

# Management of Queensland's Great Sandy Islands

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## Abstract

The increased demand for outdoor recreation combined with a heavy and rapid increase in the public use of off road vehicles has led to a rapidly growing use of three major offshore sandmasses in south-eastern Queensland - Stradbroke Island, Moreton Island and Fraser Island - as well as providing stronger pressure for their conservation and better management. The controversies over land use and management of the Queensland sandmasses since the early 1970s, mainly associated with sandmining, and the many subsequent studies and inquiries have resulted in comprehensive understanding of the sandmasses and how they should be managed. The political sensitivity of the Queensland Government to land use issues on the sandmasses and its predisposition towards exploitation have so far frustrated the implementation of any management plans for any of the sand islands. There are many unresolved conflicts over the best methods of land management for the sand islands. The difficulty of reconciling the divergent interests and the lack of consultation have hindered the implementation of any effective plans of management. The major problem for management is the acceptance by the Queensland Government that conservation should be the major objective for such management plans.

## INTRODUCTION

There are three major offshore sandmasses in south-eastern Queensland - Stradbroke Island, Moreton Island and the world's largest sand island and largest single sandmass, Fraser Island. They are still in a relatively natural state. Fraser Island along with Cooloola and the rest of the Great Sandy Region has been proposed for World Heritage listing.

These three offshore sandmasses are the three principle offshore sand islands in Australia. They are well vegetated with tall forests, and have high dunes of aeolian sand. Because of the similarity of their geomorphological features and biological characteristics and the similarity of the threats and management problems the three islands are collectively grouped as Queensland's Great Sandy Islands.

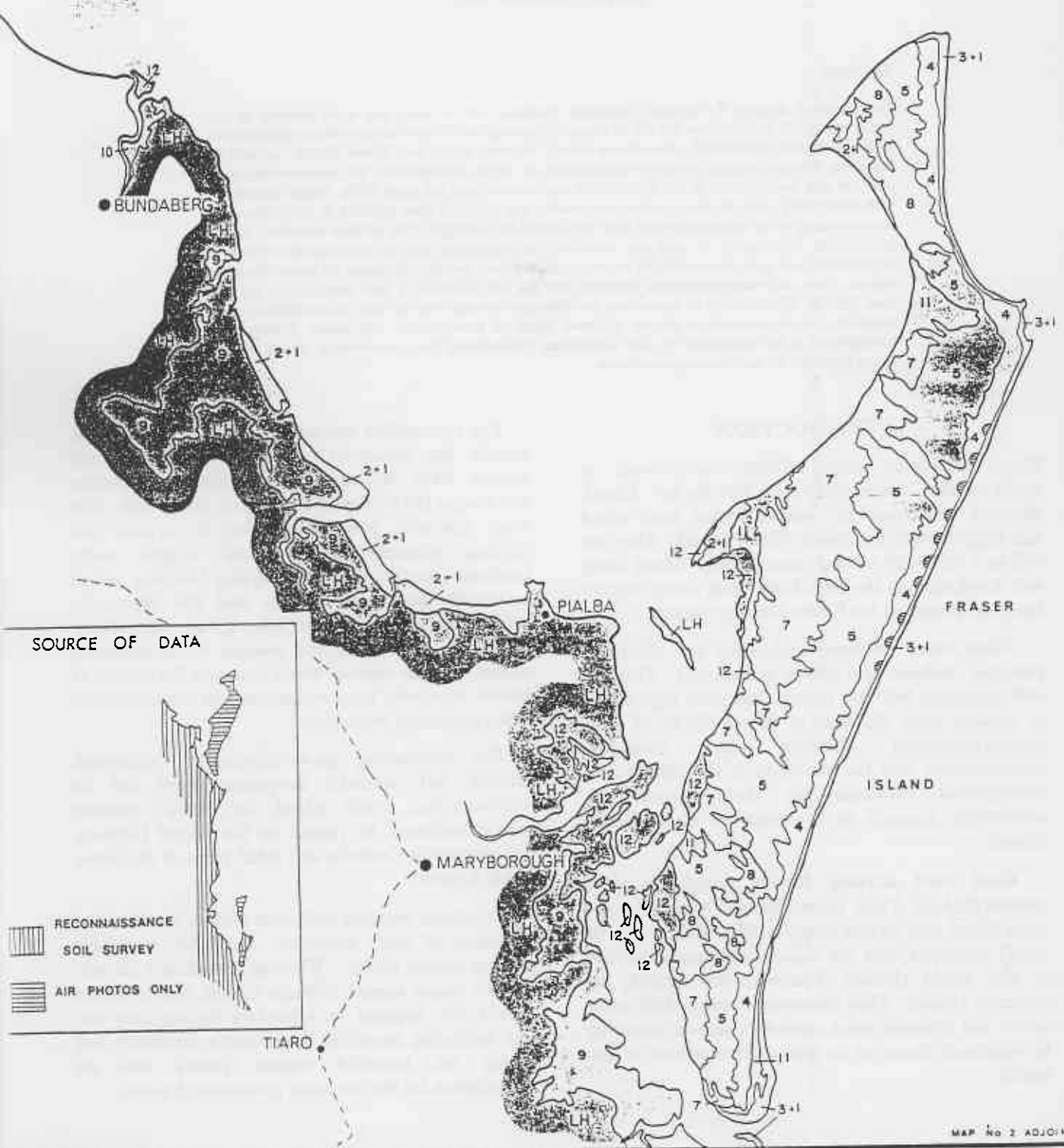
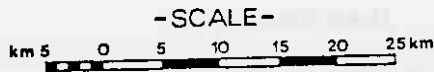
Their most startling feature though, is their geomorphology. Their claims include world's largest sand island and largest single aeolian (laid down by wind) sandmass, and the highest permanent sandhill in the world (Mount Tempest, 300 metres, on Moreton Island). They also contain some of the most active and dramatic wind erosion processes occurring in vegetated dunes to be witnessed anywhere in the world.

The outstanding aesthetic features of sand islands include the numerous scenic perched dune and window lakes, streams flowing through spectacular and unique tall rainforest growing on dunes with clear water coloured either port wine or crystal, the startling coloured sands, scenic rugged rocky headlands, a vast, expansive surfing beaches, varied heathlands and open forests, and the impressive cultural legacy of former Aboriginal populations. They also have a rich and unusual biota, including several endemic species, which occupies the mosaic of diverse vegetation from mangroves and tidal meadows to the terrestrial vegetation.

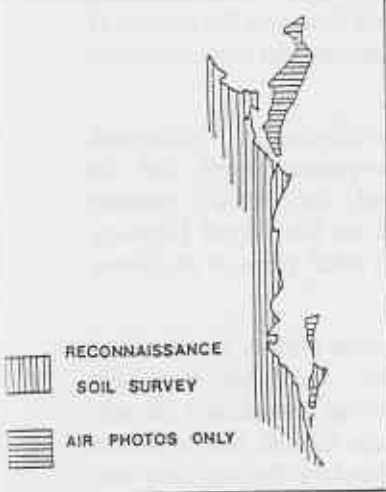
The outstanding geomorphological, biological, cultural and aesthetic properties have led to proposals that Fraser Island, the world's greatest coastal sandmass, be placed on the World Heritage List along with Cooloola and other parts of the Great Sandy Region.

As natural wonders each now attracts hundreds of thousands of visits annually. Each has a rapidly growing tourist traffic. Whereas less than a decade ago the major appeal of these islands was to beach anglers who enjoyed its legendary fishing, they are now increasing attracting those with a sensitivity and feeling for beautiful natural places and an appreciation for the awesome processes of nature.

# COASTAL LANDFORMS OF SOUTHERN QUEENSLAND



SOURCE OF DATA



MAP No 2 ADJOINS

CABOOLTURE

MORETON ISLAND

CSIRO Division of Soils  
1964 - 1972  
Soil Surveyor C.H. Thompson

Drawn by K.J. Smith

BRISBANE

BEENLEIGH










NORTH

STRADBROKE ISLAND

SOUTHPORT

N.S.W.

LEGEND

-  BEACH RIDGES AND BEACH
-  LOW DUNE/MOBILE SANDSHEET COMPLEX AND BEACH
-  YELLOW-BROWN TRANSGRESSIVE DUNES
-  HIGH TRANSGRESSIVE DUNES
-  MULTICOLOURED WEAKLY-COHERENT SAND REMNANTS
-  LOW HILLY WHITE SANDHILLS
-  UNDULATING SAND-PLAIN WITH LAKES
-  GENTLY SLOPING COASTAL SANDPLAIN
-  RIVER FLOODPLAINS
-  FRESH-WATER SWAMPS
-  TIDAL MUD FLATS
-  LOW HILLS OF COUNTRY ROCK

Collectively North Stradbroke Island, Moreton Island and Fraser Island are barrier islands. They lie roughly parallel to the coast for about 200 kilometres and protect about half the South Queensland coast between the New South Wales border and Bundaberg. Moreton Island and North Stradbroke Island combine to form the eastern side of Moreton Bay. Fraser Island forms the eastern side of Hervey Bay and Great Sandy Strait.

Of the three islands, Fraser Island is by far the largest. Its 160 000 hectares exceeds the combined areas of almost all of the remaining sandmasses in central and southern Queensland. It dwarfs North Stradbroke Island (27 520 ha) and Moreton Island (18 500 ha) in area but the significance of these two islands in strategic geographical and management terms is emphasized because of their close proximity to Brisbane.

Fraser Island, located 190 kilometres north of Brisbane, is the largest sand island in the world with an average width of 15 kilometres and a length of over 120 kilometres. The dunes reach up to 240 metres.

Moreton Island and North Stradbroke Island are similar in shape and size with only shallow South Passage, about 2 kilometres wide, separating them. Both are about 40 kilometres in length with an average width of 11 kilometres. Moreton Island is slightly narrower and more tapered. Both have quite attractive and rugged rocky headlands at their north east corner and both are widest at their northern end. Both islands are approximately 40 kilometres from the mainland suburbs of Brisbane. Both are also now within an hour of Brisbane by launch. The main difference between the two is that Moreton Island has largely escaped the exploitive land use and urbanisation that has heavily impacted North Stradbroke Island. There is strong public pressure to preserve and to protect both islands.

The three islands enjoy a subtropical climate with an annual average rainfall of between 1250 and 1800 mm.

The isolation of these islands and their infertile soil let them escape major European development and exploitation until the latter part of the twentieth century.

The significant lode of heavy mineral sands led to major land use conflicts involving each of the islands during the last two decades. Some sandmining has occurred on all three islands; only a relatively minor area was disturbed on Fraser Island, before it ceased in 1976. A limited amount of beach scalping was

carried out on Moreton Island in 1957-58. Sandmining has had a very heavy environmental impact on Stradbroke Island, where operations are currently being expanded. There are constant threats to resume sandmining on Fraser Island and Moreton Island. This impasse has not been resolved.

The three islands are not the only sand islands in Queensland. Bribie Island is also a sand island. It is an inshore island and because no part of its 14 400 ha are above 10 metres in elevation it has not been dealt with in this paper. South Stradbroke Island broke away from North Stradbroke Island only in 1986. Apart from its closer proximity to the mainland, South Stradbroke Island's small area doesn't justify separate discussion.

## VALUES

The three sand islands have innumerable examples of large parabolic dunes, unique in the world. Hundreds of wind-driven sand dunes are part of a complex cycle eroding and restructuring the sand mass. This process is more developed than anywhere else in the world. It is this complexity and the active, dynamic nature of the dune system which excited one scientist to exclaim, "*Fraser Island is for sandmasses of the World what the Great Barrier Reef is to coral reefs of the world*". Fraser Island is the world's greatest sand mass and the oldest age sequence of giant coastal sand dune systems yet recorded; some dunes may be 400 000 years old.

The complex interaction of the windblown sand, the flora and decomposing organic material, results in impervious layers being developed which support lakes high above the water table. These lakes, resting on impervious organically bound sand in wind-formed dune depressions, are unparalleled in the world. There are many perched dune lakes. These contain some of the freshest, purest water in the world.

Botanists have identified hundreds of species of flowering plants and ferns, including a number of rare and endemic plants. More than 150 listed plants are found in the rainforests of Fraser Island. The islands contain a compact, outstanding example of "wallum", the vegetation of coastal lowlands, along with important examples of heathland communities. It contains a wide diversity of marine, terrestrial and avian fauna, some of which is rare or endemic, surprisingly, despite the dense biomass. The terrestrial part of the islands are relatively poor as far as mammals are concerned. However, what they lack in the volume of fauna is compensated for by the great rarity of species.

As recently as 1980, in a previously logged area, the measured biomass at one site on Fraser Island was the second highest yet recorded in the world. It was exceeded only by the giant Sequoia forests of California. Almost as remarkable as the prodigious bulk of biomass is the incredible age of some of the trees and the evidence of the changes to their environment as they stood there. On Fraser Island are ancient Paperbarks *Melaleuca quinquinervia*, estimated to be 2 000 years old.

More than 250 species of birds have been listed from the three islands. Most are common to all islands but the largest list comes from Stradbroke Island where there has been more intensive observations. These range from the dull brown migratory waders to the more colourful honeyeaters, lorikeets and parrots. Many of the birds are uncommon elsewhere. Fraser Island contains important habitat for the Ground Parrot. The estuaries in the lee of the islands are recognized as most important summer stopovers for migratory wading birds.

There is a great diversity of reptiles on the islands. Although there is a diversity of land mammals, the populations are very small and often isolated. There are no macropods on Moreton Island. Only Stradbroke Island has population of koalas, and a residual population of *Macropus agilis*. The dingoes of Fraser Island are regarded as one of the purest strains of dingoes in Australia. There are many small rodents.

The absence of feral cats and dogs has helped to avoid decimation of many wildlife populations. More recently though, feral fish, cane toads, cats, dogs and foxes have begun to make a heavy impact on Stradbroke Island. Feral horses, cattle, goats and pigs have competed with the wallabies and kangaroos to their detriment. There is increasing concern that feral predators may become more of a threat to fauna. Domestic dogs have passed on diseases such as Parvo virus to the dingoes, with devastating impact.

Apart from their aesthetic appeal the islands are regarded by many as having wilderness values even though these have been seriously compromised through intensive networks of tracks and easier access.

The cultural, biological, aesthetic and geomorphological values of the three islands have been well identified and are widely recognized as the bibliography indicates.

## HISTORY

The sandmasses have always been important for humans. Prior to European civilization the sandmasses were a haven for rich Aboriginal cultures.

The first recorded Europeans to reside in what is now Queensland, were three escaped convicts who took up residence with the Aborigines of Stradbroke Island. They were found by Oxley when he arrived to establish the Moreton Bay settlement in 1824. A settlement was established at Amity Point on Stradbroke Island about 1829, to serve as a pilot station to guide ships through South Passage. In 1847, after a marine disaster on the South Passage Bar, the pilot station was moved to Bulwer on Moreton Island, and a large area of land there was alienated. In 1849 Dunwich was established as a quarantine station. Despite the early colonization the mainland, the offshore sand islands escaped heavy impact of European settlement until the late 1940s and exploitation was limited.

Since European settlement of southern Queensland, the island's Aboriginal cultures have been decimated. The only island where some of the once very significant Aboriginal population still resides is Stradbroke Island. Fraser Island and Moreton Island have been depopulated of Aborigines in a very sordid and abrupt way.

There has been an historic tendency to accept the existing European Australian practices to predicate how the land should be used subsequently. This had unfortunate effects. It reinforces the rights of established management regimes and provides precedents for their continuation.

In 1893 the Australia Association for the Advancement of Science proposed that the whole of Fraser Island should be made a National Park, however due to the fact that a National Park would be incompatible with the existing logging operations, the proposal was shelved for over eighty years. Even now the Great Sandy National Park only embraces those parts of Fraser Island which the sandminers, land exploiters or timber interests are prepared to concede. Such exploiters have a virtual *defacto* power of veto over any National Park proposal in Queensland.

Although the character of the islands changed very little in the first century of European settlement, after World War Two the pressure for increased exploitation grew rapidly. North Stradbroke Island was the most accessible and suffered the heaviest impact mainly from sandmining. A whaling station was established at Tangalooma on Moreton Island in

1952. While the whaling station was in operation fertilizer trials were conducted using whale meat fertilizer in a futile bid to render the infertile sand more arable. When whaling ceased in 1962. Tangalooma became a resort.

During the 1960s there were a number of coincidental claims made for land on Fraser Island. A new resort proposal at Orchid Beach, applications for residential allotments by many individuals and the mining leases caused the Forestry Department to opt out of the total authority over Fraser Island. To accommodate this demand, and the Lands Administration Commission was given control over more than 80 kilometres of seaboard of Fraser Island between Eurong and Sandy Cape in 1963. During the 1960s there was a great deal of expansion of interests in resorts and residential areas. Land at the site of two villages, Eurong and Happy Valley, was subdivided and sold in 1966. Orchid Beach was established in 1966.

It was during the 1960s and 1970s that the European settlement of the islands made the biggest impact. The villages of Cowan Cowan and Koorinal on Moreton Island were also expanded and the subdivisions were sold off about this time.

The sandmasses have continued to attract a lot of public interest and attention. Since 1970 the recreational use of these areas has shown exponential increase. Increased vehicular ferry access has made the sandmasses much more accessible to four wheel drive recreational vehicles. The increase has been generally of the order of 12 to 20 per cent annually since the growth in popularity of off road vehicles. In the case of Fraser Island there has been an aggregate increase of about 1 000% in 15 years.

In 1970 there was a major move to expand the area of sandmining already established on both Fraser Island and Moreton Island. This led to a bitter land-use controversy which saw the establishment of such voluntary conservation groups as the Fraser Island Defenders Organisation and Moreton Island Protection Committee. The disputes simmered for years until 1975 when the Commonwealth Government established the Fraser Island Environmental Inquiry. This inquiry generated a great deal of information about Fraser Island. It also led to the banning of mineral sands from there for export which effectively has ended sandmining there since 1976.

Subsequently the Queensland Government, in an attempt to forestall Commonwealth Government intervention on Moreton Island commissioned an Environmental Impact Study from A.A. Heath and

Partners. This was followed up by the Cook Inquiry into the land-use questions on Moreton Island in 1977.

In 1975 the Royal Society of Queensland held its first Symposium on Stradbroke Island. It held a second Symposium in 1984. The Queensland Government commissioned a management plan for Fraser Island in 1978, although it subsequently declined to implement its recommendations. The CSIRO about this time began their studies of dune dynamics on Cooloola which had relevance to the island sandmasses.

These various inquiries and studies have led to Queensland's sandmasses being amongst the best studied and most understood natural areas of Australia. The studies indicate the optimum management policies for these areas.

## ACCESS AND LAND USE

Access to Stradbroke Island has been quite open for many years. Since sandmining began in the 1950s, there have been regular ferry services and roads to carry conventional vehicles.

Two of the islands, Moreton and Fraser, are untrafficable to any but off-road vehicles because there is no network of hardened roads. Until the late 1970s neither of these islands had even any sort of hotel and there was very limited permanent accommodation. There was no vehicular ferry service and it was difficult for any vehicle to be landed on the islands. There were no shops and all supplies had to be carried in. Self sufficiency was necessary. There were no schools, shops, police, casualty centres or public services. There is still no mains electricity supply on either of these two islands although there are moves in that direction. This has meant that until now many visitors have been deterred from going unless they had access to special vehicles and equipment or they were quite intrepid adventurers.

Each island is now served with three different vehicle services and a variety of other fast passenger services for day trippers. Although there are now hotels and resorts, the majority of visitors who stay over on Fraser Island and Moreton Island are campers. There is little in the way of support facilities and services.

There are three major means of travel on the islands: on foot, in a four wheel drive, or else in a conducted tour or safari. Four wheel drivers and their parties usually drive to one of the three embarkation points to the island and take one of the vehicular ferries. Regular daily tourist services

operate from Hervey Bay City, Rainbow Beach and Noosa to Fraser Island and from Brisbane, Redcliffe and the Redlands District to Moreton Island and Stradbroke Island.

Fraser Island has a permanent resident population of only about 100 people, who reside in one of the four main tourist villages of Orchid Beach, Happy Valley, Eurong or Dilli Village, the Ungowa Forestry camp or the Sandy Cape lighthouse station. Because of its mild climate and idyllic settings the campers far outnumber those who seek sturdier accommodation at one of the resorts. The resident population of Moreton Island is less than 50 and it is similarly based on the lighthouses and the tourist industry.

The permanent population of Stradbroke Island is about 1 667 due to the employment generated by the sandmining tourist, and fishing industries. It includes a significant Aboriginal population. The network of roads and power supply installed to serve the sandmining industry encouraged a larger infrastructure such as a school, shops and services with their associated employment. In turn this attracted a significant retired population.

Fraser Island annually attract more than 500 000 visits. Visitors are well catered, for even though not all tourist and travel agencies are as well informed about available services as they should be. Moreton Island attracts a similar number of visits.

The number of visits to Stradbroke Island is probably much larger but probably involves fewer persons such as residents and relatives making more frequent visits. The traffic to Stradbroke Island is oriented towards domestic purposes and recreation, whereas recreation is the dominant reason for the visitors to both Fraser Island and Moreton Island.

Fraser Island is divided between National Park and State Forest with some private tenure in places. Most of the southern two thirds of Fraser Island are State Forest and most of the northern third is National Park. There are fewer than 500 ha in private ownership but subdivision is causing a proliferation of landholders which makes implementation of management policies more difficult.

There is only one small national park on Stradbroke Island (512 ha). The bulk of Stradbroke Island is Vacant Crown Land. There is dispute over that land. Much of it covered by mining leases. Conservationists and the bulk of residents want this area committed to become national parks. The Queensland Government is determined to have it subdivided and to achieve that objective is planning a bridge across Moreton Bay.

Moreton Island has now more than 90 percent of its area covered by the Moreton Island National Park. The Queensland Government is pledged to convert another 6.4 percent to national park after it has been mined.

## MANAGEMENT

It is proposed to focus on Fraser Island to illustrate the problems of management of all three islands.

Until 1963, the whole of Fraser Island was in the hands of the Forestry Department. The management of the island under a State Forest regime (other than its impact on the forests) was fairly benign. There had been no great impact on the island's eastern exposed coast. The number of visitors was well within its carrying capacity. It was only with the increasing fragmentation of management which took place from 1963 onwards that the degradation accelerated.

In 1963, the applications for extensive sandmining leases meant that the Forestry Department had to begin sharing management with the Mines Department. At the same time, a number of applications for permanent leases and other land tenure along the island's east coast prompted the Forestry Department to cede a strip about 80 kilometres long and one kilometre wide to the Lands Department. This enabled the Forestry Department to avoid the contentious problems of administering subdivision and resort development. However, the more that responsibility for this island was shared the weaker the overall management became. Management to most of this coastal strip from Eurong to Sandy Cape, could only be advanced if the mining companies, the Mines Department and the Lands Departments all agreed. All had some jurisdiction over it. No such agreements were forthcoming.

The added tourist interest added the dimensions of the control by both the Tourist Department and Fisheries Department to be added to the burgeoning bureaucracy. To that was added a Beach Erosion Control District administered by the Beach Protection Authority which extended 400 metres inland from the high water mark.

In 1971, the Queensland Government sought to appease public support for the conservation of the island by declaring a large section of the most remote northern end as a National Park. This has subsequently been enlarged to now embrace almost all of the northern third of the island. A new set of managers was installed - the Queensland National Parks and Wildlife Service.

Then in 1976, the Queensland Government resolved the squabble over which local authority, Maryborough or Hervey Bay should have the control over the island with the wisdom of Solomon. They changed the administration of Fraser Island from just one Council to being administered by two rival councils. This made the implementation of any effective by-law to control vehicular traffic or collection of a management fee almost impossible unless there was total unanimity between the two councils. This wasn't forthcoming. Splitting management between two authorities also meant that some private subdivision proposals, which would not have been previously countenanced, were allowed to proceed. The opportunity to prepare a strategic planning scheme for the whole island was frustrated.

All to this add the interest of other departments. The Department of Aboriginal Affairs and its concern for preserving Aboriginal artifacts and relics. The Water Resources Commission also became involved in attempting to preserve the quality of the great body of groundwater. The bureaucratic snare became even more entangled.

The impact of this continued proliferation of agencies with management responsibilities is best demonstrated by the frustrations experienced by the Maryborough City Council. In trying to establish a designated camping ground, the council, after six years was unable to proceed. It was frustrated in turn by the more than seven different Queensland Government departments. Similar frustrations prevented the Council establishing public toilet facilities and urgently needed public rubbish tips.

In a little over a decade, from 1963 to 1975, the Queensland Government has presided over the sharing of management decisions from just one government department, Forestry, to a proliferation of departments and a proliferation of private landholders. At the same time it rendered the local authorities impotent to address the problems. The level of management was reduced to the lowest common denominator.

In 1985 the Queensland Government responded to the public demands of the previous decade for better management. Management of Fraser Island is being coalesced again. A similar authority on Moreton Island has been foreshadowed.

Following special legislation passed by the Queensland Parliament, from 1st December, 1985 Fraser Island falls under the control of the Fraser Island Recreation Authority (FIRA). FIRA is a body which will divide management responsibilities between just two departments; the National Parks and

Wildlife Service and the Forestry Department. Fees will be charged to all island visitors other than residents and people working there. Permits are needed prior to visiting the island from either of the Authority if it is intended to traverse or to camp there. The problem is to reduce the number of authorities with jurisdiction on the island. The Queensland Government has declared that the Authority is not going to address land-use, it is just going to "control the visitors to the island". At least this is seen as beginning to address some of the more critical management problems.

In 1984, there was some attempt to regulate the land-use on Moreton Island and Fraser Island in an extraordinary land deal. Mining companies surrendered some mining lease titles there in return for millions of dollars worth of real estate on Inskip Point immediately to the south of Fraser Island. Whilst the reduction of mining leases is welcomed by the conservation movement, there is still major alarm at the prospect that mining could occur on the remaining leases.

## **OBJECTIVES OF THE SAND ISLAND MANAGEMENT POLICIES**

There is a major dilemma over the management of the sand islands. The principle management decisions can only be made by the Queensland Government or its agencies. The Queensland Government's political prescriptions for the objectives of management of the Great Sandy islands are oriented towards exploitation. The option for sandmining is retained on all three islands. Logging operations on Fraser Island are to be continued.

Such policies bring the Queensland Government into conflict with very large sections of the community represented by the voluntary conservation movement, which opposes exploitation. The conservation movement believes that there are most important aesthetic, cultural, biological and geomorphological values which deserve greater protection. They would prefer to see the bulk of islands' area dedicated as National Parks. They want exploitation limited.

The State government's attitude to maximization of tourism and its reluctance to obstruct free enterprise adds to the conflict over both land use and management. It has totally shunned this option of having National Parks taking precedence over other land-uses. This is also a source of continuing friction with the advocates of conservation who regard the sand islands as being very fragile and requiring sensitive management.



The Queensland Government has no environmental impact legislation at all. This has meant that many works on the islands are needlessly adding to the accelerating degradation. Roads are being widened, and urban expansion and building and construction projects proceed without any consideration for the environment. Environmental Impact Statements are not even required for the most destructive land use practices and proposals such as logging and sandmining. On the few occasions when EISs have been prepared they have had questionable validity and conclusions and/or the recommendations in them to minimize any adverse impact have been ignored.

There is also a difference between the Queensland Government and the Commonwealth Government over what should be the objectives of management. This reached its climax with the banning of mineral sand exports from Fraser Island from 31st December 1976. This action effectively stopped sandmining on Fraser Island. A similar restriction for mineral sands from Moreton Island is now Commonwealth Government policy. In addition, the proposal that the Commonwealth Government should nominate the whole of the Great Sandy Region for World Heritage listing has added to the strained intergovernmental relations on this issue. The Queensland Government, which reluctantly agreed to nominate the Great Barrier Reef for World Heritage listing in 1981, has now declared that "not one more inch of Queensland" will be added to that list.

In this tense political situation of quite contradictory objectives for management there has been little progress towards resolution. A Queensland Government commissioned management plan was prepared for Fraser Island in 1978 but it was immediately shelved. In 1983, the State government foreshadowed that it would respond to a critical management problem on Fraser Island by establishing a new management authority. On 1st December, 1985, two and a half years later the Fraser Island Recreation Authority is due to come into operation but without any degree of public involvement in the Authority, either as advisors or consultants in the process of development of the planning.

The Queensland Government has stated that its support for logging of Fraser Island is not negotiable. This is a further problem. However, the impasse over both logging and sandmining are not now seen as critical as the cumulative effects of general environmental degradation resulting from the present *laissez-faire* management. There is no control over the number of visitors, where they can camp, what becomes of the garbage that they generate, how they

travel over the dunes, the creation of new roads and the widening of existing roads, the spreading influence of embryonic urban areas and resorts, behaviour or hygiene. As well the Queensland Government has shown itself relatively impotent or weak in the control of squatters. The absence of environmental controls and the multiplicity of agencies dealing with these issues has prevented any resolution of the issues. The fact that there is almost a paranoia on the part of the Government to engage in any meaningful process of public consultation has impeded resolution of the issues.

Part of the problems may be resolved by the creation of one authority to control Fraser Island instead of the multiplicity of agencies which have shared and vied for control until now. The model of the Fraser Island Recreation Authority is being considered also for Moreton Island.

Many people believe that the degradation on Stradbroke Island is too far advanced to be able to easily resolve. There are still advocates of conservation and a majority of island residents who do not want this island degraded any further. They see the chance to resolve the management dilemma best served by including the bulk of Stradbroke Island in a national park.

Obviously there needs to be a mechanism to resolve the differences of opinion and the competing land use interests in Queensland. This is exemplified by the impasse over the management of the sand islands. Unfortunately there is little opportunity for open consultation and public participation in the planning process in Queensland.

## **TREATS POSED TO THE SAND ISLANDS**

The major threat to the sand islands comes from the failure to have any management plan which has public acceptance and endorsement. There are three major threats:

### **1. Sandmining**

This is really only an issue which is at best stalemated by the position taken by the Commonwealth Government. The Queensland Government has a policy of encouraging the mining of about 6.4 percent of Moreton Island and a similar proportion of Fraser island. Sandmining is destructive of the environment in many ways. It has a heavy impact on the vegetation, the hydrology and the long term stability of the sandmasses. It is the most fiercely contested land-use issue involving the sandmasses as it is regarded by the majority of the

people as an unacceptable environmental cost for such highly regarded recreation areas.

The presence and even expansion of sandmining on Stradbroke Island results from three factors; firstly it is on the island which is regarded as the most degraded of the three; secondly, it is the basis of employment for a very significant proportion of the Stradbroke Island residents including the Aboriginal community; and thirdly because there is a very strong "squatter principle" in Queensland, which gives rights to any previous landuser.

## 2. Logging

This is only an issue on Fraser Island but here it is fought with the same passion and dedication as the sandmining issue or the campaign to prevent the continued logging of the tropical rainforest in North Queensland. Moreton Island and Stradbroke Island do not have commercial forests. It is the presence of the commercial forest which is effectively preventing the declaration of the most attractive and significant parts of Fraser Island as National Park.

## 3. Subdivisions and creeping urbanisation

This is really an issue which is most ominous on Stradbroke Island where the public auction of Crown land a few years ago yielded an unexpected bonanza which has spurred on a rapid release of Crown land and encouraged the Queensland Government to move to construct a new bridge across Moreton Bay. The Lands Administration Commission does not appear to have any clear policy on the release of land other than to maximize its cash return from land sales or to satisfy political requests.

It is this desire to realize the cash values of land that appears to underlie the Queensland Government's determination to build a bridge to Stradbroke Island and to destroy its remaining isolation. Stradbroke Island, already the most seriously degraded island of the three, will suffer irreparable damage if the bridge is built, as currently seems most likely.

Squatting has occurred with seeming immunity on both Moreton Island and Fraser Island. The Lands Administration Commission seems unable to remove any determined squatter who calls its bluff. Worse, there is now an established practice of rewarding squatters with either cash or legal tenure elsewhere in bids to coerce them to move voluntarily.

Tourist resorts such as Orchid Beach and Eurong on Fraser Island and Tangalooma on Moreton Island are expanding rapidly. What began as isolated hotels catering for those seeking seclusion

in remoteness have now become identified with creating enlarged urban complexes around them with consequential environmental degradation. For example to cater for the demands of the Eurong Resort following dramatic increases in the cost of diesel fuel, the local electricity authority is proposing to establish a swathe of destruction along the foredunes of more than 80 kilometres.

The establishment of properly organized camping areas is vital to the long term management of the islands but there is no coherent policy which could achieve that. Instead there is a catering to private developers who can sell plausible stories of what they will do if given title to a bit of land which they have "selected".

Added to these three major issues which many regard as incompatible with the long term use of the sandmasses are a number of lesser but still significant issues. These include:

- a. Prevention of introduction of injurious agencies. The impact of Cane toads (*Bufo marinus*) on all islands, feral goats, horses and pigs on Moreton Island, the impact of brumbies and to a much lesser extent feral cattle on Fraser Island and the effect of feral cats and dogs needs to be addressed. Attempts to remove the feral cattle on Fraser Island as part of the tuberculosis-brucellosis campaign early in 1985, were not successful and some "scrubbers" remain. There was such a public outrage when it was suggested that the brumbies be removed from Fraser Island in 1974 that the authorities backed off. A similar controversy occurred when authorities attempted to eliminate feral animals from Moreton Island. Pigs were eliminated but some brumbies and goats remain.

The largest problem exists on Stradbroke Island where there is no control of public access and there is a busy roll-on/roll-off ferry service and a network of sealed roads for conventional vehicles. This makes the dispersal of feral animals and ominous menace. There are feral cats, dogs foxes and fish (*Gambusia*) all having an adverse impact. It is believed that feral dogs may have eliminated the Agile wallaby population.

On Fraser Island, dingoes have kept domestic dogs under control and there is virtually no evidence of feral cats. The Fraser Island Recreation Authority has indicated that it will now prevent any domestic cats from being taken to the island under any circumstances. However the Authority refuses to address the more vexed

issue of dogs, which are still allowed to go to Fraser Island and do so in great numbers.

The larger more sinister problem in the introduction of weeds, disease and pathogens such as *Phytophthora cinnamomi*. There appears to be no attempt to practice quarantine on islands such as these to insulate them from diseases which have ravaged much of the mainland in disturbed areas.

Already two noxious weeds, grousel and lantana, have gained a strong foothold on all three islands. A more potent weed threat is Bitou Bush or Boneseed, which although not reported on any of the islands, is now well established at Inskip Point, just two kilometres across the water from Fraser Island.

- b. Fire is a problem on the sandmasses where the surface of the soil can dry out very quickly. This, combined with the dense biomass allows uncontrollable fires to develop easily. There have been several major fires which have damaged the crowns of the forests on the northern part of Fraser Island during the last 20 years. All were results of deliberately lit fires which got out of control very quickly. Wider public usage has not increased the frequency of fires. The need for a fire management policy is vital for the whole of each island in any future management plan.
- c. Control of traffic across the foredunes and limiting the number of vehicular access points to the beach and even the closing of beaches to vehicular traffic should be an important consideration for any managers. So far political considerations have prevented these options from being fully addressed.
- d. Control over rubbish and garbage disposal. The preferred option of "carry in - carry out" is being practiced by more and more people. Unfortunately resorts are great creators of garbage and in the pursuit of profits shun this option. The result is that the resorts tend to create dumps convenient to themselves which are used with quiet abandon by the less environmentally conscious in ugly displays of laziness. This very visible symptom of management is one which has served to focus wider attention on the environmental sensitivity of the sandmasses
- e. Sewage and human waste disposal. The perched lakes on the islands are a result of the sealing of the sand with organic colloids. The use of septic tanks tends to rapidly reproduce those

conditions and cause the sand surrounding soakage drains to become impervious. This is a problem already experienced in every heavily used septic block. The alternatives of evaporation ponds are expensive and are shunned by the resorts. This is a problem yet to be properly addressed.

The safest method of human waste disposal is by the earth closet methods. These are used extensively by campers. Unfortunately, the indiscriminate location of these pits are unknown and apart from fouling the water quality they present a potential health hazard particularly as many campers do not observe all of the recommended practices in sealing them afterwards.

There is now a well recognized problem in trying to avoid enrichment and eutrication of the lakes by avoiding the use of soap and any other additions to the water. The awareness has not prevented one popular dune lake suffering considerable enrichment and loss of water quality through the added urine.

- f. Fore-dune camping is now at a premium. The demand for sites is so great that on the better sites as soon as one lot of campers vacate the next campers move in. This has a devastating impact on the ground cover and access to the site. It usually means that the sites are progressively expanded. The impacts result from the destruction of the ground cover, the stripping and removal of trees, the fouling of the ground with litter and human waste and the proliferation of access tracks across the foredunes to the sites.

As firewood along the fore-dune is at a premium, it also usually results in the surrounding trees being stripped of any easily removable limbs. Because almost every camp uses open fires, and a very large percentage of four wheel drive vehicles carry chainsaws, the environmental impact that campers can be very severe. The constant use of the limited number of attractive sites does not allow sufficient time for the vegetation to recover. As well, the constant proliferation of both vehicle and pedestrian tracks across the fore-dune increases the problem.

The devastation of the vegetation in this fragile and sensitive fore-dune area plus the health hazards have made this type of camping one of the most urgent management problems to be addressed on both Fraser Island and Moreton

Island. The complexities of proliferation of authority described above, has so far prevented establishment of any adequate alternative to the present uncontrolled foreshore camping practices.

g. The need for better environmental impact assessment of any new project on the sand islands must be recognized and practised. Too frequently shortcuts are taken deliberately by persons who work on the premise that "It is easier to beg forgiveness than obtain prior approval". Under this practise roads are widened, gravel is introduced to the sandmass with the impact on the water quality and the risk of pathogens, and clearing occurs indiscriminately. The process is assisted by the lack of clear authority and responsibility for control and the prejudice in Queensland against any form of mandatory environmental assessment. It is made worse by the lack of mechanisms for public involvement in the planning processes. As a result even statutory authorities such as Telecom are negligent in applying proper environmental evaluations.

h. The management of people and traffic has become an increasing role for the police. Petty larceny, drunkenness and, most of all, loutish recklessness in vehicles, has increased alarmingly during the past five years on the sand islands. There has been a longstanding police presence on Stradbroke Island but Moreton Island and Fraser Island, where any police presence was until recently regarded as superfluous, are now regarded as needing police during busy times. The Police Department is now planning to establish a Police Station on Fraser Island.

i. Expansion of National Parks. The most urgent issue in management policies for all three islands is the expansion of the existing National Parks. This is seen as a more or less permanent resolution to many of the land use problems.

This would also bring management under the control of one authority.

j. Restriction of access. The factor which has most aided the retention of the naturalness of the islands has been their relative isolation. The management problems have dramatically accelerated with the greater vehicle access by more ferries. The provision of bridges as proposed for Stradbroke Island would create the heaviest impact yet on these fragile ecosystems.

## CONCLUSION

The three major offshore islands of south east Queensland are very important. They are important to the community as largely natural areas of great attraction which are ideally suited and conveniently located for recreation. They are very important biologically. They are extremely significant in geomorphic terms. Two islands, Moreton Island and Fraser Island, have retained their essential natural character and are being sought almost in their entirety as National Parks. Stradbroke Island is more degraded as a result of heavier settlement and more extensive sandmining but there is still a strong pressure for much greater areas to be dedicated as National Park rather than being opened up to more subdivision.

The attitude of the Queensland Government has been the largest single obstacle to the management of these sand islands. It has been unsympathetic to conservation. Therefore conservationists and others have increasingly turned to the Commonwealth Government to implement policies which would guarantee less exploitive management and preserve the natural character of these islands. The main objective is to ensure that future generations can enjoy the enormous recreational potential of these islands in a relatively undisturbed state.

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