Playing with FIRE on Fraser Island

Fraser Island has experienced significant ecological changes since its World Heritage listing in 1992. Most of this can be attributed to fires and climate change. In the 1930s foresters *"could crown every stump without getting out of the saddle"*. Other pioneers spoke of a *"park-like appearance"* with little under-storey. There is photographic evidence of this. Fire is an inevitable part of the Fraser Island ecology. It is therefore important to ensure that Fraser Island is prepared for the inevitable and perhaps catastrophic wildfires. For this Backgrounder (No 67 — February 2014) FIDO has combed through 20 years of MOONBIs (84 to 128) from 1993 to 2013 to recall the impact of some of the more serious Fraser Island wildfires and a history of advocacy for the resourcing and implementation of a better fire strategy.

FIDO's concern about the impact on fire follows a severe wildfire that ravaged Stradbroke Island over the 2013-14 Christmas-New Year period. It is predicted that another severe fire within five years could see some animal species vanish from the island. University of Queensland wildlife ecologist Dr Greg Baxter, who studied the impact of fires on Fraser Island in 2002 and 2003 said the population of koalas, gliders, native rats, goannas, ants, snakes, lizards, and birds of prey would take two decades to recover.

Fraser Fire History

This reports only wildfires recorded in MOONBI. Reporting of the areas burnt by planned and unplanned (wild) fires to the advisory committees has virtually ceased and FIDO's access to statistical information is limited.

1992: Large wildfire near Hook Point/ QTM sand mined area.

October 1994: A wildfire near Moon Point in October burnt out 25,000 hectares. More than 80 personnel were engaged at one stage in fighting the fire. Another wildfire broke out in the vicinity of Hook Point. This was limited to just 800 hectares due to the previous burn.

August 1998: About 10,000 hectares between the Woralie Track and Awinya Creek were incinerated in a day by a single fire ignited by the DEH. Another wildfire occurred in the Sandy Cape area.

1999: No budget to implement **any** management burns.

August 2000: Fire Management Workshop Hervey Bay. A management burn at Sandy Cape escaped.

December 2000: Fire smoldering in Wathumba peat escaped, incinerating 20,000 hectares from Wathumba to Dundubara.

Late 2001: A large wildfire southern Fraser Island burnt from Ungowa to Hook Point.

2002: Fraser Island Fire Management Strategy released.

2003: Illegal campfire in total fire ban burns 3,000 ha from Bogimbah Road to Yidney Scrub. Offenders are prosecuted.

November 2004: A wildfire caused by a lightning strike at the end of November caused some roads in the northern section of Fraser Island to be closed for a few days. Luckily the storms which caused the fire outbreak occurred again and helped put the fire out after a few days. The fire began on the western side north of Woralie Road,

August 2004: A management burn was ignited in appalling conditions and savagely burnt a huge area from Moon Point Road west to rainforest and south to Valley of the Giants.

December 2005: Summer storm lightning strike burnt out an area between the Bowarrady and Woralie tracks and bridge.

2005: Only 350 of Fraser Island's 180,000 hectares was burnt by prescribed fires for the year. At that a rate it would take 500 years to burn the island just once. In 2006 the rate improved. 1669 hectares were burnt.

November 2006: A lightning strike at Moon Point started a wildfire burning out approximately 20,000ha up to Woralie Road. It continued to burn up to 8th January.

September 2009: A fire that FIDO attributes to an ember blown across Great Sandy Strait started a ferocious fire that swept through 22,500 hectares of the island south of the massive Dillingham road firebreak and some north of it. The smoke could easily be seen from space by satellites:

Southern Fraser Island as the September fire took hold

October 2011: A fire escaped (possibly from a management burn) came within 800 metres of the Kingfisher Resort filled with 500 guests. It ravaged a large area east of Kingfisher Resort to Lake McKenzie (Boorangoora).

December 2013: While the Stradbroke Island fires received headlines Fraser Island rangers were containing three wildfires — most of the Sandy Cape area, the Hook Point area and in the Woralie area.

Poverty, Neglect and Bad Timing

Poverty: This incomplete review shows that Fraser Island fire management suffers from an appalling lack of resources. There are definitely insufficient resources to implement critically needed ecological burns. Fuel loads that continue to accumulate in unburned areas create a sort of time bomb ready to explode when there is any ignition. Although lightning strikes are known to have caused some of the wildfires on Fraser Island, there are three main causes of wildfires — men, women and children.

Neglect: This is probably a result of the lack of resources to apply to closer study of how fire should be better managed on the Fraser Island landscape. Thus areas are left unburnt when there is the best opportunity for a good outcome.

Bad Timing: Fraser Island's fire history shows that almost all of the severe wildfires occur between August and January. The optimum timing for good ecological and fuel reduction burns should be in other months. Wetter ground conditions are most conducive to producing cool burns that don't scorch the larger trees and reduce everything to ash.

A critique of some Fraser fire management practices

Records show that FIDO strongly supports management burns and is concerned that there have not been enough burns. However there are some particular aspects of Fraser Island fire management practices we remain critical of: fire break practices, relying on public service hours, timing and size of burns and the size of the "patches" burnt.

Fire-break Practices

Paranoia with Banksias: FIDO first noticed that banksias were being targeted by plant operators in 1991. Some claim that Banksia cones explode like hand-grenades and can help fires to cross roads. FIDO termed this paranoid campaign to eliminate Banksias near roads as *"Banksia Serial Killing"*. Many MOONBIs since have pointed out the incongruity of removing roadside Banksias in a World Heritage area but the practice still continues. In 1993 fire ecologist Peter Stanton said *"If the fire management was so out of control that roads had to be used as fire breaks then there was something wrong with the overall fire regime."*

This firebreak was created mainly as an escape route

This raises the question of relying on firebreaks to control fires. FIDO believes that firebreaks are ecologically unsound, cause an unnatural fragmentation of wildlife populations and make many species vulnerable to higher levels of predation. FIDO questions the effectiveness many kilometres in severe firestorms and we have seen fires jump the widest firebreaks yet built on Fraser Island.

Over the decades many Fraser Island roads have been deliberately widened to serve as firebreaks. So far there has not been a single formal environmental or cultural assessment to cover this massive environmental destruction caused by widening roads since the island achieved World Heritage status. FIDO remains very critical of these firebreaks and the double standards applied to clearing what aggregates into a very extensive area without proper prior assessment.

Timing of the burns

Because the budget doesn't extend enough for aerial ignition, rangers are required to follow along roadways and tracks with drip torches. For the personal safety of the rangers OH&S then prescribes that if the fire doesn't penetrate far from the road, it is unsafe to light the fires where there is no easy escape if the fire turns.

Because there is a rule that all fires should be able to take off at the first ignition, there needs to be a degree of dryness of the combustible material next to the road. Thus fires are more likely to be lit when the conditions are drier. This almost certainly will result in a hotter fire. It means that management burns are more likely to occur in August or September (dangerous months) rather than April or May, the optimum time to get the best ecological outcome.

Public Service hours

FIDO believes that too much of Fraser Island fire management is determined by public service hours. The only exception seems to be when there is a wildfire and all hands rally to fight fires at all hours. Fires are started at about 10.00am, burn intensely at 2.00pm but are extinguished about 4.00 pm so that no overtime is necessary. 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. Likewise the dates for igniting management burns are influenced more by what days there will be the greatest numbers on shift than the environmental conditions on the day. Prescribed burns are set well in advance. This method of fire management is contrary to traditional Aboriginal burning methods which FIDO supports.

Proper Patchiness

Several rules currently result in what is described as "mosaic" burns. Instead of small patches (10 hectares maximum), burnt areas are hundreds or thousands of hectares. Instead of obtaining a mosaic of small spots, the end result is a patchwork of much larger areas bounded by **roadways and tracks.** Regardless of the differing requirements of different ecosystems within any of these large blocks, all are burnt out at the same time. Aerial ignition allows different ecosystems in any given area to be dealt with much more precisely than sending large blocks up in smoke at the same time. Aerial ignition also means that the burning could begin late in the day when the evening dew is likely to cause the small fires to self extinguish about 9.00 to 10.00 pm.

FIDO's Proposal

FIDO would like to see a replication of Aboriginal burning patterns. Instead of lighting fires in the morning, they would start late in the afternoon when the conditions are right. Such small, cool fires normally last only a few hours and self–extinguish before midnight as heavy dew settles.

FIDO wants Fraser Island QPWS to have more resources to:

1. Employ a designated Fire Ecologist or a senior officer with long experience in fire management and understanding local conditions with fire management being their only role.
2. Engage in aerial ignition to ignite fires at optimum times and in accessible sites rather than putting rangers at risk when lighting fires.
3. Rely on fuel reduction rather than hideous ineffective firebreaks to control the spread of fires.

As climate change moves Fraser Island into a hotter and drier regime and it is predicted that fires will become more frequent and more intense, it is vital that fire management receives a greater priority and greater resources. It is also important that those resources are not wasted on futile barriers like firebreaks but on better ecological management.