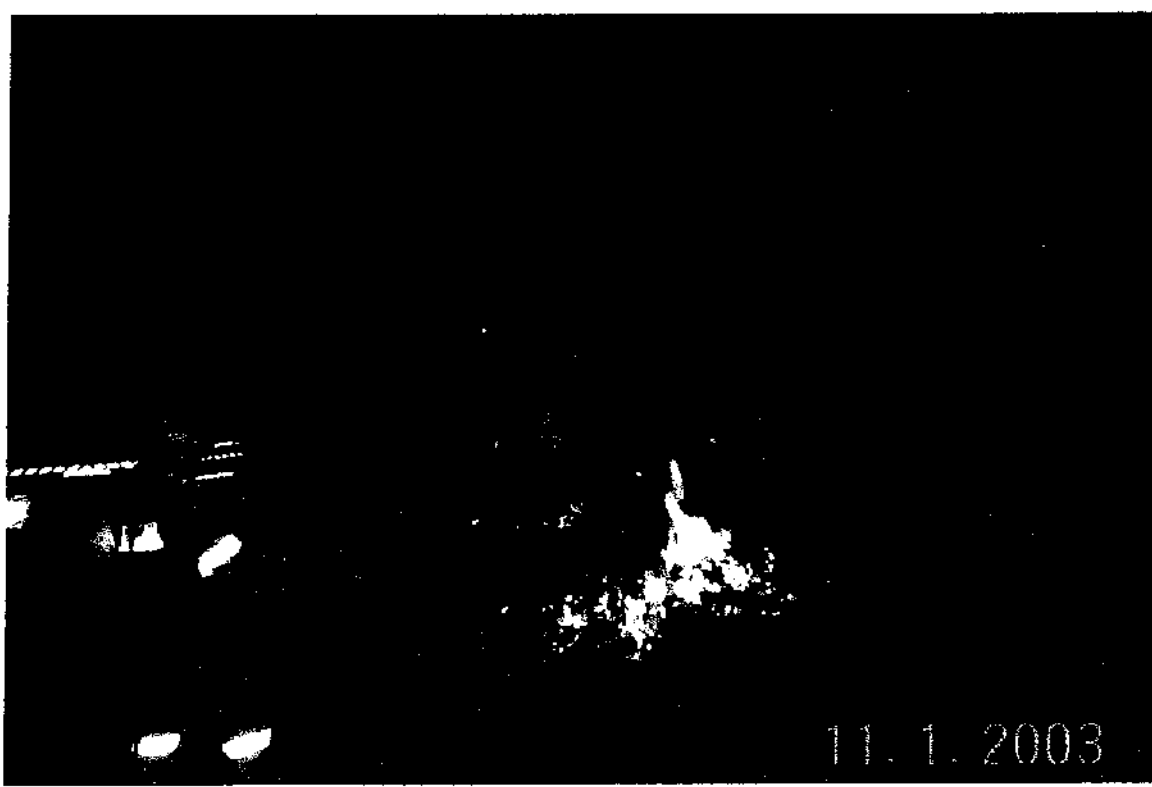


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Lewis
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SUBMISSION BY
TIMBER COMMUNITIES AUSTRALIA
TO
FEDERAL BUSHFIRE INQUIRY



Prepared by:

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Preface

This document was prepared within a timeframe where emotions following the Kosciusko National Park 2003, had largely expired.

We make no excuse for using the most recent fires and surrounding issues, the focus of our submission.

We believe the examples used are timely, relevant and representative of a national situation.

As authors of this document, we are somewhat cynical regarding the outcome of this or any other inquiry where politics can not only be a motive but also the terminating factor in the effectiveness of follow-up.

The matters we raise are not only questions, we provide answers which are scientifically and practically based.

After 160 years occupation by our Families, we believe our association with the land is spiritual and intimate. We understand our environment.

If this submission achieves nothing else we would ask that the Committee acknowledge our value as future advisers regarding land and fire management.

We therefore request that the Committee provide the opportunity to present our case at a future meeting.

Jill Lewis
National Director
TCA

Peter Cochran
NSW State Manager
TCA

Noeline Franklin
Research Co-ordinator
Brindabella Farmer
TCA Member

Executive Summary

Bushfires are an integral part of the social, economic, environmental and political landscape in Australia.

Our submission argues that each of these elements can be managed to reduce negative impact.

SOCIAL

"Volunteerisms" is noble and society beneficial to Government but a huge burden on those families and business houses who share the cost.

RECOMMEND

That the Inquiry be assertive and thorough with their findings of this inquiry.

RECOMMEND

That unsatisfactory Land Management practises across all tenures be dealt with severely. This will help ensure that the 2003 holocaust is not easily revisited.

RECOMMEND

"That volunteers be appropriately compensated by Government when fighting fires on public land".
Brigades in many areas of Australia (particularly NSW) feel as though they have lost control of their organisations to big brother.

RECOMMEND

"That balanced autonomy be restored to Bush Fire Brigades".

ECONOMIC

Wildfires are responsible for the loss of large amounts of income and potential income across the timber industry and rural communities reliant on the timber resource.

ENVIRONMENTAL

Wildfires that wreak havoc due to lack of Hazard Reduction and proper Land Management, cause huge environmental damage, such as soil erosion, land degradation and loss of Flora and Fauna.

POLITICAL LANDSCAPE

In recent years State Governments have succumb to 'green' extremism in order to secure votes at election time.

Unacceptable Losses from Needlessly Severe Bushfire

The following submission will demonstrate that rural communities in Australia have suffered unacceptable environmental, social, economic hardship in the face of catastrophic bushfire and the consequences of ill-conceived environmentalism largely manipulating the political process including public consultation, environmental legislation and management of natural resources held as forests, farms, fisheries, fossil fuels and water catchment.

Given the magnitude of many recent bushfires Non Interventionist Conservation is to be deemed a failed experiment. Rural communities have long been aware and made preparations against the risk factors associated with bushfire, developing a battery of cost recovery risk minimisation strategies.

Local communities have a vested interest in bushfire minimisation and support the Commonwealth Governments goals for retention of natural resources, proposing the incorporation of the long term of sustainable harvest of renewable natural resources as an integral part of fire risk management. ***Our businesses are often family operations and we therefore have a long-term perspective for sustainability and successful fire management.***

Conservation Land Deprived of Knowledge, Skills & Motivation to Quell Bushfire Threat

Within our local rural communities is an unequalled depth of land and resource management experience, expertise and knowledge evolving on a multicultural input hampered only in its full expression by the immediacies of economic and social imperatives. The agricultural and forestry sectors in particular, have developed a menu of proven effective fire risk management strategies from fuel reduction to rapid detection and response to unwelcome bushfire incident. Both sectors are highly motivated, by self-interest, to deal with fire quickly, efficiently and in the most environmentally sympathetic manner, redeploying resources of skilled labour, heavy machinery etc. If the immediacies of economic and social imperatives were lifted from forestry and agricultural communities through an appropriate political voice and trade circumstances then our methodology could enhance our achievements for preserving the nations natural environment.

Rural communities need restoration of support to continue efforts for Biodiversity Retention and Natural Resource Management including bushfire Suppression.

The forestry and agricultural sectors wish to offer the nation our skills and knowledge in enhancing retention of biodiversity and environmental values of clean water, air, healthy food, fibre production systems in exchange for appropriate commodity returns affording us the resources to maintain an excellence in sustainability of selective harvest and fire preparedness. Our communities need support from our political leaders, policy makers and objectivity from scientists to retain thrift and empower our communities to progress the development of fire risk and resource management practices. Our communities require restoration of services education, health, finance and communication as a part of securing our vast knowledge of land management, instilling business confidence and secure employment opportunities for our families offering continuity and advancement of skills. Agricultural and forestry dependant communities have been chronically deprived of objective representation on issues of policy, trade, management and selective harvest of renewable natural resources.

Snowy 2003 fires not only burnt years of relief grazing and forest resources but have seriously endangered the recovery of the forests, grasslands and water catchments. Gone too, is the biodiversity stockmen and foresters nurtured by their commitment to land management, hijacked for national park for obscure short term political advantage, creation of ecological artefacts and unsustainable land use. Continuation of so called Non Interventionist Conservation, is no longer acceptable to generate fuel loads in excess of any affordable fire fighting capacity on public land and allowed to affect adjacent forest and farming enterprises having flow ons for irrigation and city water at continued community expense.

Extreme green blackmail about political advancement rather than environmental security.

Governments considering the continuation of "lock out" conservation policies can only be considered irresponsible. Swayed by political blackmail from those identified as extreme green groups having arguably a greater investment in their own political advancement rather than sincere consideration for the nations environment or natural resource management.

The well-researched that the cool burn technology, that the NSW State Forests Department, continued to practise on a seven-year rotation throughout the entire 2.5 million hectares under management, last year (2002) only suffered 2000ha of fires.

On the other hand, the NSW National Parks and Wildlife Service reduced its activity to half a per cent of its management area and experienced 750,000ha of fires last year.

Commonwealth Parliament House of Representatives Inquiry into the Incidence and Impact of Bushfires

Acknowledgements

I would like to thank the Brindabella Community for their photographs included in this report. I would like to thank Dr Phil Cheney CSIRO fire behaviourist for his time, discussions and assistance in citing relevant research findings in this report. I would like to thank the many people in the community that have discussed, at length, their lifetimes and families observations in ecology and biodiversity dynamics of the mountains and forests, fire behaviour and the recommended way forward to maximize the recovery and minimize the risk of reoccurrence. I thank them for their objectivity, insight and analytical approach to what has been a personal tragedy and trauma to most.

RECOMMENDATIONS – ENVIRONMENTAL

Fire risk And RFAs

Fire incidence and greater fire risk due to fuel loads in conservation reserves and have place investment in RFAs, at risk. Business confidence, certainty of supply, return on investment for processing and value adding to enhance our national productivity, is seriously questioned with reduction of available resource.

Restructured Forest Industry realise worst fears of unacceptable fire threat to timber supplies, Business Confidence

The Snowy 2003 fires leave TCA members very concerned over the security of their recently restructured industry and relinquished tree conservation reserves, and old growth forests to national park management.

Conservation reserve management accumulating fuel loads indefinitely in native forests, following policies of revegetating access roads, abandoning prescribed burning, wood getting, salvage of burnt saw logs or other fuel management strategies combined with the loss of skilled staff, and heavy machinery from the regions and failure of air attack to quell many blazes raises many concerns in TCA membership about future disrupted timber supplies falling well short of recently signed RFAs, Forest workers, processors, construction workers and investors in plantation development cannot afford the risk of large area fire, leaving areas of public land pursuing inadequate fire risk management practices when these fire prone areas are at the centre of quality timber growing regions. TCA recommends that the bushfire inquiry committee explore the national consequences of poor fuel load management on forest conservation goals, carbon crediting, water catchment security, implications for insurance, and cost of production, addressing trade deficit goals and honoring RFAs in which the Commonwealth Government has a significant investment.

Accumulated fuel loads and large area fire listed as key threatening processes

Indefinitely accumulated fuel loads should be listed on the Commonwealth Environment and Biodiversity Act 1999 and

large area intense non selective wildfire. Included in the recognition of accumulated fuel loads is the effect of dry litter, fallen timber, excessive dead trees, forest thickening or increased tree density, thick woody scrub layer, under storey bulking out to reach the canopy and out to compete with ground covers, blackberry and other invasive flammable weed infestations.

Accumulation of fuel loads in native and plantation forests are to be declared a key threatening process and active fuel management encouraged across all land tenures through tried and proven approaches of prescribed burning, wood collection, weed suppression and or livestock grazing to prepare the environment for fire by:

- reducing the intensity of burning in bushfire incident
- reducing the area affected in any bushfire
- maintaining in local communities practical skills & equipment needed to fight fires
- increasing the safety margin of fire fighters to work in fire prepared environments
- making control and suppression efforts more effective and affordable
- reducing the damage done to biodiversity, water catchment and local communities
- ensuring a more rapid and complete recovery

On going research needs to be encouraged and supported to overcome any imperfections in tried and proven fire risk management and fuel reduction approaches with the view to progressing our techniques and environmental stewardship, within of industries. It is no longer legitimate to abandon tried and proven fire risk management for certain serious accidental fire, of national importance such as what has occurred in the Sydney and Canberra Water Catchments bringing about a degraded vegetation recovery more fire prone if fuel loads remain subject to only a series of serious so called accidents! Non Interventionist Conservation (NIC) is a failed experiment internationally.

Investigative Committee seek optimal fire risk minimisation approaches

Bushfire is a part of the Australian Ecology and will inevitably overcome any amount of fire fighting capacity especially where fire exclusion is practiced indefinitely over large regions. The environment must be managed to minimise the impact of fire in extraordinary climatic challenge. We must maximise the ability of fire fighters to minimise the impact of fire in extremes of climate and minimize risk to life and assets from bushfire.

An Objective Expert Committee (OEC) be formed to investigate land management techniques to achieve

- demonstratable fire risk mitigating effects
- optimize biological benefit of fire to promote the persistence of biodiversity
- secure water catchment values with special emphasis on investigating various combined applications of :
 - sawlog harvesting
 - small area burning
 - small area clearing
 - small time wood collecting (firewood)
 - intermitant livestock grazing
 - feral animal control
 - committed local community management

Expertise drawn from international professionals, demonstrated ability in fire behaviour and fire fighting , fuel load managers, land managers expert in, grazing, timber harvest, feral species managers with proven effective outcomes for retention and proliferation of biodiversity and water catchment quality.

OEC Nominations

Chair with national vision, drive and passion for rural Australian and retention of natural virtues

Phil Cheney CSIRO Fire Behaviourist Forester

Barry Belt Fire Ground Operation NSW RFS (Retired)

Dick Condon Snowy Soil Conservation Western Lands Commissioner Carbon Accounting (Retired)

Huge Lavery Environment Australia Consultancy Biodiversity in Agricultural Productive Systems

Leong Lim Integrated Pest Species Management

Tim Flannery Prehistorian Australian Ecologist

Wholistic Water Catchment Management

Forestry and Biodiversity (WA)

Practicing Bushman Forester with a depth of established family knowledge, overview of the national forestry systems, Plantation and Native Forests
Practicing Bushman/Stockman with established family knowledge overview of national grazing systems Mountains and western division
Pest Animal Controller predation on wild and domestic animals

Public Land Performance Obligations

Public land management should have clearly defined goals relating to:

- Fire risk minimisation
- regular fuel load audits
- agreed fuel load targets
- regular fuel reduction
- agreed biodiversity targets
- regular biodiversity audits
- actions mindful of fire risk minimisation
- agreed forest density and vegetation structure
- water catchment monitoring for quality and quantity
- adequate prioritization of budgets to address fuel loads and invasive ferals

Precautionary conservation land management - not legitimise fuel load neglect

Precautionary land management of public land to retain existing biodiversity should not be interpreted as doing nothing about feral animals and fuel loads but modulating what local communities are doing to enhance the biodiversity they achieve with their management by forest thinning and small area clearing, followed by rest, grazing of large animals, wood collection and small area fire or other activity such as feral animal control. Acquisition of National Parks from local community management or State Forest should show cause (via NSW Environmental and Planning Act for example) that it can achieve greater resourcing for retention of set goals including fire risk minimisation, biodiversity continuity, water quality and yield than that achieved by local communities acting as foresters, stockmen or other voluntary groups contributing to land management value.

Acknowledge and progress land management expertise in local communities

Public acknowledgement that within local rural communities, acting as foresters and farmers, is advanced land management understanding and systems insight, a vast data base of observations having thousands of years of multicultural input and synthesis which needs progression through appropriate access to resources and formal scientific quantification. This data base needs acknowledgement that it exists and has functioned informally by passive transfer of information through successive generations of people living in the same area and has been very functional in fire risk and general land management. It needs to be acknowledged that this continuity of land management practice and, expertise has over many years, actively harboured biodiversity from, wildfire, the demands resource drainage supporting an urban society dominating the political decision making process.

Public land management practices exposed to political bargaining and unsubstantiated philosophical opinion rather than proven effective outcomes: public land management must have demonstrable and binding performance indicators

Public acknowledgement that formation of National Parks has been a political ploy to gain Government distracting the urban environmental disenchanted from their urban needs, are largely left unaddressed by political leadership. Utopia on public land that was created by the toil of rural communities is then left starved of resources, disenfranchised from the knowledge base and voluntary contribution fundamental to maintaining utopias virtues safe from wildfire, invasive weeds, loss of water catchment values and biodiversity. Environmental utopia should be encouraged within our cities where the need is more urgent! The drain of resources to cities away from our natural rural resources needs to be acknowledged and damage mitigating processes put in place to enhance national sustainability of resource use rather than shifting ownership, of the environmental debt, to the politically not well represented (ie rural Australia doing the lions share of compensating on meager commodity returns).

Issues to be addressed directly include: youth recreation, population demographics, urban water, transport and energy use efficiencies. Wildfires are not an acceptable approach to national carbon accounting or responsible government!

Biodiversity & threatened species not responding to Non Interventionist Conservation (NIC)

Foresters and stockmen claim they had many minor species in recovery on the public land, managed by grazing or logging, which have been lost under Non Interventionist Conservation through the effects of serious fire, species competition, stagnation, removal of intermittent disturbance by small area fire or clearing or significant grazing pressure creating opportunity for biodiversity. These claims should be verified by further studies to formalize scientific observations of local communities while offering continuity of successful management approaches to minimise fire risk.

Fuel management paramount over minor inconvenience - look elsewhere for solutions

Under no circumstances should hazard reduction fuel load management be sacrificed or compromised for short term profitability in city water filtration, carbon crediting to offset squandering of fossil fuels, legitimise photochemical pollution, disrupt airport visibility, respiratory discomfort alleviated in other ways, compromised through location of fire sensitive crops (pine plantation) or other reason, philosophical beliefs of a political minority blackmailing the balance and direction of politics.

Future Research Directions

Research opportunity, to look at facilitating detritus cycle of plant residues in respect to litter having antimicrobial properties such as eucalyptus and tea tree oils. Look at how large grazing animals can facilitate detritus by trampling, grazing etc. Compare and contrast fire risk with and without grazing high conservation value land. Analyse a systems approach to grazing adjacent to grazing sensitive areas in respect to creating an effective systems of fire breaks. Compare and contrast risk of damaging fire from accumulation of fuel loads with various applications of prescribed burning and managed livestock grazing, encouraged grazing by wildlife, strategic clearing selective thinning or mixed land use. Understand biodiversity stems from system dynamics not stagnation and normalization including unifying fire history over vast tracts of NICed land.

ECONOMIC

Voluntary community contribution to conservation

Public acknowledgement that vast areas of public land cannot be cost effectively overseen or managed from a remote centralized point with regards to fire, fuel loads feral animal etc. The resources needed to match local community commitment to raise the high standard of conservation value are likely to be unsustainable long term for Governments wanting to provide good services of health, education, transport etc. which compete for public funds. Selective harvest of renewable resources, grasses, trees, wood, engendered self interest of local communities providing voluntary contribution makes more resources available to maintain high standard land management values. Local community management of land through grazing and logging has great potential to be enhanced through strategic resourcing of multiple land use agreements to re-prioritise land management goals for biodiversity, benefit public recreation, cultural heritage, tourism, water yield or other agreed activities. Commodities must attract appropriate remuneration to reflect the resources required to maintain the productive system without sacrifice or compromise of management or forced unsustainable exploitation.

Conservation subsidised long term by rural communities heightened environmental awareness previously shut out of the political process of environmentalism

It must be acknowledged that biodiversity and environmental values of much of rural Australia have been retained and actively harboured by committed local communities through much self denial social and economic sacrifice where local communities value natural virtues rather than have them exploited or terminated for short term gain. If private land holders are required involuntarily, to accumulate threatened species, carbon credits etc. sit beside huge fire or feral risk provide voluntary fire fighting services in poorly prepared fire fighting circumstances then they must receive, compensation, resources and incentives to do so.

Fire insurance industry should encourage self help fire risk management

Around Australia (including policy discussed in the Greenhouse Office) the need to accumulate carbon credits, including the abandonment of prescribed burning as it is a deliberate action releasing carbon emissions) has been discussed. Bushfire, no matter how inevitable, is claimable on insurance and not considered a carbon debt!

In the event that we need to maintain our unsustainable urban lifestyles using fossil fuel powered electricity, mowing lawns, inefficient transport systems etc. the perception that atmospheric carbon needs to be consumed and tied up by forests is being adopted rather

than tackling head on the sources of carbon debt seeking direct efficiencies or substitutes for fossil fuel use while seeing prescribed burning as a mandatory emission for environmental good. Bureaucrats are looking to restrict fire management to only increasing fire insurance, individually or on a community basis as payments of compulsory levies in isolation of becoming fire prepared environmentally. We question the morality of this approach and the long term cost economically, socially, environmentally. Many believe fire insurance premiums and successful claims should be geared to clearly stated fire risk management procedures being in place, giving incentive for land managers to suppress fuel loads to below an agreed level and prepare for successful bushfire management if they are to attract affordable premiums and be favoured for successful claims.

SOCIAL

Loss of rural community skills and critical response to bushfire

Rural communities are reaching low levels, - losing critical mass to support a community through the loss of employment opportunities in agriculture and forestry, as vast areas of land are transferred to uninhabited vulnerable National Parks. Employment base is shifted to city graduates in resource management rather than employing locals, who have skills in bushmanship. Required skills, local knowledge and confidence is invaluable and critical in bushfire fighting. Governments need to take a big picture view of the social implications of land management practices.

OPERATIONAL

Matching fuel burdens to fire fighting capacity rather than enhancing fire fighting capacity to match lack of environmental fire preparedness

The lack of fire preparedness and fuel burdens are major underlying issues in any successful fire fighting. In most cases no amount of fire fighting capacity could have matched the fuel burdens present. That is the appalling reality that needs addressing for the future. Biodiversity and water catchment values are degraded during the fuel load build up process and when the big fire happens the recovery time is unacceptable given the loss of species, soil fertility, erosion, permanent damage and expense.

Parks authorities lack the required level of objectivity in fire fighting

State Park Authorities must not be exempt from hazard reduction obligations but be encouraged to use the most environmentally effective, (proven in practice and cost) effective means available. Lack of management of fuel loads is no longer acceptable to the public, neighbours, and communities depending on timber supplies or agricultural production. An independent authority such as RFS, CFA etc. must have primary jurisdiction to suppress fires over all land tenures to minimise damage. ***These authorities must be resourced to apply rapid response to multiple ignition points irrespective of land tenure or borders under threatening climatic conditions and unacceptable risk to life and property.***

Conflict of interest - fuel loads in public land and fire authorities budget allocations

While State Fire Authorities have prospered with increased Government budgetary support to fight bigger fires on public land because of accumulated fuel loads many local communities witness the folly of and the conflict of interest shown in many post fire investigations where those authorities prospering from large fire incidence in terms of increased wages, community standing and access to facilities are asked for advice on strategies. ***"Fuel load issues are never addressed adequately"***. In NSW RFS budget increases are tied closely to fire incidence in public land. Conversely fire incidence in public land is tied to fuel loads. Processes need to be put in place to interrupt this feedback loop.

Constitutional reform of State Fire Authorities to include preparing the environment for fire and minimising risk for their volunteer Fire Fighters during bushfire incident

State Fire Authorities have recently removed themselves from the business of prescribed burning suggesting that is the responsibility of land managers. Technically this may be so however fire prevention is a community responsibility and local, regional, state and interstate authorities need to take cooperative responsibility for fire preparedness which includes hazard reduction on all tenures. The culture in State Fire Authorities needs to change in fire preparedness, offering professional advice and support to land managers irrespective of tenures.

Operational Research Opportunities

Governments are encouraged to seek research funds to improve the environmental understanding of various fire fighting approaches and fuel load management practices before fire outbreak thus preparing the environment for fire and operational approaches during fire incident. (fire retardants, bulldozed lines, aircraft, professional first attack teams, local fire fighter autonomy etc.)

Closure of Fire Trails, Tracks and Access Issues

A common criticism of forest and grazing lease country that has been transferred to national park management is the loss of ground access. In many National parks there is an active policy of access closure and revegetation with the reasons given regularly as lack of resources to maintain them to a good standard and said restoration of wilderness aesthetics. This assumes a greater reliance on air fire fighting capacity with inhibited ground attack, delayed response time. There also seems to be a general perception in the park and environmental lobby that dense uninhabited forest is fire retardant. There is a lot of contrary evidence to this and when questioned, environmental activists are generally offering a philosophical approach rather than one based on land management experience, fire fighting experience or irrefutable evidence and scientific observations. In practice national park has been formed around what is considered 'fire prone' areas according to their rugged topography and inherent inaccessibility. Closure of further accesses further exacerbates the situation as does the encouragement of an impenetrable vegetation structure and inaccessible water supply streams overhung by dense scrub and dams returned to wilderness state.

Definitions

Bushfire will be considered distinct from prescribed burning. Bushfire is considered a fire which occurs in climatic extremes and be the result of lightening or accidental ignition or unwisely lit where it will burn in a manner considered to endanger life, assets or environmental values. Bushfire will be considered distinct from grassfire. Both are unwelcome.

Prescribed burning is a deliberately lit and planned event with the intent to reduce fuel loads or plant residue and suppress aggressive under storey species by low intensity, managed fire, set in a sympathetic climate to accomplish defined goals for fire risk minimization and habitat management, and to promote rapid recovery, optimize biological benefits or environmental advantage in ecologies which are especially fire prone. Prescribed burning pre-empts the natural occurrence of fire, alleviating the severity, by choosing the least damaging circumstances of climate, topography and fuel loads. In practice, the more frequent prescribed burning is applied, the smaller the areas burnt at any one time the more predictable the area burnt the more superficial and therapeutic the burn and more randomized any disadvantages are applied and more easily overcome by rapid recolonisation from adjacent unburnt country. Any criticisms of prescribed burning pale into insignificance in the face of large area incineration such as 2003.

Hazard reduction (burning) is an alternative term for reducing fuel burdens in plant communities by controlled fire. Hazard reduction can be carried out by intense grazing pressure, mechanical clearing, logging, wood removal to reduce burnable fuel. In this submission hazard reduction by low intensity burning will be assumed unless specified otherwise.

Back burning is an operational term where deliberately lit fire is used to strategically clear a fire break in front of an active bushfire as part of a bushfire control strategy. Back burning is a hazard reduction technique but will not in this submission, be used other than in an operational sense during bushfire incident. Back burning is not a technique insuring long term fire preparedness of an environment by long term fuel load management. It is understood that hazard reduction burning, in this submission, is a land management approach to reduce bushfire risk. It follows, where fuel loads are managed by regular small area prescribed burning, grazing or other fuel reduction action takes place effectively in a fire prepared environment. Back burning will be most predictable in controlling bushfire, making it more self limiting through starvation for supportive fuel even during extremes of climatic challenge.

Mosaic burning is prescribed burning/ hazard reduction carried out routinely in a land management plan and is separated by time and season. Mosaic burning is not as has been applied to the Snowy 2003 fires where burns varied in intensity due to humidity, time of day, topography, vegetation type and climatic conditions. Mosaic burns are not a matter of choice between hot and bloody hot. Mosaic burns are variable with fire history between seasons and years promoting and maximizing plant community and biodiversity. Mosaic burns are creating a system of fire safe havens and food sources by small area burns randomly applied at various times of the year and in different years in the one ecotype to facilitate recovery regeneration, recolonisation and relocation of fauna according to the needs of food, shelter, breeding, territory etc.

Mosaic burning is an out of phase burning strategy to minimize impact and risk of inevitable fire incident which may become an out of control bushfire incident under extremes of climatic challenge and or when fuel loads exceed 5-8 tonnes/ha.

Extremes of Climatic challenge is where prevailing weather conditions predispose to serious fire incident such as hot ambient 35°C or > , dry westerly winds 40-100+km/h, low relative humidity, dry litter subject to protracted accumulation and or chronically deprived of rainfall.

Fire prepared environment is a forest or grassland made fire retardant by management
Usually fuel loads are actively managed by

- 1) reducing tree density to connected or open canopy by clearing logging, ring barking, intermitant prescribed burning or grazing by large herbivores,
- 2) suppressing under storey flammable woody shrubs again by grazing, prescribed burning or mechanical means,
- 3) removal of ground litter by regular grazing and or burning.
Grazed open forests are regularly thrifty green swards of vegetation even in drought times and are fire prepared fire retardant compared to cluttered unkempt forests suffering ground litter accumulations, lack of tree and shrub regeneration, and suffers a slow death by starvation from competition.
- 4) Invasive weeds which infest waterways and gullies communities act as a wick in bushfire and are also controlled by grazing, burning herbicide in a fire prepared environment.

Wet communities acting as fire safe havens for wildlife and fire sensitive plants are also fostered in a fire prepared environment where run off is reliable in an open forest community offering living ground mulch rather than compost heaps of detritus in National Parks.

- 5) Operational: access tracks, fire observation towers, quick response equipment, Tankers and trained confident experienced crew,

Fuel loads mostly refer to ground litter twigs and leaves readily consumed in a fire. In major fires crown litter, candle bark dead standing trees shrubs, woody under storey, tea tree, and acacia banksias etc. Dense stands of timber, and fallen timber must be considered as fuel load actively contributing to fire intensity in neglected unkempt forests. Wet ecologies and fire sensitive snow gum, alpine ash and mountain ash ecologies may sit outside this criteria as fire management is targeted adjacent to these areas usually considered fire retardant by their wet humid location at altitude or shaded by topography.

Environmental impact will refer to the natural environment bush land, river systems, open agricultural land, livestock raising, plantation timber, logged forests rather than the urban environment or extensive cropping areas.

Extent and impact of the bushfires on the environment, private and public and local communities:

ENVIRONMENTAL

Bushfires can have highly significant impact on the environment depending on the intensity of the burn, size of area affected, fire sensitivity and vulnerability of the system affected. Recovery can be such that vegetation cover does not occur before serious soil erosion through heavy rain, wind or other forms of erosion occurs.

Localised desertification is not unrealistic and may persist especially in rain deficit conditions. Loss of human life and assets, species loss locally or regionally, siltation of water ways and water storages can be a costly consequence of serious, large area, intense, non selective fire. Bushfires can and do interrupt forest industries, agricultural enterprises, tourism and regional trade.

Summer Bushfires in 2003 Australia Wide

1 595 000 ha ACT NSW
1 324 000 ha Victoria
115 000 ha Queensland
46 000 ha Tasmania
31 000 ha Western Australia

3 106 000 ha TOTAL
(C Wagner CO Nat Ass Forest Inds)

In 2001-2002 fire season 595 000ha was burnt in NSW ACT.
ACT 2001 burnt 1 698ha

Audits of the proportions of National Park Estate and private forest and private grazing land are being taken. In Victoria 20 000 ha of State Forest Ash forest was burnt. 6ha of pine plantation in Hume NSW.

1939 was previously considered the worst fire season since European settlement where 1.5M ha was burnt with loss of human life amounting to 71 in Victoria in 8 days. Judge Stretton of the 1939 royal commission into the bushfires wrote that the fires occurred in heat-wave conditions, 1.2M ha of Victoria's forest was burnt killing 2/3 of the Ash forest and severely damaging other areas. 4.5M cub m of sawlogs were harvested for the next 10 years before seedling re-growth damage became unacceptable stopping salvage operations. Much of this wood was used as casing for war armourments. Pulp wood was also harvested and enhanced recovery of the forests according to the Timber Industry Inquiry.

In 1944, 120 mills were employed in the mammoth salvage operation accounting for half of Victoria's saw log output. Victoria has 4.7Mha of public forests of which only one quarter are available for logging, the rest have been placed in National Park. 180 000ha are Central Highland ash forests of which approximately half that area (90 000ha) is available for logging including over half that area being 1939 re-growth (~60 000ha). Ash forests do not regenerate if trees are either too immature to hold seed or viable seed is not present on existing trees and available to reseed the ash bed. Foresters are concerned that access is being denied for harvest and that unnatural fire exclusion policies in national park may eventually lead to the demise of Ash forests. (Vic Forest Industries Assn. *Ash Re-growth from the 1939 Fires* publication) Australian Timberman (vol 27 no3 Mar 2003) reported that the Victorian Government has directed that ~\$300 000 worth of burnt Ash logs in Victoria's national park will not be available for salvage. **Observers of the 2003 fires through Cabramurra NSW KNP suggest Ash killed in a wildfire through the area in 1984 killed the forest and in 2003 old dead standing trees combined to burn immature re-growth to bedrock.** It is uncertain what will recover this time as the fire cycle is unacceptable to ensure reseedling. **Collection of fire wood, saw log and pulp wood have proven effective benefits for biodiversity responses and fire preparedness and forest conservation long term.** These issues should be objectively analysed when managing the recovery from fire. Many in local communities have already asked about the active reseedling and reestablishment of Cabramurra ash. In Victorian Bogong area it is estimated that >20 000ha of ash has been lost including large areas recently transferred from state forest logging to conservation as national park. In 1994 a hectare of 1939 ash regrowth was valued at \$234 000 mill door. While some areas are said to have burnt superficially and non lethally other areas have been killed and viable reseedling uncertain. Lost has been a potential several \$Bs in salvageable timber. Areas killed will take another 80 years to reach harvestable size. It is suggested that 2003 fires in particular the Tambo and NE forest management areas could

reduce the state of Victoria's supplies by approximately 10%. Analysts suggest parks authorities have let access tracks fall into disrepair, actively revegetated them and staff lack the economic imperative to aggressively fight the fire. They also question the effectiveness of hazard reduction claimed to have been carried out in the region by parks authorities.

Fuel Load Effects

The severity of the heat generated by bushfire is proportional to the fuel loads burnt. The relationship is exponential to the increase in heat generated and in intensity of the burn with increases of fuel loads. Fuel load management has been shown to reduce the speed of fire spread, the flame height, and the propensity to produce spot fires. **Reducing the dry sclerophyll fuels to an average of one quarter will reduce the fire intensity and therefore the damage to one sixteenth.** Reducing the fuels to one quarter will reduce the areas burnt to between one quarter and one sixteenth.

Control burns in the Jarrah forests of Western Australia have been shown to be effective in reducing fire intensity for up to 15 years. Fires with a flame height of 1-2m traveling at 0.2km/h producing 1000kW/m of heat can be controlled and contained with hand tools. Fires of flame height 4-6m traveling 0.4km/h producing 2500kW/m in a stringy bark forest require air tankers and ground crew support to control. Flame heights of 40m+ could generate 10000 kW/m or up to x10 that. (Cheney CSIRO Federal Parliament seminar 5.3.03) The Sydney 2001-2002 fires were estimated to generate 30000-40000 megawatts per metre of travel. Ash Wednesday fires 1983 were the hottest fires previously recorded at 100 000MW per metre as they ripped through pine plantation in an extraordinary climatic challenge. (M Bird CSIRO Co research no394 Feb 2003)

What Burnt?

Much of the area burnt in 2003 was national park, plantations, public and private forest and grazing land, threatening and burning housing on the edge of regional communities and the towns Omeo, Orbost, Brennabra, Corryong, Adaminiy, Jindabyne, Yacok, Wee Jasper and the capital cities of Canberra and Sydney among many other communities. It is interesting to note that in the above table NSW and Victoria are the worst affected and that both these states have embraced increase National Parks on public land and produced a barrage of legislation based on the same assumptions. Preventing private land holders from pursuing prescribed burning, clearing native vegetation and grazing bush runs as was previously the situation, as proven effective fire risk minimization strategies. **We ask were these fires unstoppable because of the fuel loads allowed to accumulate and wait for the right climatic circumstances to overcome any amount of fire fighting capacity?** Back burns and other strategies were rendered ineffective because of the huge fuel burdens over vast areas of mountainous country.

How did the 2003 fires start in ACT, NSW and Victoria? What was lost?

Many thousands of hectares of the Kosciusko (70% of 1M ha) and Alpine National Park including areas taken for salvation from past management by foresters and stockmen have been burnt very intensely as a result of multiple ignitions from lightning in a dry storm coming through the area on the 8.1.03. 80 fires were lit in Victoria, 43-52 in Kosciusko national park complex and 17 in NSW State Forest.

Although Australia was experiencing the worst drought conditions in one hundred years the Snowy Mountains in the South East of Australia, were not yet fully drought declared and much of the mountains were green and suitable for drought relief grazing by many flocks and herds further west in NSW and Victoria suffering both feed and water shortages. KNP alone has, in the past, provided drought relief grazing and drinking water for in the order of 2M sheep, many thousands of cattle and horses. It is estimated the national park system has excluded relief grazing and water access to, in the order, of 10 Million sheep. KNP in today's figures could contribute around \$70 Million pa to regional trade from livestock grazing which is likely to have little impact on tourism or water catchment values other than in a positive long term effect on sustainable land use converting fire fodder into export and domestic trade opportunity. Stockmen contributed in kind, legally binding grazing lease obligations of approximately \$2075/ha pa in voluntary contribution maintaining the park setting, mowing grass to let the wildflowers through, catching dogs, weeding and preparing for fire in exchange for grazing rights in addition to direct cash payments for agistment. Selective logging leases were let under similar conditions, where fuel loads and debris had to be managed to minimal specifications, to maintain water catchment values and freedom from feral animals. **Arguably past management from foresters and stockmen brought much of the public land, since ravaged by fire to National Park World Heritage status by their diligence and commitment in the past.**

As recently as late 2002 grazing access to the Snowy was refused by the NSW and Victorian Governments. This was in response to requests from stockmen for relief grazing in what was described as an unacceptable request to impose on fragile alpine vegetation. Much of this country has since been subject to serious fire. In some cases possibly the worst in up to 30 000 years, given the unprecedented fuel loads that have been allowed to accumulate indefinitely over 40-60 years. Prescribed burning has been terminated and livestock grazing excluded on a roll back basis since 1973 when the last cattle lease was used in the northern reaches of what has become the KNP NSW. Grazing of cattle in the Alpine park of Victoria has also closed many grazing leases more recently in the last 10 -15 years.

National Park has been declared in increasing areas of native and plantation forests across the SE of Australia. Typical of the ongoing national park declaration process is the recent instance (Australian Timberman vol 27 no3 Mar 2003 reported) that premier of NSW, Bob Carr, stitched up a deal with greens to secure Green preferences in NSW electorates by declaring 15 new national parks taking in 65 000ha from forest production including 10 000ha of plantation established for commercial harvest plus perpetual leases and freehold land forfeiting 60 000-80 000 cu m pa of harvestable timber in short supply bringing about an estimated Government payout >\$200M in compensation for lost timber contracts.

Independent observers suggest the Victorian high country still grazed by cattle has fared well in the fires compared to country destocked for inclusion into national park which burnt mercilessly in both timbered country and alpine meadows. Local community observers and naturalist fear that country subject to chronic stagnation and inundation with toxic leaf litter and mercilessly burnt may now be devoid of viable seed and unable to recover many species of wildflowers and alpine herbs previously rejuvenated by fire, or kept fire safe by the combined effects of traditional small area fire and grazing those areas or those adjacent.

No Burn No Graze for possibly the first time in 30 000 years!

Grazing by wildlife has been largely eliminated in much of the KNP as wild dog populations have been allowed to build to unprecedented numbers underpinned by a shandy of other invasive litter baring feral animals like pigs, rabbits and foxes which hunt and live off each others activities, finding their own population levels while not taking wildlife off the menu. This situation has been brought about by the exclusion of aerial baiting of dogs and foxes in 1996, said to threaten species such as the tiger and spotted quoll. Strategic aerial baiting was widely considered the last effective suppression control program for dogs and foxes, replacing on ground vigilance from trappers and poison baiting in place for 150 years, taking over from the Aboriginal harvest of these dogs for rations effectively keeping their population in check for the previous 4000 years. Dogs have been superceded as a ration animal but their wildlife harvesting activities continue comprehensively, as their numbers build to form packs effectively ambushing both large and small species including gliders, possum, echidna, rodents, lizards, wallaby, wombat, kangaroo, sheep, calves, weaner cattle, children's ponies.

Extraordinary Wildlife Predation By Ferals

Observers suggest quoll prosper in areas where dogs are rigorously suppressed and excluded by effective baiting and trapping programs. These effects are likely results of competition for food by dogs. The attrition and displacement of native wallaby kangaroo among other wildlife has been reported by longtime experienced observers with the building of dog populations. Plant communities have been deprived of any grazing services to moderate litter and under storey suppression for 20-30 years. Many kangaroo were found drowned in creeks in the 1980s when dog numbers were building. Macropods seek water in an attempt to drown their tormentors.

Dogs have invaded forestry land in the Tumut, Tumberumba, Hoibrook areas with dogs also being regular residents of State Forest in the North, Central and South Coast and escarpment of NSW NE Victoria. Dog territory and level of predation has forced the destocking of many hundreds of thousands of sheep off private land near large conflagrations of national park acting as dog breeding and distribution centres.

Stockmen observe if domestic animals are safe and well fed in our bush runs so are our wildlife. Environmentalists have been vocally opposed to wild dog suppression programs in public land looking to ban and frustrate control programs including aerial baiting, traps, access of professional dog men to harbour, use of 1080 poison. Wild dogs are not a problem in the Forests of Tasmania offering a supportive balanced habitat for a myriad of wildlife some species of which are no longer in existence on the mainland with dogs, foxes and cats implicated in their demise. In Western Australia a number of species of wildlife including wallaby are credited with the suppression of under storey species at the seedling or older

stages of excessive regeneration. Native rodents have also been implicated in seedling loss in other states to suppress overt forest density and aggressive under storey bulking out increasing the risk of serious fire.

While the area burnt was comparable and the ignition method similar in the 1939 and 2003 fires that is where the similarities stop. In January 13, 1939, a similar climatic event occurred as January 8, 2003 in the SE of Australia where a dry lightning storm came through and lit many hilltops over 100s of kilometres. Arguably 1939 was a greater climatic challenge than 2003.

The Snowy was one of the few areas in the SE not drought declared in one of the worst droughts in 100 years affecting other parts of the SE. **In 1939 stockmen had established a grazing dominant ecology across the mountains of ACT, NSW and Victoria.**

Wildlife grazers, wallaby, kangaroo, wombat had recovered their numbers from very rare to then common over most of the mountains with the previous 100+ years combined application of traditional small area fire, reintroduction of intermitant large animal grazing rejuvenating plant communities and rigorous dog, fox, cat, pig suppression while exhaustive work on rabbit numbers by trapping and poisoning continued. The Snowy had not yet become Canberra's water catchment. Any grazing damage attributed to livestock grazing was confounded by the results of 50 years rabbit plague, 20 years drought, two world wars and economic depressions affecting resource availability including skilled labour diverted to Europe's wars and latterly Asia's involvement.

The forests were kept in good faith as the open forests suppressed under storey scattered grasslands our families found on first settlement. Traditional Aboriginal small area burning off was adopted and adapted to the reintroduction of large grazing animals lost from the Australian ecology 20 000 – 30 000 years ago.

Large grazing animals groom and prune the forests, early stage process plant residues facilitate detritus recycling and suppress under storey plants. It is likely as a result of this loss of large grazing animals to mow and prune the vegetation, environmental turbulence was brought about as plant residues accumulate indefinitely and wait to be resolved by catastrophic fire such as we have just experienced in 2003.

In 1939 a similar large area fire resulted from a dry storm coming through the Snowy. While a large area of the mountains was burnt large proportion of Victoria's Ash forests were burnt, the intensity of burns and speed the fire traveled was not as severe as in 2003 by all reports from surviving eyewitness to the 1939 event and now.

The 1939 fires were largely self limiting in comparison because fuel loads were managed at a far lower level following on from Aboriginal Fire stick management .

Fire Stick management has been in place for many thousands of years until the last 30-50 years in the SE where water catchment and national park authorities have shunned both managed grazing and burning as habitat management tools and fuel management tools. Naturally occurring fires have also been put out almost exclusively with increasing fire fighting capacity capable of overcoming fire in larger and larger fuel loads. Independent of the best intentions for the environment the 2003 fires across the mountains has arguably been the worst incident in 30 000years. While state Fire Authorities have prospered on increased Government budgetary support to fight bigger fires on public land because of bigger accumulated fuel loads many local communities witness the folly of and the conflict of interest shown in many post fire investigations where those authorities prospering from bushfire in terms of increased wages, community standing and facilities provided are then asked for advise on land management and fire fighting strategies.

Fuel load issues are never addressed adequately. In NSW RFS budgetary increases are tied closely to major fires on public land, managed as national park. Other states seem to be catching up on this closed loop process.

Grazing needs to be viewed objectively as hazard reduction - habitat management tool in forests

Application of intermittently managed grazing by our domesticated mega fauna is an alternative to traditional small area fire alone to promote, diversity, regeneration, recolonisation and recycling of nutrients in a fire safe manner. While self professed environmentalists have conceptual difficulty replacing the ecological essentials of indigenous grazing fauna with domestic animals, wildlife follow grazing flocks and herds to thrive on the nutritious shoots, flowers and seeds produced in response to grazing and browsing by mixed species. **Arguably it was the management of stockmen and foresters which brought land up to national park status and maximized biodiversity values.** Grazing of domestic and wild animals is complementary rather than all competitive. In 1939 the mountains were a

grazing dominant ecology, fire prepared environment where fuel loads were small and largely self limiting to fire spread.

Water ways suffered few blackberry infestations which with the grazed grasslands and open, higher altitude forests acted effectively as fire safe havens for both wildlife and plants many Snow gum, Mountain Ash, Alpine Ash ecologies either unharmed or successfully recovering. Many sheep in the mountains on leases continued their stay with little threat or trauma as the fires worked their way around over weeks in areas the 2003 fire burnt over days to extinction removing wildlife, birds, fallen timber, forest structure, centimetres of top soil, humus and seed reserves. The fires were particularly traumatic on the 17, 18, 26, 30 January as major fires converged and combined with huge fuel loads and extreme climatic events of hot dry winds, low relative humidity, to spot and move at great speed and ferocity causing tornado, fire storm and fire ball conditions across vast areas of the mountains and adjacent grazing lands otherwise considered fire safe had fuel loads in nearby public land not been accumulated in some cases for 40 years as unkempt forest. *The photographs give an indication that gaseous fuel loads became an important factor in the behaviour of these fires allowing them to super heat vast areas of forest creating massive turbulence to blow across bare drought affected closely grazed paddocks killing sheep, cattle, horses and wildlife from incident heat and lung damage, shower embers great distances onto homes haysheds public buildings.* Embers were sent kilometres into the air and traveled 40-80km cross country. Soot, ash and smoke were blown from the Snowy to New Zealand as most urban Australians were preoccupied by weapons of mass destruction in Iraq while their nations water catchment, natural and cultural heritage was suffering melt down.