Ramsar Information Sheet

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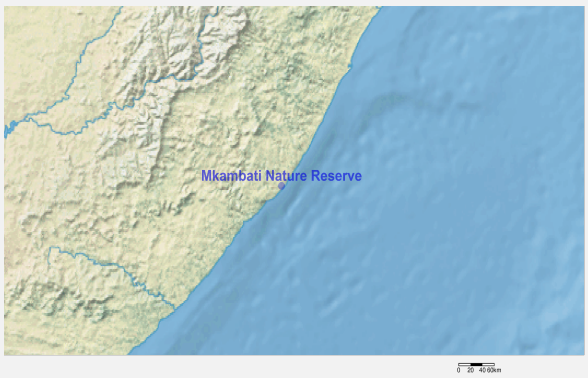
South Africa

Mkambati Nature Reserve



Designation date	2 February 2025
Site number	2554
Coordinates	31°16'01"S 29°59'04"E
Area	7 720,00 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

Mkambati Nature Reserve is situated on the wild coast of the Eastern Cape, approximately 71km from the town of Flagstaff. This 7720ha nature reserve takes its name from the rare Mkambathi Palm (Jubaeopsis caffra). The Reserve consists of open grassland and with ravines of scarp forest and is dissected by multiple rivers, streams, marshlands (dominated by seep wetlands), swamp forests and waterfalls. The forested ravines of the Msikaba and Mtentu rivers and their predominantly open estuaries flanks each side of the Reserve to the north and south and in the east, between the two estuaries, it includes a 13km stretch of pristine coastline. The Mtentu River has small but important patches of mangrove forests on its banks. Within the reserve two smaller estuaries (the Gwegwe and Mgcetyana) flow into the Indian Ocean and the Pondoland Marine Protected Area. Together with the rare swamp forests, the Mkambati Falls occurs in the reserve and is one of only a few in the world cascading straight into the Indian Ocean. The subtropical climate together with the leached sandstone soils have contributed to a high diversity of plant life in this region. The Reserve is one of only a few protected areas which occurs with the Pondoland Centre of Plant Endemism which holds 196 endemic plant species out of a total of 2,200 species. The reserve is also a globally Important Bird Area. The wetlands serve as critical habitats for a variety of threatened species, including Boneberg's frog (Natalobatrachus bonebergi), Riverbream (Acanthopagrus vagus), Japanese meagre (Argyrosomus japonicus), and the Pondo White Pear (Apodytes abbottii). These wetlands play a vital role in conserving biodiversity by providing essential resources such as water, food, shelter and breeding habitats for the many endemic species and species at risk of extinction. Amongst the species which are dependent on these wetlands is a newly discovered endemic diving beetle (Copelatus Mkambati). Both the Msikaba and Mtentu Estuaries are also extremely important as fish nursery areas. The Reserve is owned by the Mkambati Land Trust and is co-managed with the Eastern Cape Parks and Tourism Agency. Apart from the vital services the wetlands provide in terms of supporting high levels of biodiversity, the reserve is also used for tourism, water provision (for use onsite), and for education, research and cultural activities. This Reserve also has an important sense of place value for the surrounding community

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Responsible compiler

Institution/agency: Eastern Cape Parks and Tourism Agency

Postal address:
17 - 25 Oxford Street
East London
5201

National Ramsar Administrative Authority

Institution/agency: Department of Forestry, Fisheries and the Environment

Postal address:
Private Bag X447
Pretoria
0001

2.1.2 - Period of collection of data and information used to compile the RIS

From year: 2004

To year: 2024

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish): Mkambati Nature Reserve

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<5 file(s) uploaded>

Former maps: 0

Boundaries description

The Ramsar Site follows the boundaries of the Mkambati Nature Reserve, located approximately 74km from the town of flagstaff. The Mkambati Nature Reserve was proclaimed as a Nature Reserve in 1977 under the Transkei Conservation Act (no. 6 of 1971), and later under the Transkei Environmental Decree No. 9 of 1992. The reserve is currently proclaimed as a Provincial Nature Reserve under the National Environmental Management: Protected Areas Act (Act 57 of 2003). The coastal zone abutting Mkambati is also proclaimed as a Marine Protected Area (MPA). The Mkambati MPA was first established in terms of regulations under the Sea Fisheries Act, 1973, which were later replaced by identical provisions in regulations under the Transkei Environmental Conservation Decree 1992, with effect from 1 January 1993. The reserve was then proclaimed under the Sea Fishery Act, 1988, with effect from 1 November 1997. In 1998 the MPA was declared under Section 43 of the Marine Living Resources Act. Subsequently (GN 202 – GG 26050 of 17 Feb, 2004) the marine reserve has been incorporated into the larger Pondoland MPA in terms of Section 43 of the Marine Living Resource Act and the original Mkambati MPA was de-proclaimed.

The 7720ha Mkambati Nature Reserve is situated on the coast of north-eastern Pondoland, in the Eastern Cape. It lies between Port Edward (30 km to the north east) and Port St Johns (59 km to the south west). The Mtentu River to the north, the Msikaba river in the south, and approximately 12 km of coastline in the east form the natural boundaries of the reserve. All the land surrounding the reserve is communally owned (Amadiba communities to the north, Lambasi communities to the south and Mkambati communities to the west). The only non-natural boundary is the inland fence to the west. The width of the reserve from shoreline to the fence ranges from 5,5 to 8,2 km. The adjacent shoreline between the Msikaba and Mtentu Rivers, and the ocean to the 1000m isobath forms part of the greater Pondoland Marine Protected Area.

2.2.2 - General location

a) In which large administrative region does the site lie? Eastern Cape

b) What is the nearest town or population centre? Flagstaff

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes ○ No ◉

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes ○ No ◉

2.2.4 - Area of the Site

Official area, in hectares (ha): 7720

Area, in hectares (ha) as calculated from GIS boundaries: 7721.23

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Freshwater Ecoregions of the World (FEOW)	Zambezian lowveld
Marine Ecoregions of the World (MEOW)	Temperate Southern Africa, Agulhas Natal

Other biogeographic regionalisation scheme

Preliminary Level II River Ecoregion Classification System for South Africa: The Mkambati Nature Reserve is situated in the North-Eastern Coastal Belt, an Ecoregion 17.4 classification (In: Kleynhans, CJ, Thirion, C and Moolman, J (2005). A Level I River Ecoregion classification System for South Africa, Lesotho and Swaziland. Report No. N/0000/00/REQ0104.Resource Quality Services, Department of Water Affairs and Forestry, Pretoria, South Africa.

Mkambati Nature Reserve falls within Indian Ocean Coastal Belt Bioregion, dominated by the Pondoland-Ugu Sandstone Coastal Sourveld vegetation type with fringes of the Eastern Valley Bushveld, Mangrove forest, Scarp Forest, Sub-tropical seashore vegetation types (South African National Biodiversity Institute. 2018. The Vegetation Map of South Africa, Lesotho and Swaziland, Mucina, L., Rutherford, M.C. and Powrie, L.W. (Editors))

Subtropical Estuarine Bioregion (Van Niekerk, L, Adams JB, James, N, Lamberth S, Mackay F, Rajkaran A, Turpie J, Weerts S, Whitfield AK. 2020. An Estuary Ecosystem Classification that encompasses biogeography and a high diversity of types in support of protection and management. African Journal of Aquatic Science, 45: 199-216)

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

☑ Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided	Hydrological services which are provided by the seep wetlands and the numerous rivers and their riparian areas include water provision for local use by the inhabitants of the Mkambati Nature Reserve (reserve staff and tourists), erosion control and bank stabilization, nutrient cycling and water quality maintenance. Although their areal coverage is very small the mangroves at the Mtentu estuary are seen as important, not only in terms of the provision of habitat and nursey areas for various species, also in terms of the role they play in stabilizing the banks of the estuary and in terms of their services in sequestering carbon in above and below ground biomass.
Other ecosystem services provided	The Mkambati Nature Reserve Ramsar Site is a biodiversity hotspot due to its exceptionally high species richness. It falls within the within the Pondoland Centre of Plant Endemism, within the Maputaland-Pondoland-Albany global biodiversity hotspot. Mkambati is one of only three protected areas within the Pondoland hotspot. The wetlands of the Mkambati Nature Reserve provide a number of other ecosystem services including education and research opportunities. Mkambati Nature Reserve is also a popular tourist destination with a number of tourist facilities. Apart from canoeing on the Mtentu and fishing (limited to the GweGwe beach), there are also variety of walking trails, popular amongst the flora and birding enthusiasts. Mkambati also provides a number of cultural services where local communities use the sea and rivers for rituals and gather grass for thatch.
Other reasons	Mkambati Nature Reserve has a large variety of both inland and coastal wetland types, comprising of pristine rivers, waterfalls, freshwater marshes, swamp forests, mangroves, estuaries and river mouths. This site has a total of four estuaries. The two larger estuaries, the Msikaba and Mtentu estuaries form the boundaries of the Mkambati Nature Reserve and are both predominantly open systems. The Msikaba estuary comprises a 0.18 km2 surface area, is deeply incised (like a fjord), and has native scarp forest that extends all the way to the water's edge. The Msikaba Estuary is the deepest estuary in South Africa (SA) reaching depths of up to 35 meters along its middle reaches (Eastern Cape Parks, 2010a). The Mtentu estuary extends approximately six kilometers in length, 50 to 150 meters in width, and 0.3 km in high-tide surface area (Eastern Cape Parks, 2010b). The Mtentu estuary is inhabited by small patches of mangrove forests (Adams and Rajkaran, 2021), of which Bruguiera gymnorrhiza is the predominant mangrove species. Within the Nature Reserve the smaller temporarily closed Mcetyana and Gwegwe estuaries can be found. The estuarine systems flow into the Indian Ocean and form part of Pondoland Marine Protected Area. They are in a natural to largely natural ecological condition and their types are representative of the estuarine types found in the subtropical estuarine biogeographical region (van Niekerk et al., 2019). Approximately 228ha of pristine swamp forest patches are interspersed between the grassland and reed dominated seep wetlands that occur at the site. These forests are rare in South Africa and are situated at the furthest point of their distribution in the country. Across their range in South Africa, this is the only occurrence of Swamp Forests on a sandstone geology as they are typically associated with sandy coast dunes and aquifers. Although several rivers (both permanent and seasonal) have their headwaters in Mkambati Nature Reserve a number of the larger perennial systems originate outside of the Nature Reserve, this consists of the Mkambati, Msikaba, Mtentu and Daza Rivers. The Msikaba River borders the site to the south while the Mtentu River borders it to the north. Nine magnificent waterfalls are present, with the Mkambati Falls being the most impressive as it is one of only two dozen in the world cascading straight into the Indian Ocean. The remaining wetlands are representative of the wetlands of the Pondoland coastal region, are in good condition, and are comprised of a number of endemic plants.

☑ Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information

The wetlands in Mkambati Nature Reserve provide essential habitats for a wide range of threatened, critically endangered, and vulnerable species, both in fauna and flora. These ecosystems are critical for species survival by offering necessary resources such as water, food, shelter, and breeding grounds. Their unique environmental conditions support biodiversity, particularly for species at risk of extinction due to habitat loss, climate change, or other environmental pressures. Many rare and threatened species such as the Endangered Cape vulture (which have important nesting sites on the cliffs of the Mtentu and Msikaba River gorges), Boneberg's frog (Natalobatrachus bonebergi), Riverbream (Acanthopagrus vagus), Japanese meagre (Argyrosomus japonicus), Black Crowned Crane (Balearica pavonina), Pondo White Pear (Apodytes abbottii), Pondo Jackal-coffee (Empogona africana) and Thick-leaved Forest Myrtle (Eugenia umtamvunensis) depend on these wetlands to survive, making this area vital for conservation efforts.

☑ Criterion 3 : Biological diversity

Justification

Mkambati Nature Reserve falls within the Pondoland Centre of Endemism, which is part of the Maputaland-Pondoland-Albany global biodiversity hotspot, one of only three Biodiversity Hotspots in South Africa and 36 worldwide. The Pondoland Scarp Forest, one of the rarest forest types in Africa, supports an endemic family, Rhychocalycaceae, which is represented here by the false water-berry (Rhynchocalyx lawsonioides). Of the over 1600 plant species at Mkambati, a number of species occur here and no where else in the world, this includes the endangered Pondo palm (Jubaeopsis caffra) which grows along the banks of the Msikaba and Mtentu rivers. Around 245 invertebrate species can also be found at Mkambati (Hammer and Slowtow, 2017), including the newly discovered diving beetle, Copelatus mkambati (Bilton & Mlambo, 2022). Mkambati Nature Reserve is also an internationally recognized Important Bird Area (IBA) (IBA code ZA066). A number of rare and endemic amphibian and reptile species also occur at the Reserve, including the golden spiny reed frog (Afrixalus spinifrons), the black-headed dwarf chameleon (Bradypodion melanocephalum) and South Africa's largest aquatic snake, the dusky-bellied water snake (Lycodonomorphus laevissimus).

☑ Criterion 4 : Support during critical life cycle stage or in adverse conditions

Optional text box to provide further information

Wetlands in Mkambati Nature Reserve are indispensable for the survival of many plant and animal species, offering habitats and resources that are not found in other ecosystems. Pondo White Pear (Apodytes abbottii) is found in swamp forests and wetland margins, this species is endemic to the Pondoland region of South Africa including Mkambati Nature Reserve. Mkambati Palm (Jubaeopsis caffra) is a rare palm that thrives in swampy areas near rivers and estuaries. Boneberg’s Frog (Natalobatrachus bonebergi) is found in wetlands and marshy areas, this endangered amphibian is endemic to South Africa’s coastal regions. Riverbream (Acanthopagrus vagus) primarily inhabits estuaries and wetlands. Diving Beetle (Copelatus Mkambati) is endemic to Mkambati Nature Reserve’s wetlands, this newly discovered species is highly adapted to wetland habitats. These species rely on the stability and health of wetland ecosystems to complete their life cycles, making wetland conservation crucial for their continued survival. Protecting wetlands will not only ensure the survival of wetland-dependent species but also sustain the broader ecological and social benefits these habitats provide.

☑ Criterion 8 : Fish spawning grounds, etc.

Justification	Both the Msikaba and Mtentu Estuaries are extremely important as fish nursery areas (James and Harrison, 2022). They are both very healthy systems with largely unpolluted catchment areas (Mann pers comm, 2024). Both estuaries remain open for most of the year which enables the recruitment of juvenile fish from the sea. This also enables larger fish which have reached adulthood to leave the estuaries and go to sea to spawn. The Mtentu Estuary is unique worldwide as it is the only estuary that shoals of adult giant kingfish predictably use as a thermal refuge to escape cold water at sea (Dixon 2022). Furthermore, the Mtentu River estuary in particular supports the distribution of zooplankton and mysid species, which are crucial components of the food chain for young fish (Connell, 1974)

3.2 - Plant species whose presence relates to the international importance of the site

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Plantae								
TRACHEOPHYTA / MAGNOLIOPSIDA	*Adromischus cristatus*	☐	☑	☐		☐		Variety mzimvubuensis. Succulent subshrub which is rare and endemic. Occurs locally in Southern KwaZulu-Natal and Eastern Cape, between Umtamvuna and Mzimvubu Rivers.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Alberta magna*	☐	☑	☐	NT	☐		Near-threatened, endemic species. Restricted to a highly specialized habitat on the margins of scarp forests in KwaZulu-Natal and Pondoland
TRACHEOPHYTA / LILIOPSIDA	*Aloe candelabrum*	☐	☑	☐		☐	South African National Institute Red Data List- Near threatened	A near-threatened species in South Africa. Endemic to east-central KwaZulu-Natal, South Africa, from Pietermaritzburg southwards to the Umtamvuna River.
TRACHEOPHYTA / LILIOPSIDA	*Aloe liliputana*	☑	☑	☐		☐	South African National Biodiversity Institute Red Date List- Vulnerable	Endemic. Known only from a small area near Luphutana in southern Pondoland in the Eastern Cape Province, South Africa.
TRACHEOPHYTA / LILIOPSIDA	*Aloe thraskii*	☐	☑	☐		☐		A near-threatened, endemic species in South Africa. Has a limited distribution along the KwaZulu-Natal and Eastern Cape coast. Occurs in dense coastal bush on dunes from the beach margin to a few hundred meters inland.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Anthospermum streyi*	☐	☑	☐		☐		Rare and endemic to SA, occurring only in the Pondoland area.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Apodytes abbottii*	☑	☑	☐	EN	☐		Endemic to the Pondoland area. A range-restricted species that occurs in a highly threatened habitat (Pondoland scarp forest)
TRACHEOPHYTA / LILIOPSIDA	*Aristea platycaulis*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data List - Vulnerable	Rare and Endemic. It is known only from the Pondoland coast between Port St Johns and Port Edward.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Asclepias patens*	☐	☑	☐		☐		Near-Threatened species in South Africa, enedmic to the Eastern Cape Province
TRACHEOPHYTA / MAGNOLIOPSIDA	*Asclepias schlechteri*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data List - Endangered	Rare and endemic species, occurring in the Pondoland area and in eSwatini.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Aspalathus gerrardii*	☑	☑	☐	VU	☐		Endemic to Eastern Cape and KwaZulu Natal. Occurs in coastal grasslands, forest margins, often in damp or marshy sites

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
TRACHEOPHYTA / MAGNOLIOPSIDA	*Bauhinia bowkeri*	☑	☑	☐	VU	☐		Rare endemic of the thicket or valley bushveld region in the Eastern Cape.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Begonia dregei*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data List - Endangered	This species is endemic to the Eastern Cape and KwaZulu Natal provinces, where it stretches from East London to Durban.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Begonia homonyma*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data List - Endangered	This species is endemic to the Eastern Cape and KwaZulu-Natal coast
TRACHEOPHYTA / MAGNOLIOPSIDA	*Brunia trigyna*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data List - Critically Endangered	Endemic to the Pondoland region of South Africa, only known from Umtamvuna and Mkambati Nature Reserves
TRACHEOPHYTA / MAGNOLIOPSIDA	*Canthium vanwykii*	☐	☑	☐		☐		A near threatened, evergreen or semi-deciduous much-branched shrub or medium-sized tree, endemic to the Pondoland area.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Cassipourea gummiflua*	☑	☑	☐	LC	☐	South African National Biodiversity Institute Red Date List- Vulnerable	variety verticillata. In South Africa this tree species only occurs in the forests of the Kwa-Zulu Natal and Eastern Cape Provinces
TRACHEOPHYTA / MAGNOLIOPSIDA	*Cassipourea gummiflua ugandensis*	☑	☑	☐		☐	South African National Institute Red Data List- Vulnerable	This species is not endemic to South Africa. It ranges from Port St Johns to KwaZulu-Natal and through Mozambique to Tanzania and Mascarene islands.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Ceropegia macloughlinii*	☐	☑	☐		☐		It is a list concern species that is endemic to Southern Kwazulu Natal, in South Africa. it occurs withinOribi Gorge and Umtata district.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Ceropegia tenella*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data List- Vulnerable	Also known as Brachystelma tenellum. A rare and endemic species found only in the Pondoland area.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Chironia albiflora*	☐	☑	☐		☐		Rare, occurring in as scattered individuals. Endemic to the Pondoland areas occurring from Umtamvuna to Magwa Falls. Has variable habitats including riverine forests, stream margins and rocky outcrops
TRACHEOPHYTA / LILIOPSIDA	*Clivia robusta*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data List-Vulnerable	This species occurs in the Eastern Cape and KwaZulu Natal provinces of South Africa, where it is distributed in Pondoland, from Port St Johns to the uMzimkhulu River north of Oribi Gorge.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Colubrina nicholsonii*	☑	☑	☐	VU	☐		Endemic, occurring predominantly between Port St Johns and the Umtamvuna River (in the provinces of KwaZulu Natal and Eastern Cape)
TRACHEOPHYTA / MAGNOLIOPSIDA	*Crassula foveata*	☐	☑	☐		☐		Rare and endemic. This species is known from isolated river valleys in KwaZulu-Natal and the Eastern Cape, from Inanda Valley to the Mbashe River.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Crassula obovata*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data List-Vulnerable	Variety dregeana. Endemic to Southern KwaZulu Natal and Pondoland.

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
TRACHEOPHYTA / MAGNOLIOPSIDA	*Crassula streyi*	☐	☑	☐		☐		Rare and endemic to the Pondoland region. Occurs on rock outcrops on steep slopes in forests.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Cryptocarya myrtifolia*	☑	☑	☐		☐	South African National Biodiversity Institute Red Date List-Vulnerable	Endemic to the KwaZulu-Natal and Eastern Cape provinces of South Africa (Ntsubane forest to Mtamvuna Nature Reserve)
TRACHEOPHYTA / MAGNOLIOPSIDA	*Cryptocarya natalensis*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data- Endangered	Endemic to South Africa, found in the Pondoland region from Mkambati to Umtamvuna, with isolated occurrences at Umdoni Park, Pinetown and Ozwatini.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Cryptocarya wyliei*	☐	☑	☐		☐	South African National Biodiversity Institute Red Data- Near Threatened	A near threatened endemic species predominantly occurring in the Pondoland area.
TRACHEOPHYTA / LILIOPSIDA	*Cyathocoma bachmannii*	☑	☑	☑	VU	☐		Endemic species. Occurs in the Eastern Cape and Kwa-Zulu Natal Provinces of South Africa, C. bachmannii inhabits wet to damp, heavy black soils on the margins of streamlets or small isolated marshes
TRACHEOPHYTA / MAGNOLIOPSIDA	*Cyphostemma rubroglandulosum*	☐	☑	☐		☐		This species is rare and endemic to South Africa, and is found in the Pondoland region, from Oribi Gorge to Port St Johns.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Delosperma subpetiolatum*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data List - Vulnerable	Endemic to South Africa occurring in Southern KwaZulu-Natal, with isolated occurrence in the Eastern Cape.
TRACHEOPHYTA / LILIOPSIDA	*Diaphananthe millarii*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data-Vulnerable	This a rare orchid species is endemic to the Eastern Cape and KwaZulu-Natal provinces of South Africa, it occurs in forests in two disjunct areas the first being between East London and the Kei River and the second in the scarp forests in the greater Durban area.
TRACHEOPHYTA / LILIOPSIDA	*Dierama ambiguum*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data- Endangered	Endemic species. Currently known from four or five locations in South Africa, from Weza to Mount Ayliff.
TRACHEOPHYTA / LILIOPSIDA	*Dioscorea brownii*	☑	☑	☐	EN	☐		Relatively rare, endemic species occurring in KwaZulu Natal and the Eastern Cape provinces.
TRACHEOPHYTA / LILIOPSIDA	*Dioscorea sylvatica*	☑	☑	☐	VU	☐		This species is widely distributed in South Africa where it is found in the Western Cape, Eastern Cape, KwaZulu-Natal, Free State, Gauteng, Mpumalanga and Limpopo Province. It also occurs in Swaziland, Zimbabwe and Zambia.
TRACHEOPHYTA / LILIOPSIDA	*Disa tysonii*	☐	☑	☐		☐		A widespread, but rare and localized orchid species occurring in Damp, rocky grassland in South Africa and Lesotho
TRACHEOPHYTA / MAGNOLIOPSIDA	*Emplectanthus dalzellii*	☐	☑	☐		☐		Rare, endemic species occurring in the Pondoland region, in forest along the Umtamvuna and Mtentu Rivers.

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
TRACHEOPHYTA / MAGNOLIOPSIDA	*Empogona africana*	☑	☑	☐	EN	☐		A range-restricted species that occurs in small subpopulations of fewer than 20 mature individuals in highly threatened forest margins along four river gorges in Pondoland.
TRACHEOPHYTA / CYCADOPSIDA	*Encephalartos caffer*	☐	☑	☐	NT	☐		A near-threatened endemic species which occurs mainly in the Eastern Cape province and in an isolated subpopulation in KwaZulu Natal, South Africa.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Erica abbottii*	☑	☑	☐		☐	South African National Institute Red Data list-Vulnerable	Endemic to the Pondoland region, occurring from Umtamvuna to Mkambati. Can be found in grassland, marshes, moist seepage areas or alongside stream banks in permanently waterlogged black turf soil on rocky upper and summit slopes
TRACHEOPHYTA / MAGNOLIOPSIDA	*Eriosema dregei*	☑	☑	☐		☐	South African National Institute Red Data list-Vulnerable	This species has a limited distribution between KwaZulu-Natal and the Eastern Cape, from Oribi Gorge to Msikaba River Mouth.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Eriosema latifolium*	☑	☑	☐		☐	South African National Institute Red Data list-Vulnerable	A range-restricted Pondoland endemic occuring from Izingolweni to Lusikisiki in the Eastern Cape Province, South Africa. Commonly found growing in the Pondoland coastal grassland
TRACHEOPHYTA / MAGNOLIOPSIDA	*Eriosemopsis subanisophylla*	☑	☑	☐		☐	South African National Institute Red Data list-Vulnerable	South Africa endemic, occurring in Southern KwaZulu-Natal and Pondoland, from Umgai in the uMzinto district southwards to the Mtentu River
TRACHEOPHYTA / MAGNOLIOPSIDA	*Eugenia erythrophylla*	☐	☑	☐	NT	☐		Endemic to the Pondoland region, occuring from Oribi Gorge to Magwa Gorge. Occurs in forest margins near streams or along the upper edges of Msikaba Formation Sandstone cliffs above river gorges.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Eugenia simii*	☑	☑	☑		☐	South African National Institute Red Data list-Vulnerable	Endemic species. Mainly occurs in southern KwaZulu-Natal and Pondoland. Disjunct records from near Vryheid in northern KwaZulu-Natal. Can be found on the rocky banks of Rivers
TRACHEOPHYTA / MAGNOLIOPSIDA	*Eugenia umtamvunensis*	☑	☑	☐	EN	☐		Pondoland endemic, occurring between Umtamvuna and Mtentu Rivers. Plants grow in Pondoland scarp forest.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Eugenia verdoorniae*	☐	☑	☐	NT	☐		Pondoland endemic, occurring from Umtamvuna to Port St Johns. Occurs on forest margins and on exposed stream banks and islands of larger rivers, restricted to Msikaba Formation Sandstone
TRACHEOPHYTA / LILIOPSIDA	*Eulophia platypetala*	☑	☑	☐	VU	☐		Endemic to the Western and Eastern Cape Provinces, where it occures from Riversdale to Port St Johns.

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
TRACHEOPHYTA / MAGNOLIOPSIDA	*Faurea macnaughtonii*	☐	☑	☐	LC	☐		A widespread, but very rare near-endemic South African species with a small and fragmented population. Occurs across across eastern South Africa from Limpopo to the Eastern Cape and is also found in eSwatini
TRACHEOPHYTA / MAGNOLIOPSIDA	*Ficus bizanae*	☑	☑	☐	VU	☐		Endemic to forests of coastal South Africa. It has a narrow and disjunct distribution in KwaZulu-Natal and Eastern Cape, recorded at Ngoye Forest in Zululand, and between Umtamvuna River valley and Dwessa-Cwebe Forest.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Garuleum album*	☑	☑	☐		☐	South African National Institute Red Data list- Vulnerable	Pondoland Endemic, occurring from Ntabankulu to Libode and Lusikisiki. A range-restricted and poorly known species, known from only a few collections.
TRACHEOPHYTA / LILIOPSIDA	*Gasteria croucheri*	☑	☑	☐		☐	South African National Institute Red Data list- Vulnerable	This species is endemic to the Eastern Cape and KwaZulu Natal provinces of South Africa, where it occurs from Port Edward to Port St Johns.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Geranium sparsiflorum*	☑	☑	☑		☐	South African National Institute Red Data list- Vulnerable	Endemic to South Arica, occurring in Southern KwaZulu-Natal between Kokstad, Ixopo and Weza. Also around Lusikisiki (Eastern Cape). Grows in moist montane grasslands and Ngongoni Veld, in seasonally moist areas
TRACHEOPHYTA / MAGNOLIOPSIDA	*Grewia pondoensis*	☑	☑	☐	VU	☐		Pondoland Endemic occurring from Oribi Gorge to Port St Johns, where it is found on forest margins, on sandstone cliffs and rocky outcrops
TRACHEOPHYTA / MAGNOLIOPSIDA	*Gymnosporia bachmannii*	☑	☑	☐	VU	☐		A range-restricted endemic to the Pondoland region, rare and found in a highly restricted habitat along stream banks from Oribi Gorge to Mkweni River.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Gymnosporia oleosa*	☐	☑	☐		☐		Also known as Maytenus oleosa. A rare South African Endemic Species. Restricted to Msikaba Formation Sandstone, on rocky riverbanks, always overhanging water. Occurs from Umtamvuna River to Msikaba River.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Gymnosporia vanwykii*	☐	☑	☐		☐	South African National Institute Red Data list- Near Threatened	Near-threatened Pondoland endemic, occurring from Umtamvuna River to Magwa Falls. Grows in Pondoland Coastal Grasslands
TRACHEOPHYTA / LILIOPSIDA	*Haemanthus deformis*	☑	☑	☐		☐	South African National Biodiversity Institute Red Date List- Vulnerable	This species is endemic to the KwaZulu Natal and Eastern Cape provinces of South Africa, where it stretches from the midlands and coastal areas of KwaZulu Natal to Mount Frere, near Tsitsa Falls and Gundrift.

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
TRACHEOPHYTA / MAGNOLIOPSIDA	*Helichrysum pannosum*	☑	☑	☐		☐	South African National Biodiversity Institute Red Date List- Endangered	Endemic to the KwaZulu-Natal and Eastern Cape provinces of South Africa. Occurs from Stanger southwards to Port St Johns. Also occurs further inland around Durban to Pinetown and Camperdown. Found in grassland, often on hill slopes near forest patches.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Helichrysum tenax*	☐	☑	☐		☐		Endemic to South Africa (Eastern Cape and Kwa-Zulu Natal province) and Lesotho. It occurs within Tabankulu and Insizwa Mountains in the Transkei and Ngele Mountain and the Suurberg near Weza in KwaZulu-Natal.
TRACHEOPHYTA / LILIOPSIDA	*Hesperantha modesta*	☑	☑	☐		☐	South African National Biodiversity Institute Red Date List- Endangered	Endemic to South Africa, and is restricted to coastal KwaZulu-Natal and Eastern Cape, mainly in the sandstone belt from Durban to Port St Johns, possibly also in Zululand near Eshowe.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Impatiens flanaganiae*	☑	☑	☑		☐	South African National Biodiversity Institute Red Date List- Vulnerable	Endemic to South Africa. Known from five locations on the Pondoland coast and southern KwaZulu-Natal. Occurs in scarp forest among large boulders near the base of waterfalls in deep, moist, shaded sandstone gorges.
TRACHEOPHYTA / LILIOPSIDA	*Jubaeopsis caffra*	☑	☑	☐	EN	☐		Jubaeopsis caffra is one of the most highly range restricted of the Pondoland endemics. It is found along the Mtentu and Msikaba Rivers (Eastern Cape)
TRACHEOPHYTA / LILIOPSIDA	*Kniphofia coddiana*	☐	☑	☐		☐	South African National Institute Red Data list- Near threatened	Endemic to the Eastern Cape and KwaZulu-Natal provinces. This species has a restricted distribution in the Pondoland area, between Mkambati and Oribi Gorge.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Knowltonia bracteata*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data List - Vulnerable	Endemic to South Africa and is found in the Eastern Cape and KwaZulu-Natal provinces. Grow in grassy forest margins, shrubby woodland and mountain forests.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Lampranthus fugitans*	☑	☑	☐		☐	South African National Biodiversity Institute Red Date List- Vulnerable	This species is endemic to the Pondoland area, where it occurs from Port Edward to Lusikisiki.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Leucadendron pondoense*	☑	☑	☐	VU	☐		Endemic to Pondoland in South Africa, occurring from Port Edward to Port St Johns.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Leucadendron spissifolium natalense*	☑	☑	☐		☐	South African National Institute Red Data List- Vulnerable	Endemic to South Africa (Eastern Cape and Kwa-Zulu Natal provinces), where it occurs from Port Edward to Port St Johns, and Dwessa Forest Reserve. It is localized to damp places in coastal sandstone grassland
TRACHEOPHYTA / MAGNOLIOPSIDA	*Leucadendron spissifolium oribinum*	☑	☑	☐		☐	South African National Institute Red Data List- Vulnerable	Endemic to South Africa. This subspecies occurs in KwaZulu-Natal and Eastern Cape provinces of South Africa, from Oribi Gorge to Mkambati.

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
TRACHEOPHYTA / MAGNOLIOPSIDA	*Leucospermum innovans*	☑	☑	☐	EN	☐		An endemic to the Eastern Cape and KwaZulu-Natal Provinces of South Africa, it occurs in the Pondoland region from the Umtamvuna River to Ntsubane.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Lotononis bachmanniana*	☐	☑	☐		☐	South African National Biodiversity Institute Red Data list- Near threatened	Endemic to South Africa, in the Eastern Cape and KwaZulu-Natal province. Occurs in damp sites in Pondoland coastal grassland.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Lydenburgia abbottii*	☑	☑	☐	EN	☐		Endemic to South Africa. Rare species of tree only found in two river gorges less than 10 km apart on the KwaZulu-Natal / Eastern Cape border.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Manilkara nicholsonii*	☑	☑	☐	EN	☐		Endemic to Eastern Cape and KwaZulu-Natal provinces of South African. Occurs from the Mzimkhulu River to Msikaba River. Occurs on the margins of scarp forests especially along the upper edge of cliffs.
TRACHEOPHYTA / LILIOPSIDA	*Mystacidium aliceae*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data list- Vulnerable	It is a South African endemic orchid (epiphyte), found in the coastal forests of the Eastern Cape and KwaZulu-Natal.
TRACHEOPHYTA / LILIOPSIDA	*Oxyrhachis gracillima*	☐	☑	☑		☐	South African National Biodiversity Institute Red Data list-Near Threatened	It is found in South Africa, in the Eastern Cape and Kwa-Zulu Natal. Although its rage extends throughout Africa, in South Africa it is only known from fewer than five locations from Port Edward to Mkambati Nature Reserve. Grows along streams and in wet grassland.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Phylica natalensis*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data list- Vulnerable	Endemic to Eastern Cape and Kwa-Zulu Natal provinces of South Africa. Occurs in Pondoland coastal grassland, in rocky sites on Msikaba Formation Sandstone.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Plectranthus brevimentum*	☐	☑	☐		☐	South African National Institute Red Data List- Critically rare	A critically rare South African endemic, found only in the Eastern Cape province. It is restricted to Lupatana River Gorge.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Plectranthus ernstii*	☐	☑	☐		☐	South African National Biodiversity Institute Red Data list- Near Threatened	A near threatened forest species, endemic to northern part of the Eastern Cape from Oribi Gorge in southern KwaZulu-Natal to Mkambati.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Plectranthus malvinus*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data list- Vulnerable	Endemic to South Africa, in the Eastern Cape province. A highly localized habitat specialist for found within Southern Pondoland on Forest margins and cliffs.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Plectranthus mzimvubuensis*	☐	☑	☐		☐		A rare perennial aromatic shrub and South African endemic, found in the Eastern Cape.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Plectranthus oertendahlii*	☐	☑	☐		☐		It is a rare groundcover which is endemic to the Kwa Zulu Natal and Eastern Cape Provinces of South Africa.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Plectranthus praetermissus*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data list - Vulnerable	Endemic to the Eastern Cape Province of South Africa. Occurs in Scarp forests from Port St Johns to Ntsubane

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
TRACHEOPHYTA / MAGNOLIOPSIDA	*Plectranthus reflexus*	☑	☑	☐		☐	South African National Biodiversity Institute Red Data list - Vulnerable	An endemic Herbaceous perennial whose distribution is restricted to the Eastern Cape of South Africa, from Port St Johns in the south to the Mkambati Nature Reserve in the north
TRACHEOPHYTA / MAGNOLIOPSIDA	*Plectranthus stylesii*	☐	☑	☐		☐	South African National Institute Red Data List- Critically rare	This species is critically rare and is endemic to the Eastern Cape Province of South Africa. Found within the scarp forest at the Msikaba River Gorge.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Podranea ricasoliana*	☑	☑	☐		☐	South African National Institute Red Data List- Vulnerable	Endemic to the Eastern Cape Province of South Africa. A rage restricted evergreen climber found on coastal forest margins
TRACHEOPHYTA / MAGNOLIOPSIDA	*Pseudosalacia streyi*	☑	☑	☐	EN	☐		Endemic to the Eastern Cape and Kwa-Zulu Natal provinces of South Africa. A rare tree found in only a small area within Pondoland from Izotsha River to Mtentu River along rocky stream banks in the river gorges.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Pseudoscolopia polyantha*	☐	☑	☐	NT	☐		A near threatened species which is endemic to South Africa (Kwa-Zulu Natal, Eastern Cape and Western Cape provinces). Mainly occurs in Pondoland between Oribi Gorge and Port St Johns.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Psoralea abbottii*	☑	☑	☑		☐	South African National Institute Red Data List - Vulnerable	Endemic to South Africa (Eastern Cape and Kwa-Zulu Natal province). It occurs within Ngele Mountain and Pondoland from Umtamvuna to Mkambati. Psoralea abbottii grows along the margins of swamp forest, and in open grassland adjacent to marshes draining into swamp forest.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Putterlickia retrospinosa*	☐	☑	☐		☐	South African National Institute Red Data Lis- Near Threatened	An endemic woody species found in the margins of the scarp forests of the Pondoland region of South Africa.
TRACHEOPHYTA / LILIOPSIDA	*Resnova lachenalioides*	☑	☑	☐		☐	South African National Biodiversity Institute Red Date List- Vulnerable	Also known as Ledebouria lachenalioides. This species is a rare bulbous plant recorded from the southern foothills of the Drakensberg from Giant's Castle in Kwa-Zulu Natal to Umtata in Eastern Cape.
TRACHEOPHYTA / LILIOPSIDA	*Restio mkambatiae*	☑	☑	☑		☐	South African Natinal Institute Red Data List- Vulnerable	Endemic to the Eastern Cape provinces of South Africa. Only records are from within Mkambati Nature Reserve. This species is found over sandstone bedrock, in marshy grassland adjacent to streams, in permanently wet areas and in seepage zones.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Rhynchocalyx lawsonioides*	☐	☑	☐	NT	☐	South African National Institute Red Data List- Near Threatened	This near-threatened species is a South African endemic. It occurs from Oribi Gorge to Port St Johns in the upper margins of forests above deep river gorges and along the margins of kloof forests.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Rinorea domatiosa*	☐	☑	☐		☐	South African National Institute Red Data List- Rare	Rare and endemic to South Africa. Occurs from Oribi Gorge to Port St Johns in Pondoland scarp forest, sometimes among rocks on river banks.

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
TRACHEOPHYTA / MAGNOLIOPSIDA	*Searsia acocksii*	☐	☑	☐		☐	South African National Institute Red Data List- Near threatened.	Endemic to South Africa. An understorey shrub in that occurs in forest margins from Oribi Gorge to Isicezula Forest in the Pondoland region.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Senecio natalicola*	☑	☑	☐		☐	South African National Institute Red Data List- Endangered	Endemic to South Africa, (Eastern Cape and Kwa-Zulu Natal province). It occurs from Ngoye to Mkambati and is found in marshy ground near streams and rocky grasslands.
TRACHEOPHYTA / CYCADOPSIDA	*Stangeria eriopus*	☑	☑	☐	VU	☐		This species is widespread along the east coast of South Africa and southern Mozambique, usually occurring within a few kilometres of the ocean. It is found in scattered subpopulations from Bathurst in the Eastern Cape to Kosi Bay in northern KwaZulu-Natal and just over the South Africa border into southern Mozambique.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Streptocarpus aylae*	☑	☑	☐		☐	South African National Institute Red Data List- Vulnerable	This species is a South African endemic. Only known from two sites in the lower Msikaba River Gorge.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Streptocarpus formosus*	☐	☑	☐		☐	South African National Institute Red Data List- Rare	Rare and endemic to South Africa. Grows around Port St Johns in northern Pondoland in the Eastern Cape and along the sandstone gorges of Umtamvuna and Oribi in southern Kwazulu-Natal
TRACHEOPHYTA / MAGNOLIOPSIDA	*Streptocarpus lilliputana*	☑	☑	☐		☐	South African National Institute Red Data List- Vulnarable	Rare and is it is known only from the forested river gorges of the rivers in the Pondoland area. Plants grow in deep shade in sparse colonies on rock seepages in forested areas.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Streptocarpus modestus*	☐	☑	☐		☐	South African National Institute Red Data List- Rare	It is rare and endemic to South Africa. Occurs only in a limited area of Pondoland in the Eastern Cape
TRACHEOPHYTA / MAGNOLIOPSIDA	*Streptocarpus porphyrostachys*	☐	☑	☐		☐	South African National Institute Red Data List - Near Threatened	It is near threatened and endemic to South Africa (Eastern Cape and Kwa-Zulu Natal). Grows on damp rock faces where small streams cascade down the walls of forested gorges. It is also found along the lips of the gorges under rock overhangs that seep water.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Syncolostemon ramulosus*	☑	☑	☐		☐	South African National Institute Red Data List- Vulnerable	Endemic to South Africa (Eastern Cape and Kwa-Zulu Natal). It occurs from the Umtamvuna River to Mtentu River.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Syzygium pondoense*	☐	☑	☐	LC	☐	South African National Institute Red Data List- Rare	Rare and endemic to South Africa (Eastern Cape and Kwa-Zulu Natal provinces). It occurs from Umtamvuna to Mlambomkulu River. Often found in rocky beds of streams
TRACHEOPHYTA / MAGNOLIOPSIDA	*Tephrosia bachmannii*	☑	☑	☐		☐	South African National Institute Red Data List- Vulnerable	Endemic to South Africa, (Eastern Cape and Kwa-Zulu Natal provinces). It occurs from Oribi Gorge to Mkambati. Restricted to Msikaba Formation Sandstone, but occurs in a variety of habitats including open grasslands, rocky sites and forest margins.

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
TRACHEOPHYTA / MAGNOLIOPSIDA	*Tephrosia pondoensis*	☑	☑	☐	EN	☐		Endemic in Pondoland, in the Eastern Cape and southern KwaZulu-Natal. This protected tree species occurs from Oribi Gorge to the Msikaba River.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Turraea pulchella*	☑	☑	☐		☐	South African National Institute Red Data List- Vulnerable	Endemic to the Eastern Cape Province and Kwa-Zulu Natal provinces of South Africa. Occurs in coastal grasslands.
TRACHEOPHYTA / LILIOPSIDA	*Watsonia bachmannii*	☑	☑	☐		☐	South African National Institute Red Data List- Vulnerable	Endemic to the Eastern Cape Province and Kwa-Zulu Natal provinces of South Africa. It occurs from Umtamvuna to Mkweni River, in grasslands in seepages and marshlands (vleis), but also in open grassland and among rocks.
TRACHEOPHYTA / LILIOPSIDA	*Watsonia inclinata*	☑	☑	☐		☐	South African National Institute Red Data List- Vulnerable	Endemic to the Eastern Cape Province and Kwa-Zulu Natal provinces of South Africa. Known from fewer than five locations from Umtamvuna River to Mkweni River.
TRACHEOPHYTA / LILIOPSIDA	*Watsonia pondoensis*	☑	☑	☑		☐	South African National Institute Red Data list - Endangered	Rare and endemic to the Eastern Cape Province and Kwa-Zulu Natal provinces of South Africa. It occurs from Umtamvuna Nature Reserve to Port Grosvenor, in standing water of permanent marshlands (vleis)

Mkambati Nature Reserve falls within the Pondoland Centre of Plant Endemism, within the Maputaland-Pondoland-Albany biodiversity hotspot which has about 200 unique endemic species. Botanists believe more new species will still be discovered in its isolated habitats and river gorges. The Pondoland Centre of Endemism is defined in terms of the underlying Msikaba Formation sandstone which occurs in Pondoland and in the southern part of KwaZulu-Natal. The area has been acknowledged as one of the important centres of plant diversity and endemism in Africa. Over 1600 plant species have been observed at the Mkambati Nature Reserve through plant surveys and citizen science activities. A large number of these plant species are endemic to the Pondoland region and can be found here and no where else in the world, this includes the only known breeding colony of the well known Pondoland ghost bush, Raspalia trigyna, a plant previously only known from a couple of isolated specimens and the Endangered Mkambati Palm (Jubaeopsis caffra), after which the Reserve was named, which only occurs on the lower Mtentu and Msikaba rivers. A variety of these endemic species are also listed as red list species both globally and through the South African national red list programme. The Pondoland Ghost Bush is Critically Endangered and Mkambati Palm is Endangered. Other species of conservation concern include the endangered Pondo fish Poison Pea (Tephrosia pondoensis), the Pondo Milkberry (Manilkara nicholsonii) and the Pondo White Pear (Apodytes abbottii) and the Vulnerable Pondo fig (Ficus bizanae), Forest Elephant's Foot (Dioscorea sylvatica), Pondo Weeping Thorn (Colubrina nicholsonii) and Dwarf Blood-lily (Haemanthus deformis) . The large diversity of plant species is greatly attributed to the large variety of habitats at the site which includes grasslands, coastal dunes, waterfalls, marshes, swamp forests, mangroves, rivers and estuaries. In terms of wetland plant species, the South African endemic "palmiet" species (Prionium serratum) which can be found in the streams and marshes, the rare Pondo Waterberry (Syzygium pondoense) which occurs on the banks and in the beds of streams and the endangered Pondo Watsonia are amongst the more water loving species which occur at Mkambati Nature Reserve.

Plant threat status and distribution in South Africa obtained from the South African National Biodiversity Institute Red Data List of Plant Species accessible at http://redlist.sanbi.org/
Data on the occurrence of plant species at Mkambati Nature Reserve and the distribution and endemism of species was obtained from plant surveys conducted at the site, supported by the South African National Biodiversity Institute Databases (accessed at https://biodiversityadvisor.sanbi.org), records from iNaturalist, and information from Bredenkamp, C.L. 2019. A Flora of the Eastern Cape Province. Strelitzia 41. Volume 1–3. South African National Biodiversity Institute, Pretoria.

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
Others																	
CHORDATA / REPTILIA	*Acontias poecilus*	☑	☐	☐	☐	☑	☐	☐	☐					☐	☐	South African National Biodiversity Institute Red Data List - Endangered	Endemic to South Africa
CHORDATA / AMPHIBIA	*Afrixalus spinifrons*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to South Africa. Inhabits Coastal Bushveld-Grassland and Moist Upland Grassland in KwaZulu-Natal and the Eastern Cape Provinces. Breeds in standing water (including dams and ponds), sedge beds and grassy wetlands.
CHORDATA / REPTILIA	*Afroedura pondolia*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to South Africa, occurring from the eastern parts of the Eastern Cape to central KwaZulu-Natal provinces.
ARTHROPODA / INSECTA	*Allocnemis leucosticta*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to South Africa and Eswatini, where it lives near streams and rivers in wooded areas
CHORDATA / AMPHIBIA	*Arthroleptis wahlbergii*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Terrestrial frog species, endemic to South Africa, occurring from the east coast of South Africa, from just south of Port St Johns northward to the Mozambique border.
CHORDATA / REPTILIA	*Bradypodion melanocephalum*	☐	☐	☐	☐	☑	☐	☐	☐				NT	☐	☐		Endemic to SA - Found in the coastal regions of KwaZulu-Natal, from north of Durban southwards to Mkambati Nature Reserve, Eastern Cape
CHORDATA / ACTINOPTERYGII	*Caranx ignobilis*	☐	☐	☐	☐	☑	☐	☐	☑				LC	☐	☐		The Mtentu River is well known for the vast numbers of Giant Kingfish which migrate up the River. Only estuary that shoals of adult giant kingfish predictably use as a thermal refuge to escape cold water at sea
ARTHROPODA / INSECTA	*Chlorolestes fasciatus*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to the Southern Africa region, being present in South Africa, Lesotho and Swaziland. Occurs in clear montane streams with long grass and bushes on the banks. Dependent on fresh water wetlands to complete their life cycle
CHORDATA / AMPHIBIA	*Leptopelis natalensis*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to KwaZulu-Natal and the northeastern part of Eastern Cape Province of South Africa. Usually found near swamps or pans in fairly dense, indigenous forest. Dependent on wetlands for breeding. Females lay their eggs near the waters edge of wetlands. After hatching tadpoles make their water to the water. The remainder of larval development takes place in the usual way in water.
CHORDATA / REPTILIA	*Lycodonomorphus laevissimus*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to South Africa. Non-venomous snake that is the largest water snake in South Africa. It is largely aquatic and favours pools and shaded streams where it often swims submerged. This species is dependent on wetlands for feeding (on frogs, aquatic invertebrates, tadpoles and small fish)
CHORDATA / REPTILIA	*Macrelaps microlepidotus*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to the eastern parts of South Africa, from northeastern KwaZulu-Natal, southwards to East London in the Eastern Cape.
CHORDATA / MAMMALIA	*Myosorex varius*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to Southern Africa, occurring in southern South Africa, Lesotho and Swaziland

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
CHORDATA / AMPHIBIA	*Natalobatrachus bonebergi*	☑	☑	☐	☐	☑	☐	☐	☐				EN	☐	☐		Endemic to South Africa - restricted to southeastern South Africa, occuring olny in the coastal forests of southern Kwa Zulu Natal and northern Eastern Cape provinces, below 900m in altitude. Associated with streams and pools in scarp and gallery forest. Dependent on shallow pools and streams for breeding.
CHORDATA / MAMMALIA	*Otomys laminatus*	☐	☑	☐	☐	☑	☐	☐	☐				NT	☐	☐		A near-threatened species, endemic to South Africa with a patchy distribution in the Western Cape (Paarl and Cape Town areas) and Eastern Cape, as well as the eastern foothills of the central and northern Drakensberg in KwaZulu-Natal and Mpumalanga provinces. Dependent on wetland for feeding.
CHORDATA / MAMMALIA	*Philantomba monticola*	☑	☐	☐	☐	☐	☐	☐	☐				LC	☐	☐	South African National Biodiversity Institute Red Data List - Vulnerable	
Fish, Mollusc and Crustacea																	
CHORDATA / ACTINOPTERYGII	*Acanthopagrus vagus*	☑	☑	☐	☐	☑	☐	☐	☑				VU	☐	☐		Endemic to Southern Africa and Mozambique. Adults are almost entirely restricted to estuaries but this species has a marine egg and larval phase, requiring connection to the sea. Adults undertake an annual spawning migration down to the estuary mouth. The species was found in Msikaba Estuary (James and Harrison 2022)
CHORDATA / ACTINOPTERYGII	*Anchichoerops natalensis*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to the South African east coast and Mozambique
CHORDATA / ACTINOPTERYGII	*Apolemichthys kingi*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Rare and endemic to South Africa, Mozambique and Madagascar
CHORDATA / ACTINOPTERYGII	*Argyrosomus japonicus*	☑	☐	☐	☐	☐	☐	☐	☑				EN	☐	☐		Juveniles recruit to the Mgwegwe, Msikaba and Mtentu Estuaries
CHORDATA / ACTINOPTERYGII	*Boopsoidea inornata*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to South Africa (Distributed from Cape Point to southern Kwazulu-Natal).
CHORDATA / ACTINOPTERYGII	*Caffrogobius gilchristi*	☐	☑	☐	☐	☑	☐	☐	☑				LC	☐	☐		Endemic to Southern Africa- has a marine larval phase, requiring connection to the sea. Found in the Msikaba and Mtentu estuaries (James and Harrison 2022)
CHORDATA / ACTINOPTERYGII	*Caffrogobius natalensis*	☐	☐	☐	☐	☑	☐	☐	☑				LC	☐	☐		Endemic to Southern Africa - Found in the Msikaba Estuary (James and Harrison 2022)
CHORDATA / ACTINOPTERYGII	*Chelon richardsonii*	☐	☐	☐	☐	☑	☐	☐	☐					☐	☐		Endemic to Southern Africa - It is found in South African coastal waters from Walvis Bay (Namibia) to KwaZulu-Natal.
CHORDATA / ACTINOPTERYGII	*Chirodactylus brachydactylus*	☐	☐	☐	☐	☑	☐	☐	☐					☐	☐		Endemic to the coastal waters of Southern Africa
CHORDATA / ACTINOPTERYGII	*Chirodactylus jessicalenorum*	☐	☐	☐	☐	☑	☐	☐	☐				DD	☐	☐		Endemic to South Africa - Occurs from Algoa Bay in the Eastern Cape, north to Sodwana Bay in KwaZulu-Natal.
CHORDATA / ACTINOPTERYGII	*Clinus superciliosus*	☐	☐	☐	☐	☑	☐	☐	☑				LC	☐	☐		Endemic to Southern Africa
CHORDATA / ACTINOPTERYGII	*Gerres methueni*	☐	☐	☐	☐	☑	☐	☐	☐					☐	☐		Endemic to Southern Africa
CHORDATA / ACTINOPTERYGII	*Glossogobius callidus*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to Southern Africa. Occurs naturally in rivers and the upper reaches of estuaries along the eastern seaboard of southern Africa and in Madagascar. Found in Msikaba and Mtentu Estuaries

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
CHORDATA / ACTINOPTERYGII	*Oplegnathus conwayi*	☐	☐	☐	☐	☑	☐	☐	☐					☐	☐		Endemic to South Africa, ranging from False Bay to Thukela.
CHORDATA / ACTINOPTERYGII	*Oplegnathus robinsoni*	☐	☐	☐	☐	☑	☐	☐	☐					☐	☐		Endemic to Southern Africa - known mainly from southern Mozambique and KwaZulu- Natal waters but common in the Pondoland MPA in the Eastern Cape and juveniles seen as far south as Tsitsikamma.
CHORDATA / ACTINOPTERYGII	*Oreochromis mossambicus*	☑	☐	☐	☐	☑	☐	☐	☐				VU	☐	☐		Endemic to South-eastern Africa. Found in Mgwegwe and Mgwetyana (James and Harrison 2022)
CHORDATA / ACTINOPTERYGII	*Pachymetopon grande*	☐	☐	☐	☐	☑	☐	☐	☐				NT	☐	☐		Endemic to Southern Africa - Distribution ranges from the southern Mozambique to Struisbaai, Western Cape.
CHORDATA / ACTINOPTERYGII	*Pavoclinus graminis*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to Southern Africa - found along the coast of southern Africa from Inhambane, Mozambique to False Bay South Africa.
CHORDATA / ACTINOPTERYGII	*Pseudomyxus capensis*	☐	☐	☐	☐	☑	☐	☐	☑					☐	☐		Endemic to South Africa, in east coastal estuaries and rivers from the Bree River to Kosi Bay. The species was found in Mgwegwe, Mgwetyana and Mtentu estuaries
CHORDATA / ACTINOPTERYGII	*Rhabdosargus holubi*	☐	☐	☐	☐	☑	☐	☐	☑				LC	☐	☐		Endemic to Southern Africa - where it can be found mainly along the eastern coast of South Africa. Found in the Mgcetyana, Mgwegwe, Msikaba and Mtentu Estuaries
CHORDATA / ELASMOBRANCHII	*Rhynchobatus djiddensis*	☑	☐	☐	☐	☐	☐	☐	☐				CR	☐	☐	South African National Biodiversity Institute Red List of South African Species - Critically Endangered	
CHORDATA / ACTINOPTERYGII	*Stolephorus holodon*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to the east coast of southern Africa and is distributed from Kenya to Port Elizabeth in South Africa. It was found in Mtentu. It is a opportunist meaning Juveniles sometimes occur in estuaries but are more abundant at sea
Birds																	
CHORDATA / AVES	*Anthus chloris*	☑	☐	☐	☐	☑	☐	☐	☐					☐	☐	South African National Biodiversity Institute Red Data List - Vulnerable	Endemic to South Africa, occurring from Mpumalanga through western KwaZulu-Natal and marginally the Free State and Lesotho to the north east of the Eastern Cape.
CHORDATA / AVES	*Balearica pavonina*	☑	☑	☐	☐	☐	☐	☐	☐				VU	☑	☐	South African National Biodiversity Institute Red Data List - Endangered	Occupies open areas such as grasslands, shallow wetlands, marshes, as well as the margins of lakes and rivers. Wetlands act as its principal breeding, feeding and roosting sites although it can also be found foraging in grasslands and near croplands of dry savanna.
CHORDATA / AVES	*Bucorvus leadbeateri*	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐	South African National Biodiversity Institute Red Data List - Endangered	
CHORDATA / AVES	*Buteo rufofuscus*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to Southern Africa
CHORDATA / AVES	*Cinnyris afer*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to Southern Africa
CHORDATA / AVES	*Cinnyris chalybeus*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to Southern Africa
CHORDATA / AVES	*Circus ranivorus*	☑	☐	☐	☐	☐	☐	☐	☐				LC	☐	☐	South African National Biodiversity Institute Red Data List - Endangered	

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
CHORDATA / AVES	*Cossypha dichroa*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to Southern Africa, occurring from the Limpopo Province along the eastern escarpment to KwaZulu-Natal, and the lowland forest of the Eastern Cape, marginally extending into the Western Cape.
CHORDATA / AVES	*Gyps coprotheres*	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☑	South African National Biodiversity Institute Red Data List - Endangered	
CHORDATA / AVES	*Halcyon senegaloides*	☑	☐	☐	☐	☐	☐	☐	☐				LC	☐	☐	Red Data Book of Birds of South Africa, Lesotho and Swaziland-Endangered	
CHORDATA / AVES	*Hydroprogne caspia*	☑	☐	☐	☐	☐	☐	☐	☐				LC	☐	☐	South African National Biodiversity Institute Red Data List - Vulnerable	
CHORDATA / AVES	*Laniarius ferrugineus*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to Southern Africa
CHORDATA / AVES	*Macronyx capensis*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to Southern Africa
CHORDATA / AVES	*Monticola rupestris*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to South Africa
CHORDATA / AVES	*Neotis denhami*	☑	☐	☐	☐	☐	☐	☐	☐				NT	☐	☐	South African National Biodiversity Institute Red Data List - Vulnerable	
CHORDATA / AVES	*Ploceus capensis*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to Southern Africa
CHORDATA / AVES	*Promerops gurneyi*	☐	☐	☐	☐	☑	☐	☐	☐				NT	☐	☐		Endemic to Southern Africa, occurring in Zimbabwe's eastern highlands and Limpopo Province extending into Mpumalanga, with a separate population in western KwaZulu-Natal, Lesotho and the far east of the Eastern Cape.
CHORDATA / AVES	*Sagittarius serpentarius*	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐	South African National Biodiversity Institute Red Data List - Vulnerable	
CHORDATA / AVES	*Serinus canicollis*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to Southern Africa
CHORDATA / AVES	*Sigelus silens*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to Southern Africa
CHORDATA / AVES	*Tauraco corythaix*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Endemic to South Africa
CHORDATA / AVES	*Zosterops capensis virens*	☐	☐	☐	☐	☑	☐	☐	☐					☐	☐		Near-endemic to South-Africa

1) Percentage of the total biogeographic population at the site

Mkambati Nature Reserve has a history of introducing large herbivore species primarily for trophy hunting, with introductions occurring 35 years ago and in subsequent years (1984 and 1986). Among the species introduced, only the Eland and Red Hartebeest are native to the region. Other introduced species, such as plains zebra, mountain zebra, giraffe, gemsbok, kudu, springbok, blesbok, blue wildebeest, and impala, were considered extra-limital—species not native to the area—and many have since been removed from the reserve. Aside from the introduced herbivores, the reserve is home to native mammals such as Chacma baboons, common reedbuck, black-backed jackal, blue and grey duiker, bushpig, and vervet monkeys. There have also been sightings of serval, cape clawless otters, and even tracks of the elusive brown hyena.

There is a high diversity of bird species in the Reserve as a result of the variety of habitats. Mkambati Nature Reserve is an internationally recognized Important Bird Area (IBA) (IBA code ZA066). The cliffs on the Mtentu River hold one of the largest remaining colonies of Cape Vulture (Gyps coprotheres) in the Eastern Cape. This colony is also one of the few protected breeding sites in the world (. The Pondoland area is also strategically important for migrating birds.

The diversity and biology of reptiles and amphibians are not well described, although preliminary studies suggest a high diversity, with a number of endemic, rare and threatened species. There are a number of endemic terrestrial mollusks in the Mkambati area.

Amphibian and reptile species were obtained from a herpetology survey conducted in February 2011 by Venter and Conradie (published in 2015). Freshwater and Estuarine fish occurrence data was obtained from citizen science records (iNaturalist), the South African Freshwater Biodiversity Information System (FBIS), Mann et al., (2006) and James and Harrison (2022). Mammal species were obtained through mammal survey's conducted by the ECPTA. Invertebrate species were obtained from Hammer and Slowtow (2017). The birds species information was obtained from the Eastern Cape Parks and Tourism Agency species database and Mokotjomela et al. (2023).

The conservation status of South African animals was obtained from SANBI Red List Database, at http://speciesstatus.sanbi.org/assessment/last-assessment/02971/.

3.4 - Ecological communities whose presence relates to the international importance of the site

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Pondoland-Ugu Sandstone Coastal Sourveld	☑	Pondoland-Ugu Sandstone Coastal Sourveld is a unique grassland vegetation type found along the coastal areas of the Eastern Cape and southern KwaZulu-Natal, South Africa.	classified as vulnerable (Dayaram et al., 2019; Jewitt, 2018; Skowno et al., 2019)
Subtropical Seashore Vegetation	☑	Subtropical Seashore Vegetation refers to the plant communities found along the coastal areas of subtropical regions, such as Mkambati Nature Reserve.	classified as vulnerable (Dayaram et al., 2019; Jewitt, 2018; Skowno et al., 2019)

Optional text box to provide further information

Mkambati Nature Reserve: Approximately 91% of the reserve is dominated by Pondoland–Natal Sandstone Coastal Sourveld grassland (Dayaram et al., 2019; Skowno et al., 2019). Other vegetation types found in the reserve are the Eastern Valley Bushveld, Scarp Forest, Subtropical Coastal Lagoons and Subtropical Seashore Vegetation (Dayaram et al., 2019; Mucina & Rutherford, 2006). The conservation status of the Pondoland-Ugu Sandstone Coastal Sourveld and Subtropical Seashore Vegetation are classified as ‘Vulnerable’, while Eastern Valley Bushveld, Scarp Forest, Subtropical Coastal Lagoons are classified as ‘Least threatened’ (Dayaram et al., 2019; Jewitt, 2018; Skowno et al., 2019).

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

The wetlands in Mkambati Nature Reserve (MNR), extending well over 1000 hectares, consist of numerous wetland types, many of which are representative of the wetlands in the North-Eastern Coastal Belt River Ecoregion, the Indian Ocean Coastal Belt Vegetation Bioregion and Subtropical Estuarine Bioregion, with the exception of the swamp forests which are rare in South Africa and the only occurrence of swamp forests on a sandstone geology (they are typically associated with sandy coast dunes and aquifers). The pristine grass and reed dominated seep wetlands along with the rare swamp forests, deep riverine gorges, numerous waterfalls and various estuaries and river mouths, add a distinctive ecological component to the MNR. These wetlands are vital for sustaining the reserve's biodiversity, providing critical habitats for many rare and endemic species, and play a significant role in water regulation and ecosystem stability. The main rivers (which boarder the MNR) are the Msikaba and Mtentu. Within the Reserve numerous smaller systems can found, including the Gwegwe, Mkambati, Daza, Butsha, Kwanondindwa and Mgcetyana Rivers. The unique Mkambati Falls cascade directly into the Indian Ocean, making it one of the few places in the world where a waterfall cascades directly into the ocean. The majority of the wetlands are permanently saturated, often due to sub-surface flow from the dominant sandstone geology but also receive rain and surface waters. All the wetland ecosystems maintain an exceptional water quality. The reserve includes a 13km stretch of pristine coastline between the estuaries of the Msikaba and Mtentu rivers, which are in a natural to largely natural ecological condition. Two estuaries are permanently open to sea (Mtentu and Msikaba), with the other two (Gwegwe and Mgcetyana) representing temporarily open-closed estuary systems, all of which are inundated all year round. These estuaries are vital ecological zones. The Msikaba is one of the deepest estuaries in South Africa and the Mtentu estuary contains small but crucial patches of mangrove forests. The estuaries serve as spawning grounds for diverse fish species and are key to the health of the broader marine ecosystem. The average rainfall in the reserve is 1200mm, with 61% falling during spring and summer (September to February). On average June is the driest month with a mean of 47.6 mm and March is the wettest with a mean of 154.87mm. The surface rock formations comprise of mainly sandstone of marine origin with localised dolerite intrusions. Soils on site are generally deep with Mispah (65%) being the most predominant soil type. Greater than 80 percent of Mkambati consists of Pondoland-Natal Sandstone Coastal Sourveld Grassland, resulting in an outstanding degree of plant endemism (196 endemic species), sustained by the Pondoland Scarp Forest, one of the most unique forest types in Africa. The exceptionally high biodiversity conservation value is further attributed to the site’s location within the Pondoland Centre of Plant Endemism, an internationally recognized biodiversity hotspot. Rare species like the Pondo White Pear (Apodytes abbottii) thrive in the reserve's unique soil and climate conditions. Mkambati Nature Reserve is also recognized as a globally Important Bird Area (IBA). Fire plays a significant ecological role in the grasslands, although the majority of fires are induced by poachers to attract antelope and is therefore one of the key pressures at the Reserve. In addition, a variety of Invasive Alien Plant species occurs with the Reserve; they are however not widespread and are being monitored and managed. Apart from supporting high levels of biodiversity, the site is known to offer an assortment of other ecosystem services, including freshwater provision, water flow regulation, nutrient cycling, erosion control, educational and research opportunities and eco-tourism and recreational opportunities, along with various cultural services.

4.2 - What wetland type(s) are in the site?

Marine or coastal wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
F: Estuarine waters	Estuary (permanently open and small temporarily closed)	3	67	Representative
I: Intertidal forested wetlands	Mangroves	4	0.6	Representative

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Flowing water >> M: Permanent rivers/ streams/ creeks	Permanent streams, rivers, waterfalls and river mouths	2		Representative
Fresh water > Flowing water >> N: Seasonal/ intermittent/ irregular rivers/ streams/ creeks	Seasonal streams	3		Representative
Fresh water > Marshes on inorganic soils >> Tp: Permanent freshwater marshes/ pools	Permanently wet seeps	1	839	Representative
Fresh water > Lakes and pools >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils	Seasonal Depressions (pans)	4	1.6	Representative
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils	Seasonal seep wetlands	4	61	Representative
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands	Swamp Forest	2	228	Rare

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Scarp Forest	
Grassland	7025

(ECD) Habitat connectivity	3 of the 9 rivers which occur at the site, namely Mtentu, Msikaba and Mkambati Rivers originate from outside of the Ramsar Site.

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/MAGNOLIOPSIDA	*Albizia adianthifolia*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Berkheya speciosa*	Known for its value in traditional medicine
TRACHEOPHYTA/LILIOPSIDA	*Bulbine latifolia*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Callilepis laureola*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Combretum kraussii*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Eriosema salignum*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Erythrina caffra*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Garcinia gerrardii*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Gnidia kraussiana*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Graderia scabra*	Known for its value in traditional medicine
TRACHEOPHYTA/LILIOPSIDA	*Haemanthus albiflos*	Used in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Helinus integrifolius*	Traditionally used for its medicinal (dermatological) properties and as a charm plant
TRACHEOPHYTA/MAGNOLIOPSIDA	*Macaranga capensis*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Maesa lanceolata*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Morella serrata*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Osteospermum imbricatum*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Pentanisia angustifolia*	Species of flower that blooms in the early rains of southern Africa, used in traditional medicine as a charm plant.
TRACHEOPHYTA/LILIOPSIDA	*Polystachya pubescens*	Species of orchid that is used in traditional medicine as a charm plant
TRACHEOPHYTA/MAGNOLIOPSIDA	*Protea caffra*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Protorhus longifolia*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Senecio rhyncholaenus*	A herbaceous species used in traditional medicine as a charm plant
TRACHEOPHYTA/MAGNOLIOPSIDA	*Syncolostemon densiflorus*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Syncolostemon rotundifolius*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Trichilia dregeana*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Ursinia tenuiloba*	Known for its value in traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Zanthoxylum capense*	Known for its value in traditional medicine

Invasive alien plant species

Phylum	Scientific name	Impacts
TRACHEOPHYTA/MAGNOLIOPSIDA	*Acacia longifolia*	Actual (major impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	*Acacia mearnsii*	Actual (major impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	*Biancaea decapetala*	Actual (major impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	*Chromolaena odorata*	Actual (minor impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	*Eucalyptus cladocalyx*	Actual (minor impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	*Eucalyptus grandis*	Actual (minor impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	*Hakea sericea*	Actual (minor impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	*Lantana camara*	Actual (major impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	*Opuntia ficus-indica*	Actual (major impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	*Psidium guajava*	Actual (major impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	*Sesbania punicea*	Actual (minor impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	*Solanum mauritianum*	Actual (major impacts)

Optional text box to provide further information

Information regarding medicinal plants at Mkambati was sourced from Zukulu,S., Dold, T., Abbott, T and Raimondo, D. Medicinal and Charm Plants of Pondoland. South African National Biodiversity Institute (SANBI), http://hdl.handle.net/20.500.12143/7666

Although there are a variety of invasive alien plant species at Mkambati Nature Reserve, they are not widespread and are being monitored and managed. Eucalyptus cladocalyx is noted as the most extensive alien invasive species in the Reserve, forming a significant stand in one of the swamp forests. Effective management of invasive species, especially Eucalyptus, typically involves a combination of approaches such as manual removal, chemical control, and ecological restoration to prevent the spread of the species and re-establish native vegetation.

Data source: Gxabhu, O., Reeves, B., Nombewu, N. & Pamla, L. 2018. Invasive Alien Plants on ECPTA Reserves. Eastern Cape Parks and Tourism Agency, Eastern Cape, South Africa.

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/REPTILIA	*Agama atra*				Near endemic to South Africa
CHORDATA/MAMMALIA	*Canis mesomelas*				Endemic to Sub-Saharan Africa
CHORDATA/AVES	*Caprimulgus natalensis*				Most southerly population of Swamp Nightjar occurs at the Reserve
CHORDATA/REPTILIA	*Causus rhombeatus*				Endemic to Sub-Saharan Africa
CHORDATA/MAMMALIA	*Damaliscus pygargus phillipsi*				Endemic to SA
CHORDATA/MAMMALIA	*Leptailurus serval*				Endemic to Africa
CHORDATA/ACTINOPTERYGII	*Lichia amia*				Endemic to the Mediterranean and the coastal waters of western Africa to the coastal waters of eastern South Africa.
CHORDATA/REPTILIA	*Python natalensis*				Endemic to Southern Africa
CHORDATA/AVES	*Cecropis cucullata*				Endemic to Africa south of the equator, occurring from southern DRC, Angola and Zambia to southern Africa.
CHORDATA/AVES	*Charadrius marginatus*				Endemic to Sub-Saharan Africa

Optional text box to provide further information

Large numbers of grazing herbivores such as Eland, Red Hartebeest, Blue Wildebeest, Blesbok and even Gemsbok, have been introduced into the grasslands, although only the first two species are indigenous to the area.

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Cfa: Humid subtropical (Mild with no dry season, hot summer)

The climate is classified as mild sub-tropical with relatively high humidity. The coastal location adjacent to the warm Agulhas Current provides for minimal differences between minimum and maximum daily temperatures. The average rainfall is 1200mm, with 61% falling during spring and summer (September to February). On average June is the driest month with a mean of 47.6 mm and March is the wettest with a mean of 154.87mm. A minimum of 50mm rain is expected every month. Strong winds can occur with predominant winds blowing from the south west or north east parallel to the coast. These winds impact significantly on coastal vegetation and on marine recreational activities.

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 0

a) Maximum elevation above sea level (in metres): 320

- [x] Entire river basin
- [ ] Upper part of river basin
- [ ] Middle part of river basin
- [x] Lower part of river basin
- [x] More than one river basin
- [ ] Not in river basin
- [x] Coastal

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

The Rivers at Mkamabti are contained within numerous small coastal catchments. Of the 9 Rivers on the site 3 originate from outside of the sites boundaries. Main catchments include Mkambati River Catchment, Mtentu River Catchment and Mksikaba River Catchment. Other smaller river catchments include Mgcetyana River , Gwegwe River, Daza River, Nondindwa and Butsha River catchments. In South African terms the Reserve falls between two quaternary drainage regions, namely T60D and T60G.

4.4.3 - Soil

- [x] Mineral
- [ ] Organic
- [ ] No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes ○ No ◉

Please provide further information on the soil (optional)

The surface rock formations of the region are primarily sandstone of marine origin with localised dolerite intrusions. An “island” of this sandstone, extending in a narrow band (15 km wide) from the uMzimkhulu River in southern KwaZulu-Natal to the Mbotyi region, is home to numerous plant species which are uncommon or absent from surrounding substrates (de Villiers and Costello 2013). The dominant soil forms in the reserve are Mispah (65%), Clovelly (16%), Champagne (7%) and Pinedene (2%) (Shackleton 1989, Venter, 2014). The soils are also generally deep (> 1.2 m) (Shackleton 1989).

4.4.4 - Water regime

Water permanence

Presence?	
Usually permanent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	
Water inputs from groundwater	☐	No change
Marine water	☐	No change
Water inputs from surface water	☐	No change
Water inputs from precipitation	☑	No change

Water destination

Presence?	
Marine	No change

Stability of water regime

Presence?	
Water levels largely stable	No change

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology:

The three main rivers (Mtentu, Msikaba and Mkambati) are characterized by perennial flow. Of the many steams at the site, some have perennial flows whilst other have seasonal flows, for seasonal streams these soils remain saturated throughout the year. Most of the wetlands are permanently saturated. This includes swamp forest and herbaceous wetlands. Some herbaceous wetlands are seasonally saturated. Wetlands are driven predominantly by sub-surface flow from the dominant sandstone geology but also receive rain and surface waters. The estuaries are inundated year round and of the 4 estuaries two (Mtentu and Msikaba) are permanently open to the sea and two (Gwegwe and Butsha) are temporarily open-closed estuarine systems.

(ECD) Connectivity of surface waters and of groundwater	unknown

4.4.5 - Sediment regime

- [ ] Significant erosion of sediments occurs on the site
- [ ] Significant accretion or deposition of sediments occurs on the site
- [ ] Significant transportation of sediments occurs on or through the site
- [x] Sediment regime is highly variable, either seasonally or inter-annually
- [ ] Sediment regime unknown

Please provide further information on sediment (optional):

Not much is known regarding the sediment regimes of the wetlands at Mkambati. Some information is however available from the 2010 Situation assessment reports for the Mtentu and Msikaba Estuaries. According to these studies the Mtentu displayed the lowest turbidity of the sub-tropical open systems sampled in the region, probably as a result of the marine influence and low sediment loads contained in freshwater runoff (Eastern Cape Parks, 2010)

(ECD) Water turbidity and colour	Turbidity based on Secchi disc measurements range from 0.1-2.5m for Mtentu Estuary & from 0.1-3m for the Msikaba Estuary

4.4.6 - Water pH

- [ ] Acid (pH<5.5)
- [x] Circumneutral (pH: 5.5-7.4)
- [x] Alkaline (pH>7.4)
- [ ] Unknown

Please provide further information on pH (optional):

Estuaries: pH>7.4 from Water characteristics determined by Aqua TROLL for the Mtentu Estuary and Msikaba Estuary water quality testing in March 2022.
Water quality sampling by the Department of Water and Sanitation (DWS) on the Msikaba Estuary at 5 sites (WMS site 195387, 195388, 195389, 195390, 195391) between September 2021 and September 2022 revealed a pH which ranged between 8.03-9.3, with an average of 8.65
Water quality sampling on the Mtentu Estuary at 6 sites (WMS site 195393, 195395, 195396, 195397, 195398, 195399) between February and September 2022 revealed a similar pH as Msikaba Estuary, ranging between 8.5-9.3, with an average of 8.8

Rivers: Water quality sampling by the Department of Water and Sanitation (DWS) in 2024 on the Daza River (WMS site 1000266065) and Mkambati River (WMS site 1000266066) revealed an average pH of 6,94 and 7,09 respectively.

4.4.7 - Water salinity

- [x] Fresh (<0.5 g/l)
- [x] Mixohaline (brackish)/Mixosaline (0.5-30 g/l)
- [x] Euhaline/Eusaline (30-40 g/l)
- [ ] Hyperhaline/Hypersaline (>40 g/l)
- [ ] Unknown

Please provide further information on salinity (optional):

Estuaries: Water quality sampling by the Department of Water and Sanitation (DWS) on the Msikaba Estuary at 5 sites (WMS site 195387, 195388, 195389, 195390, 195391) from 2016-2022 revealed a salinity which ranged between 0.06g/l - 39.65g/l with an average salinity of 21.4g/l.
Water quality sampling on the Mtentu Estuary at 6 sites (WMS site 195393, 195395, 195396, 195397, 195398, 195399) between 2016-2022 revealed a similar salinity to Msikaba Estuary, ranging between 0.09g/l - 41g/l, with an average of 28.7g/l.

River: Water quality sampling by the Department of Water and Sanitation (DWS) in 2024 on the Daza River (WMS site 1000266065) and Mkambati River (WMS site 1000266066) revealed an average Electrical Conductivity of 11mS/m and 9.4mS/m respectively

(ECD) Dissolved gases in water

Dissolved Oxygen concentrations in the Msikaba and Mtentu Estuaries ranged between 4.2-18mg/l and 1.4-24.8mg/l respectively between 2016-2022

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic ☐
Mesotrophic ☑
Oligotrophic ☐
Dystrophic ☐
Unknown ☐

Please provide further information on dissolved or suspended nutrients (optional):

Water quality monitoring shows that the Rivers and Estuaries at Mkambati have very low levels of nutrients (Nitrates and Phosphates) compared to many of the inland wetland systems and estuaries which are affected by their upstream and surrounding land uses.
Estuaries: Water quality sampling by the Department of Water and Sanitation (DWS) on the Msikaba Estuary from 2016-2022 revealed Orthophosphate (PO4) concentrations of between 0,02-0,42mg/l with an average of 0,07mg/l. Concentrations of PO4 at Mtentu Estuary are almost the same and ranged between 0.02-0.41mg/l with an average of 0.08mg/l. PO4 concentrations of the waters at Daza and Mkambati Rivers (sampled in 2024) averaged at 0.01mg/l.

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar ○ ii) significantly different ◉

Surrounding area has greater urbanisation or development ☐
Surrounding area has higher human population density ☑
Surrounding area has more intensive agricultural use ☑
Surrounding area has significantly different land cover or habitat types ☐

Please describe other ways in which the surrounding area is different:

The catchment areas surrounding Mkambati Nature Reserve play a significant role in its ecological health. The numerous rural villages which occur in these catchments use the land primarily for grazing and small-scale agriculture. A number of small plantations also occur in the catchment, including a eucalyptus plantation which occurs just outside of the Nature Reserve, in the headwaters of the Daza and Mkambati Rivers, which may affect water availability and biodiversity due to the high water consumption of these trees. Some sand mining in the rivers of Msikaba and Mkambati are also reported to occur, which may lead to increased sediment loads downstream. Proper management of these upstream activities is crucial to maintaining the ecological integrity of the wetlands within the Nature Reserve.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Fresh water	Drinking water for humans and/or livestock	High
Wetland non-food products	Reeds and fibre	High

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Erosion protection	Soil, sediment and nutrient retention	Medium
Hazard reduction	Flood control, flood storage	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	High
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	High

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganizms, the genes they contain, and the ecosystems of which they form a part	High

Optional text box to provide further information

Nutrient Cycling: Wetlands support nutrient cycling, which sustains plant life and provides food for herbivorous and omnivorous species.
Nursery Areas: Wetlands serve as safe nursery grounds for many fish species, including the endangered Riverbream and Japanese Meagre, ensuring the survival of juveniles.
Habitat for Endemic Species: The unique conditions of the wetlands are crucial for endemic species like the Pondo White Pear and Mkambathi Palm, which are found nowhere else.
Other: The wetlands of the Mkambati Nature Reserve provide a number of other ecosystem services including education and research opportunities. Mkambati Nature Reserve is also a popular tourist destination with a number of tourist facilities. Apart from canoeing on the Mtentu River and fishing (limited to the Gwegwe beach), there are also variety of walking trails, popular amongst the flora and birding enthusiasts. Mkambati also provides a number of cultural services where local communities use the sea and rivers for rituals and provides provision services in the form of providing water for the reserve staff and tourists and for local communities who gather grass for thatch. One of the beliefs regarding Mkambati River is that you will get married when you wash your face with the water from the river. Although not currently harvested at Mkambati, a number of medical plants (which are typically used by traditional healers) are also present. Because of its isolation, before being proclaimed as a Nature Reserve, Mkambati saw the establishment of a leper colony in 1899. When leprosy was cured, the hospital became a tuberculosis facility. The graves of the people that were buried during this time can still be found at the Reserve.

Other ecosystem service(s) not included above:

The wetlands of Mkambati Nature Reserve are crucial ecosystems, particularly for species that are highly sensitive to environmental changes such as water quality, temperature, and habitat availability. Wetlands help regulate water flow, provide nursery grounds for fish, and support a wide variety of plant and animal species.

Within the site:	100s
Outside the site:	1000s

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes ○ No ◉ Unknown ○

4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland ☑

Description if applicable

The Pondoland region is known for its rich diversity of medicinal plants, many of which are used by traditional healers for treating various ailments. This practice remains an integral part of local culture and healthcare. Plants like the Pondo White Pear (Apodytes abbottii) and other endemic species have cultural significance as sources of traditional remedies. The local communities have a deep understanding of the natural environment. Their traditional knowledge of medicinal plants, sustainable resource use, and land management has been passed down through generations.

ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland ☐

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples ☐

iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland ☐

4.6 - Ecological processes

(ECD) Vegetational productivity, pollination, regeneration processes, succession, role of fire, etc.	Fire plays an important ecological role in the grasslands of Mkambati. Nutrient concentrations remain elevated for up to 6 months post burn, by when they are comparable to surrounding unburned grassland (Venter, 2014)
(ECD) Pressures and trends concerning any of the above, and/or concerning ecosystem integrity	The main pressure is poaching of antelope species especially Eland by local communities and the ignition of fires by poachers with the aim of attracting animals to certain areas once the new grass starts to grow

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Cooperative/collective (e.g., farmers cooperative)	☑	☑

Provide further information on the land tenure / ownership regime (optional):

In 1990 a cattle farming scheme was introduced by TRACOR on the land adjacent to Mkambati Nature Reserve. However, the poor productivity of the soil resulted in the failure of the pilot agricultural projects and the land remains still largely unutilized. Conflicts over land use between TRACOR officials and community members of seven villages adjoining Mkambati led ultimately to a claim for restitution of land rights under the Restitution of Land Rights Act in 1994. The land claim was finally processed in 2004, and land ownership of both the Mkambati Nature Reserve and the adjacent TRACOR lands reverted to the Mkambati Land Trust. Mkambati Nature Reserve is co-managed by the Eastern Cape Parks and Tourism Agency.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

Eastern Cape Parks and Tourism Agency

Provide the name and/or title of the person or people with responsibility for the wetland:

Lwazi Khuzwayo

Postal address:

Eastern Cape Parks and Tourism Agency
17 -25 Oxford Street
East London
5200

E-mail address:

Lwazi.Khuzwayo@ecpta.co.za

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Tourism and recreation areas	Low impact	Low impact	☑	☐

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Water abstraction	Medium impact	Medium impact	☑	☑

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Wood and pulp plantations	High impact	High impact	☑	☑
Livestock farming and ranching	Low impact	Low impact	☐	☑

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Roads and railroads	Low impact	Low impact	☑	☑
Aircraft flight paths	Low impact	Low impact	☑	☐

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Logging and wood harvesting	Medium impact	Medium impact	☐	☑
Fishing and harvesting aquatic resources	Low impact	Low impact	☑	☑

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Low impact	Low impact	☑	☑

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Fire and fire suppression	High impact	High impact	☑	☑

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Invasive non-native/ alien species	High impact	High impact	☑	☑
Problematic native species	High impact	High impact	☑	☐

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Garbage and solid waste	Low impact	Low impact	☑	☑

Geological events

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Avalanches/landslides	Low impact	Low impact	☑	☑

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Habitat shifting and alteration	Medium impact	Medium impact	☑	☑
Droughts	Medium impact	Medium impact	☑	☐
Temperature extremes	Low impact	Medium impact	☑	☑
Storms and flooding	Low impact	Medium impact	☑	☑

Please describe any other threats (optional):

Mkambati faces relatively few major threats. Invasive alien plants such as triffid weed (Chromolaena odorata), black wattle (Acacia mearnsii), tickberry (Lantana camara) and guava (Psidium) species are present. Animal poaching occurs in the reserve, as well as arson fires to attract game to certain points where poachers can more easily target them. Grassland fires that are too frequent and intense are of a concern as they can have significant impacts on the plants species found at Mkambati, for example this causes forest margins to recede affecting many rare and threatened marginal forest species. Sand mining upstream of the site has increased the sediment load in two Rivers which occur on the Ramsar Site, namely Msikaba and Mkambati Rivers.

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Provincial Nature Reserve	Mkambati Nature Reserve		whole

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	IBAZA006	https://datazone.birdlife.org/site/factsheet/mkhambathi-nature-reserve-iba-south-africa	whole
Other non-statutory designation	Maputaland-Pondoland-Albany Biodiversity Hotspot	https://www.cepf.net/our-work/biodiversity-hotspots/maputaland-pondoland-albany	whole

5.2.3 - IUCN protected areas categories (2008)

Ia Strict Nature Reserve ☑

Ib Wilderness Area: protected area managed mainly for wilderness protection ☐

II National Park: protected area managed mainly for ecosystem protection and recreation ☐

III Natural Monument: protected area managed mainly for conservation of specific natural features ☐

IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention ☐

V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation ☐

VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems ☐

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Faunal corridors/passage	Proposed

Species

Measures	Status
Control of invasive alien plants	Partially implemented
Threatened/rare species management programmes	Partially implemented

Human Activities

Measures	Status
Harvest controls/poaching enforcement	Implemented
Regulation/management of wastes	Partially implemented
Fisheries management/regulation	Implemented
Regulation/management of recreational activities	Implemented
Communication, education, and participation and awareness activities	Implemented
Research	Implemented

Other:

Mkambati's main management objective is to conserve biodiversity and to provide sustainable benefits to the local community through sustainable natural resource use and tourism

5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site? Yes ◉ No ○

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes ○ No ◉

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

Educational centre is available

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No, but a plan is being prepared

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Water quality	Implemented
Plant community	Implemented
Animal community	Implemented
Birds	Implemented
Plant species	Implemented

Climate monitoring

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Adams J.B., Colloty B.M., and Bate G.C. (2004). The distribution and state of mangroves along the coast of Transkei, Eastern Cape Province South Africa. Wetlands Ecology and Management 12: 531–541.
Adams, J and Rajkaran, A. (2021). Changes in mangroves at their southernmost African distribution limit. Estuarine, Coastal and Shelf Science, Volume 248. https://doi.org/10.1016/j.ecss.2020.107158
Bilton D.T., and Mlambo M.C. (2022). A new Copelatus with small eyes from the Eastern Cape wildcoast of South Africa (Coleoptera: Dytiscidea). Acta Entomologica, 62: 15–21. doi: 10.37520/aemnp.2022.002
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Gxabhu, O., Reeves, B., Nombewu, N. & Pamla, L. (2018). Invasive Alien Plants on ECPTA Reserves. Eastern Cape Parks and Tourism Agency, Eastern Cape, South Africa.
James N.C., and Harrison T.D. (2022). A preliminary fish survey of the estuaries on the east coast of South Africa, Mpande to Mtentwana: a comparative study. Water South Africa 48: 94–412. https://doi.org/10.17159/wsa/2022.v48.i4.3944

A full bibliography is provided under "Additional Reports and Documents".

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
<4 file(s) uploaded>

ii. a detailed Ecological Character Description (ECD) (in a national format)
<no file available>

iii. a description of the site in a national or regional wetland inventory
<no file available>

iv. relevant Article 3.2 reports
<no file available>

v. site management plan
<4 file(s) uploaded>

vi. other published literature
<3 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

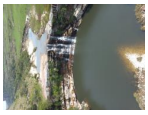
Please provide at least one photograph of the site:


Swamp Forest (*Jackie Jay, 27-09-2023*)


Butsha River (*Jackie Jay, 27-09-2023*)


Mtentu Estuary (*Jackie Jay, 27-09-2023*)


Horseshoe Falls (*Lwandiso Pamla, 14-11-2021*)


Horseshoe Falls from Aerial view (*Lwandiso Pamla, 12-10-2022*)


Mkambati Falls discharge to the ocean from Aerial view (*Lwandiso Pamla, 12-10-2022*)


Msikaba River (*Lwandiso Pamla, 01-12-2022*)


Four falls from Aerial view (*Lwandiso Pamla, 12-10-2022*)


Mthentu Estuary from Aerial view (*Lwandiso Pamla, 12-10-2022*)


Field trip with community members. (*Lwandiso Pamla, 27-09-2023*)


A stand of Palmiet (Prionium serratum) growing in one of the many rivers at Mkambati. (*Jackie Jay, 27-09-2023*)


The view from inside one of the swamp forests at Mkambati (*Jackie Jay, 27-09-2023*)


An example of one of the many seep wetlands that can be found at Mkamabti (*Jackie Jay, 27-09-2023*)


Daza River Mouth (*Graham Grieve, 26-10-2024*)


GweGwe River Mouth (*Graham Grieve, 27-10-2015*)


Eriosema dregei (*Graham Grieve, 11-08-2013*)

Impatiens flanaganiae (*Graham Grieve, 29-10-2015*)

Jubaeopsis caffra (*Graham Grieve, 14-09-2017*)

Leucadendron spissifolium subsp. natalense (*Graham Grieve, 28-10-2015*)

Lotononus bachmanniana (*Graham Grieve, 11-09-2015*)

Daza River (*Graham Grieve, 07-11-2018*)

Strandloper Falls (*Graham Grieve, 29-11-2017*)

Looking up to the Strandloper Falls (*Graham Grieve, 14-09-2017*)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation: 2025-02-02