



iLembe District Municipality Wetland Strategy and Action Plan (2017- 2030)

Local Action for Biodiversity (LAB): Wetlands South Africa



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ILEMBE DISTRICT MUNICIPALITY
WETLAND STRATEGY AND ACTION PLAN (2017- 2030)

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LIST OF ACRONYMS AND ABBREVIATIONS

AS	Africa Secretariat
BSP	Biodiversity Sector Plans
CARA	Conservation Agricultural Resources Act
CoGTA	Cooperative Governance and Traditional Affairs
DEA	Department of Environmental Affairs
DWS	Department of Water and Sanitation
EMF	Environmental Management Framework
EMS	Environmental Management System
EMU	Environmental Management Unit
IAP	Invasive Alien Plant
ICLEI	ICLEI – Local Governments for Sustainability
IDM	ILembe District Municipality
IDP	Integrated Development Plan
KZN	KwaZulu Natal Province
LAB	Local Action for Biodiversity
MTSF	Medium Term Strategic Framework
NDP	National Development Plan
NEM: BA	National Environmental Management: Biodiversity Act
NEM: PAA	National Environmental Management: Protected Areas Act
NEM: WA	National Environmental Management: Water Act
NEMA	National Environmental Management Act
NWA	National Water Act
SALGA	South African Local Government Association
SANBI	South African National Biodiversity Initiative
SDF	Spatial Development Framework
SPLUMA	Spatial Planning and Land Use Management Act
SSP	Shared Services Programme
USEPA	United States Environmental Protection Agency

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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.

ILembe District Municipality (IDM) is one of 10 district and 1 metropolitan municipalities located within the KwaZulu Natal (KZN) Province of South Africa and covers an area of 3 260 km². The municipality falls within the biodiversity-rich Grassland Biome, the second largest of the eight biomes falling within South Africa. Numerous wetlands, of high ecological value and exceptional beauty, occur throughout the municipality and provide crucial habitat for not only a number of species specially adapted to the Grassland Biome but also for a variety of nationally critically endangered flora and fauna species. The wetlands throughout I Lembe District Municipality are also considered to be high-value 'ecological infrastructure' as they provide critical ecosystem services to the local communities living within 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 I Lembe District Municipality however, a significant number of the wetlands are under threat or have already been lost. This is largely due to historical degradation, deliberate draining of wetlands to make way for urban and rural development and expansion, conversion and use of land for agriculture (mainly sugar cane) and the encroachment 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.

I Lembe 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 WSAP, ICLEI AS will assist I Lembe District Municipality in identifying the gaps in management and assist with devising new and better wetlands management strategies going forward.

Supporting Documentation:

This document relies heavily on two supporting documents: The I Lembe 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 ILEMBE 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 I Lembe District Municipality. Please refer to the I Lembe 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 the I Lembe 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 I Lembe District Municipality provide.

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

Ecosystem Service Type	Ecosystem Service	Description/ Case Study
Provisioning	Food	<p>Local communities living within ILembe District Municipality harvest local plants and fish to support their diets.</p> <p>They also use the wetland fringe zones for informal cultivation/ small scale farming and plant and harvest various crops such as maize, sugarcane as well as the local amadumbi. There is a belief particularly in the Mandeni and Ndwedwe local municipal areas that the amadumbi cannot survive anywhere other than a wetland area and that sugarcane grown within a wetland is best.</p>
	Clean drinking water	<p>Local communities living within ILembe District Municipality, particularly those located in the more rural areas, use clean water supplied by the wetlands for drinking purposes.</p>
	Medicinal plants	<p>Many of the plants growing within and around wetlands have natural medicinal properties. Local communities living within ILembe 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.</p>
	Raw materials	<p>Wetlands provide a significant number of raw materials which directly contribute to local livelihoods and income. Local communities living within the rural areas of ILembe District Municipality for example, harvest reeds from the wetlands to make baskets and furniture and grasses for thatching.</p>
	Grazing Land	<p>Local communities, living particularly in the more rural areas, use the wetlands as pasture for their livestock (goats and cows mainly).</p>
Regulatory	Water storage and stream flow regulation	<p>The local wetlands within ILembe District Municipality store stormwater runoff and slowly release the water as the water table drops. The stored water also contributes to recharging ground water. This all contributes to sustained streamflow throughout the year.</p>
	Flood attenuation and control	<p>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.</p>
	Erosion control	<p>Wetland plants, strengthen the banks of wetlands and thereby contribute to sediment stabilisation and soil retention within the catchment.</p>
	Water filtration and purification	<p>Wetlands and wetland plants contribute substantially to water quality improvement by filtering and purifying water as it moves through the system. Wetlands have the ability to</p>

		modify 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	Recreation	Currently there are no wetland areas known to be used for recreational purposes within ILembe District Municipality. Various identified wetland areas however have been earmarked to be developed as recreational parks and open space systems in each of the local municipalities within the district. It is hoped that by developing more inclusive open space systems, tourism and recreational activities (e.g. birding, canoeing, hiking etc.) will be encouraged within the area.
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 ILembe 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 the numerous ecosystem services provided by wetlands come at no cost to the municipality 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 the 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 ILembe 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 ILembe 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 to the wetlands located within ILembe District Municipality are summarised in **Table 2** below:

Table 2: Threats to wetlands within ILembe 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 ILembe District Municipality were deliberately drained and infilled to 'reclaim the land' for commercial, agricultural and urban uses.
Inappropriate urban and rural development and expansion	<p>Wetlands throughout ILembe District Municipality are at risk from both formal and informal urban development and expansion. Due to increasing population, particularly in areas such as KwaDukuza, as well as demands for space for industrial development, developments are being taken right up to, and sometimes beyond, the urban edge putting wetlands near the vicinity of the urban edge at risk from polluted stormwater runoff as well as from sewerage seeping into wetland areas. 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.</p> <p>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 within the district. 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 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 not only results in biodiversity loss and fragmentation of natural vegetation corridors but also compromises the wetlands' ability to perform valuable ecosystem services such as water filtration resulting in poorer water quality moving downstream.</p>
Conversion and use of land for agricultural purposes	Another major threat to wetlands within ILembe District Municipality is intensive commercial agriculture. Due to the lack of knowledge of the value of wetlands and the importance of the ecosystem services they provide, much of the land along the KZN Coastal Belt has been deliberately cleared and drained to take advantage of the moist soils for sugar cane production. Converting the land in such a manner results in the degradation, or in some cases even complete removal, of the wetland systems within these areas. Subsequently, this means that the valuable ecosystem services that these wetlands would have once provided are largely lost.

	<p>In addition, inappropriate or poorly regulated agricultural practices such as ploughing within wetlands also negatively impact any remaining wetland systems' functioning. The result is that when flooding events occur, a significant amount of erosion occurs and high volumes of sediment are washed downstream putting infrastructure and livelihoods at risk.</p>
<p>Encroachment of invasive alien plants (IAPs)</p>	<p>Invasive plant species, introduced by human actions either accidentally or intentionally, are proving a major threat to the quality and quantity of wetlands, as well as to the biodiversity, within ILembe 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 (especially Blue Gums and Pines) 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.</p> <p>According to SANBI, IAPs which pose a direct threat to wetlands within ILembe District Municipality (as well as the greater KZN provincial region) include Water Thyme (<i>Hydrilla verticillata</i>), Water Poppy (<i>Hydrocleys nymphoides</i>), the Broad-leafed Arrowhead (<i>Sagittaria latifolia</i>), the Yellow Floating Heart (<i>Nymphoides peltata</i>), and the Delta Arrowhead (<i>Sagittaria platyphylla</i>). All of which here are listed as category 1a under the National Environmental Management: Biodiversity Act (NEM: BA) and are highly invasive.</p>
<p>Land allocation by the Amakhosi and Izinduna</p>	<p>There are 45 Traditional Authority Areas located within ILembe District Municipality, largely in the rural areas inland of the municipality. Under traditional leadership, when a community member wishes to use traditional land to build a house or grow crops, they go to the chief (Induna) of the community to make a formal application for land. Following extensive discussion with the community member, the Induna allocates land as required in an area of his choosing within the Traditional Authority Area. More often than not, the land that is allocated is within too close proximity to/ within a wetland, putting the wetland at a direct risk from being degraded.</p> <p>Traditional leadership and land allocation is, in most instances, not done in consultation with either the district or local municipality and is rather done independently without guidance on where sensitive environmental features, including wetlands, are located. This leadership style puts the wetlands within the Traditional Authority Areas at risk from degradation or even being lost completely resulting in the wetland systems being unable to perform valuable ecosystem services such as water filtration, flood attenuation or provide food for the local community. Building in such close proximity to wetland systems, without implementing municipal-developed buffer guidelines, also puts the local community at risk from flooding impacts during the rainy season.</p>

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 the Ilembe 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 the Ilembe District Municipality. It is important to note that some of the legislation such as the National Environmental Management Act provides specific instructions regarding wetland management whilst other legislation indirectly supports management of wetlands such as the National Environmental Management: Waste Act.

Table 3: Legislation governing wetland management in the Ilembe District Municipality

LEGISLATION/ STRATEGY	POLICY/	HOW IT RELATES TO WETLANDS
Legislation		
South African Constitution (Section 24)	Constitution	<ul style="list-style-type: none"> Promotes cooperative governance on the management of the natural resources including wetlands. Encourages management of natural resources, including wetlands, in such a manner as to ensure communities are not exposed to any health risks. For example, this would include avoiding the pollution of rivers and wetlands so that drinking water is not contaminated. Promote conservation of natural resources for the benefit of present and future generations (sustainable development).
National Environmental Management Act (NEMA)	Environmental	<ul style="list-style-type: none"> NEMA gives effect to Section 24 of the Constitution of South Africa in that it serves as the framework for environmental management within South Africa. NEMA provides for the development of planning tools for the better management of environmental resources, including wetlands. NEMA Listing Notice 1, 2 and 3 provide guidance on activities that require an Environmental Impact Assessment (EIA) prior to commencement. This includes activities in and around wetlands.
National Water Act (NWA)		<ul style="list-style-type: none"> The NWA aims to ensure that the South Africa's water resources are protected, used, developed, managed and controlled in such a manner that needs of the current generation are met without compromising the needs of future generation. Listed water resources included in the NWA are rivers, estuaries, aquifers and wetlands. NWA provides guidance on activities that require a Water Use License Application (WULA) prior to commencement.

LEGISLATION/ POLICY/ STRATEGY	HOW IT RELATES TO WETLANDS
	<p>This includes abstraction as well as construction activities within the vicinity of listed water resources.</p>
<p>National Environmental Management: Biodiversity Act (NEM:BA)</p>	<ul style="list-style-type: none"> • The core objective of NEMBA is to ensure effective conservation and management of South African biodiversity. • This is done through the formulation and implementation of a number of tools such as Bioregional Plans as well as the development of e.g. Threatened Ecosystem Lists, all of which feed into land-use planning and EIA decision making.
<p>National Environmental Management: Biodiversity Act - Alien and Invasive Species Regulations</p>	<ul style="list-style-type: none"> • The NEM: BA Alien and Invasive Species Regulations guide all matters related to invasive species management (both fauna and flora). • Section 76 (2) (a) of NEM:BA states that <i>“All organs of state in all spheres of government must prepare an invasive species monitoring, control and eradication plan for land under their control, as part of their environmental plans”</i>.
<p>National Environmental Management: Integrated Coastal Management Act</p>	<ul style="list-style-type: none"> • Integrated landscape protection from catchment to the coast.
<p>National Environmental Management: Protected Areas Act (NEM:PAA)</p>	<ul style="list-style-type: none"> • NEM: PAA aims to ensure the protection of national parks, protected areas and conservation sites as part of a national strategy to conserve key ecological areas and general biodiversity. This includes the protection and conservation of wetland areas.
<p>National Environmental Management: Waste Act (NEM:WA)</p>	<ul style="list-style-type: none"> • Among other things, NEM: WA regulates illegal dumping (including within and around wetlands).
<p>Conservation of Agricultural Resources Act (CARA)</p>	<ul style="list-style-type: none"> • CARA protects the utilization of the natural agricultural resources to promote the conserve the soil, water sources and natural vegetation, • CARA also supports NEM: BA in the eradication of IAPs.
<p>Municipal Systems Act (MSA)</p>	<ul style="list-style-type: none"> • Outlines the role of local governments and the specific requirements for Integrated Development Plans (IDP), Spatial Development Frameworks (SDF) and Disaster Management Plans. • As part of the (MSA), municipalities are expected to compile a Strategic Environmental Assessment (SEA) as part of the Spatial Development Framework for the Municipal Integrated Development Plan. An Environmental Management Framework, which is similar in nature to a SEA, has been developed for ILembe District Municipality. This is used as a tool to guide environmental management matters within the district’s geographical area.
<p>Municipal Structures Act</p>	<ul style="list-style-type: none"> • Promotion of regional planning and spatial planning categories.

LEGISLATION/ STRATEGY	POLICY/ STRATEGY	HOW IT RELATES TO WETLANDS
Policies		
National Development Plan (NDP), and associated Medium Term Strategic Framework (MTSF).		<ul style="list-style-type: none"> The NDP sets out measures to protect natural resources within South Africa. Through the creation of the MTSF and associated 'Delivery Agreements', required outputs and targets are set. The NDP also assists with policy and regulatory framework creation for various land uses. This is to determine the environmental and social costs of new developments and ensure the conservation and restoration of protected areas.
Local and Provincial Development Policies		<ul style="list-style-type: none"> A draft Provincial Green Economy Strategy has been developed for the KZN Province.
Municipal Planning		
Integrated Development Plan (IDP)		<ul style="list-style-type: none"> The IDP is the overall strategy document for the municipality. Currently the main goal at both a national and provincial level is to focus on promoting conservation of important biodiversity areas. The ILembe District Municipality IDP includes projects pertaining to this.
KZN Provincial Growth and Development Plan		<ul style="list-style-type: none"> Overarching spatial planning guidelines for the province.
District Municipality SDF		<ul style="list-style-type: none"> Broad spatial planning guidelines for the district (including a map to guide land use within the district).
Local Municipality SDFs		<ul style="list-style-type: none"> Strategic plans to manage municipal land at the local level.
Open Space Framework		<ul style="list-style-type: none"> Demarcation of Open Space Areas.
Environmental Management Framework (EMF)		<ul style="list-style-type: none"> The EMF provides land use management guidelines and associated maps for areas of environmental importance. This includes guidance on specific land-uses which are best suited for the environmentally sensitive land as well as control/ buffer zones for maintaining the appropriate use of such land. The EMF can also be used as a supporting document to the Spatial Planning and Land Use Management Act (SPLUMA) (see below). The ILembe District Municipality EMF has identified a number of wetland systems requiring management. Wetlands within the district can be rehabilitated, preserved and protected using the EMF as a guideline.
ILembe Biodiversity Sector Plan (BSP)		<ul style="list-style-type: none"> Identifies critical biodiversity areas (CBAs) and ecological support areas (ESAs) within ILembe District Municipality. Maps of these areas, developed by Ezemvelo KZN Wildlife, are included in the BSP.
Strategies		
The National Biodiversity Framework		<ul style="list-style-type: none"> Provides biodiversity targets for South Africa.

LEGISLATION/ STRATEGY	POLICY/ STRATEGY	HOW IT RELATES TO WETLANDS
National Water Strategy	Resource	<ul style="list-style-type: none"> Speaks to protection and rehabilitation of wetlands.
Other		
Bioregional Plans		<ul style="list-style-type: none"> Maps Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) (see ILembe Biodiversity Sector Plan above).
Spatial Planning and Land Use Management Act		<ul style="list-style-type: none"> Provides a framework for spatial planning and land use management in South Africa. It sets out in its definitions that municipal planning is primarily the executive function of the local sphere of government and requires that biodiversity (including wetlands) is adequately considered in spatial planning.
Disaster Management Amendment Bill		<ul style="list-style-type: none"> Outlines how ecosystems should be considered in the updated Disaster Management Act.

2.2 Wetland management within the municipality

Environmental management within South Africa is the shared responsibility of the Department of Environmental Affairs (DEA), the 9 Provincial Governments as well as the District and Local level municipalities. Within ILembe District Municipality however due to a lack of resources, there are significant capacity constraints for effective district wide environmental management.

To address environmental management as effectively as possible with the available resources and capacity, ILembe District Municipality has developed an Environmental Management Unit (EMU) housed within the Planning Department of the municipality. The EMU deals with all environmental related matters specifically including 1) efficient and sustainable use of natural resources; 2) effectively responding to the impacts of climate change; 3) enhancing systems for integrated planning and implementation; 4) building sustainable communities through education and awareness programmes; and 5) development towards a green economy. Currently just 2 officials and 2 interns have been allocated to the EMU (under normal circumstances, the structure should ideally consist of at least 8-10 officials to effectively implement district wide environmental management programmes).

As a result of the limitations of the EMU, there is currently no specific designated wetland management authority within ILembe District Municipality. Instead, the management of wetlands is a collective but disconnected effort between the EMU and the Environmental Health, Disaster Risk Management and Water Quality Management units within ILembe District Municipality as well as key parastatals such as Ezemvelo KZN Wildlife and SANBI, each of which manage wetlands through their own key mandates and legislative requirements. KwaDukuza Local Municipality also plays a role in wetland management but only within the boundaries of the local municipality.

To relieve some of the capacity constraints going forward, ILembe District Municipality has developed the Development Planning Shared Services programme (DPSS), with co-funding support from Cooperative Governance and Traditional Affairs (CoGTA) and the constituent Local Municipalities. Through the DPSS, among other things, ILembe District Municipality has created a position for an Environmental Management Specialist (EMS). The role of the EMS is to provide holistic and effective support and expertise to the district, as well as the local municipalities within

the district (Mandeni, KwaDukuza, Ndwedwe and Maphumulo), requiring input on specific environmental management issues including planning around environmentally sensitive areas, the sustainable use of natural resources, planning for climate change impacts and policy development for more effective environmental management going forward.

Currently there are a number of forums where the environmental concerns within ILembe District Municipality are tabled and discussed. These include the iLembe Planning and Development Forum, which receives monthly reports and updates on environmental programmes underway, the KwaDukuza Environmental Forum which focuses specifically on the geographic region of KwaDukuza Local Municipality, as well as the Municipal Coastal Committee and the Climate Change Compact. Due to a lack of focus on the environment and wetlands specifically however, environmental concerns are not always effectively addressed and sometime things do “slip through the cracks”. To rectify this, ILembe District Municipality is currently establishing an Environmental Management Forum that will specifically address all environmental matters at a district level.

2.3 Local and regional partnerships and programmes managing wetlands within ILembe 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 currently no active wetland or biodiversity projects being implemented by ILembe District Municipality. The ILembe District Municipality Environmental Management Framework (EMF) has been finalised in partnership with the Provincial Department of Environmental Affairs (Department of Economic Development, Tourism and Environmental Affairs, DEDTEA). It is envisioned that this framework will assist ILembe District Municipality with a better understanding all of its natural resources (including wetlands) and also provide guidance on how to better manage these resources. Ezemvelo KZN Wildlife has also developed a district wide Biodiversity Sector Plan (BSP) that will also contribute to supporting the district in managing natural resources including wetlands. It is hoped that through the development of the EMF and the BSP, relationships can be developed and maintained between critical stakeholders working within the environmental sector.

In addition to the above, ILembe District Municipality is part of the Central KwaZulu-Natal Climate Change Compact, a regional partnership between eThekweni Municipality and its neighbouring municipalities. The main aim of the partnership is to provide a forum through which participating municipalities can cooperate to reduce the vulnerability to the impacts of climate change as well as increase the resilience of their local communities. Critical stakeholders also included in this partnership include the South Africa Local Government Association (SALGA), DEA, Department of Water Affairs and Sanitation (DWS) as well as the Department of Agriculture, Forestry and Fisheries (DAFF). During these meetings, various role players deliberate on projects contributing to building resilient communities.

3. DEVELOPING THE ILEMBE 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 stakeholder 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 ILembe District Municipality located and engaged with key stakeholders (provincial, district and local municipal officials within ILembe District Municipality as well as representatives from local NGOs, private landowners and farmers) in three key ways namely through a Wetland Awareness Raising Workshop, one on one meetings which facilitated the development of a 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 KwaDukuza in February 2016. Prior to this workshop, a desktop study was undertaken to ascertain which stakeholders within ILembe District Municipality are working in the planning and biodiversity sectors. 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 ILembe District Municipality co-developed a Wetland Report throughout the course of 2016. The ILembe 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 ILembe WSAP Workshop was held in Blythedale Beach in November 2016. All stakeholders identified during previous engagements were invited to attend. During the workshop feedback on the findings of the ILembe District Municipality Wetland Report were presented to the stakeholders, namely the critical ecosystem services the wetlands within ILembe 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. ILEMBE DISTRICT MUNICIPALITY WETLAND STRATEGY AND ACTION PLAN (2017- 2030)

VISION STATEMENT
<p><i>“By 2030, through the effective coordination of all key stakeholders, wetlands within ILembe District Municipality will be ecologically functioning and providing goods and services to all in a sustainable manner.”</i></p>
VALUES
<ul style="list-style-type: none">✓ Collaboration <i>Collaborative planning; inclusivity; acknowledging the role of the public sector; public participation; ownership by all key stakeholders.</i>✓ Capacity Building <i>Education and awareness.</i>✓ Sustainability <i>(preservation and intergenerational planning)</i>✓ Efficiency✓ Effectiveness✓ Equity✓ Conservation

- ✓ *Passion*
- ✓ *Proactiveness*
- ✓ *Diligence*
- ✓ *Cooperation*
- ✓ *Urgency*
- ✓ *Alignment*

FOCUS AREAS (3 – 6 strategic interventions / priorities):

1. *Land Use Planning*
2. *Research, Mapping and Monitoring & Evaluation*
3. *Awareness Raising, Capacity Building & Community Involvement and Ownership*
4. *Funding*
5. *Cooperative Governance*
6. *Alien Vegetation Removal, Conservation & Green Jobs*

(S.M.A.R.T.) GOALS FOR EACH FOCUS AREA

FOCUS AREA 1: <i>Land Use Planning</i>	Goal 1.1: Gain a clear understanding of how and where wetland information is currently included in municipal strategic plans and how (which, where within and when) these plans need to be updated by January 2018 .
	Goal 1.2: Incorporate wetlands information (including maps, buffers areas and developmental restrictions) into municipal land use schemes by June 2019 .
	Goal 1.3 Continuously reevaluate and update wetland information captured in Strategic Plans and municipal land use schemes.
FOCUS AREA 2: <i>Research, Mapping and Monitoring & Evaluation</i>	Goal 2.1 Map wetlands within ILembe District Municipality (desktop study) by December 2018
	Goal 2.2 Conduct a wetland assessment on all wetlands identified in mapping exercise (ground-truthing exercise) by December 2019 .
	Goal 2.3 Develop a 'Wetland Management Guideline 'by December 2018 .
	Goal 2.4 Develop a 'Wetland Information Database' by December 2018 .
FOCUS AREA 3: <i>Awareness Raising, Capacity Building & Community Involvement and Ownership</i>	Goal 3.1 Design and implement a wetland awareness raising programme by February 2020 .
	Goal 3.2 Develop a community forum for sharing wetland related knowledge and ensuring ongoing public participation of local communities by June 2019 .
FOCUS AREA 4: <i>Funding</i>	Goal 4.1 Identify potential sources of funding by January 2018 .
	Goal 4.2 Identify methods of packaging projects to secure funding by June 2018 .
	Goal 4.3 Ensure that wetland projects are included in the municipal IDPs by 2017 (dependent on municipal timeframes). December 2017 - ongoing

FOCUS AREA 5: <i>Cooperative Governance</i>	Goal 5.1 Develop an ILembe District Municipality Environmental Management Forum (EMF) by June 2019
	Goal 5.2 Ensure participation of all relevant stakeholders (district and local municipalities as well as external parties) at international, national, provincial and district level environmental (and wetland) forums from June 2019 and thereafter on an ongoing basis.
FOCUS AREA 6: <i>Alien Vegetation Removal, Rehabilitation, Conservation & Green Jobs</i>	Goal 6.1 Map invasive alien plant species distribution within ILembe District Municipality by December 2018
	Goal 6.2 Develop an 'Invasive Alien Plant Eradication Plan' by July 2020 .
	Goal 6.3 Develop capacity within ILembe District Municipality for adequate management of invasive alien species management, particularly within wetlands by July 2020 .
	Goal 6.4 Develop a Green Jobs Programme to implement the 'Invasive Alien Plant Eradication Plan' by July 2020

HIGH LEVEL ACTION PLAN

FOCUS AREA & GOALS	KEY ACTIONS	RESPONSIBILITY	TIME FRAME
Focus Area 1: Land Use Planning			
Goal 1.1: Gain a clear understanding of how and where wetland information is currently included in municipal strategic plans and how (which, where within and when) these plans need to be updated by January 2018	<ul style="list-style-type: none"> Undertake a review of the existing national, provincial, district and local wetland legislation (e.g. SDFs, IDPs, EMFs and IDPs) to ascertain what wetland information is currently included in those planning tools. Draft a report detailing where wetlands are currently included in the municipal policies, where there are gaps and where opportunity exists for the inclusion of wetlands information. 	DWA, DEA, DEDTEA, iLembe District and local municipalities.	January 2018 (thereafter annually)

HIGH LEVEL ACTION PLAN			
FOCUS AREA & GOALS	KEY ACTIONS	RESPONSIBILITY	TIME FRAME
	<ul style="list-style-type: none"> Arrange workshop to discuss integration of wetland information into strategic documents of various Municipal Departments within iLembe District and its family of Municipalities. 		
<p>Goal 1.2: Incorporate wetlands information (including maps, buffers areas and developmental restrictions) into municipal land use schemes by June 2019.</p>	<ul style="list-style-type: none"> Undertake the review of existing wetland policies to ensure compliance and alignment. Identify key wetland information to be included in the municipal policies (e.g. SDF, IDP and EMF). Establish clear guidelines for wetland buffers and developmental restrictions (with support of local wetland specialists). Amend all municipal policies (e.g. SDF, IDP and EMF) to include wetland information (maps as per Goal 2.1 , wetland management guidelines as per Goal 2.3 and other critical information from the database as per Goal 2.4). 	District and local municipalities.	June 2019
<p>Goal 1.3: Continuously reevaluate and update wetland information captured in Strategic Plans and municipal land use schemes.</p>	<ul style="list-style-type: none"> See Goal 1.1 Review existing national, provincial, district and local wetland legislation (e.g. SDFs, IDPs, EMFs and IDPs) Where possible, and applicable, include key wetland information into the SDFs, IDPs and EMFs to ensure that they align to national legislative updates. Update municipal policies to capture all relevant information obtained through development applications. 	District and local municipalities.	Ongoing (Ideally every 36 months)

HIGH LEVEL ACTION PLAN			
FOCUS AREA & GOALS	KEY ACTIONS	RESPONSIBILITY	TIME FRAME
Focus Area 2: Research, Mapping and Monitoring & Evaluation			
Goal 2.1: Map wetlands within ILembe District Municipality (desktop study) by December 2018	<ul style="list-style-type: none"> Establish the boundaries of the study area (iLembe District Municipality). Identify what existing information and GIS data is currently available for wetlands within iLembe District Municipality using existing data sources. Using existing data sources as well as other GIS tools (SANBI BGIS etc.), develop a detailed wetland map indicating the location of all wetlands within iLembe District Municipality. 	iLembe District Municipality	December 2018
Goal 2.2: Conduct a wetland assessment on all wetlands identified in mapping exercise (ground-truthing exercise) by December 2019 .	<ul style="list-style-type: none"> Appoint an 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 iLembe District Municipality as well as their current state (i.e. pristine, degraded, destroyed etc.). 	Service Provider and iLembe District Municipality.	December 2019
Goal 2.3: Develop a 'Wetland Management Guideline 'by December 2018 .	<ul style="list-style-type: none"> Identify wetland specialists who can assist with key wetland management guidelines. Develop a Wetland Management Plan/ Guideline for all wetlands within iLembe District Municipality (Plan should include the ground-truthed map). The plan should include detailed guidance on how to manage all different kinds of wetlands as well as 	Led by iLembe District Municipality in collaboration with DWS, EDTEA, DEA, EKZN Wild life & SANBI	December 2018

HIGH LEVEL ACTION PLAN			
FOCUS AREA & GOALS	KEY ACTIONS	RESPONSIBILITY	TIME FRAME
	<p>maintain the state of pristine wetlands and improve the state of degraded wetlands.</p> <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. 		
<p>Goal 2.4: Develop a 'Wetland Information Database' by December 2018</p>	<ul style="list-style-type: none"> • Source and collate all available wetlands related information (as per Goal 2.1), including existing reports, GIS spatial data, EIA reports etc. • Categorize information into themes as required. • Develop a 'Wetland Information Database' which houses all wetland related information into a central hub. • Assign a responsible party (officer) for managing and updating the 'Wetland Information Database'. • Appointed responsible party (officer) to ensure that all relevant stakeholders (at a district and local level as well as external parties) are able to access the information as required. 	iLembe District Municipality	December 2018 and on an ongoing basis thereafter.
Focus Area 3: Awareness Raising, Capacity Building & Community Involvement and Ownership			
<p>Goal 3.1 Design and implement a wetland awareness raising programme by February 2020.</p>	<ul style="list-style-type: none"> • Identify all key stakeholders (both internal and external). • Identify the target audience (e.g. local communities, schools, private sector etc.) 	To be led by iLembe District Municipality	Develop programme by February 2020 and then implement on

HIGH LEVEL ACTION PLAN			
FOCUS AREA & GOALS	KEY ACTIONS	RESPONSIBILITY	TIME FRAME
	<ul style="list-style-type: none"> Establish key themes for specific educational programmes (e.g. Wetlands: What are they? Wetlands: Ecosystem Services: Wetlands: Reducing the Impact of Climate Change etc.). Develop educational packages for each of the identified themes. Hold an Annual World Wetlands Day event which utilizes the education packages developed. Ensure that wetland education programmes are included in other workshops being run by other departments within ILembe District Municipality (including Disaster Risk Department, Water Services Department etc.) Develop annual report which reports back on what education strategies have been implemented, where and with whom. Develop an assessment and monitoring tools to measures impacts of the Educational programmes. 		an ongoing basis.
<p>Goal 3.2 Develop a community forum for sharing wetland related knowledge and ensuring ongoing public participation of local communities by June 2019</p>	<ul style="list-style-type: none"> Identify a champion to establish the community forum. Identify key local community leaders to participate in the forum. Develop the required ToRs to develop the community forum with the input of identified key community leaders. 	iLembe District Municipality	June 2019

HIGH LEVEL ACTION PLAN			
FOCUS AREA & GOALS	KEY ACTIONS	RESPONSIBILITY	TIME FRAME
	<ul style="list-style-type: none"> Identified a community champion to ensure that the forum meets regularly (quarterly?) to share and discuss wetland as well as broader environmental concerns. Feedback report to be completed by the identified champion which includes what was discussed at community forum. This is to be presented to the iLembe District Municipality EMF (Goal 5.1). 		
Focus Area 4: Funding			
Goal 4.1 Identify potential sources of funding by January 2018	<ul style="list-style-type: none"> Develop a database of potential funding sources (sourced via desktop study as well as through networking) which includes the requirements of each individual funder. 	iLembe Municipality District	January 2018
Goal 4.2 Identify methods of packaging projects to secure funding by June 2018 .	<ul style="list-style-type: none"> Develop a business plan. Explore business plan packaging options. Develop marketing methods (particularly via social media- Facebook, Twitter etc.) 	iLembe Municipality District	June 2018
Goal 4.3 Ensure that wetland projects are included in the municipal IDPs by 2017 (dependent on municipal timeframes). December 2017 - ongoing	<ul style="list-style-type: none"> Include the iLembe Wetland Strategy and Action Plan as well as wetland projects that have been identified and developed in the IDP. 	iLembe Municipality as well as the local municipalities District	December 2017 and thereafter on an ongoing bases
Focus Area 5: Cooperative Governance			

HIGH LEVEL ACTION PLAN			
FOCUS AREA & GOALS	KEY ACTIONS	RESPONSIBILITY	TIME FRAME
<p>Goal 5.1 Develop an ILembe District Municipality Environmental Management Forum (EMF) by June 2019.</p>	<ul style="list-style-type: none"> Identify key stakeholders who should participate in the EMF. Develop a Terms of Reference for the EMF (which will incorporate biodiversity and wetland management issues as well as air quality, waste management and all other relevant environmental issues). 	iLembe District Municipality supported by DWS, EDTEA and DEA	June 2019
<p>Goal 5.2 Ensure participation of all relevant stakeholders (district and local municipalities as well as external parties) at international, national, provincial and district level environmental (and wetland) forums from June 2019 and thereafter on an ongoing basis.</p>	<ul style="list-style-type: none"> Compile a list detailing all the environmental forums that occur at a national, provincial and district level. Identify key stakeholders who need to participate at these forums. Invite key stakeholders to attend the identified forums, including the iLembe District Municipality Environmental Management Forum (Goal 5.1). 	iLembe District Municipality	June 2019 and thereafter on an ongoing basis.
Focus Area 6: Alien Vegetation Removal, Conservation & Green Jobs			
<p>Goal 6.1 Map invasive alien plant species distribution within ILembe District Municipality by December 2018.</p>	<ul style="list-style-type: none"> Identify key invasive alien plant species negatively affecting ILembe District Municipality. Establish the boundaries of the study area (iLembe District Municipality). Using existing data sources as well as other GIS tools (see Goal 2.1) develop a detailed map indicating the location of invasive alien plant species within ILembe District Municipality. 	iLembe District Municipality and Local Municipalities, Working For Water and Working on Fire, SANBI, CEDARA, EDTEA & DEA.	December 2018

HIGH LEVEL ACTION PLAN			
FOCUS AREA & GOALS	KEY ACTIONS	RESPONSIBILITY	TIME FRAME
	<ul style="list-style-type: none"> Develop an invasive species map overlay which indicates when invasive plant species are located within and around wetland areas to assist with prioritization of invasive alien vegetation removal. 		
<p>Goal 6.2 Develop an 'Invasive Alien Plant Eradication Plan' by July 2020.</p>	<ul style="list-style-type: none"> Identify best practice methods for removal of each invasive alien plant identified in the mapping exercise (Goal 6.1) (e.g. mechanical, chemical, bio-control etc.) Develop a guideline for removing invasive alien species within ILembe District Municipality. Based on the invasive alien species map as well as the prioritisation overlay (Goal 6.1), develop an 'Invasive Alien Plant Eradication Plan' which prioritizes removing invasive alien vegetation from within and around wetland areas first.. 	ILembe District Municipality and Local Municipalities, Working For Water and Working on Fire, SANBI, CEDARA, EDTEA & DEA.	July 2020
<p>Goal 6.3 Develop capacity within ILembe District Municipality for adequate management of invasive alien species management, particularly within wetlands by July 2020.</p>	<ul style="list-style-type: none"> Identify the target group where there is a need for job creation (e.g. local communities). Identify the skills and tools required by target group to implement the 'Invasive Alien Plant Eradication Plan'. Develop a training package which highlights the need for invasive alien species removal, what are the methods for removal and what are the associated tools and skills required to do this. 	ILembe District Municipality and Local Municipalities, Working For Water and Working on Fire, EDTEA & DEA.	July 2020

HIGH LEVEL ACTION PLAN			
FOCUS AREA & GOALS	KEY ACTIONS	RESPONSIBILITY	TIME FRAME
<p>Goal 6.4 Develop a Green Jobs Programme to implement the 'Invasive Alien Plant Eradication Plan' by July 2020.</p>	<ul style="list-style-type: none"> Develop a business model for the implementation of the 'Invasive Alien Plant Eradication Plan'. This should align where possible with the existing green jobs within ILembe District Municipality. Source funding to develop a Green Jobs Programme to implement the Invasive Alien Plant Eradication Plan (Goal 4.1). 	<p>ILembe District Municipality and Local Municipalities, EDTEA & DEA.</p>	<p>July 2020.</p>