

## **WORLD HERITAGE NOMINATION - IUCN SUMMARY**

### **630: FRASER ISLAND AND THE GREAT SANDY REGION (AUSTRALIA)**

Summary prepared by WCMC/IUCN (March 1992) based on the original and the revised nomination submitted by the Government of Australia. This original and all documents presented in support of this nomination will be available for consultation at the meetings of the Bureau and the Committee.

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#### **1. LOCATION**

On the south-eastern coast of Queensland. Fraser Island and the mainland Cooloola sand mass together make up part of the Great Sandy region.

#### **2. JURIDICAL DATA**

In 1860 the whole of Fraser Island was gazetted as an Aboriginal reserve. Cooloola was declared a forestry reserve in 1881. After the Aborigines were removed from Fraser Island, the remnant Aboriginal reserve was revoked in 1906. In 1908 the central part of Fraser Island was declared a forestry reserve, and by 1925 most of the island had been set aside as state forest. The land is under state, federal and private tenure.

#### **3. IDENTIFICATION**

Covering approximately 239,000ha the major geological elements of the region are the sandmasses of Fraser Island and Cooloola. Fraser Island is 122km long, 5-25km wide and reaches 235m, the depth of the sand extending 30-60m below present sea level. Dunes on Cooloola reach 260m, cover 40km of coastline and extend 10km inland. Notable features are the sandmass aquifers, the dune lakes, the Noosa River system and associated plains lakes. The closed forests of Fraser Island and Cooloola, covering some 10,500ha of high dunes, largely distinguish these sandmasses.

Aboriginal people are thought to have first occupied the region about 40,000 years ago. Currently, the earliest date for the occupation of Fraser Island is 1,500-2,000 years, although it is possible that further archaeological work may reveal evidence of earlier occupation. Four main groups of Aborigines dominated the Great Sandy region before the arrival of Europeans, but none now remains. Visible remains of

Aboriginal settlement include middens, canoe and gunyah trees, and a few other markings such as scars where bees nests have been removed.

#### 4. STATE OF PRESERVATION / CONSERVATION

The forests of Fraser Island and Cooloola have been subject to logging for around 130 years. The mainland rain forests were largely cleared for timber and then agriculture, but the forests of the sandmasses have fared considerably better. Many of the largest and oldest trees were removed, and the resource of scrub timber declined to unsustainable levels, in some instances after less than 30 years of logging. Agreement has been reached between the Queensland Government and the timber industry to cease all logging on Fraser Island by 31 December 1991. Although there is no evidence that any species have been eliminated from the region due to logging, the forest structure, floristic composition and relative species abundance have been altered.

Comparatively small areas of land on Fraser Island have been mined to extract the valuable heavy minerals which occur in ore bodies throughout the sandmasses. Mining ceased in 1976 and rehabilitation was undertaken in the areas mined. Sandmining in the 1970s affected 350ha, but no further sandmining will take place. The topography of the 150ha of mined dunes of Fraser Island has been irreversibly simplified by mining and the original forest removed. Invasion by weeds, pathogens and feral animals is minimal and controllable, and the impacts of recreational use and vehicular access are already under active management to ensure resource conservation.

Several resorts, as well as camping areas, forestry camps, roads, jetties, and airstrips lie within the nominated area. There are additional development proposals both within and adjacent to the nominated area, several of which have already received approval. Around 200,000 tourists visit Fraser Island annually, numbers having increased rapidly since 1975. Cooloola is estimated to receive around 120,000 visitors annually.

#### 5. JUSTIFICATION FOR INCLUSION ON THE WORLD HERITAGE LIST

##### Natural property

- (ii) **Outstanding examples representing significant ongoing geological processes, biological evolution and man's interaction with his natural environment.** Complex coastal dune formations are still evolving. The array of dune lakes is exceptional in terms of number, diversity, age and the evidence provided of dynamic and developmental stages.

- (iii) **Contains unique, rare or superlative natural phenomena, formations or features of exceptional natural beauty.** Fraser Island is the largest sand island in the world, and the Cooloola sandmass is recognised as the largest deposit of wind blown sand on mainland Australia. The combination of rain forests growing on tall sand dunes is believed to be unique in the world. The area includes over 250km of clear sandy beaches with long, uninterrupted sweeps of ocean beach, including more than 40km of strikingly coloured sand cliffs, as well as spectacular blowouts.

## WORLD HERITAGE NOMINATION - IUCN TECHNICAL EVALUATION

### 630: FRASER ISLAND AND THE GREAT SANDY REGION (AUSTRALIA)

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#### 1. DOCUMENTATION

- i) IUCN/WCMC Data Sheet (2 references)
- ii) Additional Literature Consulted: Wallis, D. Fraser Island. Aust.Geog. July-Sept. 1991; Queensland N.P.W.S. Cooloola Tour Operator Workshop Papers, 1991; Nordstrom K. et.al. Coastal Dunes 1990; Bird, E.C. and Schwartz, M.L. The World's Coastline 1985.
- iii) Consultations: Queensland and DASET Government officials, Fraser Island Interim Management Board, local residents (Noosa), J. Sinclair, G. Mosely, A.G. Harrold, W. Huxley, A. Gilmour, P. Valentine, 2 anonymous reviewers.
- iv) Field Visit: January 1992, Jim Thorsell

#### 2. COMPARISON WITH OTHER AREAS

The Great Sandy region is one of a number of coastal sand accumulations along Australia's east coast extending from the Croajingolong National Park in Victoria to Cape York in northern Queensland (see map). Impressive deposits in the latter exist at Cape Flattery (600 sq km), Temple Bay (400 sq km), Newcastle and Orford Bays. Other less significant but comparable areas include Myall Lakes in NSW and several coastal sites in western Australia. The phenomena of rainforest on sand is also evident in part of the NSW Forest World Heritage site (Iluka) but this is of more limited extent. The Great Sandy has certain similarities with the Shark Bay World Heritage site in Western Australia. This site, also on the coast, is an embayment and contains predominantly marine values interwoven with some terrestrial features. Shark Bay excised the major urbanized and mining area from the nomination.

The Great Sandy "system" extends several hundred kilometers to the south and includes other sand islands (Moreton, Bribie and Stadbroke). Fraser Island and Cooloola, however, are the northern terminus of this system and are where the most outstanding sand landforms occur.

Beyond Australia there exist a number of other coastal sand masses, for example, along the coasts of Oregon, Oman, Kenya, Namibia (Skeleton coast), Peru and

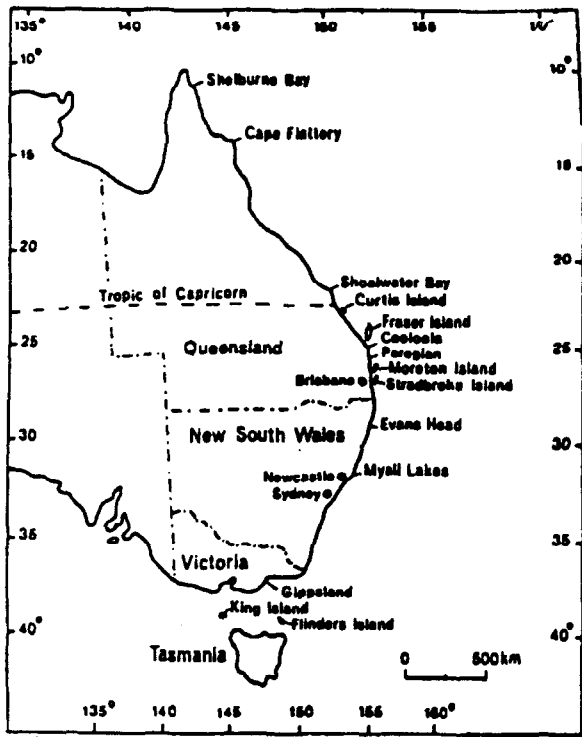
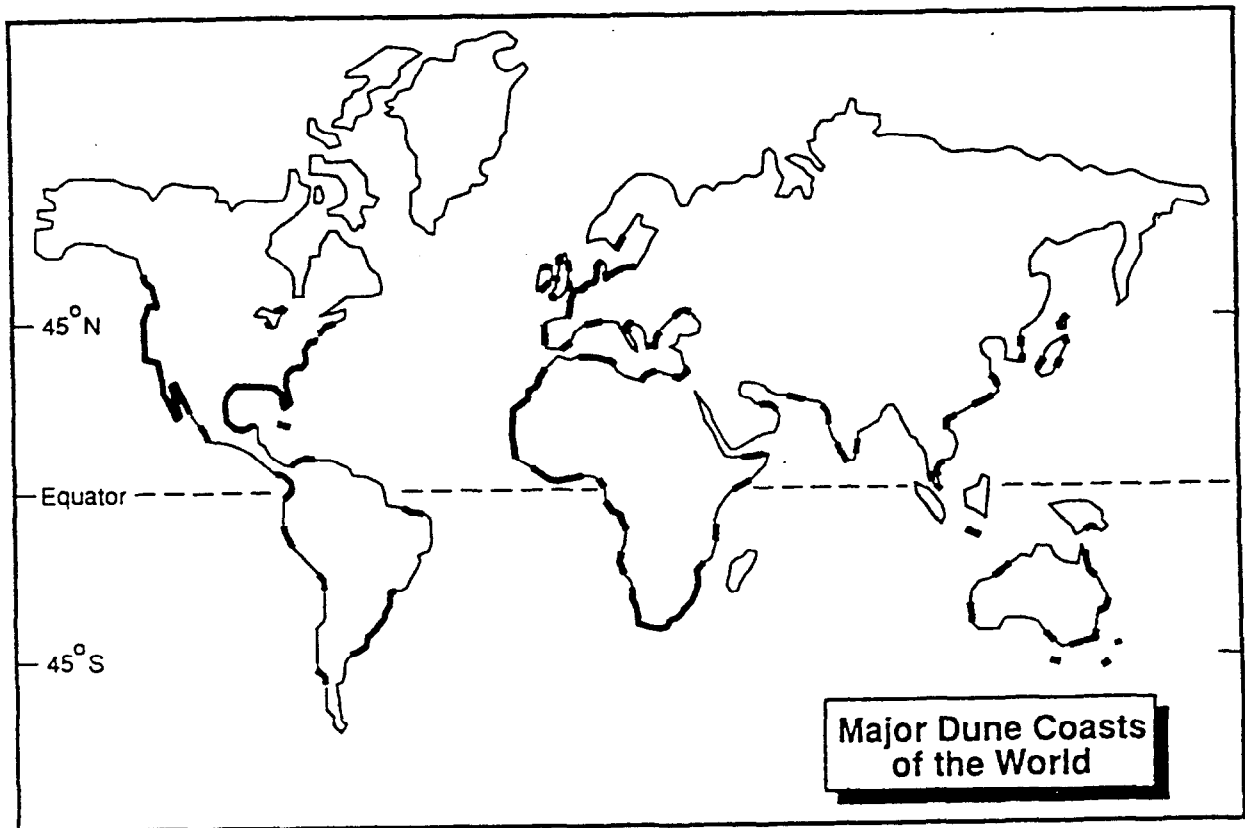


Figure 1. Main areas of large parabolic dune systems along the east coast of Australia (after Thompson 1983).



From: Coastal Dunes  
K. Nordstrom and N. Psuty, 1990

South Africa (St. Lucia). (See map) Several parks and reserves along the east coast of the USA (Cape Cod and Cape Hatteras) are similar and the White Sands National Monument in New Mexico is a prime example of an inland site. Other protected areas with major sand dune features and sand islands are Kouchibouguac National Park in New Brunswick and Kobuk Valley National Park in Alaska. Existing World Heritage sites that contain extensive sand features are Banc d'Arguin (Mauritania), Tassilli (Algeria) and Aïr Ténéré (Niger) but neither of these have geomorphic affinities with the Great Sandy.

Another feature of the nomination is the vegetation but its uniqueness has been questioned by reviewers. The significance of the extensive area of heath vegetation is not established but heathland is widespread in Australia and the ground parrots and other fauna associated with it are common outside the nominated site. Various statements on certain plant species may also not be as important as suggested. Certainly the nominated area is one of considerable biodiversity but the concentration of local endemics is not greater than for other regions of Australia. Once again, although there are important values related to vegetation, it is not demonstrated that the plants are universally outstanding and they appear to be a secondary feature of the nominated area.

The conclusion reached after a comparative overview of the natural heritage of the Great Sandy area is that its most outstanding features relate to its geomorphic and geologic aspects. The accumulation of massive sand deposits and the processes that led to dune building, soil podsolisation, and perched lakes have resulted in an intact and significant coastal sand formation. Fraser Island itself is the largest sand island in the world. It is the best known part of the region and contains the majority of the unique natural features that make up the Great Sandy.

### 3. INTEGRITY

Three issues are addressed: human impact, management and boundaries.

#### 3.1 Human Impact

Portions of the coastal strip in both Cooloola and on Fraser Island have been subject to sand mining and the forests have been particularly adversely affected by 130 years of logging. Both sand mining and extractive forestry, however, have now ceased. The adjacent marine area is utilized as a commercial and recreational fishery. Recreational use of the area is intensive along the coastal strip and seven resorts cater to visitors. There are a number of proposals for expansion of these areas and one in particular (Eurong) is urgently in need of rehabilitation and some land use planning controls. The southern end of the nominated area is relatively intensively used for watersports and at least one lake is showing signs of eutrophication. Effects of heavy 4WD traffic on the beaches have unknown impacts on littoral fauna and control measures may soon be needed. The legal

status of the portion of Fraser Island that is not a national park is under review and many changes in favour of conservation are anticipated.

### 3.2 Management

A major turning point in conservation of the area was the report of a Commission of Inquiry in 1990-1991. This resulted in recommendations for World Heritage nomination, cessation of forestry, expansion of national park lands, and a proposal for a Regional Park Authority to manage the entire Great Sandy Region. An Interim Management Board for the region has been established, in part modelled after similar structures in other Australian World Heritage sites. A management plan for the entire region is now being prepared and is due for completion in 1993. Management plans for the two national parks already exist.

### 3.3 Boundaries

The original nomination from Australia consisted of the entire Great Sandy Region as reviewed by the Commission of Inquiry. After the field inspection and subsequent discussion with the Australian authorities, however, a reduced boundary for the site was submitted. This smaller and more simplified nomination has a more unified theme and excludes a number of inappropriate areas. It now consists of two sections, Fraser Island and Coolooloa National Park. The boundary on the marine border is 500m below the high water mark which corresponds to the digital cadastral survey line and also incorporates the beaches and some wetlands and mangroves.

The question of the inclusion of Coolooloa National Park within the site has been given considerable attention. Dune systems on Coolooloa and on Fraser Island are closely correlated and are linked geomorphologically as the northern "sinks" of a coastal sand transport system. Coolooloa's mainland dune system is more complex and better studied and may be the largest sand mass along the coast of Australia. It also contains excellent examples of vegetation succession on dunes and contains some important choked coastal lagoons.

Coolooloa, however, is separated by a gap of 12 km from Fraser Island. The southern portion (south of Lake Coolooloa) is at the limit of the sand system and World Heritage values are affected by other land uses. Because of these problems and in light of the fact that World Heritage values are at their most outstanding on Fraser Island, the case for the inclusion of Coolooloa is less clear. This park is clearly important on a State and National level and deserves the increased conservation attention it has been receiving in recent years. As the maps from the Commission of Inquiry suggest, however, it is of secondary importance to Fraser Island in terms of its World Heritage values.

Finally, the inclusion of Coolooloa was not called for in the Perth IUCN General Assembly Resolution 18.71 which promoted only the nomination of Fraser Island.

## 4. ADDITIONAL COMMENTS

4.1 The Badtjala and Kabi Kabi groups of Aboriginal people have cultural and other traditional affiliations with the area nominated and have indicated in

correspondance that they are concerned over the consultation process. It would be useful if a clear position from them on the nomination was known.

4.2 The name of the site "Fraser Island and the Great Sandy Region" has been taken from the Fitzgerald Inquiry and could be left only as "The Great Sandy/Kgari" or some less superfluous title in a revised nomination. (Nb. Kgari is the aboriginal name for the island.)

4.3 Bordering Fraser Island to the northwest is a marine area of high natural value. The shoreline and waters of Hervey Bay are very important habitat for dugong, turtle, whales and migrating waders. This adds another natural attraction of the Great Sandy and its inclusion in the management plan for the region is strongly commended.

4.4 The Operational Guidelines for natural sites do not require nomination documents to provide a perspective of the value of the site on a world scale as is required for cultural nominations. The nomination for The Great Sandy thus assumes that its global status in terms of all coastal systems is self-evident. A cursory comparison, however, has shown that, although it is indeed significant, there are comparable sites elsewhere. It would be useful to modify the guidelines accordingly.

## 5. EVALUATION

The major portion of the area nominated (Fraser Island) is the center piece of the Great Sandy region and clearly meets World Heritage natural site criterion (ii): an outstanding example of significant on-going geological and biological processes. These processes, acting on a sand medium, include:

- longshore marine transport
- coastal beach and lagoonal deposition
- dune building
- soil development (e.g. podsolisation)
- biological adaptation (e.g. rainforest succession)
- biological evolution (e.g. acid frogs)

Fraser Island also meets criterion (iii) superlative natural features and exceptional natural beauty. It has long uninterrupted ocean beaches backed in some places by colored sand cliffs. Inland from the beach are found majestic remnants of tall rainforest growing on sand and half the world's perched freshwater dune lakes.



The conditions of integrity are also met as there is no perceptible human threat to longshore transport. All other significant on-going processes cited above are located within the area. Furthermore, land use measures already taken should ensure that these processes will continue. In this regard the Australian authorities should be encouraged in their plans to administer all of Fraser Island as the Great Sandy National Park and to continue the management planning process now well advanced.

As discussed under 3.3 above, the existence of World Heritage values in Cooloola is less convincing. The area is a national park and it has been the site of some important scientific research but it is subject to a number of land use problems in its southern section. Accordingly, the Bureau recommended Cooloola not be considered as part of the property.

## 6. RECOMMENDATION

The Bureau should recommend inscription of Fraser Island on the basis of criteria (ii) and (iii). To encourage conservation throughout the entire Great Sandy, the Australian and Queensland Government authorities should be encouraged in their efforts to plan and manage Fraser Island in the wider context of the "Regional Park" and to extend statutory protection to all of Fraser Island.

