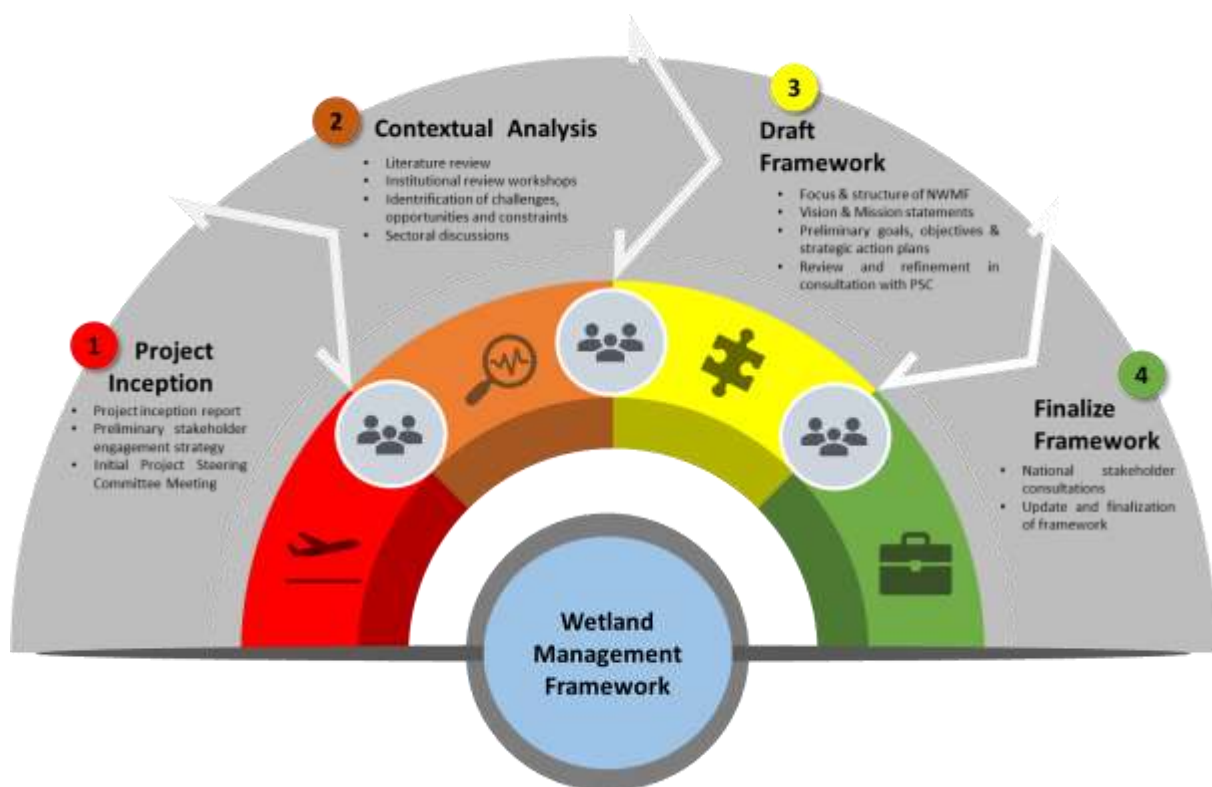


Figure 4. Overview of the steps taken to develop the National Wetland Management Framework.

The PSC have been actively engaged in all steps of the project and have been instrumental in reviewing and revising the approach to project implementation. A series of interim reports were produced at regular intervals during the project and served as a basis for sharing information and guiding subsequent phases of project development. These reports have largely been re-packaged as Annexures to this report and serves as background information to this document. A brief overview of key aspects that informed the development of this framework is outlined here, with reference to supplementary information as appropriate.

2.1 Clarifying the scope and purpose of the NWMF

Prior to initiating any detailed work, it was important for the PSC and project team to reach a common understanding as to what was meant by a "National Wetland Management Framework". As such, key terms were discussed to ensure direction and alignment and clarify the scope and purpose of the project:

National: The emphasis of this framework is on guiding wetland management at a national level. The implication here is that it should be focussed principally on identifying strategic imperatives necessary to improve wetland management in South Africa. Given this emphasis at a national level, the framework will seek to provide specific direction for National Departments jointly responsible for wetland management. It is however acknowledged that the framework must have relevance to the challenges and functions of sub-national entities and should therefore be structured in such a manner that it can be unpacked further for application at a sub-national level.

Wetland: For the purposes of this project, a wetland is defined as per the definition in the South African National Water Act; Act No. 36 of 1998, as "*Land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.*"

This definition is considerably narrower than the definition outlined in the Ramsar Convention, which defines wetlands rather broadly, as "*areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres*" (Ramsar Convention Secretariat, 2016).

This was a conscious decision made by the PSC in recognition of the differences in regulatory mandates for estuaries and the additional complexity that this could bring to the process. Nevertheless, it is important to acknowledge that there is a continuum between rivers and wetlands that occur outside estuarine functional zones and those situated within these zones. As such, there may be a need to revisit this and integrate wetlands that occur within the estuarine functional zone into future revisions of the framework.

Management Framework: A combination of interlinked items that provides a structure used to support wetland management.

It was agreed that the goals of the framework should seek to foster the following key outcomes:

- **Collective outlook:** The framework should seek to develop clear statements of intent that clarify the aspirations for wetland management at a national level. Such statements should be informed by appropriate contextual information that foregrounds the state and value of wetland management in South Africa. The intention here, is that the framework would help set a solid foundation for the compilation of a National Wetland Policy (NWP).

- **Directed response:** The framework should seek to outline a clear and strategic response for wetland management that is based on an understanding of the challenges, constraints, and opportunities across a broad suite of sectors.
- **Institutional collaboration:** The framework should be developed collaboratively to draw key stakeholders together to support the achievement of desired outcomes. This should be informed by existing mandates and seek to outline roles and responsibilities, particularly in instances where there is a lack of clarity. This will focus principally on strengthening the collaboration of key national departments whilst recognizing the supporting role of other stakeholders.

2.2 Review of institutional framework

Much work had been undertaken previously to document the current institutional mandates and responsibilities for wetland management in South Africa. The emphasis of this task was to draw on existing reviews and syntheses already undertaken of South African legislation, policies, strategies, guidelines and action plans and to present this in a structured manner to inform future policy development. This work is included in [Annexure 1](#) and provides an overview of the following aspects:

- **International obligations:** This provides a summary of relevant international commitments with an emphasis on key position statements and policy imperatives that need to be acknowledge when developing a local policy response.
- **National Mandates:** This serves to briefly outline the mandates of key national departments with a mandate for wetland management. This has direct relevance to the allocation of responsibilities for implementing strategic actions identified as part of the framework.
- **Key Strategic Planning Documents:** A broad suite of strategic level planning documents already deal with environmental and water resource. Those with a clear and direct link to wetland governance and management were therefore reviewed in order to understand to what extent wetland management was accounted for and to explore how these could be strengthened through the development of a NWMF.
- **Existing coordinating bodies:** The lack of coordination was highlighted early on as a key challenge to effective wetland management. A review of the mandates and operation of existing co-ordinating bodies was therefore undertaken with a view to strengthening coordination efforts between key government departments.

2.3 Review of Best Practice Guidelines, Wetland Policy Case Studies

A literature review of selected international policy, strategies and guidelines was undertaken with a specific focus on countries that are known to have existing wetland management frameworks in place. The process was led by the project team but was also informed by guidance and key references provided by the PSC. The findings of this review are included in [Annexure 2](#) and includes the following components:

- **Review of key international best-practice guidelines:** A rapid review of selected international guidelines including those prepared by the Ramsar Convention on Wetlands and the Convention on Biological Diversity was undertaken. This served to provide useful insights into the development of strategic plans including key aspects that should be considered based on international experiences.
- **Comparative analysis of international case studies:** A broad suite of wetland policies and other relevant documents relating to wetland management were interrogated as part of this literature review. The emphasis was on extracting key ideas and learnings and includes a summary of international examples and selected case studies that are most relevant to the South African context.

2.4 Integrating learnings from international best-practice

Based on the international review, a set of recommendations were extracted and used to further inform the development of the NWMF. These recommendations were then used to inform data collection and stakeholder engagement processes and the structuring of the strategic action plan. Further details of these learnings, together with how they were integrated into the development of the NWMF are detailed in [Annexure 3](#).

2.5 Selecting wetland management themes

The importance of developing a well structured response plan emerged early in the contextual analysis phase of the project. Several common themes relevant to wetland management also started to emerge when reviewing international literature. As such, a decision was made to define clear themes as a basis for collecting information and then in structuring a strategic action plan as part of the NWMF. An overview of these themes, refined somewhat as the project has unfolded and tailored for the South African context, is provided in Table 1.

Table 1. Overview of selected wetland management themes.

No	Theme	Emphasis
1	Governance and Regulation	This theme focusses on top-down actions taken to improve the management of wetlands through effective governance and regulation. This includes the development of policies, legislation and guidelines and subsequent enforcement actions to ensure that regulatory mechanisms are appropriately implemented.
2	Advocacy and Outreach	The emphasis here is on building support and buy-in for wetland management across sectors through a range of advocacy and outreach initiatives that emphasizes the important role that wetlands play in society. This includes forums for discussion and information sharing, distribution of communication material, outreach activities and capacity building initiatives.
3	Catchment Planning	This theme recognises that wetlands are intimately linked with their catchments and that wetland management ultimately requires careful planning and management of activities in the catchment. The focus here is therefore on the management of catchment land uses and activities that ultimately affects the quantity and quality of water delivered to wetland systems.
4	Sustainable use of Wetlands	The emphasis here is on promoting sustainable use and effective management of wetlands through the adoption and implementation of management interventions aimed at preventing degradation and addressing direct threats to wetlands through appropriate planning, management, and support.

No	Theme	Emphasis
5	Restoration of Wetlands	This theme responds to the urgent need to improve the state of wetlands through proactive interventions that seek to restore the functions and values provided by wetlands.
6	Wetland Protection	Whilst there are many ways to protect wetlands the emphasis here is on ensuring that wetlands are prioritised, conserved and effectively managed through a network of protected areas.
7	Research, monitoring and evaluation	The emphasis here is on supporting research and developing and maintaining an effective national inventory of information on wetlands that can be used to inform planning and decision making.

2.6 Assessment of existing challenges, constraints and exploring potential opportunities and solutions

Proper understanding of the key wetland management problems and challenges and their root causes (drivers and pressures) is critical to the development of a suitable response plan. An important emphasis of the project was therefore on deepening our understanding of why wetland ecosystems are still in decline despite the presence of various laws and institutions to protect and manage wetlands. Whilst the answers are complex, these issues were explored by reflecting on the following key focal areas:

- **Institutional, regulatory and policy failures:** An overview of common governance challenges and their relevance to wetland management in South Africa was provided.
- **Negative externalities and constraints:** Key inherent underlying constraints imposed by negative externalities are presented as key limitations that need to be acknowledged and understood when exploring potential solutions to wetland management.
- **Review of wetland challenges and opportunities:** The emphasis here, was on identifying and assessing the present drivers, pressures and responses to wetland management across a broad suite of sectors and to then start consolidating recommendations to improve wetland management.

The findings of this review are included in **Annexure 4** and includes an in-depth assessment of a broad suite of sectors (Figure 5). A sectoral approach was adopted to provide an opportunity to take a "deep-dive" into wetland management issues and to solicit ground-up ideas from sector stakeholders on how wetland management could be improved. This proved an effective means of reaching out to a broad cross-section of stakeholders and ensuring that key wetland management issues were not overlooked.

Conservation Sector - 08

Landowners and other stakeholders with an interest or mandate for biodiversity conservation.

Communal Land - 07

Activities on communal lands ranging from grazing and subsistence use through to peri-urban development.

Urban Development - 06

Activities associated with the development of towns, cities and associated infrastructure.

Industrial Sector - 05

Broad suite of industrial activities such as breweries, chemical industries, petroleum works, manufacturing, paper pulp or pulp product industries, etc.



01 - Governance

Government Departments with a mandate for wetland management and protection.

02 - Research & Consulting

Academics, researchers and consultants involved in informing wetland management and decision-making.

03 - Commercial Agriculture

Commercial agricultural activities including crop production, animal production and plantation forestry.

04 - Mining Sector

Mining including open-cast, underground, alluvial, offshore, dune or artisanal operations.

Figure 5. Schematic diagram illustrating key sectors that were engaged to build an understanding of the constraints challenges and opportunities to wetland management.

2.7 Stakeholder Consultation

The importance of engaging with stakeholders was recognized as a key consideration in the development of the NWMF. The approach adopted was informed by international best practice but constrained by practical considerations including time for consultations and the COVID-19 pandemic which meant that most interactions had to be undertaken remotely. Given that coordination and buy-in from National Departments was critical to the process, regular meetings were held with the PSC where active engagement was encouraged.

Apart from regular PSC meetings, a series of additional targeted stakeholder engagements were undertaken as part of Step 2 in the project. These engagements are outlined in Figure 6 and initially focused on fostering collaboration and interaction between government departments (A & B). Additional input was then obtained through targeted sectoral engagements with both government and non-government stakeholders (C & D). The logistics of arranging these sectoral engagements was challenging, and after convening an initial series of virtual collaborative discussions, a decision was taken to engage further where necessary through telephonic interviews rather than soliciting further inputs through a series of targeted questionnaires and follow-up workshops as envisaged during project inception.

During Step 3 a Draft Wetland Management Framework was prepared. This was informed both by the literature review and engagements with different sectors. A series of planning workshops were then held with the PSC to review and refine the vision, mission and strategic action plan. In this way, initial recommendations identified during the sectoral discussions were reviewed and refined whilst additional priority actions also emerged through further consultation with the PSC. Once action plans had been refined, the importance of actions and associated responsibilities were discussed.

The final phase of stakeholder consultation involved the hosting of two virtual National Stakeholder Consultation Workshops (Step 4). The first of these virtual workshops was held on the 12th August 2021 and involved Government Representatives from DWS, DFFE and DALRRD. The second was held on 25th August 2021 and included stakeholders from the broader wetland community. Whilst opportunities were provided to contribute during the workshops, comments from the second workshop, along with targeted feedback received from SANBI was consolidated in comments register which will be used to inform further refinements to this document. The comments and response register is included as [Annexure 5](#) to this report.



Figure 6. Overview of the stakeholder consultation process followed in developing the NWMF.

3 VISION AND MISSION FOR WETLAND MANAGEMENT

The vision and mission for wetland management in South Africa is presented below and were developed through a cooperative process involving key government departments with a mandate for wetland management and were refined through a process of stakeholder engagement.

Vision:

Wetlands in South Africa are recognized, prioritized and collaboratively governed as high-value ecosystems that provide multiple benefits vital to the well-being of all, now and in the future.

The vision was developed through a consultative process with a broad suite of stakeholders and was informed by the following key principles:

- The vision should be outcome oriented and articulate what we aspire to achieve if we effectively implement our Mission.
- The vision should move us towards a new state that will require new ways of thinking and acting (transformative).
- We should be able to reflect back on the vision in 10, 20 or 30 years' time and be satisfied with this as an outcome.
- The vision should draw from key words that reflect the mandates of different Departments responsible for wetland management.
- The vision should take cognizance of strategic statements of intent reflected in existing government documents and developed as part of the strategic action plan.
- The vision should reflect the shared responsibility of all South Africans to help uphold the environmental rights enshrined in our constitution "an environment that is not detrimental to his or her health or well-being".

The vision also seeks to succinctly articulate the aspirations of stakeholders for more proactive and effective wetland management. Important high-level aspirations that were communicated by stakeholders and which were used to inform the drafting of the vision are captured below:

- The status of wetland management in South Africa is very concerning. As such, there is a need for a radical shift in our response to be much more pro-active in addressing negative impacts and strengthening actions to manage, restore, sustainably use and protect our wetlands.
- The importance of wetlands as high value ecosystems needs to be effectively communicated and well understood by all South Africans.
- There is a recognition that protection of all wetlands is not an achievable goal but that sustainable use is appropriate in the South African context.
- Prioritization of wetlands is an important consideration that should be used to inform decision making and management actions.
- Rehabilitation of wetlands needs to be mainstreamed / improved to enhance and secure wetland ecosystem goods and services.

- Significant impacts to wetlands should only be permitted in exceptional circumstances (in public interest).
- Impacts to wetlands must be avoided and mitigated as far as possible (recognizing the need for development).
- Offsets should effectively deliver a net gain in wetland functions to address water management challenges.
- Formal protection of wetland ecosystems must be enhanced in line with national targets.
- Management actions should be equitable for current generations but should not prejudice future generations.

Mission:

To adaptively manage, protect, sustainably use and restore wetlands through inclusive, integrated and aligned national, provincial and local actions that are supported by investments, advocacy, outreach and science-based, participatory research and learning.

The mission was informed by the following principles and aspirations:

- The mission should outline the “how” of the vision and include key words that reflect priority actions required to drive more effective wetland management.
- The mission should reflect the need for enhanced collaboration and cooperation between all entities with a responsibility for wetland management.
- The importance of adaptive management and creating space for learning should be acknowledged and supported.
- The need to ensure that wetland management is supported by appropriate research and science needs to be emphasized.
- Participation across all sectors and involvement of all stakeholders in co-managing wetlands should be actively promoted.

4 STRATEGIC ACTION PLAN

A strategic action plan was developed to help institutions responsible for wetland management to coordinate their activities to inform further policy and program development, encourage enhanced cooperation at all levels of government and support strategic partnerships. The action plan has been informed by existing legal and policy instruments guiding wetland conservation in South Africa, and through a thorough review of wetland management issues, challenges and opportunities identified through sectoral engagement. The action plan seeks to realise the vision and mission for improved wetland management and to direct the actions of government and other stakeholders with a mandate or interest in wetland management.

4.1 Structure of the plan

The strategic action plan has been structured according to key wetland management themes (Figure 7) and includes a preliminary suite of goals, objectives, and prioritised actions for enhancing wetland management in South Africa. It is important to note that the action plan focusses simply on the “what” rather than the “how”. The “how” is to be defined through subsequent steps which would need to be developed by the institutions designated as responsible for implementing the actions. It is foreseen that implementation plans for individual actions will be collated into an implementation plan for the NWMF and that progress in implementing the Framework will be monitored and progress evaluated on an annual basis. The NWMF will further be reviewed every 3 years to reflect on the progress made and lessons learnt and to identify new and emerging issues that need to be addressed. It is recommended that a National Wetland Committee be established to ensure and monitor the implementation and review of the NWMF.

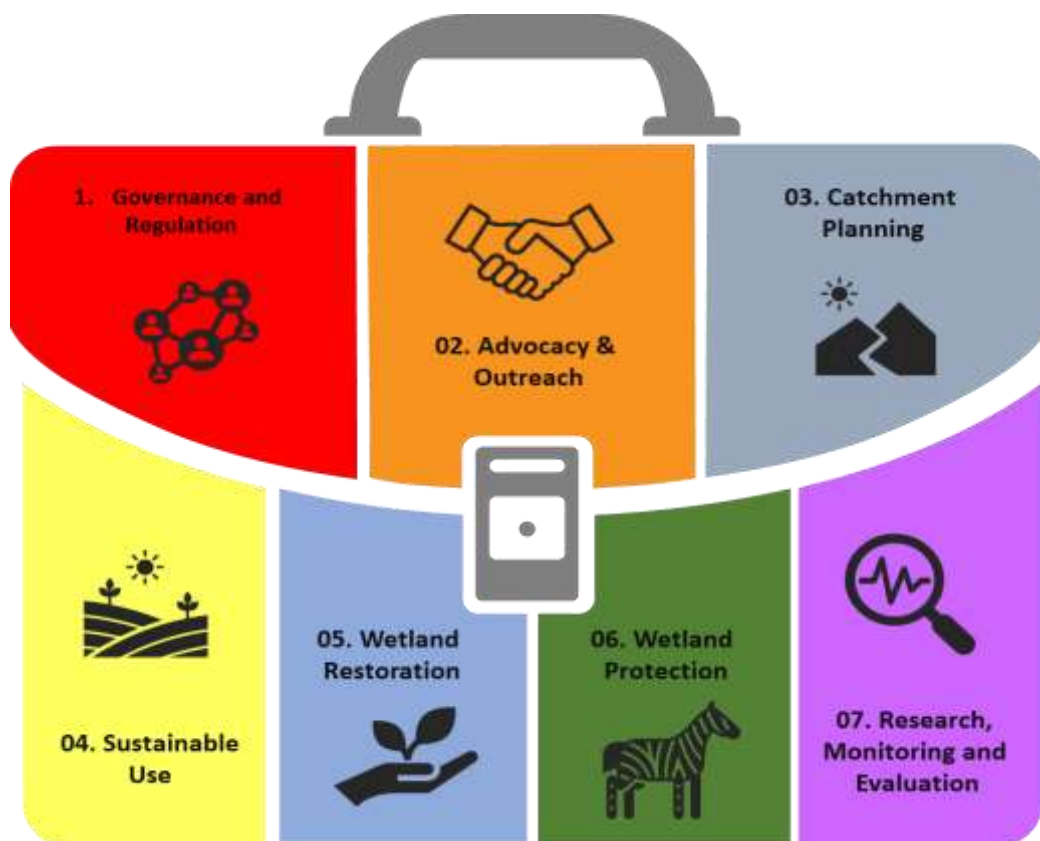


Figure 7. Overview of wetland management themes

Whilst the action plan has been structured according to core themes, it also follows a logical progression as outlined in Figure 8, below. This starts with problem statements that articulates the issues that need to be addressed. From here, statements were prepared that reflected the strategic intent of government in responding to the issues identified. These statements were then translated into strategic objectives whilst action plans were developed based on recommendations that emerged from sectoral engagements and further inputs emerging from subsequent engagements with the PSC and other stakeholders.



Figure 8. Overview of different elements included in the strategic action plan for each wetland management theme.

4.2 Strategic Action Plan

The action was specifically informed through a thorough review of wetland impacts and engagement across a range of sectors. This resulted in a broad suite of recommendations being put forward which were then reviewed and refined with input from the Project Steering Committee and subsequently through further engagement as part of two national consultation workshops. Key attributes of the plan as agreed to with the PSC include:

- The plan is strategic in nature and is directed principally at directing the activities and coordinating activities of the departments of DWS, DFFE & DALRRD
- This action plan is not intended to be a detailed exhaustive plan that seeks to account for all wetland management activities across the Departments
- The action plan does respond to key issues and opportunities to improve wetland management as identified through the status quo analysis
- The action plan does include key strategic actions required in order to advance / improve wetland management in the country.
- Whilst action plans are typically focused at national level, where relevant, they do also address critical regional issues / opportunities

In order to guide the future prioritization of wetland management activities, actions have been allocated priority ratings according to the following classes:

- **1:** Short-term actions that can be implemented immediately
- **2:** Medium-term actions that should be actioned as soon as possible but may require some time to implement
- **3:** Longer-term actions that are necessary to achieve the objective but for which significant preparation / funding may be required.

It is anticipated that these priorities will be reviewed and refined further as steps are taken to move towards implementing the National Wetland Management Framework.

1. Governance and Regulation

Theme focus

This theme focusses on collaborative actions taken to improve the management of wetlands through effective governance and regulation. This includes the development of policies, legislation, guidelines and subsequent enforcement actions to ensure that regulatory mechanisms are appropriately implemented.

Goal 1

Strengthen governance and regulation to improve wetland management.

Emerging issues

A summary of key issues that have emerged under this theme are summarised in the form of problem statements in the table below. A statement of strategic intent is also included indicating the proposed response from government to address the issue.

No	Problem statement	Strategic Intent
1.1	The responsibilities for wetland management are shared across a number of government departments. Whilst significant progress has been made to improve wetland management, departmental mandates often overlap and there is often a lack of coordination between departments. Wetland management also does not feature prominently in many strategic planning documents. As such, there is an urgent need to enhance collaboration and to align work streams so as to more effectively address strategic wetland management priorities.	Government departments will strengthen co-operation and collaboration in order to align and support effective wetland management.
1.2	Officials and consultants responsible for ensuring the effective regulation of wetland impacts often have inadequate training in wetland management. As such, there is a need to strengthen capacity building initiatives to ensure that key stakeholders have sufficient skills and capacity to effectively guide decision making.	Government departments will strengthen the levels of competence and capacity to regulate and manage wetlands through targeted employment and capacity building initiatives.
1.3	Regulation of activities with potential impacts on wetlands are managed through both the Environmental Authorization and Water Use Licensing processes. Whilst integration is being promoted through the implementation of the one-environmental system, there is a need for further alignment and coordination to strengthen and streamline wetland assessments, regulatory processes and decision making. This is particularly relevant given the threat of droughts and increased flooding linked with climate change	Government departments will work together to streamline and strengthen regulatory requirements and the processing of environmental and water use applications.
1.4	Subsistence farmers make use of wetlands to support their everyday livelihoods. With growing population numbers, particularly in peri-urban areas, the pressure for subsistence use is likely to increase. Such use may however undermine biodiversity and functional values provided by wetlands and in some instances would trigger water use licencing requirements. The current regulatory framework is not well suited to manage such impacts whilst costs of applying for a water use licence is beyond the reach of subsistence users. Support and guidance is also lacking to support the wise use of wetlands. Appropriate regulation, guidance and support is therefore required to facilitate equitable and sustainable use of wetlands by communities.	Government departments will provide targeted support to facilitate sustainable use of wetlands by poor communities.
1.5	There is a general lack of capacity to regulate illegal activities and to monitor and enforce conditions of environmental authorizations and/or administrative actions. Without	Compliance monitoring and enforcement activities will be strengthened to promote effective regulation of impacts to wetlands.

No	Problem statement	Strategic Intent
	appropriate enforcement and follow up, impacts to wetlands are not effectively mitigated.	
1.6	As South Africa's population grows and demands for resources increase, natural areas like wetlands will continue to be impacted where human infrastructure and economic growth interests are prioritized. Whilst the need for sustainable development is acknowledged, such development should not be authorized at the expense of biodiversity and key ecosystem goods and services that will be increasingly important in the face of climate change. As such, there is an urgent need to halt and reverse this trajectory of wetland loss by avoiding and minimizing impacts, rehabilitating degraded systems, and where there are unavoidable impacts, ensuring that offsets are effectively used to compensate for significant residual impacts.	The mitigation hierarchy is central to decision making and will be strictly applied in order to slow and progressively reverse ecological deficit and enhance protection of wetland ecosystems.

Strategic Action Plan

The strategic action plan for addressing issues of Governance and Regulation of wetlands is outlined in the table below. Key priorities identified include the need to establish a National Wetland Committee, and appoint Wetland Champions and to enhance regulatory efficiencies so as to streamline the issuing of licences to water users. The importance of strengthening avoidance and minimization options in development applications and further strengthening compliance monitoring and enforcement are other key priority actions identified.

Goal 1: Strengthen governance and regulation to improve wetland management.			
Objective 1.1: Enhance alignment, collaboration and coordination between key departments with a mandate for wetland management.			
Activities	Priority	Lead	Support
1.1.1 Review current wetland coordination structures and establish a National Wetland Committee (NWC) with representatives from each Department to oversee the effective implementation of the NWMF	1	DWS	DFFE, DALRRD, SANBI
1.1.2 Designate Wetland Champions to coordinate wetland management activities within each Department	1	DWS, DFFE, DALRRD	
1.1.3 Develop an integrated National Wetland Policy for South Africa	1	DFFE	DWS, DALRRD, SANBI
1.1.4 Strengthen the integration of wetland management in key strategic planning documents	3	DWS, DFFE, DALRRD	SANBI
1.1.5 Align the wetland offset guideline with the biodiversity offset guidelines	3	DWS	DFFE, SANBI
1.1.6 Finalize the development of a "Response Protocol to Peat Fires" to strengthen collaboration and promote improved management of these unique and important systems	3	DWS	ARC, DFFE, DALRRD, SANBI
Objective 1.2: Strengthening capacity to support effective wetland governance, management and regulation.			
Activities	Priority	Lead	Support
1.2.1 Appoint an appropriate complement of appropriately qualified wetland specialists to strengthen the capacity of DWS, DFFE & DALRRD	2	DWS, DFFE, DALRRD	
1.2.2 Provide targeted training to build the capacity of DMR officials dealing with mining activities that often have a negative impact on wetland ecosystems	2	DWS	DFFE
1.2.3 Support the development of appropriate training material for wetland assessments and prioritize the rollout of wetland-related training courses	2	NWC	
1.2.4 Formalize a wetland training and capacity building program for national, provincial and regional government staff	2	NWC	

1.2.5 Actively encourage the participation of officials in provincial wetland forums as a platform for engagement and collaborative learning	3	DWS, DFFE, DALRRD	
1.2.6 Strengthen the wetland science sub-field of practice within SACNASP by working with SAWS to support the review and registration of wetland professionals	3	DWS, DFFE	DALRRD
1.2.7 Work with higher education institutions to strengthen training of specialists in wetland management (including areas of policy, governance & regulation)	3	DWS, DFFE	DALRRD
Objective 1.3: Harmonize, streamline and strengthen processes and guidelines to regulate impacts on wetland ecosystems.			
Activities	Priority	Lead	Support
1.3.1 Strengthen cooperation between DWS and DFFE in the implementation of water resource regulations in areas of convergence to optimize use of limited regulatory capacity	1	DWS, DFFE	DALRRD
1.3.2 Streamline the review and issuing of licenses to water users in accordance with the NWA in order to support equitable economic growth and to allow urgent interventions to address degradation	1	DWS	DFFE, DALRRD
1.3.3 Harmonize, streamline and strengthen the procedures for the assessment and minimum criteria for reporting on wetlands in terms of the NEMA & NWA	2	DFFE, DWS	DALRRD
1.3.4 Refine definitions and interpretation guidelines for key terms including "watercourse", "wetland", "river", "spring" and "estuary"	2	DWS, DFFE, DALRRD	DALRRD
1.3.5 Provide clear guidance on how "artificial" wetlands should be handled in development applications	3	DWS	DFFE, DALRRD
Objective 1.4: Support sustainable use of wetlands for livelihoods in poor communities.			
Activities	Priority	Lead	Support
1.4.1 Formulate a joint strategy to legitimize and support sustainable use of wetlands in poor communities	2	DWS	DALRRD, DFFE
Objective 1.5: Strengthen compliance monitoring and enforcement and address non-compliance with conditions of authorizations and/or other administrative actions to ensure that wetland impacts are appropriately mitigated.			
Activities	Priority	Lead	Support
1.5.1 Strengthen compliance monitoring and enforcement of conditions of authorizations and/or other administrative actions related to wetlands	1	DFFE, DWS, DALRRD	
1.5.2 Develop and maintain a database of wetland offsets approved as part of Environmental Authorizations and Water Use Licenses	2	DFFE, DWS	SANBI
Objective 1.6: Strengthen the application of the wetland mitigation hierarchy to avoid, minimize, rehabilitate and where necessary, offset negative impacts to wetland ecosystems.			
Activities	Priority	Lead	Support
1.6.1 Provide clear guidance on the application of wetland buffer zones to avoid confusion and strengthen the implementation of best-practice	2	DWS, DFFE	DALRRD
1.6.2 Strengthen wetland rehabilitation obligations by setting "minimum requirements" which actively promote wetland rehabilitation as a standard requirement for development applications in priority areas	2	DWS, DFFE, DALRRD	
1.6.3 Implement wetland offsets as a standard condition for all developments with a significant negative impact on wetland ecosystems	1	DWS, DFFE, DALRRD	SANBI, WRC
1.6.4 Strengthen existing wetland offset guidelines by evaluating current practice, integrating best available data, and actively promoting the replenishment of natural capital through enhancing key wetland services where appropriate	2	DWS, DFFE, DALRRD	SANBI, WRC
1.6.5 Actively support and promote the implementation of pro-active approaches to delivering wetland offsets through	2	DWS	DFFE, DALRRD

composite offsets / wetland mitigation banking in pilot catchments			
1.6.6 Establish an offset reference group that will provide technical support in reviewing wetland offset proposals and setting clear and enforceable conditions in environmental authorizations	2	DWS, DFFE	SANBI, WRC

2. Advocacy and Outreach

Theme focus

The emphasis here is on building support and buy-in for wetland management across sectors through a range of advocacy and outreach initiatives that emphasizes the important role that wetlands play in society. This includes forums for discussion and information sharing, distribution of communication material, outreach activities and capacity building initiatives.

Goal 2

Proactively engage with stakeholders through education, partnerships and collaborations in order to strengthen and support efforts to protect and sustainably manage wetlands.

Emerging issues

A summary of key issues that have emerged under this theme are summarised in the form of problem statements in the table below. A statement of strategic intent is also included indicating the proposed response from government to address the issue.

No	Problem statement	Strategic Intent
2.1	Public involvement is vital in order to promote, protect and add value to our wetland resources. Whilst efforts have been made to raise awareness on the importance of wetlands, there is a need to improve public awareness and understanding of the importance of the ecosystem services, and the economic value provided by wetlands. This inadequate knowledge contributes to the degradation of wetlands. Creating awareness and educating decision makers, developers, water users and communities is therefore essential, particularly in contexts where wetlands are facing pressure from development and unsustainable use. The importance of recognizing indigenous and local knowledge and the need for a two-way dialogue to build collective understanding must be acknowledged.	Awareness, knowledge and participation in wetland management will be improved through targeted advocacy and outreach initiatives.
2.2	Whilst impacts to wetlands are largely regulated through the EIA & WUL processes, effective wetland management needs to be supported through management at a local government level. As such, municipalities have an extremely important role to play in supporting wetland management by integrating wetland management objectives into municipal spatial planning and land use, policies, budgeting, decision-making processes and operations.	Municipalities shall be encouraged, supported and empowered to protect, manage and restore wetlands within their jurisdictions.

Strategic Action Plan

The strategic action plan for this theme is outlined in the table below. Priorities identified include the need to continue raising awareness about the importance of wetlands and the need to actively promote the integration of wetland inventories in municipal spatial planning.

Goal 2: Proactively engage with stakeholders through education, partnerships and collaborations in order to strengthen and support efforts to protect and sustainably manage wetlands.			
Objective 2.1: Raise awareness, build capacity and promote participation in wetland management.			
Activities	Priority	Lead	Support
2.1.1 Raise awareness through appropriate publications and awareness initiatives	1	DWS, DFFE, DALRRD, SANBI, WRC, ARC	
2.1.2 Strengthen the community of practice on wetlands advocacy and outreach	2	DWS, DFFE, DALRRD	SANBI, WRC, ARC
2.1.3 Develop a coordinated "National Wetland Education Program / Campaign" targeting schools and institutions of higher learning	3	DFFE	DWS, DALRRD
2.1.4 Work with business to establish wetland "stewards" to drive wetland management in key sectors	3	DWS, DFFE	DALRRD
2.1.5 Develop a "Citizen Science Implementation Plan" to encourage community participation in wetland management	2	DWS, SANBI	DFFE, DALRRD
2.1.6 Create a platform for Citizen Scientists to contribute data towards the National Wetlands Management Programme and other projects	2	DWS, SANBI	DFFE, DALRRD
Objective 2.2: Support and empower Municipalities to protect, manage and restore wetlands by integrating wetlands into planning and decision-making.			
Activities	Priority	Lead	Support
2.2.1 Actively promote the use of existing wetland inventories by Municipalities to guide and inform spatial planning	1	DFFE, DWS	SANBI
2.2.2 Use the ICLEI Wetland Management Guidelines and education campaign as tools to guide and inform mainstreaming activities in Municipalities	2	DFFE, DWS	
2.2.3 Support Municipalities in developing refined wetland inventories	2	SANBI	DWS, DFFE
2.2.4 Promote the uptake of appropriate stormwater discharge methods and water quality standards and the integration of SUDS in urban planning	2	DWS, DFFE	SANBI
2.2.5 Empower Municipalities to mainstream wetlands into Municipal Spatial Planning and Land Use Management	2	DWS, DFFE	SANBI
2.2.6 Empower Municipalities to prioritize, plan and integrate wetland restoration projects into their Integrated Development Plans	2	DWS, DFFE	SANBI
2.2.7 Advocate for Municipalities to contribute towards the National Wetland Monitoring Programme	3	DWS	SANBI
2.2.8 Investigate opportunities to strengthen reporting and auditing of actions taken by Municipalities to support wetland management and rehabilitation in their jurisdictions (In line with Green-Drop reporting principles)	3	DWS, DFFE	

3. Catchment Management

Theme focus¹

This theme recognizes that wetlands are intimately linked with their catchments and that water and land use activities in the catchment ultimately affect the functioning of wetland systems. It also recognizes the

¹ Note: The regulatory control of activities in the catchment is largely addressed through the "Governance and Regulation" theme. The integration of wetlands into municipal planning is covered under the "Advocacy and Outreach" theme.

role that wetlands play in a catchment to assimilate pollutants, trap sediments, regulate stream flows and mitigate flood risks. Effective wetland management ultimately requires the integration of wetlands into national, provincial and catchment scale planning processes across various sectors, as part of broader Integrated Water Resource Management.

Goal 3

Ensure that wetlands are appropriately integrated into national, provincial and catchment-level planning processes, including broader IWRM initiatives.

Emerging issues

A summary of key issues that have emerged under this theme are summarised in the form of problem statements in the table below. A statement of strategic intent is also included indicating the proposed response from government to address the issue.

No	Problem statement	Strategic Intent
3.1	Hydrological systems within any single catchment are fully connected, both above and below ground, from water source areas to outflow points. Due to the widespread distribution of numerous wetlands (and other inter-linked aquatic ecosystems) across multiple nested catchments, it is challenging to harmoniously integrate wetlands and their supporting systems into and across broad-scale planning processes in a way that adequately takes the catchment context into account. As such, there is often a lack of effective integration of wetlands into planning processes at and between various scales including national, provincial and catchment levels. This is especially problematic due to the major impact that upstream land uses and management decisions can have on downstream areas and the aquatic ecosystems occurring there. One of the impediments to effective catchment planning, for wetlands and other aquatic ecosystems, is a lack of appropriate data as well as data-sharing platforms between the various stakeholders involved in broad-scale planning processes.	Wetlands and their supporting systems are valued as significant parts of the South African landscape and are effectively integrated into broad-scale planning processes within a framework of Integrated Water Resource Management (IWRM), in a way that fundamentally takes the catchment context into account.

Strategic Action Plan

The strategic action plan for integrating wetlands into catchment management and decision-making is outlined in the table below.

Goal 3: Ensure that wetlands are appropriately integrated into national, provincial and catchment-level planning processes, including broader IWRM initiatives.			
Objective 3.1: Strengthen the integration of wetlands and their supporting systems into land and water sector plans, within a catchment context that incorporates all inter-linked aquatic ecosystems.			
Activities	Priority	Lead	Support
3.1.1 Support and strengthen actions to address water quality challenges within catchments through the implementation of the Integrated Water Quality Management Strategy, National Water and Sanitation Master Plan and the relevant actions being addressed by the DWS Anti-Pollution Task Team	2	DWS	DFFE, DALRRD
3.1.2 Evaluate the functioning of wetlands in relation to sustainability thresholds, and use this as a basis to inform wetland rehabilitation and offset actions at a catchment scale	2	DWS, WRC	SANBI, DFFE, PCAs
3.1.3 Develop and implement a systematic approach and programme to determine ecological water requirements for	3	DWS	DFFE, SANBI, WRC, PCAs

strategically selected wetlands considering their catchments and associated aquatic ecosystems			
3.1.4 Harmoniously integrate wetlands (along with other aquatic ecosystems) into national, provincial, regional and catchment-scale strategies and plans ensuring all potentially relevant priorities and datasets from existing broad-scale planning initiatives (such as NFEPA, NBA, SWSAs, WRCS outputs and provincial biodiversity plans) are considered per WMA and sub-WMA	3	DWS, DALRRD, DFFE	SANBI, PCAs
3.1.5 Adopt and advocate for the use of a nationally recognized nested system of catchments as a means of better integrating planning across provincial and municipal scales	3	SANBI, DWS	DFFE, PCAs
3.1.6 Strengthen and/or establish catchment-based partnerships to facilitate joint planning on wetlands between role-players at a catchment scale	3	DWS	SANBI, DFFE, DALRRD, PCAs
3.1.7 Explore the development of wetland ecosystem accounts in biophysical terms	3	DWS, DFFE	SANBI, WRC

4. Sustainable use of Wetlands

Theme focus

The emphasis here is on promoting wise use and effective management of wetlands through the adoption and implementation of management interventions aimed at preventing degradation and addressing direct threats to wetlands through appropriate planning, protection, management, and support. This includes activities such as alien plant control, grazing, cropping, maintenance of vegetated buffers and fire management.

Goal 4

Promote the sustainable use and management of wetlands to prevent wetland degradation.

Emerging issues

A summary of key issues that have emerged under this theme are summarised in the form of problem statements in the table below. A statement of strategic intent is also included indicating the proposed response from government to address the issue.

No	Problem statement	Strategic Intent
4.1	Sustainable use of wetlands has been historically managed using a top-down approach, in which legislation is used as the key tool for promoting and enforcing effective wetland management. Whilst such an approach is reasonably effective in managing impacts from new developments and is used to inform water allocations at a catchment scale, such approaches have little influence on existing land uses. Most wetlands are also located on private and public land and as such, effective management requires the buy-in and support of both landowners and land users. Pro-active initiatives to promote collaborative wetland management should therefore be supported and encouraged.	Participation of landowners and land users, including local communities and in particularly those in SWSAs and catchments of significant wetlands resources is critical for effective wetland management and will be encouraged and supported.
4.2	In some instances, land use activities have had undesirable and persistent impacts on wetland ecosystems that is not compatible with the vision for wetland management. In such contexts, proactive approaches are required to redress legacy impacts and ensure compatible and sustainable use of wetlands.	Ongoing incompatible use and legacy impacts to wetlands will be addressed through targeted engagement with landowners and land users.

Strategic Action Plan

The strategic action plan for promoting the sustainable use of wetlands is outlined in the table below.

Goal 4: Promote the sustainable use and management of wetlands to prevent wetland degradation.			
Objective 4.1: Promote the active participation of landowners and land users including local communities in wetland management.			
Activities	Priority	Lead	Support
4.1.1 Actively promote and support the work of NGOs to mainstream wetland management into different land use sectors	1	DFFE	DALRRD & DWS
4.1.2 Promote water stewardship in the agricultural and industrial sectors	2	DWS	DALRRD
4.1.3 Support the uptake and implementation of certification schemes that address wetland and water resource management impacts	3	DWS	DFFE
4.1.4 Strengthen support for the sustainable use and management of wetlands used for subsistence farming and to supporting local livelihoods	3	DALRRD	DWS & DFFE
4.1.5 Explore and strengthen financial incentives for wetland protection and management	3	DFFE	DALRRD & DWS
Objective 4.2: Proactively engage with key sectors to promote the application of best-practices and to address incompatible use and legacy impacts to wetlands.			
Activities	Priority	Lead	Support
4.2.1 Proactively engage with the forestry sector to address concerns around illegal afforestation	1	DWS, DFFE	DALRRD
4.2.2 Update the "Biodiversity and Mining Guidelines" to integrate findings of the NBA and new learnings	2	DWS, DFFE	DALRRD
4.2.3 Promote the application of best practices including the "Biodiversity and Mining Guidelines" and "Guidelines for Wetland Rehabilitation in the Mining Landscape" in managing wetland impacts associated within mining activities	1	DWS, DFFE, DMRE	DALRRD
4.2.4 Collaborate with the agricultural sector to develop a strategy to mitigate impacts of unsustainable cultivation, wetland drainage, grazing and pollution on wetland ecosystems	1	DALRRD	DWS & DFFE
4.2.5 Targeted support by NRM programmes for landowners to control alien invasive plants threatening wetland systems	2	DFFE, DALRRD	DWS

5. Restoration of Wetlands

Theme focus

This theme responds to the urgent need to improve the state of wetlands through pro-active interventions that seek to restore and enhance the functions and values provided by wetlands.

Goal 5

Promote and support the active rehabilitation of wetlands in order to enhance key functions and values.

Emerging issues

A summary of key issues that have emerged under this theme are summarised in the form of problem statements in the table below. A statement of strategic intent is also included indicating the proposed response from government to address the issue.

No	Problem statement	Strategic Intent
5.1	Wetlands are recognized as small, high-value ecosystems that provide multiple benefits to people whilst they can also play an important role in mitigating the impacts of climate change. Given the poor state of wetlands in South Africa, there is an urgent need to invest in the restoration of wetlands. This has been recognized by the South Africa government who have invested substantial resources in a range of National Programmes that have made an important contribution to wetland restoration in South Africa. Whilst the contribution of these programmes is unquestionable, activities have sometimes lacked coordination and these programs have had limited reach when considering the poor state of wetlands across the country. Municipalities also only play a limited role in funding wetland restoration activities, despite the important role that wetlands play in disaster risk management. There is therefore a need to enhance collaboration and coordination in order to scale up investment in wetland restoration activities. Monitoring of rehabilitation outcomes is also critical to inform learning and adaptive management.	Government will continue to improve collaboration and prioritize investment in wetland restoration and associated monitoring activities.
5.2	Some wetland rehabilitation has been initiated in production sectors, particularly in the forestry context where the establishment of "minimum standards" with industry and enforcement through environmental certification schemes has led to the removal of trees from large wetland areas. Progress has been slow in most agricultural production sectors, however, since wetland restoration results in a loss of productive land which, without compensation, would have a direct negative impact on profitability. Investment by the private sector has also been limited and is typically only undertaken in response to legal requirements. A further constraint is the regulatory requirements for rehabilitation projects that acts as a barrier to most stakeholders. Further work is therefore required to mainstream, streamline and incentivize wetland restoration efforts.	Promote and actively facilitate the rehabilitation of wetlands by private land-owners, NGOs, businesses and other non-governmental stakeholders.

Strategic Action Plan

The strategic action plan for promoting the restoration of wetlands is outlined in the table below.

Goal 5: Promote and support the active rehabilitation of wetlands in order to enhance key functions and values.			
Objective 5.1: Collaboratively strengthen and expand the reach and effectiveness of government-led wetland restoration projects.			
Activities	Priority	Lead	Support
5.1.1 Focused investment by NRM programs to rehabilitate wetland systems prioritized through regional and national initiatives.	1	DFFE	DWS, SANBI, DALRRD, PCAs
5.1.2 Review international funding opportunities and seek additional international funding to strengthen budget allocations for the Working for Wetlands Programme	2	DFFE	DWS, SANBI, PCAs
5.1.3 Investigate mechanisms to improve funding and tracking of wetland rehabilitation initiatives outside of the NRM programme	2	DWS	SANBI, DFFE, PCAs
5.1.4 Develop easy-to-use technical rehabilitation guidelines, which also deal with water quality improvement as a wetland rehabilitation measure, for both government and non-government stakeholders (including land-owners)	3	DWS	SANBI, DFFE, WRC, DALRRD
5.1.5 Implement an effective monitoring program for rehabilitated wetlands as an opportunity for learning, capacity building and adaptive management	2	DFFE	DWS, SANBI, PCAs
Objective 5.2: Promote and actively facilitate the rehabilitation of wetlands by private land-owners, NGOs, businesses and other non-governmental stakeholders.			
Activities	Priority	Lead	Support
5.2.1 Streamline and/or actively facilitate authorization requirements for wetland restoration projects	2	DWS, DFFE	

5.2.2 Develop innovative ideas to encourage partnerships and investment in wetland restoration between government and non-government stakeholders	3	DWS, DFFE	PCAs
5.2.3 Investigate and support incentive mechanisms such as carbon offsets and other initiatives as a means of promoting and actively facilitating wetland restoration	3	SANBI	DWS, DFFE
5.2.4 Investigate the establishment of a "Public Wetland Restoration Fund" where non-governmental stakeholders can apply for and access funding for proactive wetland restoration work	3	DWS, DFFE	DALRRD

6. Wetland Protection

Theme focus²

The emphasis of this theme is on ensuring that priority wetlands are adequately protected. Protection can be achieved through a network of formally protected conservation areas incorporating priority wetlands, restrictions to avoid and minimize impacts on priority wetlands, incentives for wetland protection and other means.

Goal 6

Enhance the protection of priority wetlands to secure critically important biodiversity and ecosystem goods and services.

Emerging issues

A summary of key issues that have emerged under this theme are summarised in the form of problem statements in the table below. A statement of strategic intent is also included indicating the proposed response from government to address the issue.

No	Problem statement	Strategic Intent
6.1	Despite efforts to regulate impacts, wetlands have continued to be impacted as development continues. This is particularly concerning where priority wetlands do not receive the protection they deserve. As such, there is a need to strengthen the prohibitions for development, particularly in instances where such impacts could have a detrimental impact on priority wetland systems, as well as improve protection through other non-regulatory mechanisms such as the creation and support of incentives to encourage better wetland protection. Effective application of the mitigation hierarchy is essential for the protection of priority wetlands, by promoting the avoidance and minimisation of impacts before considering rehabilitation or offsets to compensate for negative impacts.	Wetlands and their supporting systems, in particular those that have been identified to be of priority concern, will be more effectively protected from negative impacts.
6.2	South Africa has made good progress in designating Ramsar sites, which includes a suite of some of the most important wetlands across the country. Whilst steps have been taken to develop management plans for most of these sites, implementation remains problematic in a resource-constrained environment. Management of Ramsar sites also requires a strategic approach that includes collaboration between stakeholders and appropriate catchment management interventions. Information about baseline	Ramsar sites will continue to be prioritized for management and protection.

² Note: The need to also ensure appropriate catchment management is also acknowledged but is addressed under the "Catchment Planning" theme.

No	Problem statement	Strategic Intent
	ecological conditions is also often lacking and an evaluation of management effectiveness across all existing Ramsar sites is yet to be undertaken.	
6.3	Wetlands are the most threatened and least protected of all ecosystem types in South Africa whilst many species that are dependent on wetlands are also negatively affected. The reality however is that priorities for wetland protection have not been adequately defined and it is difficult to protect wetlands and associated species through conventional conservation means alone. Efforts are nevertheless still required to expand the extent of wetlands that are formally conserved through appropriate legal and other means.	Efforts to formally protect priority wetlands and wetland-dependent species of conservation concern will be strengthened in line with national and international targets.

Strategic Action Plan

The strategic action plan for the conservation, regulation, management and protection of priority wetlands is outlined in the table below.

Goal 6: Enhance the protection of priority wetlands to secure critically important biodiversity and ecosystem goods and services.			
Objective 6.1: Increase and improve efforts to avoid and minimize impacts on priority wetlands.			
Activities	Priority	Lead	Support
6.1.1 Develop guidelines for identifying priority wetlands and their supporting systems	1	DFFE, DWS, DALRRD	SANBI
6.1.2 Ensure that the suite of national priority wetlands and their supporting systems are mapped and identified in a rigorous manner that takes the catchment context into account through the FEPA update process	2	SANBI	DFFE, DWS, DALRRD
6.1.3 Undertake targeted management actions (directed by monitoring and managements plans), to secure compliance with RDMs for priority wetland ecosystems	3	DWS	SANBI, WRC, PCAs
6.1.4 Ensure the protection of priority wetlands, as a minimum, through effective application of the mitigation hierarchy for potential impacts (i.e. avoid, prevent and minimize impacts before considering rectification, rehabilitation or offsetting of impacts)	3	SANBI, DWS, DFFE, DALRRD	PCAs
6.1.5 Strengthen incentives and disincentives, including market-based mechanisms, to ensure the protection of priority wetlands and their supporting systems	3	DALRRD	DFFE, DWS
Objective 6.2: Enhance the protection and management effectiveness of existing Ramsar sites.			
Activities	Priority	Lead	Support
6.2.1 Undertake baseline assessments of the condition and functioning of wetlands across all Ramsar Sites and supporting systems	1	SANBI	DFFE, DWS, PCAs
6.2.2 Undertake baseline METT assessments for all Ramsar Site	1	DFFE	DWS, DALRRD, SANBI, PCAs
6.2.3 Ensure that ongoing METT assessments are undertaken to evaluate management effectiveness	2	DFFE	PCAs
6.2.4 Include focused pilot actions to improve management effectiveness for Ramsar Sites	3	DFFE, DWS, DALRRD	PCAs
6.2.5 Prepare targeted funding proposals to strengthen management of selected Ramsar Sites	2	DFFE	
Objective 6.3: Actively promote and support the formal protection of priority wetlands and associated wetland-dependent species.			
Activities	Priority	Lead	Support
6.3.1 Strengthen National and Provincial Protected Area Expansion Strategies (PAES's) to better integrate wetland conservation priorities	2	DFFE	SANBI DWS, DALRRD

6.3.2 Ensure wetland offset sites are formally protected , Including through stewardship agreements	2	DFFE, PCAs	DALRRD
6.3.3 Pursue and support/facilitate biodiversity stewardship and associated incentives as a key mechanism to protect wetlands in agricultural, mining and urban landscapes	3	DFFE, DALRRD, PCAs	DWS
6.3.4 Undertake baseline METT assessments for wetlands in protected areas that are not Ramsar sites-integrating wetlands into the protected areas METT	3	DFFE, PCAs	SANBI
6.3.5 Support and strengthen actions to conserve Species of Conservation Concern that rely on wetland habitats	3	DFFE	MTPA, DMRE, DWS, BirdLife SA, PCAs
6.3.6 Strengthen the mapping of high-value agricultural land to better integrate wetland conservation	3	DALRRD	DFFE, DWS

7. Research, monitoring and evaluation

Theme focus

Support research and develop and maintain effective data and information on wetlands that is accessible, secure and current and can be used to inform planning and decision making.

Goal

Ensure that wetland management and decision making is informed by best available scientific research, data and information.

Emerging issues

A summary of key issues that have emerged under this theme are summarised in the form of problem statements in the table below. A statement of strategic intent is also included indicating the proposed response from government to address the issue.

No	Problem statement	Strategic Intent
7.1	Wetland science is relatively new and the country requires continuing dedicated research to build a sound scientific and technological base to improve management techniques and decision making. Whilst over the past few years, significant progress has been made and should continue to be made in applied research, foundational research has been lagging on which applied research depends. As such, there is a need to strengthen the coordination of and investment in both applied & primary research to guide and inform wetland management and decision making.	Wetland research will be effectively coordinated and supported to strengthen knowledge and decision making.
7.2	Wetland monitoring, data and information management is critical to assess management performance and understand wetland dynamics. Insufficient wetland information therefore impacts on the effective management of wetland resources. At present, there is a lack of sufficient wetland monitoring and wetland data management and co-ordination between sector partners, and this must be addressed. A strategic plan for wetland data acquisition and management (W-DAM) is however being developed by DWS & SANBI and will address some of these shortcomings. Effective implementation will however require adequate funding and support from key partners.	Wetland monitoring, data and information management and reporting will be effectively strengthened and coordinated to support the informed management of the country's wetlands.

Strategic Action Plan

The strategic action plan for research, monitoring and evaluation is presented below. This suggests that many of the actions require urgent attention to ensure that the goal for this theme is realised.

Goal 7: Ensure that wetland management and decision making is informed by best available scientific research, data and information.			
Objective 7.1: Strengthen the coordination, prioritization and investment in wetland research in South Africa.			
Activities	Priority	Lead	Support
7.1.1 Establish a platform for coordinating and prioritizing key research areas for both primary and applied research	1	SANBI, WRC, ARC, SAEON	DWS, DFFE, DALRRD
7.1.2 Leverage additional dedicated funding for wetland research through local and international sources	2	DWS, DFFE, DALRRD	SANBI, WRC, ARC, SAEON
7.1.3 Promote and support primary research to strengthen our understanding of wetland dynamics and functioning	1	SANBI, WRC, ARC	DWS, DFFE, DALRRD
7.1.4 Update the national wetland delineation guidelines	1	DWS	SANBI
7.1.5 Support the development of user-friendly guidelines to facilitate the uptake and application of wetland assessment, management and rehabilitation protocols	2	WRC	DWS, DFFE
7.1.6 Refine and update the national wetland ecosystem type classification based on best available information	2	SANBI	DWS, DFFE
7.1.7 Test and improve desktop approaches for predicting and validating wetland condition and functioning for regional / national assessments	2	SANBI, WRC	DWS, DFFE
Objective 7.2: To co-ordinate and expand the implementation of wetland monitoring and reporting activities and enhance data accuracy, availability, and accessibility through improved data governance, lifecycle management, data management systems and partnerships.			
Activities	Priority	Lead	Support
7.2.1 Develop and adopt standardized methods for mapping wetlands and sharing data (across many agencies operating at different scales)	1	SANBI	DWS, DFFE, DALRRD, PCAs
7.2.2 Continually update and improve the National Wetland Map through targeted regional initiatives	1	SANBI	Identified Data Custodians
7.2.3 Fund and support the implementation of a National Wetland Monitoring Programme	1	DWS	DFFE, SANBI, ARC, WRC, SAEON
7.2.4 Develop and implement a wetland data acquisition and management action plan	1	DWS, SANBI	DFFE, WRC
7.2.5 Implement a peatland fire monitoring plan	2	ARC	
7.2.6 Monitor and routinely report on compliance to wetland RQOs and critically evaluate their adequacy in achieving the stated objectives	2	DWS	

4.3 Reviewing and refining the plan

A framework can be one that is designed to represent a situation at a single point in time with a particular endpoint in mind (e.g. developing a wetland policy) or it can be prepared in such a manner that it becomes integrated into management planning and decision making processes. Following consultations with the PSC, it was agreed that the framework should be integrated into the adaptive management cycle (Figure 9). For this to be realised, the National Wetland Committee (once established), will need to review progress on a regular basis and re-prioritize actions accordingly. Such

reviews would ideally be undertaken on an tri-annual basis to maintain momentum, with updates aligned as far as possible with other reporting requirements (e.g. Compilation of National Ramsar Reports).



Figure 9. The adaptive management cycle³

5 CONCLUSION & WAY FORWARD

This report outlines the vision, mission and strategic action plan which together constitutes a framework for Wetland Management in South Africa. The NWMF has been developed principally to strengthen alignment and coordination at a national level as a basis for stimulating and guiding wetland management actions. For this to be achieved in practice, appropriate support will be required from top tiers of management, and as such, it is recommended that statements of commitment be obtained from key departments as an indication of their commitment to implement this framework.

It is also important to emphasize that the aspirations outlined in this framework will not be achieved without the appropriate capacity and financial commitments to implement key actions identified. As such, it is recommended that a review of financial requirements is undertaken by key departments and that resources are then targeted to support effective implementation. This should start with the designation of wetland champions in each department and the establishment of a National Wetland Management Committee to oversee implementation of the NWMF. This could be easily achieved through the reconstitution of the existing Wetland Task Team. Once established, it is suggested that task teams or working groups be established to lead, refine and report back on various priority activities.

Whilst the implementation of this framework should be championed at a national level, the intention, is for lower levels of government to actively support the implementation of the NWMF. For this to be realised,

³ Source: <https://essa.com/approach/>

it is anticipated that the national departments will facilitate a process to integrate the strategic framework into plans at regional and local levels. Indeed, the development of secondary action plans will be critical for implementation of many of the strategic actions to be realised. Advocacy and outreach activities will also be necessary to promote the uptake of the NWF by a broader stakeholder group, which includes Provincial Conservation Agencies, Municipalities, NPOs, Business Sectors, Learning Institutions and Civil Society.

It is also important to recognize that the NWMF serves as a step towards the development of a joint National Wetland Policy for South Africa. The task now lies with DWS, DFFE and DALRRD to use the information gathered and priorities identified as a basis for developing clear policy principles that will serve to further guide wetland management actions in South Africa. During this phase, it will be important to further clarify and define key definitions, whilst the roles of supporting institutions will need to be further clarified.

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7 ANNEXURES

The following Annexures are included with this report:

Annexure 1. Review of Existing Institutional Framework for Wetland Management in South Africa

Annexure 2. Review of Best Practice Guidelines & Wetland Policy Case Studies

Annexure 3. Learnings Integrated from International Best Practice

Annexure 4. Assessment of existing challenges, constraints and exploring potential opportunities and solutions

Annexure 5. Comments and Response Register