

# iSimangaliso Wetland Park

## 2020 Conservation Outlook Assessment

### SITE INFORMATION

**Country:** South Africa

**Inscribed in:** 1999

**Criteria:** (vii) (ix) (x)



The ongoing fluvial, marine and aeolian processes in the site have produced a variety of landforms, including coral reefs, long sandy beaches, coastal dunes, lake systems, swamps, and extensive reed and papyrus wetlands. The interplay of the park's environmental heterogeneity with major floods and coastal storms and a transitional geographic location between subtropical and tropical Africa has resulted in exceptional species diversity and ongoing speciation. The mosaic of landforms and habitat types creates breathtaking scenic vistas. The site contains critical habitats for a range of species from Africa's marine, wetland and savannah environments. © UNESCO

### SUMMARY

#### 2020 Conservation Outlook

Finalised on 01 Dec 2020

##### GOOD WITH SOME CONCERNS

The conservation outlook for iSimangaliso Wetland Park is good with some concerns. The values of the site are of low concern overall following significant restoration projects and management interventions in accordance with the Integrated Management Plan. These include the restoration of wetlands, the removal of alien invasive plants, and the improved ecological functioning of the Lake St Lucia system. The socio-political context is a management challenge, however significant progress has been made to ensure engagement with local people and participation in decision making, as well as economic and other benefits for local communities. Although the lack of enforcement in marine fisheries in and outside the site and the conversion of unique swamp forest adjoining Sodwana Bay, is cause for concern. The findings of high concentrations of organochlorine in animal tissues could potentially lead to a deterioration of the Parks biodiversity and poses a high threat to biodiversity and the Park's visitors if not counteracted.

## FULL ASSESSMENT

### Description of values

#### Values

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##### World Heritage values

- **Geographically diverse area with superlative vistas along its 220 km-long coast** Criterion:(vii)

The site is geographically diverse with superlative scenic vistas along its 220 km-long coast, including areas of exceptional natural beauty and aesthetic importance. From the clear waters of the Indian Ocean, wide undeveloped sandy beaches, forested dune cordon and mosaic of wetlands, grasslands, forests, lakes and savannah, the iSimangaliso Wetland Park contains exceptional aesthetic qualities (World Heritage Committee, 2011).

- **The shifting salinity states within Lake St Lucia** Criterion:(vii)

The shifting salinity states of Lake St Lucia from low to hyper-saline are linked to wet and dry climatic cycles, and are considered an outstanding natural phenomenon (World Heritage Committee, 2011).

- **Vivid natural spectacles including nesting turtles and large aggregations of flamingos and other waterfowl** Criterion:(vii)

The spectacle of large numbers of nesting turtles on the beaches and the abundance of dolphins and migration of whales and whale sharks off-shore is an outstanding natural phenomenon. The huge numbers of waterfowl and large breeding colonies of pelicans, storks, herons and terns are impressive and add life to the wild natural landscape of the area (World Heritage Committee, 2011). iSimangaliso is the most important breeding site for waterbirds in South Africa with presence of globally threatened species, range-restricted species, biome restricted species and the site holds more than 20,000 waterbirds on a regular basis (Barnes, 1998).

- **The combination of fluvial, marine and Aeolian processes which have resulted in a variety of landforms and are ongoing to present day** Criterion:(ix)

iSimangaliso is an outstanding example representing significant ongoing ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems, and communities of plants and animals. The combination of fluvial, marine and aeolian processes initiated in the early Pleistocene has resulted in a variety of landforms and continues to the present day. The site's transitional geographical location between sub-tropical and tropical Africa as well as its coastal setting have resulted in exceptional species diversity. Past speciation events in the Maputaland Centre of Endemism are also ongoing and contribute another element to the diversity and interplay of evolutionary processes at work. In the marine component of the site, the sediments being transported by the Agulhas current are trapped by submarine canyons on the continental shelf allowing for remarkably clear waters for the development of coral reefs. The interplay of this environmental heterogeneity is further complicated by major events such as droughts, floods and coastal storms, which are regularly experienced in the site. The site is also of sufficient size and retains most of the key elements that are essential for long-term functioning of the ecosystems. The ecological linkages between the five ecosystems found in the iSimangaliso Wetland Park have been a major attraction for research on the geomorphological and biological processes occurring here (World Heritage Committee, 2011). The five ecosystems are (i) the marine ecosystem, characterised by a warm sea, the southernmost extension of coral reefs in Africa, submarine canyons and long sandy beaches (ii) the coastal dune system, consisting of linear dunes up to 180 m in height, sub-tropical forests, grassy plains

and wetlands (iii) lake systems, consisting of two estuarine-linked lakes (St Lucia and Kosi) and four large freshwater lakes (Sibaya, Ngobozeleni, Bhangazi North and Bhangazi South) (iv) the uMkhuze and uMfolozi swamps, with swamp forest, extensive reed and papyrus wetlands, and (v) the inland western shores, with ancient shoreline terraces and dry savannah woodlands, thickets and sand forests that occur on the higher lying ground between the coastal plain and the Lubombo Mountains.

### ► Significant diversity of African biota

Criterion:(x)

The five interlinked ecosystems found in iSimangaliso provide habitat for a significant diversity of African biota, including a large number of rare, threatened and/or endemic species. iSimangaliso contains some of the most important and significant natural habitats for the in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

As iSimangaliso is situated on the southernmost extremity of the Mozambique coastal plain, it hosts numerous species reaching the southernmost limit of their range which are, thus, not found elsewhere in South Africa. This adds to the value and importance of this unique area from a South African species conservation perspective. The presence of some of these species north of our borders cannot detract from the importance of conserving the South African populations, as little information is generally available on their conservation status and distribution in other parts of southern and central Africa. iSimangaliso is clearly a critical habitat for a range of species from Africa's marine, wetland and savannah environments. The species lists for the site are the most comprehensive in the region and population sizes for most of them are viable. There are also 48 species present that are listed as threatened internationally and 147 on the CITES list. The site is clearly a critical habitat for a range of species from Africa's marine, wetland and savannah environments. Of the over 6,500 plant and animal species known to occur in the park, populations of species of conservation importance include 11 species that are endemic to the park, and 108 species endemic to South Africa, while 467 are listed as threatened in South Africa (World Heritage Committee, 2011).

## Other important biodiversity values

### ► One of the most important breeding areas for waterbirds in South Africa

The entire iSimangaliso Wetland Park is a designated Important Bird and Biodiversity Area (BirdLife South Africa, 2015) and also contains Key Biodiversity Areas.

iSimangaliso Wetland Park supports more than 500 bird species and is one of the most important breeding areas for waterbirds in South Africa, with at least 48 species having bred here. Due to the variability of the St Lucia system, the lakes may hold very important numbers of a species in some years and almost insignificant numbers in others. The numbers and diversity of waterbirds vary considerably in response to environmental changes. Not only are waterbirds largely absent during periods of high salinity or elevated water levels, but many species are migratory or nomadic, occurring only in defined seasons.

## Assessment information

### Threats

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#### Current Threats

High Threat

The main threats to the site are from agricultural and forestry plantations inside and outside its boundaries, poaching and invasive alien species. Management intervention on invasive species has already shown positive results, and is flexible in order to adapt to new and emerging invasive species when these are identified. As agricultural and forestry plantations are outside the site, the management of their impact on the site requires strong cross-sectoral collaboration at the local, provincial and national levels. Recent findings of organochlorine in the tissues of species as well as drastic decrease of wetland features pose high threats to the Park's biodiversity. Additionally, the swamp forest deforestation within

the Park is of concern as it increasingly resulting in the loss of unique habitat inside of the Park.

► **Fishing / Harvesting Aquatic Resources**

**Low Threat**

*(Unsustainable fishing)*

Inside site, scattered(5-15%)

Outside site

Fish stocks in Kosi Lake, which represents 4.7% of the estuarine area of the park (IUCN Consultation, 2014), are being over-exploited as illegal gill nets are used in addition to traditional fish harvesting methods (James et al. 2001, 2008; Carbutt, 2012; IUCN Consultation, 2012b; Kyle, 2013). There is also harvesting of *Neosarmatium meinerti* and *Callianassa krauassi* crustaceans from the Kosi Lakes, but it is thought that this was sustainable at time of publication (Perdersen et al. 2003; Mann et al 2014), however the current status is unknown. Illegal fishing using gillnets has also been an issue in Lake St Lucia in the past (Mann, 1995; Crook & Mann, 2002), but current levels are unknown. In 2014 for example, 42 fishing craft and over 5km of gill net were confiscated. Management of so called no-take marine protected areas (MPAs) have been criticized limiting local fisheries, however, a 12-year study shows several species of fish, including *Rhabdosargus sarba*, *Trachinotus botla* and *Caranx heberi*, are sensitive towards catch & release methods when exhibited in high intensity (e.g. by tourists instead of researchers only), which poses a threat towards their populations (Mann et al., 2018). Dames et al. (2020) suggests some fish species (eg. *Caranx elampygus* and *Lethrinus crocineus*) may be particularly vulnerable to fishing pressure, which is permitted in the Controlled Pelagic Zones (CPZs) in contrast to the No-take Sanctuary Zone (NTSZ), where it is not permitted.

► **Dams/ Water Management or Use**

**Low Threat**

*(Reduction in surface water volumes)*

Inside site, scattered(5-15%)

Outside site

Following research (Bate et al., 2011), the St Lucia Estuary and Mfolozi River systems were re-joined in July 2012, opening the way for the restoration of the Lake St Lucia ecosystem. Estuarine functioning has been restored and the system is allowed to open and close to the sea naturally. Lowering the water table due to water abstraction from underground coastal aquifers possibly affects Lake Sibaya and Kosi lake systems, and other coastal wetlands. Kapangaziwiri et al. (2017) discovered more than 1/3 of the extensive water users in the KwaZulu-Natal province were not registered and creates a critical basis for aspects of water management, informs macro- and micro-water resource planning, water allocation reform, as well as water use compliance, monitoring and enforcement.

► **Forestry/ Wood production**

**High Threat**

*(Extensive rural wood-lot and small-scale commercial forestry development in the Buffer zone.)*

Outside site

The moratorium on the issuing of new forestry licenses in the catchment area by the Department of Water Affairs (DWA) has been effective as no new timber growing applications have been approved. Together with the DWA, the ecological water reserve has been determined for Lake St Lucia, Sibaya Lake and the Kosi lakes. A hydrological study has been completed for the buffer zone and has been included in a revised Integrated Management Plan 2017-2021 (iSimangaliso Wetland Park Authority, 2016).

► **Housing/ Urban Areas**

**Low Threat**

*(Densification of rural settlements in Zone of Influence)*

Inside site, scattered(5-15%)

Outside site

Densification of rural settlements near the park's boundaries is occurring, specifically Kosi Bay (KwaNgwqanase), Dukuduku, Nibela, Qongwana (just outside Sodwana) and Mseleni settlement (west of Lake Sibaya). Impacts are largely within the buffer zone but a working buffer zone policy is in place that deals with the mitigation of development and visual impacts (IUCN Consultation, 2012a; Umkhanyakude District Municipality, 2012). However, informal developments are taking place within the site boundaries, especially in the area directly north-east of Lake Sibaya and in the Bhanag Nek area. This is visible via Google Earth imagery.

- **Tourism/ Recreation Areas** **Very Low Threat**  
*(Tourism developments in Zone of Influence)* Outside site
- There have been localised but illegal resort developments (small-scale) in the northern Coast Forest section of the park (KwaDapha and Mabibi) with vegetation clearing (IUCN Consultation, 2012b), all of which have been removed and demolished. Rehabilitation has been completed at these sites. Development controls are in place (Kuppan, 2009; Sapa, 2010).
- **Hunting and trapping, Fishing / Harvesting Aquatic Resources** **High Threat**  
*(Poaching of animals (including rhinos) and illegal harvesting of plants, such as cycads and pelagics by illegal longliners often at night)* Inside site, scattered(5-15%)
- Poaching persists, especially of rhino. Additional management measures have been put in place and include the appointment of an additional 30 field staff. It was intended to train another 70 people in 2017. Increased surveillance of the boundary fence is being undertaken. A programme implemented by the Ezemvelo KZN Wildlife's Game Capture unit to remove the horns of rhino as a disincentive to poachers is ongoing (iSimangaliso Wetland Park, 2018). The number of rhino poached in 2016 was 23 and by May 2017 four rhino had been poached. More recent data is not available. Unpublished reports of poaching of pelagics does occur by illegal longliners, particularly along the South African/Mozambique border at night-time.
- **Shipping Lanes, Water Pollution** **Very Low Threat**  
*(Pollution from ships)* Inside site, scattered(5-15%)  
Outside site
- Waste material from passing ships washes up onto the beaches. The Management Authority implements a coast care programme, a job creation programme for local communities that includes the cleaning of beaches. Pollution from shipwrecks has been successfully prevented by emergency measures being implemented together with the South African Marine Safety Authority (SAMSA) (IUCN Consultation, 2012b).
- **Invasive Non-Native/ Alien Species** **High Threat**  
*(Alien invasive species)* Inside site, localised(<5%)  
Outside site
- Several alien invasive plant species (including *Chromolaena odorata*, *Psidium guajava*, *Casuarina equisetifolia*, *Lantana camara*, *Parthenium hysterophorus*) occur in the site, predominantly in areas of disturbance. An Invasive Species and Control Plan 2017-2021 is being implemented focusing on priority areas and the securing of funding. The Asian invasive gastropod, *Tarebia granifera*, has been recorded and monitoring is ongoing (Appleton et al. 2009; Miranda & Perissonotto, 2014). Unfortunately there are no known control measures for this species (Raw et al., 2012). Exotic timber tree plantations are grown inside the park, which show high encounter of the potentially synantropic honey badgers, because this modified habitat is not ideally suited to large carnivores such as leopard or spotted hyena (Kheswa et al., 2018).
- **Erosion and Siltation/ Deposition** **Very Low Threat**  
*(Disruption of coastal sediment movement)* Inside site, localised(<5%)  
Outside site
- Casuarina* trees have disrupted the coastal dune sediment building processes. These trees have been removed from the Kosi Bay Mouth, 9 Mile, Sodwana to the north of Adlams, and St Lucia beach and estuary mouth. Plans to remove trees at Sodwana Bay are the subject of an EIA currently being undertaken (IUCN Consultation, 2014).

- **Water Pollution, Industrial/ Military Effluents, Agricultural effluents, Air Pollution** **High Threat**  
*(Organochlorine pesticides (OCPs) and herbicides)* Inside site, widespread(15-50%)  
Outside site
- High levels of Organochlorine pesticides (OCPs) detected in two common fish species *Oreochromis mossambicus* (Mozambique tilapia) and *Clarias gariepinus* (African sharptooth catfish) as well as in *Crocodylus niloticus* (Nile crocodiles) in the lakes and wetlands at iSimangaliso Wetland Park highlight potential human health and ecotoxicological threats (Humphries 2013; Buah-Kwofie et al., 2018a,b). Birds are also affected (Bouwman et al. 2019). Porter et al. (2018) finds coastal groundwater to be the likely source of the pollutants finding high concentrations of OCP in coral species *Sarcophyton glaucum*, *Sinularia gravis* and the sponge *Theonella swinhoei*. Buah-Kwofie et al. (2019) finds elevated levels of OCP residues were detected in all products crops commonly cultivated by rural communities surrounding iSimangaliso Wetland Park with the majority of samples exceeding European Commission's maximum residue limits (MRLs) therefore residues in crops and fish from the study area pose a high risk to human health.
- Widespread contamination of herbicides in riverine sediments and St Lucia estuarine environment have also been detected. Ecological assessment indicates potential risk to algae and aquatic invertebrates (Tyohemba et al. 2020).
- **Household Sewage/ Urban Waste Water** **High Threat**  
*(Population growth and tourism establishments adjacent to the Park)* Inside site, extent of threat not known  
Outside site
- Growth of population and rise of annual visitors in and outside the Park followed by the development of a considerable number of additional private holiday establishments situated outside the Park and therefore outside its jurisdiction, which negatively influences quality of groundwater, the lakes and the estuary at the site due to boreholes and waste water discharge into the ground, hence a lack of formal municipal sewage system regulations (Bate & Taylor, 2019)
- **Habitat Shifting/ Alteration** **High Threat**  
*(Drastic decrease of wetland features (marshland and quag) between 1987 and 2017.)* Inside site, widespread(15-50%)
- Presumably due to climate change, environmental degradation and invasive species wetland features (marshland and quag) between 1987 and 2017 experienced drastic decrease with an area coverage of about 16,651.07 km<sup>2</sup> (38%), whereas dense vegetation, sparse vegetation and water body have increased with about 14% (5976.495 km<sup>2</sup>), 23% (10,349.631km<sup>2</sup>) and 1% (324.621) respectively in the same time period (Orimoloye et al., 2019).
- **Other Ecosystem Modifications** **High Threat**  
*(Habitat transformation)* Inside site, scattered(5-15%)
- Critically endangered swamp forest has/is being cleared in at least two areas within the site for subsistence agriculture and the wetland canalized (iSimangaliso, 2019a,b; Van Deventer et al. in prep). This includes the Mapelane area and the entrance to Sodwana Bay. In the case of Mapelane, ~51% loss of swamp forest cover has occurred from 2002 to 2012 in a total patch size of 6 km<sup>2</sup> (Van Deventer et al. in prep). The causes apparently relate to boundary disputes of the site with locals and a perceived lack of benefits from the site. This is observable on the ground and with Google Earth imagery.
- **Water Pollution, Industrial/ Military Effluents, Agricultural effluents** **Data Deficient**  
*(Heavy metal contamination)* Inside site, extent of threat not known
- High levels of arsenic have been detected in several species of fish from Kosi Lake that are likely to pose a risk to human health, however it is unknown what the risk may be to biodiversity (Beukes 2018). Furthermore, particularly high levels of nickel have been found in the soft coral *Sinularia* from Sodwana Bay (van der Schyff et al. 2020).

► **Habitat Shifting/ Alteration, Temperature extremes** **Low Threat**  
(*Marine heatwaves*) Inside site, widespread(15-50%)

Long-term monitoring of underwater temperature at Nine-mile Reef has indicated that temperatures have shown a stable trend over the last 25 years (Porter & Schleyer 2017). However, there have been marine heatwaves and incidences of mild coral bleaching have been detected on several occasions (Porter et al. 2018). Global-scale models predict water temperatures to rise, but currently the threat is considered to be low as thermal stress has not resulted in significant mortality on reefs within the site.

► **Tourism/ visitors/ recreation** **Low Threat**  
(*SCUBA diving and boating*) Inside site, localised(<5%)

Dames et al. (2020) suggests there is a possibility of disturbance from scuba diving to fish species, which e.g. has impacted the population structure and habitat selection of *Lethrinus crocineus* in Controlled Pelagic Zones (CPZs). Curry et al. (2012) and Floros et al (2013) concluded that human activities are significantly affecting fish communities. Divers also damage coral which is why diver carrying capacity was calculated, but this did not consider disturbance to fish communities (Schleyer & Tomalin 2000).

The bigger issue here is that there is no buffer area as far as zonation in the marine environment is concerned. Sodwana Bay, where all the diving is undertaken, lies opposite the Central Reef Complex, in the core of the marine environment of the site. As such, the core of the marine environment in this site is the most disturbed and heavily utilised, which is contrary to best practices. The draft iSimangaliso Wetland Park integrated management plan is also looking at creating another launch site opposite Nine-mile Reef which may add to levels of disturbance in the core of the site.

**Potential Threats** **Low Threat**

Implementation of the legislation controlling shipping activities and the application of emergency response protocols reduce the potential and actual pollution threat. Future effects related to climate change will need to be considered to assess the threat status and appropriate adaptation responses.

► **Shipping Lanes, Water Pollution** **Low Threat**  
(*Pollution - marine and coastal*) Inside site, widespread(15-50%)  
Outside site

With the escalation in shipping along the coast, pollution from cleaning of bilge tanks of ships, potential oil spills from tankers and occasional shipwrecks on the coast and reefs will occur. Emergency response procedures are in place to counter this threat (IUCN Consultation, 2014).

► **Droughts, Temperature extremes, Storms/Flooding** **High Threat**  
(*Climate change*) Inside site, widespread(15-50%)  
Outside site

Predictions of climate change in south-eastern Africa are that it will become hotter and wetter and sea levels will rise. The exact future effects on these wetland and coastal systems are a matter of speculation to some extent as comprehensive data on the effects of projected climate change across the many values for which the site is listed is lacking. However, the overwhelming majority of climate models predict warming and the site contains many thermally sensitive species such as marine calcareous organisms, which have already shown signs of thermal stress (IUCN Consultation, 2020). Climate change also carries potential impacts on the hydrodynamics of the site which underpin many of the sites values and may have already contributed (likely in combination with other factors including natural and human activities) to significant depletion of the water surrounding iSimangaliso Wetland area (Orimoloye et al., 2020). Therefore, this potential threat is assessed as high, even in the absence of fully comprehensive monitoring data.

► **Identity/social cohesion/ changes in local population and community that result in negative impact**

**High Threat**

Outside site

*(Increasing rural population coupled with poverty leading to increased edge effects)*

The local municipalities encompassing and adjacent to the site are rural. The uMhlabuyalingana Municipality encompasses the informal settlements of Mbazwane and Manguzi. Of the 39614 households, 19.1% have electricity and 1.6% have piped water (Local government handbook, 2020). The dependence ratio is 82.0%. The Big Five Hlabisa Municipality is also rural, and of the 25255 households 70.1% have electricity while 11% have piped water (Local government handbook, 2020). The dependence ratio is 79.9%. The populations within these areas are increasing and may increase the 'Densification of rural settlements in Zone of Influence' threat listed above through edge effects such as incursions, illegal developments, resource use, poaching etc. within the site if not managed appropriately.

► **Dams/ Water Management or Use**

**Low Threat**

*(Depletion of groundwater)*

Inside site, widespread(15-50%)

Many of the ecosystems of the site are dependent on groundwater recharge. Unsustainable abstraction of groundwater is likely to be having a negative affect when one considers increasing populations and commercial forestry, especially during droughts. This could lead to potential seawater invasion of the coastal aquifer (Weitz & Demlie, 2013).

**Overall assessment of threats**

**High Threat**

Threats include commercial plantations in the buffer zone and alien invasive plants in and outside the site, with proven and potential impacts on ground water levels and changes in natural habitats. The positive impacts of the management interventions that have been undertaken to restore habitats, control and mitigate threats and conserve the World Heritage values have been significant in reducing the potential severity of threats to the sustainability of the site. Recent findings of organochlorine in the tissues of species as well as drastic decrease of wetland features pose high threats to the Park's biodiversity.

## Protection and management

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### Assessing Protection and Management

► **Management system**

**Mostly Effective**

The Integrated Management Plan for the site has been revised and approved for the 2017-2021 period (iSimangaliso Wetland Park Authority, 2016). In 2019 the new regulations for the management of the iSimangaliso Marine Protected Area are being ratified leading to an extension of the Park (National Environmental Management, 2019). The day-to-day conservation management is undertaken by Ezemvelo KwaZulu-Natal Wildlife (provincial conservation authority, EKZNW), as defined by a management agreement with iSimangaliso Wetland Authority. A well capacitated staff undertakes the strategic and project management and day-to-day management of the site, implementation of community development programmes, management of research and monitoring (iSimangaliso Wetland Park Authority, 2011; EKZNW, 2007). However, there is a need for improved transboundary cooperative communication and management with the neighbouring Ponta do Ouro Partial Marine Reserve as many marine species are shared between these sites (Daly et al. 2018).

► **Effectiveness of management system**

**Mostly Effective**

A Management Effectiveness Tracking Tool (METT) assessment was undertaken for the 2015-2016



period. The outcome was a score of 86%. There is no more recent data on the effectiveness of the management system.

► **Boundaries**

**Some Concern**

Extension of the Marine Protected Area MPA boundaries: The planned iSimangaliso Wetland Park expansion will provide additional protection the wider marine environment, including tiger shark (*Galeocerdo cuvier*) populations, with these planned MPAs resulting in an increased coverage from 1.48% to 6,83% of their identified hotspot (Daly et al. 2018). With an additional 970 366.57ha of ocean now falling under the iSimangaliso MPA, iSimangaliso's combined terrestrial and marine area is some 1 328 900ha (or 13 289 square kilometres), also making it the second largest protected area in the country after the Kruger National Park (IWPA, 2019a). However, there are some issues with the delineation of the western boundary and there are areas where the boundary is not clearly marked or fenced which has in part contributed to the transformation of critically endangered swamp forest to the entrance of the Sodwana Bay area and in the Mapelane area. Furthermore, there is a lack of offshore enforcement of the boundaries.

► **Integration into regional and national planning systems**

**Mostly Effective**

The site is integrated into the Lubombo Spatial Development Initiative which is a three country (South Africa, Swaziland and Mozambique) programme focused on agriculture and tourism development (IMP, 2011).

► **Relationships with local people**

**Mostly Effective**

Considerable effort and resources are allocated by the Management Authority to the management and maintenance of relationships with communities. Significant achievements have been made to date with regards to participation of local communities in decision making and the implementation of programmes that deliver tangible benefits to local communities. The Authority has the capacity and resources to maintain ongoing relationships with communities (IUCN Consultation, 2014) and thus, through this process strengthening the resilience of the park. It prioritizes the delivery of benefits to its neighbors and landowners -more than 700 000 on the borders of this natural wonder - alongside its commitment to collaborate with stakeholders (IWPA, 2019b).

► **Legal framework**

**Mostly Effective**

Protection and environmental laws are in place and are enforced systematically by mandated law enforcement staff.

► **Law enforcement**

**Some Concern**

The national and provincial conservation and environmental laws and regulations are enforced by staff of the Management Authority stationed at strategic locations within the World Heritage site. Daily foot patrols are undertaken by field rangers throughout the area. Law breakers are caught, arrested and prosecuted. However, a lack of law enforcement has led to the systematic transformation of swamp forest at Sodwana Bay (IUCN Consultation, 2020), despite the negative effects on the values of the site that such conversion entails. Furthermore, there are no offshore law enforcement patrols being conducted in the marine environment, except from Cape Vidal, which is a concern (IUCN Consultation, 2020).

► **Implementation of Committee decisions and recommendations**

**Data Deficient**

n/a

► **Sustainable use**

**Mostly Effective**

Fish and certain plants continue to be harvested. Monitoring of these activities is in place.

► **Sustainable finance**

**Mostly Effective**

Budget provision is made annually to the iSimangaliso Wetland Authority from National Government and to EKZNW from Provincial Government. The Management Authority continues to obtain funding for rehabilitation, restoration and re-development, including the implementation of substantial local economic development programmes. However, Ezemvelo has been experiencing significant budget cuts (IUCN Consultation, 2020).

► **Staff capacity, training, and development**

**Mostly Effective**

In-house training of staff is ongoing and programmes are in place for staff to advance in their skills and/or qualifications.

► **Education and interpretation programs**

**Mostly Effective**

Over 5 200 learners visit the Park annually as part of the environmental education programme, while 112 academic achievers have been supported thus far in tertiary education as they study in fields relevant to the Park's management (IWPA, 2019b). An Environmental Education Assistant has been appointed to advance environmental education activities. A biannual School Award Program has involved some 11,250 students from 75 schools who participated in the 'My Rhino, Our Future' campaign using both artwork and mobilising people to walk the length of the park in support of rhino conservation. The bursary and academic support programme is ongoing. It has supported 41 students at universities and technical colleges in conservation and tourism exceeding the annual target in 2018/2019 (IWPA, 2019b). Some 1,500 new signs (direction, safety, regulation information) have replaced about 2,500 outdated signs. A tree name labelling project is ongoing that is also linked to smart phone technology.

► **Tourism and visitation management**

**Mostly Effective**

The total number of Park visitors for the period 2018/2019 was 522 954, of which 278 759 were paying visitors (IWPA, 2019b). The Authority is rolling out a new marketing and tourism strategy to increase the numbers in the period 2019/2020 with one of the Authority's mandates being to uplift the local communities living adjacent to the Park through initiatives such as improving access to the Park and providing employment and business opportunities (IWPA, 2019). In the third quarter of the year, the Authority made Park access at Sodwana Bay free for all local visitors, and to provide business opportunities for locals, the facilities contract and security fence maintenance were unbundled to offer local SMMEs these opportunities (IWPA, 2019b).

The tourism industry around the World Heritage site has experienced exponential growth since 1999. Plans for the redevelopment of Sodwana Bay camp and the EIA have been approved. An amount of R126.6 million is to be invested in the Coastal Forest Reserve section and Kosi Bay facilities. An EIA is being undertaken for the Bhangazi Heritage Site and the re-development of Charters Creek camp is underway. Some 300 km of tourist roads have been refurbished as well as visitor facilities (e.g. hides, sanitation, boardwalks, picnic sites, etc.).

There are still further tourism opportunities to be developed within the park (IUCN Consultation, 2020). For example, the closure of Rocktail Bay lodge led to the loss of a low impact tourism venture well suited to the Park.

► **Monitoring**

**Highly Effective**

Essential monitoring of biotic and abiotic components is ongoing. Monitoring of physical and chemical parameters of Lake St Lucia has improved with the implementation of an automatic electronic data gathering and storage application. This has allowed the Management Authority to assess the impact of the Lake restoration project. Monitoring in the marine environment includes: line-fish, surf-zone fish, turtles, coelacanth, whale shark and bull shark populations; also assessments of reef fish and shark populations as well as coral reef monitoring surveys (long-term). Monitoring of the estuarine system includes ground and estuarine waters. Monitoring of animal populations focuses on endangered species

(i.e. wild dog, leopard) in addition to rare and Red data plant species and conservation assessments of insect and butterfly biodiversity. Following a project for the contraception of elephants, monitoring is being conducted.

► **Research**

**Highly Effective**

There are currently 130 research projects being undertaken by researchers and postgraduate students from both South Africa and other countries. Research is approved on the basis of its contribution to the management of the site, and to science in general. Research findings are fed into management decisions. The iSimangaliso Authority also commissions research required to assist with management of the site.

**Overall assessment of protection and management**

**Mostly Effective**

The Management Authority has been mostly effective in its protection and management of the Site. The Integrated Management Plan has been revised for the 2017-2021 period and is currently being implemented. The Site achieved a high METT score and funding for protection and development has been forthcoming. Staff development is ongoing and visitor facilities improvements made. Research and environmental monitoring is ongoing. The lack of enforcement, particularly in regards to offshore marine fisheries and land conversion of the swamp forest adjoining Sodwana Bay, is however an area of concern which requires greater attention on behalf of the management.

► **Assessment of the effectiveness of protection and management in addressing threats outside the site**

**Mostly Effective**

The Management Authority has been mostly effective in addressing outside threats through its relationship with local people, a robust legal framework, and the integration of the site into both local and regional plans. It has been particularly effective in undertaking a relatively comprehensive education and student support programme. However there is concern in regards to enforcement of offshore fishing and the ongoing conversion of unique swamp forest. Transboundary cooperative management and governance is another area for improvement, especially with the neighbouring Ponta do Ouro Partial Marine Reserve, which serves as a critical buffer for the iSimangaliso Wetland Park and shares many of the same marine species, including almost all marine predatory sharks.

► **Best practice examples**

(1) The delivery of benefits to communities, the co-management agreements in place with land claimants and the participation of local communities in decision making makes iSimangaliso's conservation model 'Developing to Conserve' useful for other protected area agencies. (2) The ongoing Western Shores collaborative management with SiyaQhubheka continues to maintain an effective and well buffered margin to the site. (3) Continuation of the alignment of the Management Authority with government's macro-economic and social priorities has allowed for strong political support and access to funding for both the conservation and rural development programmes that the Authority delivers to a range of beneficiaries.

## State and trend of values

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### Assessing the current state and trend of values

#### World Heritage values

► **Geographically diverse area with superlative vistas along its 220 km-long coast**

**Good  
Trend: Improving**

The aesthetic scenic values have improved with the implementation of management interventions, the

restoration of Lake St Lucia and the recovery in natural vegetation with associated fauna. The extension of the marine protected area adds additional value to the biodiversity of the site

► **The shifting salinity states within Lake St Lucia**

**Low Concern**  
**Trend:Improving**

In the recent past, Lake St Lucia has been facing significant water shortages as a result of human intervention, and exacerbated by severe droughts. The St Lucia Restoration Project (R63 million) to re-establish the hydrological link of the uMfolozi River with the Lake St Lucia system has been completed. This has entailed the removal of 1.363 X 10<sup>6</sup> m<sup>3</sup> of dredged spoil deposited in the past over some 60 years due to the mouth of the river being artificially separated from the estuary. Ongoing monitoring is occurring on the biotic and abiotic effects of the project. Preliminary results suggest that a shift from coarse and medium grains to silt has produced muddier substrate, with a corresponding shift in zooplankton and macrofauna composition shown in preliminary analyses (Jones et al, 2020) as well as on various flora and megafauna, including hippopotami and crocodiles, have also been observed (Jones et al., 2020).

► **Vivid natural spectacles including nesting turtles and large aggregations of flamingos and other waterfowl**

**Low Concern**  
**Trend:Improving**

The spectacle of large numbers of nesting turtles on the beaches and the abundance of dolphins and migration of whales and whale sharks off-shore is an outstanding natural phenomenon. The significant populations of waterfowl and large breeding colonies of pelicans, storks, herons and terns are impressive and add life to the wild natural landscape of the area (SoOUV, 2011). iSimangaliso Wetland is the most important breeding site for waterbirds in South Africa with presence of globally threatened species, range-restricted species, biome restricted species and the site holds more than 20,000 waterbirds on a regular basis (Barnes, 1998). Nesting loggerhead and leatherback turtles have been protected in the site for five decades. The nesting beaches are undisturbed with few anthropogenic disturbances, protecting both the nests and vulnerable hatchlings. The 2016/2017 nesting season yielded a total of 628 individual nesting female loggerhead turtles. This shows a decline since the 2011-2012 season. The numbers of female leatherbacks nesting on the beaches was 69, that is stable at 70-100 individuals. The turtle beaches were severely eroded in October 2016. There is, therefore, concern regarding turtle hatching success rates.

► **The combination of fluvial, marine and Aeolian processes which have resulted in a variety of landforms and are on-going to present day**

**Low Concern**  
**Trend:Improving**

Generally, abiotic and biotic processes continue to function largely unhindered. The dune-building processes have been restored in certain areas with the removal of casuarina trees. There is however some evidence of erosion of dunes in the Sodwana Bay region, with forested foredune slumping occurring (IUCN Consultation, 2020).

► **Significant diversity of African biota**

**High Concern**  
**Trend:Stable**

Good viable populations of all indigenous plants are still present including rare and endemic species, e.g. the forest habitat for *Cola dorrui* in the False Bay Park section appears well-protected (Cheek et al., 2018). Although comprehensive recent data is fairly limited, restoration of grassland, coastal forest, wetland and estuarine habitats on the eastern and western shores and the reinstatement of more natural estuarine conditions within Lake St Lucia have enhanced the recovery of plant communities (IUCN Consultation, 2014). Good viable populations of all fish species are also present including rare and endemic species, although some species populations are declining (IUCN Consultation, 2012a). The reinstatement of wetland habitats on the eastern and western shores have substantially increased the habitat availability for amphibians (IUCN Consultation, 2014).

Population sizes of two sea turtle species are increasing, and population trends for various birds and mammals appear to be improving (IUCN Consultation, 2012b). The extension of the marine protected area adds additional value to the biodiversity of the site, especially the conservation of pelagic and

offshore environments (IWPA, 2020; National Environmental Management, 2019). However, water pollution with organochlorine pesticide contamination in the MPA as well as in the wetlands and estuaries is high with several marine and fresh water species showing concerning levels of organochlorine pesticides in their tissues, which poses high risk to them as well as to human health (Buah-Kwofie et al., 2018a,b; Porter et al., 2018, Buah-Kwofie et al., 2019). In addition, habitat transformation of critically endangered swamp forest is a major threat to the sites biodiversity and the failure of management to stop this destruction, despite recognizing and making steps to halt it (iSimangaliso, 2019a), is of high concern (IUCN Consultation, 2020). For the first time in history the Park was closed for 74 days of COVID-19 lock-down, which has released pressure on terrestrial habitats from tourist disturbances, and granted an opportunity for animal species to rehabilitate, with game spp. reportedly much more relaxed and grazing freely close to the roads (IWPA, 2020).

## Summary of the Values

### ► Assessment of the current state and trend of World Heritage values

Low Concern  
Trend: Improving

All site values have shown significant improvement in the past, and this has resulted in an increased resilience of this World Heritage site and its Outstanding Universal Value such that overall the current state and trend of the World Heritage values is of low concern. However, the deteriorating trend in a number habitats, both marine and terrestrial, within the site due to a combination of threats listed in this assessment including organochlorine pesticide pollution, land conversion and climate change render the significant diversity of African biota of high concern.

### ► Assessment of the current state and trend of other important biodiversity values

High Concern  
Trend: Deteriorating

Many of the site other important biodiversity values have shown significant improvement in the past, and this has resulted in an increased resilience of this World Heritage site and its Outstanding Universal Value. However, the high amounts of organochlorine are alarming posing a severe threat to all biodiversity of the Park. Additionally, the deforestation of unique swamp forest habitat for agriculture within the park boundaries is escalating and needs urgent attention.

## Additional information

### Benefits

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#### Understanding Benefits

##### ► Outdoor recreation and tourism

The natural coastal environment together with its tourist facilities provided both within and outside of the site are used by local, national and international visitors to their benefit.

##### ► Importance for research

The site has been well studied and many postgraduate students and research organisations continue to undertake research projects.

##### ► Coastal protection

Marine, terrestrial, wetland and estuarine biodiversity services function optimally as well as coastal protection being provided.

Factors negatively affecting provision of this benefit :

- Pollution : Impact level - High, Trend - Decreasing

High concentrations of organochlorine found in animal tissue.

► **Fishing areas and conservation of fish stocks**

Major fisheries depend on the estuarine functioning of St Lucia lake system.

► **Natural beauty and scenery**

One of the world heritage Values of this site is that it is geographically diverse with superlative scenic vistas along its 220 km-long coast, including areas of exceptional natural beauty and aesthetic importance.

► **Sustainable extraction of materials (e.g. coral, shells, resin, rubber, grass, rattan, etc)**

Sustainable harvesting of grasses and sedges for building materials. The harvesting of sedges are estimated to be R 7.5 million a year (CoastKZN, 2017).

► **Fishing areas and conservation of fish stocks**

Subsistence harvesting of estuarine fish species and intertidal invertebrate resources

► **Contribution to education**

The site makes a significant contribution to education, an example is the recent tree naming project where trees have been identified and labeled in several languages for purposes of visitor education (iSimangaliso, 2018). Furthermore, numerous school groups visit the site for education on their natural heritage (iSimangaliso, 2019a). There is also the Crocodile Education Centre at St. Lucia (iSimangaliso, 2019b). These are a few examples.

► **Collection of genetic material**

A portion of the research conducted within the site focuses on the collection of genetic material. Examples are the recent work done on soft corals (Etsebeth, 2018) and Pocillopora spp. (Chiazzari et al. 2019) and the discovery of a new species of freshwater crab in the Hluhluwe area of the site (Peer et al. 2015).

► **Direct employment**

Most of the staff that work in the site are from local communities and employed by the iSimangaliso Wetland Park Authority and by Ezemvelo KZN Wildlife.

► **Tourism-related income**

The site supports a thriving eco-tourism industry. Just the expenditure by scuba divers contributes R 73 to 78 million per annum in direct revenue (Dicken, 2014).

► **Provision of jobs**

The site provides many indirect jobs to local people that are not directly employed by the site. This is in the form of the many tourism related concessions licensed to operate within the site, and in many ways supports the economies of many of the towns in the area such as St. Lucia, Mbazwana, Hluhluwe, Mtubatuba, Mkuze etc.

► **Traditional agriculture, Livestock grazing areas**

The contribution of the estuarine floodplain areas associated with the site to livestock grazing is estimated at R3,6 million per year (CoastKZN, 2017).

► **Carbon sequestration,  
Water provision (importance for water quantity and  
quality)**

The highest densities of swamp forests and peatlands occur within the site which contribute significantly to carbon sequestration and storage (Ellery et al. 2012) as well as have a positive influence on water quality.

Factors negatively affecting provision of this benefit :

- Habitat change : Impact level - High, Trend - Continuing

There is transformation of swamp forest and peatland to subsistence agriculture in and outside of the site.

► **Soil stabilisation,  
Coastal protection**

Sediment generation by the coral reefs at just Sodwana Bay has been valued at R2.6–R4.8 million, and sediment entrapment valued at R71.8–R84.6 million, totalling between R74.4 million and R89.4 million (≈\$5.6–\$6.7 million, at R13.38/US\$1) per year (Laing et al. 2020). The total value of the Sodwana Bay beach in 2018 was calculated as being worth US\$ 21 081 623 (Laing et al. 2020).

► **Other**

Conservation of significant terrestrial, wetland, estuarine and marine biodiversity and natural heritage.

Factors negatively affecting provision of this benefit :

- Climate change : Impact level - Low
- Pollution : Impact level - Low, Trend - Continuing
- Overexploitation : Impact level - Low, Trend - Continuing
- Invasive species : Impact level - Low, Trend - Continuing
- Habitat change : Impact level - Low, Trend - Continuing

► **Pollination**

As a natural world heritage site and one with high biodiversity, the site contributes significantly to maintaining pollination interactions (Johnson et al 2009; Griffiths et al. 2010; Joubert & Samways 2011; Gigant et al. 2014)

► **Flood prevention**

The site is characterized by a high abundance of large wetlands and is prone to receiving large amounts of rain from tropical cyclones (Creek & Rocks, 2015). Wetlands play a critical role in flood mitigation and prevention (Loveline, 2015).

Factors negatively affecting provision of this benefit :

- Habitat change : Impact level - High, Trend - Continuing

Due to the canalization of the Mfolozi River, the Mfolozi swamps ability to mitigate flooding is compromised (see Cyrus et al. 2010 and Whitfield et al 2013).

► **History and tradition,  
Cultural identity and sense of belonging**

The site is rich in cultural heritage, due to the long history of inhabitation of the land, extending back to the Stone and Iron Age. The site is the largest protected area of recorded and potential Stone Age and Iron Age sites in South Africa with a high density of archeological material (Beaumont et al. 1978; Avery 1980; Anderson 2001).

► **Sacred natural sites or landscapes**

There are sacred natural sites within the Site, for example Enkwazini on the eastern shores (Hall, 1980).

► **Sacred or symbolic plants or animals, Cultural identity and sense of belonging**

There many symbolic animals, particularly birds with respect to Zulu cultural traditions and beliefs (Biyela, 2009; Koopman, 2018).

► **Wilderness and iconic features**

The Site formally incorporates a terrestrial Wilderness area and many iconic features (iSimangaliso, 2017)

► **History and tradition**

The site is rich in fossils (Kennedy & Klinger, 2006, 2013).

**Summary of benefits**

Major benefits from nature conservation are received by both communities outside the site and further afield. All other benefits are of major importance to the communities outside the site and to a lesser extent to a wider community.

**Projects**

**Compilation of active conservation projects**

<b>Nº</b>	<b>Organization</b>	<b>Brief description of Active Projects</b>	<b>We bsit e</b>
1	iSimangaliso Authority (funding from iSimangaliso and Global Environment Facility)	Lake St Lucia Estuary restoration The iSimangaliso Wetland Park Authority has raised funding through the Global Environment Facility to investigate and formulate long-term solutions that will, as far as possible, restore the natural hydrological and ecological functioning of this important system. Using the best available scientific knowledge, current management activities are focused on diverting fresh water from the Mfolozi into the lake and allowing the Mfolozi and St Lucia mouths to join.	<a href="http://isimangaliso.com/">http://isimangaliso.com/</a>
2	iSimangaliso Authority (funded by iSimangaliso Authority and Department of Environmental Affairs - Natural Resources Management)	Land and Coast Care A management programme aimed at the removal / control of alien invasive plants that threaten the site and subsequent rehabilitation of disturbed environments. Over the past ten years, 3,424 land care contracts were awarded to community based contractors who employed 35,464 people to undertake the rehabilitation of 22,500 ha at a cost of R 70,112,249.64. iSimangaliso is also implementing a Coast Care programme which focuses on the coastal areas of the park. The programme employs 108 people living in the coastal areas over three years to keep the beaches clean, to build infrastructure and for alien vegetation control. Labour intensive methods are engaged to maximise the job creation aspects of the programme, and a capacity building and training component aimed at the people employed is included.	<a href="http://isimangaliso.com/">http://isimangaliso.com/</a>
3	iSimangaliso Authority (in partnership with Siyaqhubeka)	Incorporation of land into iSimangaliso Wetland Park. Removal of pine/gum plantations on the eastern and western shores and subsequent rehabilitation of degraded environments. Joint management of incorporated land on western shores – Siyaqhubeka (Mondi).	<a href="http://isimangaliso.com/">http://isimangaliso.com/</a>
4	iSimangaliso (in partnership with Ezemvelo)	Game reintroduction programme Re-introduce, re-establish and maintain viable and ecologically appropriately sized populations of depleted or locally extinct indigenous species to optimal ecological carrying capacity and manage for genetic viability by application of appropriate wildlife management practices.	<a href="http://isimangaliso.com/">http://isimangaliso.com/</a>



№	Organization	Brief description of Active Projects	Website
5	iSimangaliso Authority (in partnership with the Transfrontier Commission and Ponta Do Ouro Partial Marine Reserve)	Extension of World Heritage Site into Mozambique iSimangaliso continues to support the establishment of one of the five TFCAs. There is action underway to establish a transfrontier site with neighbouring Mozambique as well as extend the marine reserve to align with the terrestrial component for the full length of the iSimangaliso Wetland Park. This would benefit the conservation of the area (IUCN, 1999).	<a href="http://isimangaliso.com/">http://isimangaliso.com/</a>
6	iSimangaliso Authority iSimangaliso Authority funds monitoring, radio collars and research. (Partners are Ezemvelo/research organisations and individuals).	Priority species conservation Turtle monitoring programme, rhino conservation programme, rare, threatened and endemic species programme; coral reef monitoring, coelacanth research programme.	<a href="http://isimangaliso.com/">http://isimangaliso.com/</a>
7	iSimangaliso (in partnership with Ezemvelo and beneficiary communities)	Natural Resource Management There is a wide range of natural resources harvested by communities living in and around the park, including marine (such as mussels and fish), estuarine (crabs and fish), forest (such as iLala palm and wood for building, fuel wood and carving), grasslands (such as for cattle grazing) and wetland species (such as iNcema). iSimangaliso will continue to provide access for sustainable and wise utilisation of natural resources. Where appropriate, alternative external sources and livelihoods are being explored, facilitated and encouraged in consultation with the beneficiary communities.	<a href="http://isimangaliso.com/">http://isimangaliso.com/</a>
8	iSimangaliso Authority (beneficiaries are land claimant and surround communities)	Environmental education and awareness There are approximately half a million people living around the park - most of whom have never visited the park or had a positive educational or recreational experience in the park. Many people do not know why iSimangaliso was listed as a World Heritage site. iSimangaliso has created an environmental education and awareness programme for the park through a schools programme (environmental education fieldtrips/school awards) and an adult awareness programme (mobile workshops in the park). In addition, the Sodwana beach area is now free to access for day visitors.	<a href="http://isimangaliso.com/">http://isimangaliso.com/</a>
9	iSimangaliso Authority (beneficiaries are land claimant and surround communities)	Benefits beyond boundaries Beneficiation programmes support iSimangaliso Authority's conservation efforts by providing alternatives to environmentally harmful practices and garnering support through training, awareness, job and equity creation. The iSimangaliso Authority manages a suite of beneficiation programmes namely: Rural enterprise programme: building and supporting entrepreneurs; Art and Craft programme: training and skilling local artists and crafters to access high value markets; Training tourism guides and chefs, front and backhouse staff as well as placing them in jobs; Co-management training for land claim trusts: providing financial and management skills to land claimant trusts; Creating equity partnerships and ownership in the tourism sector with surrounding previously disadvantaged communities; Job creation and training through the land care, coast care and infrastructure programme.	<a href="http://isimangaliso.com/">http://isimangaliso.com/</a>
10	iSimangaliso Wetland Park Authority (unit Park Operations)	PROGRAMME 1: PARK OPERATIONS The primary functions of the unit are to determine conservation policy and ensure that the day-to-day conservation management activities are undertaken in accordance with the Integrated Management Plan for the Park, as well as the Conservation Operational Plan.	<a href="http://isimangaliso.com/">http://isimangaliso.com/</a>

№	Organization	Brief description of Active Projects	Website
11	iSimangaliso Wetland Park Authority (units Tourism and Business Development, Biodiversity Conservation, and Socio-economic Development)	PROGRAMME 2: TRANSFORMATION (SOCIAL AND ECONOMIC DEVELOPMENT) The Socio-economic Development unit is directly responsible for the rolling out of training and development programmes, while the other units are directly responsible for job creation and equity participation in tourism developments. Its primary function is to improve access to job and income generation opportunities for previously disadvantaged individuals and communities who live in and around the Park, including land claimant groups.	<a href="http://isimangaliso.com/">http://isimangaliso.com/</a>
12	iSimangaliso Wetland Park Authority (units Tourism and Business Development)	PROGRAMME 3: COMMERCIALISATION The primary functions of the unit are: (a) To identify revenue generation opportunities for the Park that are consistent with the parameters set out in the Park's IMP and afford economic benefits to claimants and local communities; (b) Implement the tourism development programme for the Park; and (c) Market and promote the Park as a must-see destination. It does this by outsourcing activities to third parties and monitoring the operation of tourism accommodation.	<a href="http://isimangaliso.com/">http://isimangaliso.com/</a>
13	iSimangaliso Wetland Park Authority (units Tourism and Business Development)	PROGRAMME 4: FINANCE AND ADMINISTRATION 1. Sub-programme One: Research and Development: The former Research and Development unit (now Socio-economic Development unit) provided scientific, technical and policy support services to the other units and programmes in the Authority. It was also responsible for the roll out of training and capacity building programmes as well as community development programmes. 2. Sub-programme Two: Corporate Governance: The Finance and Administration component is responsible for the financial management of the Organisation, as well as human resources, information technology and administrative support for the CEO.	<a href="http://isimangaliso.com/">http://isimangaliso.com/</a>

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