
WORLD HERITAGE NOMINATION - IUCN TECHNICAL EVALUATION

GREATER ST. LUCIA WETLAND PARK (SOUTH AFRICA)

1. DOCUMENTATION

- i) **IUCN/WCMC Datasheet:** (no references)
- ii) **Additional Literature Consulted:** Lubombo Spatial Development Initiative. n.d. 44p.; Bird, E.C. 1968. **Coasts**. MIT Press; Heydorn A.E.F. 1989. The Conservation Status of Southern African Estuaries, *in* Huntley, B.J. **Biotic Diversity in Southern Africa**. O.U.P.; Hockey P. and C.D. Buxton. 1989. Conserving Biotic Diversity on Southern Africa's Coastline *in*. *ibid*; Hughes, R.H. and J.S. Hughes. 1992. **A Directory of African Wetlands**. IUCN/UNEP/WCMC; Begg, G. 1978. **The Estuaries of Natal**. Town and Country Planning Commission. Natal. 657p.; Sheppard C. and S. Wells. 1988. **Coral Reefs of the World**. Vol.2. IUCN/UNEP; MacKinnon, J. & K. 1986. **Review of the P.A. System in the Afrotropical Realm**. IUCN/UNEP; Stuart S. et al. 1990. **Biodiversity in Sub-saharan Africa**. IUCN. 242p.; Ramsar Convention. 1992. St. Lucia System. Monitoring Procedure Report 28; Ramsar Bureau. Various dates. Information Sheets on Ramsar Wetlands in South Africa; Davis S. ed. **Centres of Plant Diversity**. Vol1. IUCN/WWF; Taylor, R.H. 1993. Proceedings of the Workshop on Water Requirements for St. Lucia. Dept. Environmental Affairs, 83p.; Kyle, R. 1999. Factsheet on Resource Utilisation in Kosi Bay. KZDNC. 12p.
- iii) **Consultations:** Federal and Provincial Park Agency representatives
- iv) **Field Visit:** January 1999. Jim Thorsell.

2. SUMMARY OF NATURAL VALUES

The Greater St. Lucia Wetland Park (GSL) is located along the north-eastern coast of Kwazulu-Natal Province in South Africa. The park system extends from the Mozambique border for almost 220km south to Cape St. Lucia. Width of the land portion of the coastal strip varies from 1km to 24km. A marine reserve component 5km wide extends 155km along the length of the coast. The GSL consists of 13 separate but contiguous conservation units totalling 239,566ha. The area has a subtropical climate affected along the coast by the Agulhas oceanic current. A number of river systems flow into the park and have their catchments outside GSL in the Lubombo Mountains. A rich source of marine fossils occur in upper cretaceous sediments that help explain the Gondwana relationships of the site. Five ecosystems are found in GSL:

- ◆ the marine ecosystem characterised by a warm sea, the southernmost extension of coral reefs in Africa, submarine canyons and long sandy beaches;
- ◆ the coastal dune system consisting of linear dunes up to 183m in height, sub-tropical forests, grassy plains and wetlands;
- ◆ lake systems consisting of 2 estuarine-linked lakes (St. Lucia and Kosi) and 4 large freshwater lakes;

- ◆ the Mkuze and Mfolozi swamps with swamp forest, extensive reeds and papyrus wetlands; and
- ◆ the inland western shores with ancient shoreline terraces and dry savanna woodland.

Apart from the variety that each of these ecosystems provide to the GSL, the many ecological linkages between them have been a major attraction for research on the geomorphological and biological processes that occur there. Four RAMSAR sites are included in the GSL.

Associated with this high environmental heterogeneity is a remarkable diversity of natural biota. This is reinforced by the transitional location of GSL between the tropical and subtropical African biota and its setting within the Maputoland Centre of Endemism. The flora of GSL is diverse with 734 genera and 44 endemics recorded within its mosaic of forest/grassland/wetland and marine vegetation. The marine component is rich in species as well with 53 corals, 812 molluscs and 991 reef fishes. GSL provides home to 50 species of amphibians, 109 species of reptiles, including several that are endemic or threatened. It is also the principal southern African breeding ground of the loggerhead and leatherback turtles. Birdlife is especially diverse with 521 species and the park is a major breeding area and refuge for migratory waterfowl and waders. GSL is also known for 97 terrestrial mammal species and 32 marine mammals including dolphins and whales. Threatened species found in GSL (as listed under the CITES Convention) total 147.

3. COMPARISON WITH OTHER AREAS

There are currently 42 sites on the World Heritage list with major wetland values and 40 others that contain secondary wetland values. 40 existing World Heritage natural sites have a coastal and marine component. In Africa, the only World Heritage site comparable to GSL is the Banc d'Arguin in Mauritania which contains sandy marine and estuarine waters but does not have freshwater habitats or coral reefs. The same is true of the Arabian Oryx Sanctuary in Oman as well as the Shark Bay site in Australia, El Vizcaino in Mexico and, to a lesser extent, Donaña in Spain. None of these have the same terrestrial species complement as St. Lucia which among others has megaherbivores such as rhino and hippo and predators such as leopard. GSL has some similarities with the Fraser Island World Heritage site in Australia which has significant coastal sand dune features as well as diverse marine life including turtles, dolphins, whales and abundant fish and marine invertebrates. GSL, however, is distinct terrestrially with its range of saline and freshwater wetlands, estuaries, floodplains and savanna.

Within southern Africa, the St. Lucia system extends into Mozambique as far as the Inhaca Peninsula with swamps, freshwater lakes and coastal lagoons. (The nomination documentation notes that, recognising its transfrontier nature, an extension of the site is being discussed with the Mozambican authorities.) There are other freshwater lagoons and estuaries further north along the Mozambique coast (e.g. Inharrime R.) but these do not have the range of natural values of GSL and are not adequately protected. Other important coastal wetlands in the region are found at Walvis Bay, Cape Cross and Sandwich Harbour in Namibia but these are arid systems without the range of ecosystems and biota as found in GSL.

Within the South African Woodland/Savanna Biogeographical Province there are 389 protected areas, many of large size such as Kruger, Hwange and the Okavango complex. All of these sites are inland and do not include the significant coastal features of GSL.

Finally, along the South African coast itself, there are almost 50 coastal conservation areas (see Map), one of which (Cape Peninsula National Park) is being considered for World Heritage nomination. GSL, however, is very distinctive from all of these in that it is the largest estuarine system in Africa, the most diverse and the only area with coral reefs and with such a high number of threatened species.

Distribution of coastal conservation areas between the Orange River and Kosi Bay.

(Reserve names, sizes and conservation status are detailed in Table 1 in Hockey and Buxton, 1989.)

4. INTEGRITY

The area has a history of conservation management dating back to 1895 when the first reserves were created by the Zululand Government. The major threat to the area was a sand mining proposal which was resolved by the South African Cabinet in 1996. After lengthy public debate the decision was made to not approve titanium mining anywhere in GSL and to nominate the area for World Heritage status. The following issues relating to integrity of GSL, however, remain.

4.1. Protection of catchment area and regional development

All estuaries exist in a state of dynamic equilibrium and are places of constant interaction between humans and sea. As experience in other World Heritage wetlands has shown, human-induced changes in upstream catchments can have significant effects. Changes that have affected the GSL include upstream water abstraction, agricultural practices and road construction. These issues were addressed in a 1992 Workshop on Water Requirements for Lake St. Lucia and will be an on-going concern as development in the catchment area continues.

Recognising the economic, social and environmental linkages in the region around the GSL, the Government of South Africa, Mozambique and Swaziland have initiated the Lubombo Spatial Development Initiative (LSDI). This exercise in tri-lateral regional planning will provide another mechanism for addressing GSL's catchment issues. The GSL World Heritage nomination is thus seen in a larger context of integrated development and a regional plan and Environmental Management Framework are now being prepared.

4.2. Management Structure

Recognising the need for integration of the GSL with the LSDI and the complexity of managing the 13 component units of the nomination, the national and provincial levels of government are establishing a statutory authority for the Greater St. Lucia region. This Authority will provide a mechanism to consolidate the various conservation units under a single legal designation. Importantly, the Authority will assign management to the Kwazulu-Natal Nature Conservation Service which IUCN recognises as one of the world's most effective protected area management agencies.

4.3. Land Claims

Much of the land in the GSL is under negotiation as part of the work of the Commission on Restitution of Land Rights. Settlement of the land claims are expected to be announced soon. It is expected that these settlements will be compatible with protecting the conservation status of the area but could possibly result in boundary changes in the peripheral and buffer areas. The Bureau should note that its decision on this nomination should not prejudice the land claim negotiation process.

4.4. Resource Harvesting and Local Community Issues

Parts of the GSL are managed to allow controlled extraction of some natural resources (i.e. IUCN Protected Area Category IV). This is an important source of revenue and subsistence by people who are neighbours of the park for these resources are difficult to obtain outside the park. For example, commercial fish off-take from Lake St. Lucia is about 14,000 tons per year. In the Kosi lake system use is even more intense with monitoring reports for 1997 indicating that a wide range of products are harvested. An average daily number of 488 local people use the area and gather products totalling 1.6 mil. Rand in annual value. Close monitoring suggests that most of this use was legal and sustainable and most of it is for subsistence purposes. Other products harvested is ncema grass and reeds. Some 1500 people per day are allowed to collect this for a two-week period each June. Other permits to individuals of local tribal groups also allow to harvest marine invertebrates and thatch. Wild-laid crocodile eggs are also collected on a controlled basis.

All of the above human uses of GSL are subject to intensive management, research and monitoring. They are also confined to about a third of the total area while the remainder is free from extractive uses. With some 100,000 people in 48 tribal groups surrounding the GSL, the community conservation programmes in place are key to minimising conflicts and maximising benefits. In this regard, some funds to assist in community conservation have come from WWF but budget allocations from the Province need to ensure GSL management is adequately supported.

4.5. Restoration of degraded habitats

Like most protected areas, GSL has some problems with exotic species, including some plantation forests. Many actions are underway to control this problem but, once again, continued support from government is required. Active intervention to dredge the St. Lucia estuary is also an on-going management expense.

4.6. Boundary changes

As the nomination notes, 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 GSL. Both these initiatives are commendable and would benefit conservation of the area. Further additions as a result of the land claim negotiations may also arise in future. The Bureau should take note of these possible extensions.

5. ADDITIONAL COMMENTS

None.

6. APPLICATION OF WORLD HERITAGE NATURAL CRITERIA

The Greater St. Lucia Wetland Park has been nominated under all 4 World Heritage natural criteria. IUCN recommends that its case for inscription strongly rests on the following 3:

Criterion (ii): Ecological processes

The combination of fluvial, marine and aeolian processes initiated in the early Pleistocene in the GSL have resulted in a variety of landforms and continues to the present day. The park's transitional geographic location between sub-tropical and tropical Africa as well as its coastal setting has resulted in exceptional species diversity. Past speciation events in the Maputoland Centre of Endemism are also on-going and contribute another element to the diversity and interplay of evolutionary processes at work in the GSL. 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 floods and coastal storms, events which are regularly experienced in the GSL. The site is also of sufficient size and retains most of the key elements that are essential for long-term functioning of the ecosystem.

Criterion (iii): Superlative natural phenomena and scenic beauty

The GSL is geographically diverse with superlative scenic vistas along its 220km-long coast. From the clear waters of the Indian Ocean, wide undeveloped sandy beaches, forested dune cordon and mosaic of wetlands, grasslands, forests, lakes and savanna, the park contains exceptional aesthetic qualities. Three natural phenomena are also judged outstanding. One is the shifting salinity states within St. Lucia which are linked to wet and dry climatic cycles. The lake responds accordingly with shifts from low to hyper-saline states. A second natural phenomena of note is the spectacle of large numbers of nesting turtles on the beaches of GSL and the migration of whales, dolphins and whale-sharks off-shore. Finally, 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.

Criterion (iv): Biodiversity and threatened species

The five ecosystems found in the GSL provide habitat for a significant diversity of African biota. The species lists for the GSL are the most lengthy 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 GSL is clearly a critical habitat for a range of species from Africa's marine, wetland and savanna environments.

The nomination does not make a convincing case for its inscription under criterion (i) – Earth's History and Geological Features. Certainly there are abundant invertebrate fossils found in the marine sedimentary deposits but this is by no means a rarity. The heterogeneous landforms are bound up more with the ecological processes which are the dominating natural features of the site.

7. RECOMMENDATION

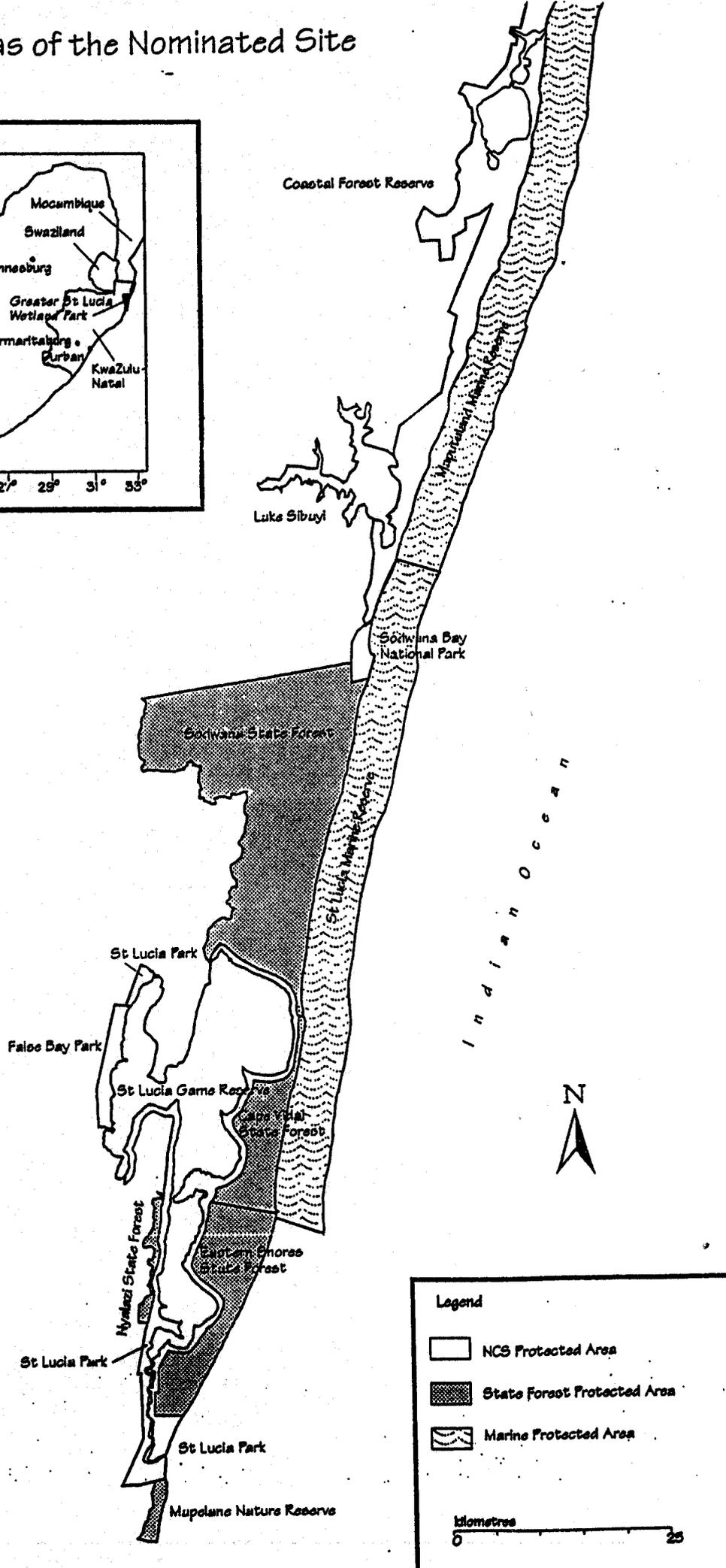
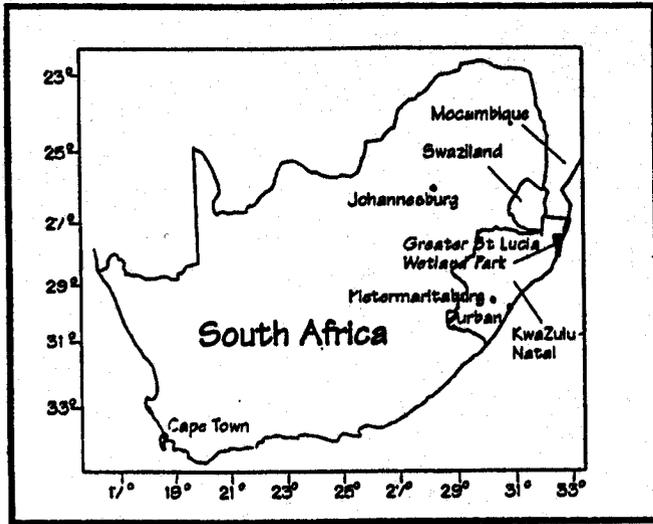
At its twenty-third ordinary session, the Bureau recommended to the Committee that the Greater St. Lucia Wetland Park be **inscribed** on the World Heritage list under natural criteria (ii), (iii) and (iv). The Centre has commended the Government of South Africa on 3 issues:

- ◆ for the democratic process it went through that led to the Cabinet decision to ban sand mining in the area and to subsequently nominate the area for World Heritage;

- ◆ the long history of conservation in the area and the very professional work of the Kwazulu-Natal Nature Conservation Service in maintaining the site;
- ◆ the launch of the Lubombo Spatial Development Initiative which the neighbouring countries of Swaziland and Mozambique which provides the regional conservation and development framework for the GSL and which will further strengthen community conservation work in the area.

The Committee should also make note of the possible extensions of the GSL including a possible future transfrontier site with Mozambique. It should also urge the completion of the land claim negotiations and confirm that World Heritage site designation should not prejudice this process.

Component Areas of the Nominated Site



Map 1. Location of Nominated Site