

6. St Lucia System

Geographical Coordinates 28°00'S 32°28'E

Area 155,000ha

Location About 30km west of the town of Mtubatuba, in north-east Natal province, eastern South Africa.

Date of Ramsar Designation 2 October 1986.

Other International Designations None.

National Designations Wetland Park^P (Greater St Lucia, 249,800ha); State Forest Reserve^P (Eastern Shores, 12,873ha).

Principal Features An extensive system of Indian Ocean coastal wetlands associated with Lake St Lucia. Principal habitat types within the site include a diversity of coastal grassland communities, dense thicket, swamp forest (dominated by *Barringtonia racemosa* and *Ficus* spp.), *Eleocharis* swamp, *Phragmites australis*/*Cyperus papyrus* beds (covering about 14,000ha), dune systems, tidal mudflats, salt marshes, mangrove forest, freshwater marshes, lakes (seasonal and permanent), estuarine waters, and rivers and streams (seasonal and permanent). Lake St Lucia, extending 40km in length, is a shallow water body (averaging 1m deep) connected with the sea by a narrow (100-400m wide), channel, some 20km long, of which 14km are tidal. In wet years, the lake can extend to 41,700ha of open water area, but in dry years may become reduced to 22,500ha. It is fed by five major rivers (the Mkuze, Mzinene, Nyalazi, Mpate and Mfolozi). The Mkuze river runs through an extensive swamp, covering an area of 120km². The submerged vegetation consists of dense beds of *Potamogeton pectinatus* in the less saline, northern areas of the system, replaced by *Ruppia spiralis* in the south and *Zostera capensis* near the sea. Along the coastline, a dune barrier up to 200m in height has developed, associated woodland of considerable botanical importance. The St Lucia system represents the largest estuarine penaeid prawn nursery area in South Africa; *Penaeus indicus* is the dominant species. The site is also an important breeding area for birds, including^{*} *Pelecanus onocrotalus* (3,000 pairs), *P. rufescens* (max. 100 pairs), *Ardea goliath*, *Mycteria ibis* (80 pairs), *Platalea alba* (300 pairs), *Haliaeetus vocifer*, *Glareola pratincola*, *Larus cirrocephalus* (1,000 pairs) and *Sterna caspia* (200 pairs). Large numbers of wading birds stage in the area, which also provides important feeding grounds for flamingos *Phoenicopterus ruber roseus* and *P. minor*. Notable reptiles include *Crocodylus niloticus* (one of the largest breeding populations in South Africa), while *Hippopotamus amphibius*, *Redunca arundinum*, *Neotragus moschatus* and black rhino are amongst mammals occurring in the area. The system also supports 82 species of fish, one of which is endemic, and is an important spawning and nursery area for many of these species. (1a,1c,2a,2b,2c,2d,3a,3b)

^{*}Figures refer to 1990.

Conservation Issues State owned and administered under the Natal Parks Board, the Department of Water Affairs and Forestry and the South African Defence Force. The Ramsar site forms a large area of the recently established Greater St Lucia Wetland Park, which consolidated a number of protected areas brought under the management of the Natal Parks Board. A management plan has recently been developed for the Park and is currently being implemented. Prospecting leases for heavy metals, particularly titanium, have been granted to Kingsa Mineral Resources and Tojan Holdings in three areas of coastal dunes within the Eastern Shores State Forest Reserve, between St Lucia and Cape Vidal. This area has been excluded from the recently established Wetland Park, although there are proposals to incorporate it. If mining leases are granted, the dunes will be mined using the particularly destructive open-dredge technique, destroying the dunes' ecological character. Geomorphological changes would also take place in the immediate area and impacts on ground-water hydrology could adversely affect a considerable area of the site.

In view of these potential changes, information on which was conveyed to the Fourth Meeting of the Conference of the Contracting Parties by means of the 1990 South African National Report, the Ramsar Monitoring Procedure was implemented at St. Lucia in 1991. A detailed report was produced, which recommended that the South African authorities should consider refusing, on principle, the granting of mining rights in view of its commitments under the Convention. However, if the authorities were to consider permitting mining to take place, there was a need for an environmental cost/benefit analysis of the proposed operations and, in any case, alternative sources of ore should be sought. The damming and

diversion of rivers for irrigation has resulted in a significant reduction in the amount of fresh water entering Lake St Lucia, particularly in dry years. In the northern part of the lake, this can result in the development of hypersaline conditions (up to 116ppt). However, subsequent flooding during wet periods serves to flush accumulated salts from the lake, and salinity decreases rapidly. The ecological character of large areas of the site have been degraded through overstocking with cattle, slash and burn cultivation, and the planting of about 3,500ha of the Eastern Shores area with *Pinus elliottii*. Military use of the site is being phased out, but some 160 km² of the northern part of Lake St Lucia is still being used for missile testing and military training. Drainage and reclamation of areas of Mfolozi swamp for sugar farming, and canalisation of rivers has greatly increased sedimentation rates within Lake St Lucia. The site is an important recreational area with many facilities and activities available, including a Crocodile Centre, nature trails, wildlife tours, hotels, and holiday chalets. A full time education officer is employed at the site, and several full time staff are employed at a monitoring and research centre in the town of St Lucia.