

Ehlanzeni District Municipality Wetland Strategy and Action Plan (2017- 2022)

Local Action for Biodiversity (LAB): Wetlands South Africa





Full Program Title: Local Action for Biodiversity: Wetland Management in a Changing Climate
Sponsoring USAID Office: USAID/Southern Africa
Cooperative Agreement Number: AID-674-A-14-00014
Contractor: ICLEI – Local Governments for Sustainability – Africa Secretariat
Date of Publication: August 2017
Author: K. Robinson

DISCLAIMER

This Wetland Strategy and Action Plan was made possible by the support of the American People through the United States Agency for International Development (USAID). The contents are the sole responsibility of ICLEI – Local Governments for Sustainability and do not necessarily reflect the views of USAID or the United States Government.



EHLANZENI DISTRICT MUNICIPALITY WETLAND STRATEGY AND ACTION PLAN (2017-2022)

TABLE OF CONTENTS

| | |
|---|----|
| Table of Contents | 3 |
| Acknowledgements..... | 4 |
| List of Acronyms and Abbreviations | 5 |
| List of Figures & Tables..... | 5 |
| Introduction | 6 |
| 1. Wetlands in the Ehlanzeni District Municipality..... | 7 |
| 1.1. What is a Wetland? | 7 |
| 1.2 The Value of Wetlands to Ehlanzeni District Municipality..... | 7 |
| 1.3 Threats to Wetlands within Ehlanzeni District Municipality | 9 |
| 2. Governance & Management..... | 12 |
| 2.1 Policy framework | 12 |
| 2.2 Wetland management within the municipality | 14 |
| 2.3 Local and regional partnerships and programmes managing wetlands within Ehlanzeni District Municipality | 14 |
| 3. Developing the Ehlanzeni Wetland Strategy and Action Plan | 16 |
| 4. Ehlanzeni District Municipality Wetland Strategy and Action Plan (2017- 2022)..... | 17 |



ACKNOWLEDGEMENTS

The compilation of the Ehlanzeni District Municipality Wetland Strategy and Action Plan (WSAP) would not have been possible without the significant contribution and support from the many active stakeholders who currently work within the Ehlanzeni District Municipality.

ICLEI Africa Secretariat (ICLEI AS) and Ehlanzeni District Municipality would like to specifically thank the United States Agency for International Development (USAID), the funders of the Local Action for Biodiversity: Wetlands South Africa (LAB: Wetlands SA) project, without whom the compilation of the WSAP would not have been possible. ICLEI AS and Ehlanzeni District Municipality would also like to thank the LAB: Wetlands SA Project partners, namely the Department of Environmental Affairs (DEA), South African Local Government Association (SALGA), Working for Wetlands as well as the South African National Biodiversity Institute (SANBI) for the unfailing support received to date for the development of this WSAP.

In addition, ICLEI AS and Ehlanzeni District Municipality would like to acknowledge the meaningful contributions from all other stakeholders within Ehlanzeni District Municipality, both public and private, which have culminated in the Ehlanzeni District Municipality WSAP.



LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---------------|---|
| AS | Africa Secretariat |
| CARA | Conservation Agricultural Resources Act |
| DEA | Department of Environmental Affairs |
| DMF | Disaster Management Framework |
| DMP | Disaster Management Plan |
| DRA | Disaster Risk Assessment |
| EhDM | Ehlanzeni District Municipality |
| EMF | Environmental Management Framework |
| GEF | Global Environment Facility |
| IAP | Invasive Alien Plant |
| ICLEI | ICLEI - Local Governments for Sustainability |
| IDP | Integrated Development Plan |
| LAB | Local Action for Biodiversity |
| LM | Local Municipality |
| NDP | National Development Plan |
| NEMA | National Environmental Management Act |
| NEMBA | National Environmental Management: Biodiversity Act |
| NEMWA | National Environmental Management: Water Act |
| NGO | Non-governmental Organisation |
| NWA | National Water Act |
| MTSF | Medium Term Strategic Framework |
| SA | South Africa |
| SANBI | South African National Biodiversity Initiative |
| SDF | Spatial Development Framework |
| SPLUMA | Spatial Planning and Land Use Management Act |
| WFW | Working for Wetlands |

LIST OF FIGURES & TABLES

Figure 1: Mottled soils indicative of a wetland.

Figure 2: Specially adapted wetland vegetation.

Table 1: Ecosystem services identified in Ehlanzeni District Municipality.

Table 2: Threats to Wetlands within Ehlanzeni District Municipality.

Table 3: Legislation governing wetland management in Ehlanzeni District Municipality.



INTRODUCTION

South Africa is endowed with a rich wealth of biodiversity, which offers an immense opportunity to support the country's development path by providing many goods and services which contribute to municipal service delivery, water and food security and quality of life, especially under a changing climate.

Ehlanzeni District Municipality is located within the Mpumalanga Province of South Africa and covers an area of 27 896 km². Of the nine vegetation biomes found in South Africa, three of these biomes occur within the Ehlanzeni District Municipality (Grasslands, Forests, and Savannah). As a result, numerous wetlands can be found throughout the municipality, including one RAMSAR site of international importance which provides crucial habitat for the unique flora in the region as well as for a variety of critically endangered flora and fauna species. The wetlands throughout Ehlanzeni District Municipality are considered to be high-value 'ecological infrastructure' as they not only provide habitat for flora and fauna, but also provide critical ecosystem services to the municipality. These include flood attenuation, water filtration, erosion control and water storage (regulatory services) as well as food provision, supply of raw materials and clean drinking water (provisioning services). The wetlands within the municipality also play a pivotal role in disaster risk management as well as reducing the impacts of climate change within the district.

Within Ehlanzeni District Municipality however, a significant number of the wetlands are under threat or have already been lost. This is largely due to mining, afforestation, historical degradation, deliberate draining of wetlands to make way for development, inappropriate development within the close proximity to the wetlands, contamination through sewage, effluent and stormwater seeps, and the spread of invasive alien plants (IAPs). Degraded wetlands are unable to function to the same degree as healthy wetlands and as such ecosystem service provision is severely hindered or even lost altogether.

In light of this, there is an urgent need to increase awareness of wetland importance and to incorporate natural wetland resource considerations into municipal governance mechanisms and planning. Careful management as well as the investment in the maintenance of healthy wetlands and the rehabilitation and restoration of damaged or degraded wetlands is also needed. This will ensure the continued provision of these vital ecosystem services to the municipality.

Ehlanzeni District Municipality is implementing the Local Action for Biodiversity: Wetlands South Africa (LAB: Wetlands SA) programme with support from ICLEI Africa Secretariat (ICLEI AS). The LAB: Wetlands SA project aims to ensure the protection of priority natural wetland resources, thus enabling the supply of ecosystem services, and promoting resilient communities and sustainable local economies under a changing climate within South African local governments. Through the development of this Wetland Strategy and Action Plan (WSAP), ICLEI AS will assist Ehlanzeni District Municipality in identifying the gaps in management and support with devising new and better wetlands management strategies going forward.

Supporting Documentation:

This document relies heavily on two supporting documents: The Ehlanzeni District Municipality Wetland Report (2017) and the Wetland Strategy and Action Plan Guidelines (2017).

These can be downloaded from <http://cbc.iclei.org/project/lab-wetlands-sa/>



1. WETLANDS IN THE EHLANZENI DISTRICT MUNICIPALITY

1.1. What is a Wetland?

“Wetlands are 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”.

National Water Act No. 36 of 1998.

In simpler terms, a wetland is a feature in the landscape which is saturated with water for a long enough period that the soil conditions change (mottling as a result of the anaerobic conditions) and the vegetation shifts to respond to these changes.



Figure 1 & 2: Mottled soils indicative of a wetland (left) and specially adapted wetland vegetation (right).

For more detailed information regarding wetlands within the Ehlanzeni District Municipality, please refer to the Ehlanzeni District Municipality: Wetland Report (2017) which can be accessed here: <http://cbc.iclei.org/project/lab-wetlands-sa/>

1.2 The Value of Wetlands to Ehlanzeni District Municipality

All wetland types can be classified as high value ‘ecological infrastructure’ due to the large number of ecosystem services that they provide. Wetland ecosystem services can be classified into four separate categories namely ‘provisioning services’, ‘regulating services’, ‘cultural services’ and ‘supporting services’. Provisioning services can be described as the products one can physically obtain from wetlands. Regulatory services can be described as the benefits one receives from the wetland. Cultural services are the nonmaterial benefits that one can obtain from wetlands. Lastly supporting services are the services provided that are necessary for the production of all other



ecosystem services. Please refer to **Table 1** below for a detailed description of the ecosystem services that wetlands within Ehlanzeni District Municipality provide.

Table 1: Ecosystem services identified in the Ehlanzeni District Municipality.

| Ecosystem Service Type | Ecosystem Service | Description/ Case Study |
|------------------------|--|---|
| Provisioning | Food | Local communities living within Ehlanzeni District Municipality harvest local plants and fish to support their diets. Local communities also use the wetland fringe zones for informal cultivation/ small scale farming and plant and harvest various crops such as maize and sugarcane as well as the local Madumbi. |
| | Clean drinking water | Local communities living within Ehlanzeni District Municipality, particularly those located in the more rural areas, use clean water supplied by the wetlands for drinking purposes. |
| | Medicinal plants | Many of the plants growing within and around wetlands have natural medicinal properties. Local communities living within Ehlanzeni District Municipality harvest these plants to maintain/ improve their personal health. The River Pumpkin (<i>Gunnera perpensa</i>) is one such plant and is highly valued and extensively used by traditional healers to relieve the symptoms of colds and flu, heal psoriasis and for various traditional gynaecological practices. |
| | Raw materials | Wetlands provide a significant number of raw materials which directly contribute to local livelihoods and income. Local communities living within Ehlanzeni District Municipality harvest reeds from the wetlands to make baskets and furniture and grasses for thatching. |
| | Grazing Land | Local communities, living particularly in the more rural areas, use the wetlands as pasture for their livestock (goats and cows mainly). |
| Regulatory | Water storage and stream flow regulation | The local wetlands within Ehlanzeni District Municipality store stormwater runoff and slowly release the water as the water table drops. This contributes to sustained streamflow throughout the year. |
| | Flood attenuation and control | Wetlands and the associated plants play a crucial role in flood attenuation as they have the ability to absorb flood water and reduce the velocity of the water moving through the system. This contributes to the protection of agricultural land as well as infrastructure downstream. |
| | Erosion control | Wetland plants, strengthen the banks of wetlands and thereby contribute to sediment stabilisation and soil retention within the catchment. |
| | Water filtration and purification | Wetlands and wetland plants contribute substantially to improving water quality by filtering and purifying water as it moves through the system. Wetlands have the ability to modify |



| Ecosystem Service Type | Ecosystem Service | Description/ Case Study |
|------------------------|--------------------------------------|---|
| | | or trap a wide range of substances commonly considered to be pollutants including suspended sediment, excess nutrients, phosphorus, nitrogen, pesticide residue, industrial effluent, pathogenic bacteria and viruses. As such, high concentrations of the above are prevented from reaching groundwater supplies or surface water downstream thus contributing to clean drinkable water. |
| | Buffer the impacts of climate change | Wetlands have the ability to protect both coastal and inland areas against the effects of climatic change. |
| Cultural | Tourism | Due to their natural beauty and diversity of plant and animal life, the wetlands, particularly Verloren Valei Wetland and Chrissiesmeer Pans, within Ehlanzeni District Municipality are popular tourist destinations. |
| | Recreation | The wetlands within Ehlanzeni District Municipality are used extensively for recreation purposes. Activities undertaken within these wetlands include, birding, frogging, canoeing, bike riding, hiking, picnicking along the banks of the wetland systems and fishing. |
| Supporting | Nutrient recycling | Wetlands naturally slow down the flow of water, thereby promoting the deposition and retention of nutrients. These are then utilised by the microbial species living in the wetland habitat which are in turn eaten by larger species such as prawns and blood worms. |
| | Supporting habitat | A large variety of bird, fish and invertebrate species are dependent on the wetlands within Ehlanzeni District Municipality for at least part of their lifecycle. Wetlands provide vital breeding and foraging ground for a variety of bird species as well as breeding, courtship and foraging ground for a variety of frog species. |

It should be noted that ecosystem services provided by wetlands come at no cost to local authorities and as such, all that needs to be done to ensure continued provision of these services is to protect and maintain local wetlands. However, the inappropriate management of wetlands, can cause a loss of wetland area and subsequent loss of ecosystem services. This results in municipalities having to invest in expensive infrastructure (e.g. water filtration plants or flood barriers) to ensure the same level of service delivery.

1.3 Threats to Wetlands within Ehlanzeni District Municipality

Despite the huge benefits that wetlands provide in terms of ecosystem services, 50% of wetlands in South Africa have already been lost and 48% of the remaining wetlands are critically endangered and/or degraded. This loss is a direct result of deliberate draining of wetlands, development and



expansion (both urban and agricultural) and pollution. Damage to wetlands results in increasingly limited functionality and subsequently a decrease in the ability to provide valuable ecosystem services.

Following verbal communications with active stakeholders working in the Ehlanzeni District Municipality, it became clear that wetlands face a significant number of threats all of which have the ability to either destroy the wetland entirely or severely compromise function and provision of ecosystem services. The key threats identified are summarised in **Table 2** below:

Table 2: Threats to wetlands within Ehlanzeni District Municipality:

| Threat | Description |
|--|---|
| Historical Degradation | Historically, due to limited knowledge on the value of wetlands and their ecosystem services, wetland areas were seen as waste lands. As such, wetlands throughout Ehlanzeni District Municipality were deliberately drained and infilled in order to 'reclaim the land' for commercial, agricultural and even urban uses. |
| Mining | Mining poses the biggest threat to wetlands within Ehlanzeni District Municipality. The Mpumalanga Province is well known for its rich deposits of diamonds, coal, and to a lesser extent gold. As such, a number of mines have been firmly established throughout the Province, including within areas of Ehlanzeni District Municipality. The activities associated with mining, particularly excavation and stockpiling of discarded soil, have irreversibly destroyed the wetland areas within close proximity of these mines. This threat to wetlands is increasing however as a rising number of open cast mining applications are being submitted, particularly for areas near the Chrissiesmeer Pans and Verloren Valei. If these applications are granted and the mining activities are not properly regulated, it will result in further irreversible wetland loss within Ehlanzeni District Municipality. |
| Afforestation and Water Abstraction | Another major threat to wetlands is the extensive afforestation that occurs throughout the district. Extensive plantations of pine trees stretch across the majority of both Bushbuckridge and Thaba Chweu Local Municipalities within Ehlanzeni District Municipality. Converting the land for such large scale forestry not only results in the degradation or even complete removal of the wetland systems within these areas but also results in the continuous abstraction of significantly more water than the original indigenous vegetation would have done. Subsequently, this means that there is significant stream-flow reduction as these man-made plantations and forests hold water that would otherwise have been available for downstream users. |
| Urban Development and Expansion | Wetlands throughout Ehlanzeni District Municipality are at risk from both formal and informal urban development and expansion. Due to increasing population, particularly in areas such as Nelspruit, development is being taken right up to, and sometimes beyond, the urban edge threatening wetlands near the vicinity of the urban edge. |



Additionally, due to limited knowledge of where wetlands are on the ground both within and outside of the urban edge, the development process often entails the accidental draining or infilling of wetlands to make room for these developments. One such example is the Mbombela Soccer Stadium which was inadvertently built upon a wetland in 2010.

In addition to the expansion of formal, planned urban development, there is also an increase in informal developments expanding beyond the formally recognised urban edge as well as an expansion of established villages in the more rural areas. Due to lack of formal planning, these informal developments are more often than not located inappropriately in wetland areas due to the close proximity to water. This not only increases the risk and exposure of communities to environmental hazards such as flooding, but the development of informal settlements within wetland areas often brings with it waste disposal into and around the wetland area. Expansion of the village areas also additionally brings an increase in livestock grazing within the wetland areas as well as clearing of the indigenous plants to make way for subsistence farming. This land use change compromises the wetlands' ability to perform valuable ecosystem services such as water filtration resulting in poorer water quality moving downstream.

Pollution and Dumping in Wetlands

As noted above, mining and forestry are having a significant overall effect on wetlands within the municipality and their ability to provide ecosystem services. As a result of expanding urbanization in close vicinity to wetland areas, combined with ageing and failing waste water treatment infrastructure and poor stormwater runoff monitoring and management, the wetlands within Ehlanzeni District Municipality are also at a very high risk from polluted stormwater runoff as well as from sewerage seeping into wetland areas. Dumping within wetland areas has also become increasingly prevalent in recent years. The effect of this includes increased nutrient loads as well as E.coli levels within in the wetland systems which negatively affects both the water quality of the water moving through the system as well as the delicate biodiversity depending on these systems for survival.

Encroachment of Invasive Alien Vegetation

Invasive plant and animal species, introduced by human actions either accidentally or intentionally, are proving a major threat to wetlands, as well as to the general biodiversity within Ehlanzeni District Municipality. IAPs have the ability to push out the local indigenous vegetation, alter local water quality, displace indigenous plants (and subsequently the fauna that depends on that vegetation for survival) and ultimately alter the habitat and change ecosystem functioning to suit themselves. IAPs are also 'thirsty' as they draw a far greater amount of water than the local indigenous vegetation resulting in a reduced amount of water moving through the system to downstream users.



2. GOVERNANCE & MANAGEMENT

South Africa has an extensive legislative framework concerning the environment and biodiversity is considered in both development planning as well as national government priorities. This section outlines key legislation and policies as well as the governance structure within Ehlanzeni District Municipality which leads to the current wetland management strategy within the district.

2.1 Policy framework

Table 3 provides a comprehensive summary of all South African legislation, policies and strategies pertinent for the management of wetlands within Ehlanzeni District Municipality. It is important to note that some of the legislation such as the National Environmental Management Act (NEMA) provides specific instructions regarding wetland management whilst other legislation indirectly supports management of wetlands such as the National Environmental Management: Waste Act (NEM:WA).

Table 3: Legislation governing wetland management in Ehlanzeni District Municipality:

| LEGISLATION/ POLICY/ STRATEGY | HOW IT RELATES TO WETLANDS |
|--|---|
| Legislation | |
| South African Constitution | Overarching principles of care for the environment. |
| Environmental Conservation Act and associated By-Laws | Controls access to and activities within coastal and wetland areas. |
| National Water Act | Water use control, including extraction and construction within the vicinity of a watercourse or wetland. |
| National Environmental Management Act | Environmental impact assessments (EIAs) for the development of a new or disturbed site within the vicinity of a watercourse or wetland. |
| National Environmental Management: Biodiversity Act | Protection of biodiversity and the formulation of a number of tools (e.g. bioregional plans and threatened ecosystem lists) that feed into land use planning and EIA procedures. |
| National Environmental Management: Biodiversity Act - Alien and Invasive Species Regulations | All matters related to invasive species management (both fauna and flora). |
| National Environmental Management: Protected Areas Act | Protection of national parks, protected areas and conservation sites. This includes the protection of wetland site. |
| National Environmental Management: Waste Act | Regulation of illegal dumping. |
| Conservation of Agricultural Resources Act | Protect the utilization of the natural agricultural resources to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invasive plants. |



| LEGISLATION/ POLICY/ STRATEGY | HOW IT RELATES TO WETLANDS |
|---|--|
| Municipal Systems Act | Role of local governments and the requirements for IDPs, SDFs and Disaster Management Plans. |
| Municipal Structures Act | Promotion of regional planning and spatial planning categories. |
| Municipal Health Act | Monitoring of Waste Water Treatment Works (WWTW) discharge. |
| Policies | |
| National Development Plan (NDP), and associated Medium Term Strategic Framework (MTSF). | Sets out measures to protect natural resources in South Africa. Through the creation of the MTSF and associated 'Delivery Agreements', required outputs and targets are set. |
| Municipal Planning | |
| Provincial Strategic Development Framework (SDF) | Overarching spatial planning guidelines for the province. |
| Integrated Development Plan (IDP) | Overall strategy document for the municipality. |
| District SDF | Broad spatial planning guidelines for the district (including a map of land use within the district). |
| Local Municipal IDPs | Overall strategy document for the local municipalities linking to the district level IDP. |
| Local Municipal SDFs | Strategic plans to manage municipal land at the local level. |
| Open Space Framework | Demarcation of Open Space Areas. |
| Environmental Management Framework | Map and land use guidelines for areas of environmental importance. |
| Sector Plans | This includes the Disaster Management Plan. |
| Strategies | |
| The National Biodiversity Framework | Provides biodiversity targets for South Africa. |
| National Water Resource Strategy | Speaks to protection and rehabilitation of wetlands. |
| Other | |
| Bioregional plans (draft or gazetted) | Maps Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs). |
| Spatial Planning and Land Use Management Act (SPLUMA) | Provides a framework for spatial planning and land use management in South Africa. It also stipulates that municipal planning is primarily the executive function of the local sphere of government and requires that biodiversity is adequately considered in spatial planning. |
| Disaster Management Amendment Bill | Outlines how ecosystems should be considered in the updated Disaster Management Act. |



2.2 Wetland management within the municipality

Currently there is no specific designated wetland management authority within Ehlanzeni District Municipality nor any specific policy in place which guides the management of wetland areas within the district. Instead, the management of wetlands is a collective, but disconnected effort between Ehlanzeni District Municipality, the four local municipalities within Ehlanzeni District Municipality and entities such as the Mpumalanga Parks Board and Working for Wetlands. Various forums also inform wetland management. These include the Environmental Management Forum, which is utilised specifically to address environmental related issues and challenges within the district municipality, as well as the Disaster Management Forum and the Waste Forum. The Mpumalanga Wetlands Forum addresses wetlands challenges at a provincial level.

Management of wetlands is somewhat fragmented across Ehlanzeni District Municipality. The district and local municipalities work from separate IDPs with different mandates and as such, environmental management within the individual municipalities is not consistent. In addition, different local municipalities have different capacity levels for effective environmental management making a coordinated approach challenging. As a result, there is no holistic management of wetlands due to the differences in agendas within each of the municipalities. There is also currently little to no cooperative action between private stakeholder which overall puts wetlands at risk from mismanagement.

To ensure holistic and effective management of wetlands within Ehlanzeni District Municipality, ideally the same vision and standardised goals for the management of wetlands should be incorporated into the IDPs and SDFs of both the local and district level municipalities. Additionally, more effectively utilising existing platforms such as the Environmental Management Forum and Mpumalanga Wetlands Forum will ensure better communication between both the district and local municipalities as well as the Mpumalanga Parks Board, Working for Wetlands and private stakeholders.

2.3 Local and regional partnerships and programmes managing wetlands within Ehlanzeni District Municipality

Across South Africa, many stakeholders are engaged in wetland management and conservation. It has long been recognised that working with or aligning with these stakeholders can have a catalytic impact by building on these endeavours and simultaneously supporting the work of the municipality (and vice versa). Partners frequently bring additional and much needed resources in terms of staff capacity, budget, knowledge etc. It is therefore imperative that all stakeholders remain connected and their individual work undertaken recognised to create opportunities for synergies and future alignment.

At this stage, there are no municipal partnerships or programmes running between Ehlanzeni District Municipality and the surrounding district municipalities. Ehlanzeni District Municipality has however started to develop a relationship with the University of Johannesburg, Tshwane University of Technology and Nelson Mandela Bay University. These universities are interested in becoming involved in, and assisting with, existing projects currently running within the municipality (including LAB: Wetlands SA) as well as any future biodiversity and wetland related projects that may be developed.



On a much broader scale, SANBI is currently implementing the Global Environment Facility (GEF) 5 project within Ehlanzeni District Municipality as well as three other district municipalities within South Africa (Amathole, uMgungundlovu and Cape Winelands District Municipalities) that have been identified as global biodiversity hotspots and national biodiversity priority areas, with high rates of habitat degradation and conversion, high levels of poverty, and other pressing needs for action. In addition, SANTAM are also closely working with Ehlanzeni District Municipality to develop a partnership for reducing risk to the impacts of climate change, particularly flood risk, and building resilience.

For further detail on local and regional partnerships involved in the management of wetlands within Ehlanzeni District Municipality, please refer to the Ehlanzeni District Municipality Wetland Report (<http://cbc.iclei.org/project/lab-wetlands-sa/>)

DRAFT

3. DEVELOPING THE EHLANZENI WETLAND STRATEGY AND ACTION PLAN

Prior to the development of a WSAP, it was critical to undertake an extensive and inclusive stakeholder engagement process in order to gather all relevant information and inputs from key stakeholders for populating the WSAP as well as ensuring critical stakeholder buy-in. In order to achieve this, as part of the LAB: Wetlands SA project, ICLEI-Local Governments for Sustainability and Ehlanzeni District Municipality located and engaged with key stakeholders (provincial, district and local municipal officials within Ehlanzeni District Municipality as well as representatives from local NGOs and private landowners) in three key ways namely through a Wetland Awareness Raising Workshop, one on one meetings which facilitated the development of the Ehlanzeni District Municipality Wetland Report and at a WSAP Workshop in order to gather the required information for inclusion in the WSAP and secure stakeholder buy-in at the local level.

The Wetland Awareness Raising Workshop was undertaken in Nelspruit in November 2015. Prior to this workshop, a desktop study was undertaken to ascertain which stakeholders within Ehlanzeni District Municipality are working in the planning and biodiversity sectors. Key Traditional Leaders were also identified. All identified stakeholders were invited to the workshop which was then used to not only raise awareness of the value of wetlands but also to identify possible stakeholders who should also be included in the WSAP development process.

After the Wetland Awareness Raising Workshop, ICLEI-Local Governments for Sustainability and Ehlanzeni District Municipality co-developed a Wetland Report throughout the course of 2016. The Ehlanzeni District Municipality Wetland Report was a desktop study and aimed to include all the known information on wetlands within the municipality. One on one interviews were undertaken with all stakeholders identified up until that point and resulted in critical information being gathered for the report but also resulted in critical 'gaps' in wetland management being identified that need to be addressed. This set the scene for the final stakeholder engagement – the WSAP Workshop.

The Ehlanzeni WSAP Workshop was held in Nelspruit in November 2016. All stakeholders identified during previous engagements were invited to attend. During the workshop feedback on the findings of the Ehlanzeni District Municipality Wetland Report were presented to the stakeholders, namely the critical ecosystem services the wetlands within Ehlanzeni provide, the threats to these wetlands and the gaps in wetland management. This set the scene for the development of the WSAP.

The WSAP is outlined below and includes all identified issues as well as proposed solutions as developed by all stakeholders present at the WSAP workshop as well as those that contributed to the Wetland Report. The WSAP was developed with close reference to the ICLEI-Local Governments for Sustainability Wetland Strategy and Action Guidelines which are an ICLEI – developed tool freely available for download: <http://cbc.iclei.org/project/lab-wetlands-sa/>

4. EHLANZENI DISTRICT MUNICIPALITY WETLAND STRATEGY AND ACTION PLAN (2017- 2022)

| VISION STATEMENT |
|--|
| <p><i>“Working together towards healthy, naturally functioning wetlands within Ehlanzeni District Municipality, which are protected by all, for the benefit of all”.</i></p> |
| VALUES |
| <ul style="list-style-type: none">✓ <i>Partnerships; (including inclusivity, collaboration and participation).</i>✓ <i>Innovation;</i>✓ <i>Ownership;</i>✓ <i>Accountability; (including responsibility and responsiveness);</i>✓ <i>Communication; (including education and awareness, collaboration and duty of care).</i>✓ <i>Effectiveness;</i>✓ <i>Respect;</i>✓ <i>Sustainability;</i>✓ <i>Ethicality; (including transparency and respect).</i> |
| <p>FOCUS AREAS (3 – 6 strategic interventions / priorities):</p> |

| |
|--|
| 1. <i>Stakeholder and community engagements.</i> |
| 2. <i>Research and Mapping.</i> |
| 3. <i>Education and Awareness Raising.</i> |
| 4. <i>Roles and Responsibilities.</i> |
| 5. <i>Job creation through Wetland Rehabilitation.</i> |
| 6. <i>Funding.</i> |

| (S.M.A.R.T.) GOALS FOR EACH FOCUS AREA | |
|---|---|
| FOCUS AREA 1: <i>Stakeholder and community engagements.</i> | Goal 1.1: Create / or strengthen existing, communication partnerships between all spheres of governments and local communities by 2018. |
| | Goal 1.2: Ensure that the community is well informed about the importance of wetlands by 2019. |
| | Goal 1.3 Promote the participation of local communities in decision-making around wetlands by 2021. |
| | Goal 1.4 Ensure the integration of wetland information sharing across all spheres of government as well as within local communities by 2021. |
| FOCUS AREA 2: <i>Research and Mapping.</i> | Goal 2.1 Establish a research team for wetland research and data gathering by 2018. |
| | Goal 2.2 Map wetlands within Ehlanzeni District Municipality by 2019 (desktop study). |

| | |
|---|--|
| | <p>Goal 2.3 Conduct a wetland assessment on all wetlands identified in mapping exercise (ground-truthing & feasibility study) by 2021.</p> |
| | <p>Goal 2.4 Produce a 'State of the Wetlands within Ehlanzeni District Municipality' Report by 2022.</p> |
| | <p>Goal 2.5 Develop a Rehabilitation Plan for wetlands that are degraded by 2022.</p> |
| | <p>Goal 2.6 Develop a Wetland Management Plan for all wetlands within Ehlanzeni District Municipality by 2022.</p> |
| <p>FOCUS AREA 3: <i>Education and Awareness Raising.</i></p> | <p>Goal 3.1 Design an education package (specifically for government officials at the district as well as local level) that highlights the value of wetlands and how we can develop around them by 2018.</p> |
| | <p>Goal 3.2 Ensure that traditional/ community leaders as well as all relevant government departments are included in relevant forums (Ehlanzeni Environmental Management Forum as well as Mpumalanga Wetlands Forum) by 2017.</p> |
| | <p>Goal 3.3 Develop a wetland education strategy specifically designed for local communities which is implemented by an environmental officer fluent in the local language (e.g. Swati, Tsonga etc.) in collaboration with the community leaders by 2019.</p> |
| <p>FOCUS AREA 4: <i>Roles and Responsibilities.</i></p> | <p>Goal 4.1 Clarify the roles and responsibilities relating to environmental, and particularly wetland, management both the district and local level by 2019.</p> |
| | <p>Goal 4.2 Identify operational capacity gaps/ constraints in terms of meeting allocated roles and responsibilities at both a district and local level by 2019.</p> |
| | <p>Goal 4.3 Ensure that wetlands are included within existing municipal mandates by 2019.</p> |
| <p>FOCUS AREA 5: <i>Job creation through Wetland Rehabilitation.</i></p> | <p>Goal 5.1 Develop bankable wetland rehabilitation projects for within Ehlanzeni District Municipality by 2017.</p> |
| | <p>Goal 5.2 Develop a skills building package accordingly to capacitate local community workers by 2019.</p> |
| | <p>Goal 5.3 Source and secure funding for implementation of wetland rehabilitation projects by 2019. (Goal 6.1).</p> |

| | |
|---|--|
| | Goal 5.4 Implement wetland rehabilitation projects within Ehlanzeni District Municipality by 2019. |
| FOCUS AREA 6: <i>Funding.</i> | Goal 6.1 Source and secure funding for implementation of wetland rehabilitation projects by 2019. |

| HIGH LEVEL ACTION PLAN | | | |
|---|---|----------------|------------|
| FOCUS AREA & GOALS | KEY ACTIONS | RESPONSIBILITY | TIME FRAME |
| Focus Area 1: Stakeholder and community engagements. | | | |
| Goal 1.1: Create / or strengthen existing, communication partnerships between all spheres of governments and local communities by 2018. | <ul style="list-style-type: none"> • Invite local community leaders to the existing environmental management forums as well as the wetland forums. • Assist local communities with the development of a community-led forum which will discuss and address environmental and wetland matters. | | |
| Goal 1.2: Ensure that the local community is well informed about the importance of wetlands by 2019. | <ul style="list-style-type: none"> • See Goal 3.3 | | |
| Goal 1.3: Promote the participation of local communities in decision-making around wetlands by 2021. | <ul style="list-style-type: none"> • Invite local community leaders to the existing environmental management forums as well as the wetland forums. • Ensure that a translator attends these forums so queries regarding wetlands made in languages other than English can be answered. | | |
| Goal 1.4: Ensure the integration of wetland information sharing across all spheres of government as well as within local communities by 2021. | <ul style="list-style-type: none"> • Establish an information sharing hub whereby all wetland related information can be stored and easily accessible by all government personnel as well as local communities. | | |

| HIGH LEVEL ACTION PLAN | | | |
|--|---|----------------|------------|
| FOCUS AREA & GOALS | KEY ACTIONS | RESPONSIBILITY | TIME FRAME |
| | • | | |
| Focus Area 2: Research and Mapping. | | | |
| Goal 2.1: Establish a research team for wetland research and data gathering by 2018. | <ul style="list-style-type: none"> • Identify key members from within Ehlanzeni District Municipality for inclusion in the research team. • Establish a Terms of Reference for what the research team will be required to do. • Contact each member and invite to join the research team. | | |
| Goal 2.2: Map wetlands within Ehlanzeni District Municipality by 2019 (desktop study). | <ul style="list-style-type: none"> • Establish the boundaries of the study area (Ehlanzeni District Municipality). • Train the research team/ external service provider to use GIS software (Google Earth Pro etc.) • Purchase the required GIS software. • Develop a detailed spatial wetland map layer indicating the location of all wetlands within Ehlanzeni District Municipality. | | |
| Goal 2.3: Conduct a wetland assessment on all wetlands identified in mapping exercise (ground-truthing & feasibility study) by 2021. | <ul style="list-style-type: none"> • Conduct wetland identification and delineation training with the Ehlanzeni District Municipality research team/ Appoint and external service provider to undertake wetland delineation. • Ground truth the wetlands identified through the wetland mapping exercise. • Develop a wetland map overlay which indicates the exact location of wetlands within Ehlanzeni District | | |

| HIGH LEVEL ACTION PLAN | | | |
|---|---|----------------|------------|
| FOCUS AREA & GOALS | KEY ACTIONS | RESPONSIBILITY | TIME FRAME |
| | Municipality as well as their current state (i.e. pristine, degraded, destroyed etc.). | | |
| <p>Goal 2.4: Produce a 'State of the Wetlands within Ehlanzeni District Municipality' Report by 2022.</p> | <ul style="list-style-type: none"> • Develop a Terms of Reference of what is to be included in the Report (including key chapters). • Using the wetland map (desktop study) and the data from the wetland assessment (ground truthing exercise), develop a 'State of the Wetlands within Ehlanzeni District Municipality' Report. | | |
| <p>Goal 2.5: Develop a Rehabilitation Plan for wetlands that are degraded by 2022.</p> | <ul style="list-style-type: none"> • Using the wetland map and the wetland overlay developed as part of Goals 2.2 & 2.3, identify wetlands which are classified as 'degraded'. • Develop a system for prioritising wetlands which can and should be rehabilitated (this can be based on wetlands' potential to support local livelihoods through ecosystem service provision; the potential to reduce the impacts of climate change; and the potential to reduce disaster risk (from e.g. flooding). | | |
| <p>Goal 2.6: Develop a Wetland Management Plan/ Guideline for all wetlands within Ehlanzeni District Municipality by 2022.</p> | <ul style="list-style-type: none"> • Identify wetland specialists who can assist with key wetland management guidelines. • Using the wetland map and the wetland overlay developed as part of Goals 2.2 & 2.3, in collaboration with the identified wetland specialists, develop a Wetland Management Plan/ Guideline for all wetlands within Ehlanzeni District Municipality (Plan should include the ground-truthed map). | | |

| HIGH LEVEL ACTION PLAN | | | |
|--|---|----------------|------------|
| FOCUS AREA & GOALS | KEY ACTIONS | RESPONSIBILITY | TIME FRAME |
| | <ul style="list-style-type: none"> Distribute the Wetland Management Plan/ Guideline to all district and local level town planners as well as to private developers. | | |
| Focus Area 3: Education and Awareness Raising. | | | |
| <p>Goal 3.1 Develop an education package (specifically for government officials at the district as well as local level) that highlights the value of wetlands and how we can develop around them by 2018.</p> | <ul style="list-style-type: none"> Develop and circulate a short survey to establish what is currently known about wetlands at both the district and local level. Using the results from the survey, develop an education package (specifically for government officials at the district as well as local level) that illustrates what wetlands are and why they are valuable and highlights the benefits of keeping wetlands within the system. As part of the education package, incorporate guidelines on how wetlands can be included as part of development planning (see Goal 2.6). | | |
| <p>Goal 3.2 Ensure that traditional/community leaders as well as all relevant government departments are included in relevant forums (Ehlanzeni Environmental Management Forum; Mpumalanga Wetlands Forum) by 2017.</p> | <ul style="list-style-type: none"> See Goal 1.2 for community leaders. Invite all relevant government departments to the Ehlanzeni Environmental Management Forum as well as Mpumalanga Wetlands Forum. | | |
| <p>Goal 3.3 Develop a wetland education strategy specifically designed for local communities which is implemented by an environmental officer fluent in the local language</p> | <ul style="list-style-type: none"> Form a partnership with existing community workers (e.g. COGTA) who speak the local language(s). Engage with the traditional leaders and establish what is already known about wetlands. | | |

| HIGH LEVEL ACTION PLAN | | | |
|---|--|----------------|------------|
| FOCUS AREA & GOALS | KEY ACTIONS | RESPONSIBILITY | TIME FRAME |
| (e.g. Swati, Tsonga etc.) in collaboration with the community leaders by 2019. | <ul style="list-style-type: none"> Based on the outcomes of the engagements with the traditional leaders and local communities, develop an education package for community education on the environment and wetlands. This should be done with support from COGTA as well as the translator. Ensure that regular environmental and wetland awareness raising engagements are undertaken with the local community. See Goal 1.4. | | |
| Focus Area 4: Roles and Responsibilities. | | | |
| Goal 4.1 Clarify the roles and responsibilities relating to environmental, and particularly wetland, management both at the district and local level by 2019. | <ul style="list-style-type: none"> Identify a responsible person to undertake stakeholder mapping of roles and responsibilities. Engage with each municipal department at both a district and local level and develop a clear understanding of roles and responsibilities pertaining to environmental management of each department. Develop an initial stakeholder map of who is doing what and where. Circulate map to all relevant stakeholders within Ehlanzeni District Municipality to confirm/clarify that all key stakeholders are included. Individual roles and responsibilities should be confirmed at this time. Stakeholder map to be finalised. | | |

| HIGH LEVEL ACTION PLAN | | | |
|---|---|----------------|------------|
| FOCUS AREA & GOALS | KEY ACTIONS | RESPONSIBILITY | TIME FRAME |
| | <p>*Note: The stakeholder map should include</p> <ol style="list-style-type: none"> 1) Each individual working within Ehlanzeni District Municipality; 2) Roles and Responsibilities; 3) Current / Historical wetland related projects; 4) Areas of jurisdiction (including buffer areas); and 5) Contact details. | | |
| <p>Goal 4.2 Identify operational capacity gaps/ constraints in terms of meeting allocated roles and responsibilities at both a district and local level by 2019.</p> | <ul style="list-style-type: none"> • Identify stakeholders and their respective responsibilities using the stakeholder map (Goal 4.1). • Review relevant legislation to identify what each stakeholder/ entity working within Ehlanzeni District Municipality is required to do. • Identify ideal personnel and tools required to effectively implement roles and responsibilities. • Identify present status of personnel (e.g. vacancies currently not filled) and tools currently on the ground. • Advertise priority vacant positions to ensure each department is meeting identified roles and responsibilities. • Appoint personnel. | | |
| <p>Goal 4.3 Ensure that wetlands are included within existing municipal mandates by 2019.</p> | <ul style="list-style-type: none"> • Identify champions at both a district and local level who will be responsible for including wetlands within existing mandates. | | |

| HIGH LEVEL ACTION PLAN | | | |
|---|---|----------------|------------|
| FOCUS AREA & GOALS | KEY ACTIONS | RESPONSIBILITY | TIME FRAME |
| | <ul style="list-style-type: none"> Wetland champions to ensure that the Wetland Rehabilitation Plan (Goal 2.5) as well as the Wetland Management Plan/ Guideline (Goal 2.6) are included in the IDP at both the district and local municipal level. | | |
| Focus Area 5: Job creation through Wetland Rehabilitation. | | | |
| Goal 5.1 Develop bankable wetland rehabilitation projects for within Ehlanzeni District Municipality by 2017. | <ul style="list-style-type: none"> As per Goal 2.5, identify wetlands which can and should be rehabilitated (this can be based on wetlands' potential to support local livelihoods through ecosystem service provision; the potential to reduce the impacts of climate change; and the potential to reduce disaster risk (from e.g. flooding). Develop project proposals (including funding requirements) to rehabilitate each individual wetland. For each project proposal, develop a Terms of Reference on how many staff members will be required (e.g. Project Manager, laborers, technical experts etc.) to complete the project. | | |
| Goal 5.2 Develop a skills building package to capacitate local community workers by 2019. | <ul style="list-style-type: none"> Identify the skills and tools required by local community workers to implement the wetland rehabilitation projects. Develop a training package which highlights the nature of the rehabilitation work to be done as well as the tools (and how to use them) required to complete the work. | | |

| HIGH LEVEL ACTION PLAN | | | |
|--|---|----------------|------------|
| FOCUS AREA & GOALS | KEY ACTIONS | RESPONSIBILITY | TIME FRAME |
| <p>Goal 5.3: Source and secure funding for implementation of wetland rehabilitation projects by 2019. (Goal 6.1).</p> | <ul style="list-style-type: none"> • See Goal 6.1. | | |
| <p>Goal 5.4 Implement wetland rehabilitation projects within Ehlanzeni District Municipality by 2019.</p> | <ul style="list-style-type: none"> • Once funding is secured for a project, advertise the rehabilitation job at the forums (ensuring that local community members are present as per Goal 1.2). • Appoint personnel as per Terms of Reference included in Goal 5.1). • Train appointed personnel as per the developed training package included as part of Goal 5.2). • Issue contracts and allocate responsibilities to appointed personnel. • Procure and issue Personal Protective Equipment (PPE). • Undertake regular reporting which highlights the progress of work being undertaken as well as the impact of the jobs created by the wetland rehabilitation work. | | |
| Focus Area 6: Funding. | | | |
| <p>Goal 6.1 Source and secure funding for implementation of wetland rehabilitation projects by 2019.</p> | <ul style="list-style-type: none"> • Conduct an online search for potential sources of funding; • Network with key stakeholders (e.g. ICLEI- Local Governments for Sustainability, US AID etc.) to further identify funding sources as well as develop a personal relationship with potential funders. | | |

| HIGH LEVEL ACTION PLAN | | | |
|------------------------|--|----------------|------------|
| FOCUS AREA & GOALS | KEY ACTIONS | RESPONSIBILITY | TIME FRAME |
| | <ul style="list-style-type: none"> • Develop a list of all viable sources of funding. • Develop bankable wetland project proposals for inclusion in the IDP (see Goal 5.1). • When funding becomes available, submit tailored bankable project proposals to funders. • Conduct a follow up of proposal submission if no news has been received within two weeks of submission. • Should funding become available, secure funding through the signing of a mutually agreed upon contract. | | |