

# What has World Heritage meant for Fraser Island?

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## Abstract

*Fraser Island was inscribed on the World Heritage List in 1992. With 99 percent of the island being a National Park its natural integrity should be ensured in perpetuity. This paper critically evaluates the management of the island and the arrangements between the State and Commonwealth Governments and how this has failed to protect the values for which it has been internationally recognized and some significant environmental degradation that has ensued.*

*Visitation has increased by more than 50% since listing, resulting in a huge diversion of the proportion of public expenditure on Fraser Island from natural resources management to recreation management. Visitor pressure continues to impact on the island's natural resources, potentially threatening its World Heritage values. Lakes suffer from infilling and in the deteriorating water quality. Dingo management has become a major issue only since the Listing. The number of weed species continues to increase despite increasing efforts to control them. Fire ecologists continue to argue that the fire regime is far from optimal due to a lack of priority and resources. Climate change is already visibly impacting on the island's environment but less research and monitoring now occurs on Fraser Island than before World Heritage listing. Despite the establishment of advisory committees to facilitate communication with stakeholders, there is now less transparency over Fraser Island management than during the 1990s. This paper seriously questions that World Heritage listing has benefited Fraser Island.*

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## 1. Introduction

Fraser Island was known to the Butchulla people as *Kgari* for millennia. It is the world's largest coastal sandmass and contains complex, evolving coastal dune formation. (FIWSAC 2004). However, it is not just its physical traits that have earned it World Heritage status (its outstanding biodiversity and geomorphology have also been recognized (DSEWPC 2009).

After a 21-year campaign for World Heritage, Fraser Island was listed in 1992. Commercial logging ceased in 1991 and the Great Sandy Region Management Plan was adopted in 1994, and since 1998 management of 99 percent of the island has been a National Park.

Of Fraser Island's surface area of 163,000 hectares, all but a few consist of siliceous sand. The highest dune has an elevation of 240 metres. The sand extends up to 90 m below present sea level (CICMFIGSR 1990). The only rock occurring is a few exposed hectares of volcanic remnants in the Indian Head-Waddy Point area and a smaller metamorphic intertidal outcrop at the mouth of Boon Boon Creek (ACF 1975). With a length of 123 kilometres and an average breadth of 14 kilometres, Fraser Island contains the tallest rainforests growing on dunes in the world (FIWSAC 2004). It has extensive areas of rainforests, eucalypt woodlands, forests and heathlands. It also features dune lakes, tidal wetlands and over 200 kilometres of wide sandy beaches. (DSEWPC 2009).

Despite over 120 years of exploitation of its precious forests and the disturbance of about 350 hectares to extract mineral sands, Fraser Island still retains most of its outstanding natural qualities. Although the island attracts about 350,000 visitors annually (MOONBI 116 2007), according to residents contacted in three villages there are still fewer than 100 permanent residents. Almost all visitors are conveyed around the island in four-wheel drive transport. (GHD 2002)

## 2. Recent History of Conflict on Fraser Island

Fraser Island has been the subject of considerable controversy as competing interests waged very public campaigns over the exploitation of its mineral sands and timber resources. (Bonyhady 1993). Following a six year campaign by conservationists wanting to preserve the island as a complete natural ecosystem for posterity

and acting on the recommendations of the Fraser Island Environmental Inquiry that conducted a six month comprehensive multidisciplinary inquiry throughout 1975, the Commonwealth Government in 1976 banned the export of mineral sands from the island which effectively ended the sandmining industry there despite the Queensland Government heavily backing the industry (FIEI 1976)

The Inquiry had also recommended that Fraser Island should be nominated for World Heritage listing. However the timber industry had been operating on Fraser Island since 1863. The Queensland Government heavily backed the logging and the Commonwealth Government lacked constitutional powers to over-ride the Queensland Government on this issue as it had in the case of mineral sands. (Bonyhady 1993, Sinclair & Corris 1994, Lines 2006) Queensland's position stalled the island being nominated for World Heritage for 10 years.

As a result of political changes, the Queensland Government in 1990 appointed a Commission of Inquiry into the Conservation, Management and Use of Fraser Island and the Great Sandy Region headed by Tony Fitzgerald QC to consider the merits of the claims of Fraser Island and Cooloola for World Heritage listing and also the sustainability of the timber industry on the island. After a most detailed examination of all submissions the inquiry recommended that the whole of the Great Sandy Region deserved World Heritage nomination and that the timber industry be phased out (Fitzgerald 1991). Logging ceased in December 1991 and Fraser Island was inscribed on the World Heritage List in December 1992.

Unfortunately the whole Great Sandy Region including Cooloola wasn't included in the area inscribed on the World Heritage List. However, both the State and Federal governments are now committed to pursuing again the inclusion of Cooloola and a much larger marine area in a World Heritage renomination that will also recognize additional values not recognized in 1992. (Jones 2010)

## 3. World Heritage Values

When listed in 1992, Fraser Island was deemed to have met two of the criteria for World Heritage listing. (DEWHA 2010). The criteria for World Heritage have since been redefined and Fraser Island is now deemed to meet three of the four natural criteria:

- Criterion (vii) contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;
- Criterion (viii) to be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;
- Criterion (ix) to be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;

In 2010 these were summarized in a Statement of Outstanding Universal Values: "*Fraser Island, (Kgari) the world's largest sand island is an outstanding example of complex dune formations evolving from a unique interaction of coastal successional vegetation, hydrological and geomorphological systems. The island contains close to half the world's known freshwater dune lakes. It is an area of exceptional natural beauty, with spectacular tall rainforests and sandy beaches, wallum heath, tidal wetlands, and diverse terrestrial and aquatic fauna including acid frogs, shorebirds, dugong, turtle and whales.*" (DEWHA 2010). These values have been elaborated in greater detail in a statement yet to be endorsed by the World Heritage Committee (DERM pers. comm 2011)

#### **4. Protecting the World Heritage Values**

World Heritage status was expected to provide an additional layer of protection to Fraser Island's outstanding natural values. It had been assumed that because the Commonwealth Government is the state party to the World Heritage Convention it is obliged to ensure that the integrity of the values for which it was inscribed are adequately protected. This paper examines the effectiveness of the Commonwealth's role in ensuring that Fraser Island's World Heritage values and integrity are being adequately maintained.

In 1991, the Queensland Government requested the Commonwealth to advance Fraser Island's World Heritage nomination. Having agreed with the World Heritage nomination the Commonwealth, then delegated the island's day-to-day management to Queensland (DEH 2002). An Commonwealth inquiry found that the Commonwealth *distributes funds among (World Heritage areas) in a manner that is not equitable and not calculated on the basis of need.* (HORSCERA 1996). Subsequent to that report the Commonwealth halved its annual contribution to world heritage areas on a per site basis over a period of seven years. (MOONBI 116 2007.) Over the first 9 years of the Howard Government, Fraser Island received only 4.26% of the World Heritage money which was divided up amongst the 9 state managed World Heritage Areas (MOONBI 116 2007). In 2007 the Commonwealth contributed less than 1% to the \$9.1 million budget to manage Fraser Island (MOONBI 116 2007). The Commonwealth's very minor contribution to the management of Fraser Island is seen as limiting its rights to intervene in management decisions about Fraser Island.

#### **4.1 Management priority for recreation use over natural resource protection**

World Heritage listing resulted in an accelerated exponential increase in visitation. It grew from just over 200,000 visitors to the Island annually at the time of listing to almost 340,000 within a decade. (DEH 2002). The significance of value of visitation was shown in a study of the annual value of Fraser Island tourism to the Queensland economy was *estimated to be in the order of \$277 million generating up to 2,880 jobs* (Kleinhardt, 2002). The economic impact from tourism is then reflected in the allocation given to managing visitors. Queensland has benefitted economically from Fraser Island tourism, servicing the recreational needs of visitors has taken priority over environmental monitoring and protecting the World Heritage values. This is demonstrated by the comparison of budget allocations given to recreation management and natural resource management because natural resource management principally covers the protection of World Heritage values. The last figures divulged on Fraser Island expenditure, in 1998-99, revealed that only 8.4% was spent on natural resource management. (MOONBI 120, 2009)

The Queensland Premier's Ministerial statement inviting private enterprise to establish infrastructure in Queensland national parks to help boost tourism is an indication of the priority given to boosting to boosting the State's tourism (Bligh 2009).

#### **4.2 State expenditure**

In 2005 the budget for managing the whole Queensland National Park estate was only \$8.81 per hectare having decreased from about \$12 per hectare in 1998 (SECITAC 2007). This compares with New South Wales expenditure almost \$40 per hectare, Victoria more than \$30 per hectare (GHD 2006) and the Commonwealth spending of \$26.80 per hectare on their National Park estates (SECITAC 2007). This seems to indicate that Queensland is not adequately providing for its National Parks to the same standard as parks services in other Australian states.

When Des Boyland was responsible for Queensland National Parks in the 1990s the service had a budget of \$6.00 per hectare. He advises that the service was then spending \$50 per hectare to manage the sand island national parks (pers. comm). Based on an anticipated annual expenditure (\$9.1M) and the area of the island, it is estimated that present QPWS annual expenditure is in the order of only \$54 per hectare.

In 2010 the Queensland Government refused to detail any breakdown in its expenditure on Fraser Island (Jones 2010) so it is not known how much is allocated to Fraser Island nor what proportion is allocated to natural resource or cultural resource management.

#### **4.3 Commonwealth Government's detachment:**

The head of the Commonwealth's Natural and Indigenous Heritage Unit advised by letter in April 2011 that "*the Australian Government provides protection of Fraser Island through the Environment Protection and Biodiversity Conservation 1999 (the Act). However, the Act is only triggered when an action has the potential to have a significant impact on a matter of national environmental significance*" (pers. comm). What constitutes matters of "*national environmental significance*" remains

undefined. Likewise a question remains about whether “an action” is required to be a single event or proposal or whether a series of events that combined have “national environmental significance” might trigger some action by the Commonwealth.

In 2002 the Commonwealth Government produced a Periodic Report to the World Heritage Committee on the status of the Fraser Island World Heritage site. Although it concluded, “The two main threats to the values have been identified as being recreation and visitation, along with inappropriate fire regime,” and “Knowledge gaps have been identified and will be addressed in future planning, management and research activities” (DEH 2002), the Commonwealth has done nothing to ensure that these critical matters were addressed.

The Periodic Report noted: “Many projects designed to minimise the threats posed by increasing numbers of visitors to the island are underway. Key projects include the Fraser Island Transport Study, development of a camping management plan, and the implementation of the recommendations of the Desired Site Capacities Study.” (DEH 2002). Of the three studies referred to above as being critical to minimising threats, only the Camping Management Plan was concluded and implemented. The *Fraser Island Transport Study* before a final report could be delivered. (GHD 2002). A working group including many stakeholders comprehensively studied over 40 major destinations over 15 months in 2006 and 2007 to assess the desired site capacities. Their completed report was then shelved and only published in 2011 (DERM 2008) without any opportunity for public comment on the original draft.

Fire management is critical to the natural integrity of the island and its World Heritage values. Although the Draft Fire Strategy was prepared fire ecologists continue to be critical of the inadequate implementation of this strategy. (Stanton 2009). There is no indication that Commonwealth taken any note of this concern and may not deem a lack of “action” as a justification for taking action under the EPBC Act.

The lack of actions to stimulate Commonwealth interest in the protection of World Heritage values is best illustrated at the lack of evident concern that no monitoring of water quality in Fraser Island’s iconic perched dune lakes was carried out by the Queensland Government for a period of twelve years (MOONBI 119 2009). The public has a right to assume that the Commonwealth has a clear responsibility to ensure that there is adequate monitoring of Fraser Island’s World Heritage values.

#### **4.4. The Management Plan**

Following the 1992 Fitzgerald Inquiry the Queensland Government made the Queensland Parks and Wildlife Service (QPWS) responsible for the management of all public land within the region even though much of it was still under State Forest and other tenures. It was in this capacity that in 1992 the QPWS began a process involving significant community consultation to develop the Great Sandy Region Management Plan. That Plan was prepared and approved in 1994 “to protect natural, cultural and economic values and to provide a framework for decision-making so that four outcomes could be achieved in the Great Sandy Region by or before the year 2010.” (FIIU, 1994).

The year 2010 was selected “as a medium-term planning horizon to allow time to undertake major works and actions and to evaluate performance.” The year 2010 has passed

without the Queensland Government undertaking any evaluation of its performance or reviewing the plan to see how well it had met those objectives. A belated review resulted in a revised version in 2005 (EPA 2005). However, in 2010 in response to a report from the Queensland Auditor General critical of the lack of MPs for Queensland National Parks generally, the Minister told Parliament that she did not believe that Management Plans are “the best use of taxpayers’ money or the expertise and resources of the Queensland Parks and Wildlife Service. There are more efficient ways to achieve good park management outcomes without undue bureaucracy.” (Jones, 2010)

The Commonwealth’s Periodic Report acknowledged that the Great Sandy Region Management Plan lacked statutory status under Queensland’s Nature Conservation Act 1992. Although the responsible Minister questioned the value of management plans for Queensland national parks, the Queensland Government advised in 2011 letter (pers. comm) that the Great Sandy Region Management Plan is being reviewed and will then have the statutory status it lacked for 17 years.

2002 seems to have been a watershed year in the management of Fraser Island. In 2001 Queensland Premier Beattie promised “to give legislative effect to World Heritage area Management Plans to ensure their planning policy and principles are reflected in local planning schemes and considered in the assessment of development applications”, and to “bring Fraser Island under the planning control of a single government agency” if elected. The Fraser Island Defenders Organisation (FIDO) has long argued for a single authority to handle Fraser Island so that the day-to-day management of the island would be similar to the Lord Howe Island model. Premier Beattie’s failure to deliver on these core election promises has resulted in urban area which impact on the National Park are managed by a separate authority confusing overall management. (MOONBI 100 2001)

#### **4.5 Degradation of the lakes and erosion**

UNESCO describes Fraser Island as featuring *an array of dune lakes that is exceptional in its number, diversity and age.* (UNESCO 2011). The volume of visitation impacts heavily on the most iconic of the island’s lakes (DERM 2008). The Fraser Island Sustainable Visitor Capacity Study reported that Lake McKenzie (Boorangoora) attracts 225,000 people annually (DERM 2008). Of these about 72,000 were free and independent travellers (FITs), 54,000 were backpackers and 122,000 were on commercial tours (DERM 2008). Redevelopment of the day-use facilities at Lake McKenzie was carried out in 2010 at a cost of \$3.4M (MOONBI 123 2011). Extensive new fencing on the famous beach now detracts from its appeal although aesthetic attraction was one of the original criteria as a basis for the island’s World Heritage listing (MOONBI 123 2011).

Apart from the aesthetic impacts of visitation on the lakes, there is a significant physical impact on the lakes. To reach the lakes, 4WDs disturb the road surface and harden the substrates below the road surface. As a consequence even light rainfall fails to penetrate the road surface and runs down the slopes carrying any loose disturbed surface sand with it. This process occurs throughout the island. A commissioned study of the road network in 2002 measured the impact of erosion on the roads. It showed that 6% of the Fraser

Island road network had moderate smothering and 7% had moderate down-cutting while a further 3% suffered severe down-cutting or smothering (GHD 2002). It is argued that this degree of induced erosion shouldn't be occurring in any major natural area.

Road wash conspicuously flows directly into Lake Allom and Lake McKenzie. This wash has two components: water and sediment. The run-off water is affecting the water quality. The sediments are resulting in the lakes being slowly filled with silt. So much solid material washed off the roads close to Yidney Lake that it has converted what was in 1975 still a lake into a large blackbutt forest (MOONBI 119 2009). While the process may be slower in the case of Lakes Allom and McKenzie, unless this is addressed the outcome will eventually be the same. (Sinclair, 2008)

There is also concern about the potential impact that dissolved impurities in road wash might affect the water quality of the lakes particularly when they were not being monitored. In 2009 water samples taken from Lake Allom showed elevated turbidity (DERM 2009). The Queensland Government dismissed this turbidity as being natural, but some people believe the results indicate that the turbidity is attributable to road run-off.

Relocating all roads and parking areas outside the lake catchments could eliminate Road run-off into the lakes. To restrict movement within the lake catchment only to pedestrians would require all vehicles to park away from the lakes resulting in longer stops on commercial tour schedules. This would be unpopular with tourists and tour operators. It is believed that this is why the Queensland Government has failed to respond to repeated requests to relocate the traffic movements away from the lake catchments (pers, comm).

It is not only road traffic causing erosion of Fraser Island's fragile surfaces. Annually 144,600 pedestrians ascend Indian Head, Fraser Island most prominent landmark, *causing considerable degradation with informal trails crossing the headland, erosion, compaction, reduced ground cover and the spread of weeds* (DERM 2008).

#### **4.6 Dingo Management**

The significance of the dingoes on Fraser Island was recognized in the 1978 Fraser Island Recreation Management Plan that moved to protect the genetic purity of the dingoes by banning domestic dogs on the island (Queensland Government 1978). This move was to stop interbreeding and to quarantine dingoes from possible pests and diseases. The genetic purity of Fraser Island dingoes makes them the purest strain of dingo on the eastern Australian seaboard and perhaps Australia wide (DERM 2010). Because DNA sampling has confirmed their genetic purity, Fraser Island's dingoes have assumed greater significance in the World Heritage values since 1992 (MOONBI 116 2007).

Dingo management only became a major issue since Fraser Island's Listing. While Fraser Island had much lower levels of visitation, dingo-human interaction wasn't an issue. There were no significant behavioural problems with dingoes in 1992. (EPA 2001) As the volume of visitation increased (DEH 2002), dingo behaviour changed. They became increasingly emboldened. This resulted in an increasing frequency of attacks on humans leading up to the fatal attack on a child in 2001 (Sinclair 2001).

Dingo management strategies now include the installation of

fences to separate dingoes from settlements has consumed much of the QPWS's meagre Fraser Island budget. (Corbett 2009, DERM 2011)

Conservation of Fraser Island dingoes is of national significance and a high priority for the QPWS, it is a problem acknowledged to result from interaction between tourists and dingoes. This causes dingoes to become both habituated and aggressive (DERM 2011). Unfortunately there is no consensus on the management of dingoes because while the QPWS are committed to a management strategy to avoid habituation of dingoes, a sector of public opinion supports the artificial feeding of dingoes. (MOONBI 121 2010)

#### **4.6 Weeds and other pests**

The number of weed species has continued to increase despite increasing efforts to control them. In 2010 there were 80 species of identified weeds listed as occurring in the Fraser Island section of the Great Sandy National Park (Harvey 2011). The plant list for Fraser Island at the time of its World Heritage nomination included only 43 species, with some of them such as red cedars and bush lemons that aren't regarded as weed species (DASSET 1991). Coincidental with the increase in the number of weed species has been the spread in the distribution of weeds throughout the island. The area of the island which remains weed free, mainly in the centre of the island has continued to shrink (Harvey 2011).

Alien ants have been known on Fraser since 1992. Their distribution hasn't been limited to the settlement areas with some outbreaks in previously undisturbed parts of the island. Because of the potential of some ants to wreak havoc on the ecology, a significant study was carried out into their distribution and spread but attempts to eliminate a known population in the Wabby Lakes area wasn't successful (DERM Sandpaper 2011)

In 2011 a virulent plant fungus, Myrtle Rust (*Uredo rangelii*) has been located close to Fraser Island. *Syncarpia hillii* is almost endemic to the island but it is most vulnerable to this serious pathogen. The Fraser Island World Heritage Joint Advisory Committees were advised in 2011 that there are no plans or provisions to stop its spread to the island and no means of controlling it if it does arrive.

In 2011 residents of Happy Valley detected a serious infestation of the Pandanus Leafhopper *Jamella australiae* that has killed a number of trees close to the township. The Fraser Island Natural Integrity Alliance (FINIA) is attempting to control this small insect that had not been previously known on Fraser Island.

Despite the identified problems with ants and other unwanted introductions to Fraser Island and the number of identified weeds almost doubling in just two decades, there is still almost non-existent quarantine measures in place to discourage the inadvertent introduction of new alien species and no plans after 19 years to institute wash-down facilities.

#### **4.7 Climate change**

Like other dune islands, Fraser Island is very exposed to impact of climate change induced sea level rises on its highly erodible coastline (Sinclair 2006). Climate change is already visibly impacting on the island's coastline particularly at Moon Point and north. Levin has postulated that, at current rates all of Fraser Island's iconic sandblows will probably be colonized by vegetation by the end of this century (Levin

2010). A significant proportion of the larger tree species are at the northern limit of their range and there is concern that these may be vulnerable as temperatures rise. However, less research is now occurring on Fraser Island than before World Heritage listing and bureaucratic obstacles to conducting studies on Fraser Island are now a major deterrent to researchers.

Fraser Island is uniquely placed to serve as a national laboratory for scientific research on the impacts of climate change. It is large, natural, intact ecosystem relatively free from human disturbance where changes can be accurately measured. Prof Bruce Thom has identified that there are parts of Fraser relatively free of human traffic and hence offers sites that can yield data on changing ecological and geomorphological conditions at the transitional latitude along the eastern seaboard (pers. com) and believes that Fraser Island is well placed to serve as a national laboratory.

To serve its full potential as a laboratory for measuring climate change, there needs to be more baseline data and this needs to be freely available to enable scientific measurement and comparisons. Prof Thom supports Fraser Island being managed by a single authority as a necessary institutional step to ensure the long term collection of data with a national scientific advisory committee overseeing the

#### **4.8 Transparency**

World Heritage Community, Scientific and Indigenous Advisory Committees were established following World Heritage Listing with the author being a member of the Community Advisory Committee through the entire period and concludes that there has been a significant reduction in the transparency of Fraser Island management. It is difficult to obtain basic information such as the budget details (Jones 2010). The budgetary details for managing Fraser Island are regarded as not available. Annual Reports covering the operation of the Recreation Area Management Board including visitor statistics have ceased being published. A transport and access study was stopped before completion without explanation. The public was not allowed any input into the interim review of the Great Sandy Region Management Plan. The author made extensive submissions to the Draft Strategic Directions Paper only to find that no submissions were ever acknowledged and all were ignored because there was only one sentence changed between the draft and the final paper that was ultimately adopted (pers. comm).

The lack of transparency is best epitomised by the fact that the Periodic Report in 2002 was submitted without the consultative committees even being advised (pers. comm). For the 2011 Periodic Report only six days were allowed for any comments to be submitted (pers. comm).

Major projects on Fraser Island such as the substantial clearing of hundreds of kilometres of island roads to become major firebreaks have been carried out without any prior public discussion or announcements or prerequisite Environmental Impact Statement and have not been subject to the EPBC Act assessment.

#### **4.9 The need for monitoring and research**

The failure to monitor lakes epitomizes a general failure to adequately monitor the natural resources of Fraser Island since its World Heritage inscription. Repeated requests by the Community Advisory Committee to be provided

with data showing the monitoring undertaken on Fraser Island have been ignored indicating either that there is no monitoring going on or that the QPWS is opposed to divulging any findings (pers. comm). The failure to undertake any formal environmental impact studies prior to clearing vast swathes amounting to hundreds of hectares for firebreaks through the landscape is also indicative of the inadequacy of deliberative studying and monitoring.

#### **5.0 Conclusions**

While this paper is not by any means present an exhaustive list of all of the issues relative to the changes impacting on Fraser Island since its 1992 World Heritage inscription, it illustrates a number of areas where Fraser Island has suffered serious environmental degradation. This seems to have accelerated since 2002. However the lack of monitoring and reporting and the deliberate lack of transparency make it very difficult to fully quantify the full scale of the impacts. Further, the much higher priority given to recreation management over natural resource management increases the probability that the Queensland Government by itself will not adequately address the protection of the island's World Heritage values.

Although Fraser Island still meets the World Heritage criteria for which it was nominated, these values are increasingly under threat. More resources are required to monitor and manage them. Without more Commonwealth Government financial contribution to the management of the island's World Heritage values and critical scrutiny of the day-to-day management, the environmental degradation will only continue.

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