

**MOONBI 106 (12<sup>th</sup> January, 2004) 10**  
**Elements of Environmental Change**

The long term integrity of the Fraser Island World Heritage site is being determined by some large but critical factors. While the changes are imperceptible on a daily basis, they are now becoming more apparent as FIDO reviews our observations over three decades.. The most significant of these are climate change, sea level rise, fire management and introductions of alien plants and animals. All of these are slowly but progressively effecting changes which may be hard to reverse. Some factors are beyond even the capacity of Australian governments to address alone. They require the full cooperation of the community and some, indeed the global community

### **Urgent Factors Affecting Fraser**

**Climate Change:** There is already growing global evidence that climate change is going to result in a dramatic increase in global extinction of species. What is concerning is that many species on Fraser Island inevitably will be vulnerable. There is just not enough known which species are at risk. Furthermore there isn't much that all of the Australian Governments collectively can do without concerted global action. What is more infuriating though is that the Howard Government has used this impotence as an excuse for itself not doing enough and even worse siding with the USA to refuse to sign the Kyoto protocol which is at least a positive attempt to address this most urgent global problem.

As well as the loss of species we are also seeing a significant change in plant communities and where they occur on Fraser Island. Climate change may be combining with changed fire regimes and alien introductions to affect plant communities.

**Sea Level Changes:** When the sea level fell by just one metre between 6,000 and 5,500 years ago Fraser Island was enlarged by the addition of new land in the Moon Point and Hook Point areas. Tat is when the fens began to form. In all about 15,000 hectares or close to 10% of the current area of Fraser Island were added. One of the lesser-known consequences of climate change is that sea levels are due to rise over the next 500 years by one metre. That will inevitably lead to that the sea which first created it will reclaim same 15,000 hectares. Evidence of this is already apparent at Moon Point. All of the land east of the Dillingham mine is likely to go in the lifetimes of the next 25 generations including Dilli Village. But it is not just "Fighting for Fraser Island" which will lose out. Around coastal Australia mega billions of dollars of valuable real estate including canal estates on the Gold and Sunshine Coasts are likely to be lost.



**Moon Point — July 2003.** This land, created when the sea level fell a metre 5,500 years ago is already showing signs of being reclaimed by the sea by the slow sea level rise.

**Alien Introductions:** It is not only weeds which threaten the integrity of Fraser Island. A small insect threatens to wipe out pandanus possibly extending beyond Fraser Island. Cane toads impacted on death adders and other species. Brumbies impacted on foredune vegetation. Beach spinifex is possibly new to Fraser Island. Introduced grasses are a major threat.

**Fire Regime:** FIDO continually compare photographs of Fraser Island back in the 1970s with photos of the same areas after 20 years or more. It is obvious that some of the very significant environmental changes have resulted from a changed fire regime. The earliest photos of Fraser Island show a far more open under-storey. How this can be regained requires a lot of skill and knowledge which has been lost. Good fire management is an art and requires people to be very finely attuned to environmental conditions. It is not an art which can be practiced within the constraint of current ranger Award working conditions. For example the best low intensity fires are started very late in the day and able to burn quietly and extinguish themselves as the dew point rises in the early evening. Because Rangers are required to have fires extinguished before they knock off for the day at 5.00 pm prescription burning starts early in the morning and the fires are burning during the hottest part of the day. FIDO supports a replication of traditional Aboriginal burning practices. The most recent burning practices on Fraser Island are in almost complete contrast to that traditional burning. FIDO want more attention paid to the art and science of burning and less to the industrial awards (although we don't want any lessening of personal risk minimization).



### **New Legislation to Attack Weeds**

It is taking some time for the impact of Queensland weeds legislation passed in 2002 to have any effect. By 1 July 2004 local governments have to develop Local Government Area Pest Management Plans (LGAPMPs). New LGAPMPs have to be developed at least every four years. This imposes more onerous places on local authorities and landholders than ever before. Since the councils virtually ignored their obligations before there is no indication yet that the new legislation will improve their management of weeds. The indications that the new legislation will help Fraser Island are not good.

On 20<sup>th</sup> November, 2002, the Hervey Bay Council said that there should be no more work done to rid Happy Valley of weeds until it had developed a "Natural Area Restoration Plan" for the township. FIDO was promised that it would be consulted in the development of the plan but until it was finished FIDO would not be able to carry out any further weed working bees in Happy Valley. Unfortunately the silence from the Council in the year since has been deafening. Because of that FIDO was forced to relocate the Weeds Working bee in August to Eurong. In the meantime the weeds problem in Happy Valley has become increasingly urgent and the silence from the Hervey Bay Council Officers seems to indicate that developing any plans is not only an excuse for doing nothing but a reason to stop any action to ameliorate the rapidly worsening position.