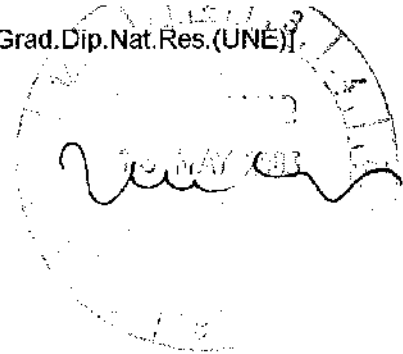


The Committee Secretary,
House Select Committee on the Recent Australian Bushfires

Submission by Mr. Doug Seacombe, [D.H.Seacombe, Dip.Ag.(Dookie), Grad.Dip.Nat.Res.(UNE)]



Date: 8th. May, 2003

INQUIRY INTO THE RECENT AUSTRALIAN BUSHFIRES

Dear Sir / Madam,

This submission only refers to the bushfires which took place in Victoria in the North - East and to a limited number of specific items. However, aspects of the submission would apply to other bushfires of a similar magnitude in other States or Territories.

To establish my credentials I advise that I have been involved in natural resource management for the past forty five (45) years throughout Victoria and to a lesser degree in other States. My experience covers the areas of land and water management including both private and public lands in planning and operational activities. In the mid 1980's I initiated the Landcare activities in North - East Victoria, one of which was the second established in Australia and was launched by former Premier Joan Kirner in her capacity at that time as Minister for Conservation, Forests and Lands in the Victorian Government.

I am semi retired but operate a small consultancy business specialising in natural resource management advice to clients.

My comments in this submission do not include the ability or inability of fire fighting bodies to effectively, efficiently or adequately prevent or control the fires which occurred. Other submissions more closely involved in the direct operational activities should cover the latter matters. Nor does it attempt to address the multitude of subjects, situations, causes or effects associated with the wildfires which took place.

PREAMBLE

Climatic conditions during the fire period were hot and dry and forest under-canopy conditions were generally drier than normal years. Wind conditions, especially the advent of hot northerlies did not seem to occur as they often have in past summers. If they had then the fires would have created a holocaust of far greater severity than that which took place.

Over the past fifteen years a number of summers have met with wet periods. This has greatly helped with control of any fire outbreaks. Unfortunately these conditions have adversely affected the ability to carry out extensive fuel reduction burning during autumn.

Community criticism of such burning because of the production of smoke has also tended to delay or reduce these Departmental operations. Particular people who have strong media contacts have been vocal in expressing their antagonism against fuel reduction burning on the grounds of the effects on community health and on baseless and inaccurate ecological information. These people must be ignored for the good of the silent majority and the protection of community private and public assets.

LAND MANAGEMENT PRACTICES

Fuel Reduction Burning

Planned, specific area based burning during periods when safe climatic conditions prevail are a means by which catastrophic fires can be mitigated, prevented and controlled. The practice of carrying out a pattern of coupe based burning on an annual basis must be carried out. If it cannot be achieved in one year then a catch up program must be financed and implemented in the following years. The use of a checker board of coupes where specific individual or groups of coupes are regularly monitored for fuel loads then treated accordingly must be achieved.

Priority for such action should be directed towards those areas which for many years have shown a propensity for dry storm activity and consequent lightning strikes. A statistical analysis would show that there is a regular line of dry storm activity in summer which extends from west of Mt. Hotham in an arc along the Alps across the Bogong High Plains and Mt. Wills through the catchment to Lake Dartmouth and into the Kosciuszko National Park south and east of Khancoban.

Despite the fact that the above covers a very extensive area of mainly National Parks there are highly experienced forest officers who have the knowledge and experience to plan and implement fire management programs which would aid the mitigation, prevention and control of wildfires by using a coupe system of fuel reduction. However, too many of these people are tied to policies (often dominated by external influences) which limits their ability to take appropriate action. In addition the current philosophy of park management inhibits any reasonable scale of fuel reduction because it advocates that there should be no interference with natural systems.

Unfortunately, in recent years the establishment of Parks Victoria has resulted in an increase in areas under its control without a corresponding increase in the experience and knowledge of its staff including their ability to manage the extended areas. From observations many of the operational staff seem to be more offey with the biota than they are with the down to earth practical requirements of all embracing land management.

This is obvious from the fact that large fuel loads have built up in critical fire prone locations in parks under this body's management control without sufficient effort being made to plan ahead and undertake measures such as fuel reduction burning to reduce the hazard. This is particularly the case where valuable public and private developments exist such as in the upper Kiewa R. and Ovens R. catchments.

If attention to only selective land management issues, such as the protection of wildlife, continues without the corresponding consideration to vegetation fuel loads and fire protection then the effects will ultimately be felt throughout the entire community, not just the rural sector. This has already been evidenced in the general effects on the tourism industry throughout the State.

Both within National Parks, State Forests and other Crown land there is a need to embrace more coherently the practice of planned fuel reduction burning especially within the zones which abound private lands so that fires which occur will be more easily managed. At the same time there is need for private property owners to ensure that their land management does not exacerbate conditions conducive to fire which will threaten public land.

PLANNING SCHEME ORDINANCES

Many planning schemes permit building developments in areas and locations highly prone to bushfire incidents. The developments are often allowed in confined valleys where access to and from is by a single, often narrow carriageway surrounded by dense forest and undergrowth.

Although restrictive conditions are included in the planning permits little is usually done to ensure compliance with them. For example, the provision of conditional water supplies for fire protection, set backs from timbered or forested areas, the planting of vegetation of low flammability and the regular clearing of vegetation which presents fire hazards, etc. Enforcement of such requirements is either a low priority or not attended to by the responsible bodies.

In their enthusiasm for development of their local government areas some responsible bodies encourage developments along natural forest or plantation forest boundaries without provision for adequate firebreak reserves which enormously increases the fire risks.

These risks can be from bushfires emanating from public land or from human initiated fires moving into the latter areas.

Community interest in recent years on the need to improve the vegetation status of land by the planting of native and indigenous tree species has sometimes been mis-directed. For instance, the planting up of small valleys and stream lines at wide and dense patterns with trees and shrubs, some of which can be highly flammable in a fire situation, can threaten urban areas, particularly where those valleys emanate in public land

and continue down into urban locations. The valleys often provide entanglements of vegetation which are allowed to persist for years and can become extensive fire hazards.

ENVIRONMENTAL EFFECTS

On Soils

Considerable scientific data is available on the effects of intense fires and wildfires on soils. For the purposes of this submission discussion is confined to the major impacts which have occurred in the North East.

The heating of soils where intense burns took place will affect the chemical and structural composition and the micro and macro organisms. The removal of vegetation and the blackening of the soil surface alters the insulating characteristics and therefore widens the soil temperature ranges until such time that vegetation is able to regenerate. This can cause problems with the re-establishment of some sensitive plant species.

Organic matter build up over many years has been considerably affected, especially in the sandier soils developed on granite, gneiss and granodiorite geology. Loss of soil organic matter will result in structural decline, soil instability and accelerated soil loss, particularly under adverse rainfall conditions.

It is expected that the fire affected soils will have lower water retention capabilities and infiltration rates and it is possible that plant pathogens and a range of soil organisms will be affected. The water factors mentioned will be exacerbated by the current drought conditions and this will significantly affect the recovery of plants and hence soil ground cover.

On Water Quality and Quantity

Extensive loss of protective vegetative cover on steep slopes where soils are often of shallow depths can only result in detrimental changes to water quality and quantity. Under average rainfall conditions it is expected that water runoff will have greater sediment loads than normal and if above average rainfall patterns occur the sediment loads will be well above acceptable limits. Where drainage lines have retained some plant cover it is possible that a percentage of sediment will be filtered out.

Hydrological effects expected will be for peak runoffs to be of short durations and possibly extreme volumes and could be devastating to drainage line and stream channel and bank stabilities. It is expected that stream yields will be affected for a period in that abnormal variations in flows will occur.

It is a fact that sediment in stream flows provides an excellent vehicle for pathogenic material which can affect both plants and animals including humans. Increased and long term sediment loads should concern water supply authorities and their consumers as well as primary producers.

In the true alpine environments where fire has severely affected the alpine vegetation, especially the moss beds of the bogs and fens, it is expected that recovery will be very slow and the important water holding and slow release capabilities of these locations will suffer. These alpine areas are critical to the long term flows in the streams which emanate from such catchments.

On Wildlife Habitat

In brief, intense fires temporarily reduce habitat for most wildlife. Standing stags, fallen hollow branches and logs, ground cover and lower canopy cover are removed, but over time are generally self replacing. In many situations habitat along drainage lines is only partially affected and locations bypassed by fire provide some refuge and food. Northerly facing slopes and the hilltops have tended to be most severely affected by the intense fires. These areas are not generally regarded as prime habitat though in the alpine environments the former locations may provide refuge for small marsupials where there are rocky outcrops.

Following the fires, percentages of the taller canopy cover drop to ground and scattered trees with burnt hollows replace those old hollow stags which burnt away. Rocky areas which are usually only partially affected still provide some habitat.

Unfortunately, current drought conditions have delayed the recovery of vegetation over many burnt areas, to the detriment of wildlife.

On Weeds

The loss of native species, (both temporary and permanent) by intense fire and the loss of competition they provided will now produce a new environment for a range of undesirable plants.

Because such fire changes the chemical composition of the soil surface, at least to a depth of several centimetres and produces an ash bed, conditions then arise which can encourage the re-establishment and spread of blackberries (*Rubus fruticosus*). This weed is probably the most widespread and dominant of all the weeds found in the fire affected areas and is one of the most difficult to eradicate.

Other weed species such as St John's wort (*Hypericum perforatum*) and English broom (*Cytisus scoparius*) will create increased land management problems. The former often rapidly re-infests areas after fire. It is expected that intense fires in the National Parks will cause areas which had some level of weed control, to a situation where much of the past effort will now often be ineffective.

HISTORIC BUILDINGS

Mountain cattlemen's huts and other historic refuge huts which have generally stood for many years, (some for over a century) were lost in the fires. About thirty of these buildings have been lost or so severely damaged that they are beyond repair. Replacement can only be by a complete rebuild.

Bush walkers, cattlemen and people who know the high country have used and maintained these assets for many years, mainly using their own labour and materials under difficult environmental conditions. The huts represent the pioneering spirit of Australia and the history of developments in this alpine area. During the last century they were not only used in the high country cattle industry but also for the development of tourism, snow sports and hydro electricity. In the latter, particular huts were used as bases for survey and investigational teams.

Very few of the huts were ever lost in fires over the last century because of the management by the above people. It is only since the scaled up development of National and other parks has taken place that these national heritages have been so severely threatened and lost.

CONCLUDING COMMENTS

The most urgent matter needing attention following the bushfires is to resolve the differing views on fuel reduction burning as an aid in mitigating the extent and severity of wildfires. Whether it be associated with National Parks, State Forest, other Crown Land or Private Property is immaterial when the enormity of resources used and the extent of the environmental damage by the bushfires are taken into account.

