National Association of Forest Industries

Submission To The

Council of Australian Governments

Inquiry On

Bushfire Mitigation and Management

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Major wildfires have affected large areas of Australia's forests and bushland over the past five years. The loss of life and property provides a compelling case for public authorities to change their current practices. The 2002-02 summer fires were also the most catastrophic on record, in terms of their impacts on the environment. Yet, the major causes behind the catastrophic nature of the fires still fail to be recognised by the primary controllers of land management – the State and Territory Governments. There is also a general lack of recognition that the severe damage caused by these recent fires, in terms of the intensity of the fires and the total area affected, is due to existing land management policies.

Solutions to the problems of fire frequency and fire severity are already known to forest managers and forest scientists. They include forest thinning, other forms of hazard reduction, maintenance of forest roads, and maintenance of local industries – such as forestry – with direct expertise in forest management. It is therefore absolutely essential that forest fuel management is integrated within a national approach to bushfire management planning and responses.

The forest industries recognise and support the human efforts to suppress fires and protect both the community and environmental assets combined with the improved processes for coordinating the fire suppression responses. However, their job is made so much more difficult by the changes in the landscape fire regimes adopted in recent times, which have seen the exclusion of low intensity fires and the forest industry, from vast areas of Australia's bushland. When ignition occurs in the heavy fuel loads of the so-called 'protected conservation areas' in particular, there must be immediate suppression of the fires or fire fighters face a most difficult task that can extend for months at a time.

An alternative does exist. The National Association of Forest Industries believes that the United States, Spain, Canada and other European countries have correctly identified the importance of developing a committed and comprehensive forest management regime to limit the impacts of wildfires on the environment and communities.

"The real solution to catastrophic wildfires is to address their causes by reducing fuel hazards and returning our forests and rangelands to healthy conditions. Tree thinning and removal of dense underbrush can ensure thriving forests while reducing risks of catastrophic fires and the dangers they pose to firefighters." (United States Healthy Forests Initiative, August 2002).

The United States Congress has recently passed the *Healthy Forests Restoration Act* (21 November 2003), which concentrates on improving forest health as the means for reducing the severity of fires, when they do occur. Through their President's Healthy Forests Initiative, an integrated approach is outlined to protect communities at the rural-urban interface, protect watersheds and catchments, and provide an improved habitat for protecting endangered and threatened species. Under a 10-year comprehensive strategy implementation plan, all phases of the fire management program on forest land are drawn together, including:

- Fire preparedness
- Suppression and prevention
- Hazardous fuels management
- Restoration of burned areas
- Community assistance, and
- Monitoring of progress.

Forest thinning combined with other fuel management solutions should be the starting point for developing the fire management framework. In Australia, parliamentary report after parliamentary report have claimed that it has not been possible, due to either the number of suitable days or the complex requirements for regulatory approvals, and that Governments have not provided sufficient financial resources, for forest fuel loads to be managed through hazard reduction burning, alone.

A far more integrated approach is required, that uses a range of solutions to deliver fuel loads that support lower intensity burns in our forest lands, when they occur. The recommendations below indicate the importance of delivering fuel management solutions that are based on the risks of fire occurrence and the likely impacts of those fires on the natural environment and community assets.

If the scientists are correct in their predictions of future climate changes across the landscape, there will be a requirement to develop a more balanced approach to forest fuel management as part of Australia's responses for adapting to the nation's changing climates. By attempting to more accurately mimic the fire regimes of nature and the Indigenous peoples, there should be a reduced occurrence of wildfires.

However, when they do occur, it is important to have the mechanisms in place to suppress those fires and to restore the ecosystems that are affected. The destructive effects of the January 2003 bushfires on a range of forest ecosystems, particularly the alpine ash forests, and the lack of any real effort by State governments or national park managers to help restore those forests indicate that no real lessons have been learnt by the ultimate regulators of forest management.

The National Association of Forest Industries welcomes the COAG Inquiry on Bushfire Mitigation and Management and hopes that all Governments can work together to deliver a truly sustainable approach to protect our forests, catchments, personnel and community assets. The following recommendations indicate the importance of delivering an effective approach that can be built on the principles of appropriate forest fuel load management.

Recommendations

1. **A pragmatic and scientifically-based approach across all land tenures to fuel load reduction be adopted as the key component underpinning a framework for bushfire prevention, management and suppression.**

2. **Incorporate the broad elements of the United States' Healthy Forests Initiative, with the highest priorities placed on fire fighter safety and environmental and community asset protection, into an Australian healthy forests framework that encompasses the broader principles of bushfire mitigation and management.**

3. **Each State and Territory jurisdiction should develop their approaches to bushfire prevention and management under a consistent national framework, given that fires do not stop at borders and fire fighters generally move from one jurisdiction to another to assist with fire suppression. (This last point is important for fire fighter safety. When fire fighters move to a new jurisdiction and have to respond to the changing objectives and strategies of those managing the bushfire responses).**

4. **Fuel management planning processes need to recognise that forests will face at least one possible catastrophic fire season and at least several bad fire seasons every 30 to 100 years, depending on the climate and type of vegetation.**

5. **The fuel management planning process should recognise that some jurisdictions, for one reason or another, continually fail to meet their hazard reduction targets.**

6. **The increased reservation of forests in national parks and reduction in multiple-use forests will require a more committed financial effort from national park managers to prevent wildfires occurring or to mitigate their impacts. Previously, national parks and state forests were closely intertwined. But by increasing the reserve areas, the neighbouring state forest agency fire suppression regimes that would have helped to protect the national park areas in the past, may no longer be available.**

7. **The fuel management planning process should be based on a more comprehensive risk assessment process which recognises the links between fuel loads, vegetation types, ecosystem types, accessibility, number of possible fires, climate, and resources available to fight the fires. Such a risk assessment process would identify the potential areas for fuel reduction in order to mitigate the spread of fires.**

8. **The fuel management planning process should recognise the risks to water catchments and water contamination from high intensity bushfires.**

9. **The fuel management planning process should be able to employ a scientifically-determined mix of hazard reduction burning, managed grazing and stewardship contracts to support thinning operations or the collection of firewood.**

10. **If State and Territory government legislation needs to be amended to allow these other forms of fuel load reduction activities to occur in areas such as national parks, it should be supported on scientific grounds, as the basis for governments committing to a national approach for improved bushfire management.**

11. **As part of a national healthy forests framework, there should be a commitment to determine, on a case-by-case basis, the most appropriate means for restoring badly damaged ecosystems, such as the large tracts of alpine ash forests devastated in Kosciusko National Park during the January 2003 bushfires.**

Introduction

"Southern Australia is one of the most wildfire prone regions in the world. The wildfires that occurred throughout Victoria, NSW and the ACT in the summer of 2002-03 are a stark reminder that…wildfire remains a significant threat to life and property in rural Victoria."
(Victorian Auditor-Generals Report on Fire Prevention and Preparedness, May 2003)

Even when it is recognised that bushfires and catastrophic wildfires are a real risk for Australia's forest ecosystems, there are only limited efforts by State and Territory governments to take the initial steps which could mitigate the extent of damage those fires cause. While it is important for Australia to have a good distribution of forest ecosystems in permanent reserves, the forest industry becomes increasingly concerned with the lack of proper management that is afforded to our 'national parks'.

In most cases, the devastating impacts of wildfires over the past five years have had a much greater impact on forest flora and fauna than would ever occur from the mosaic approach to timber harvesting that is applied by the forest and timber industry. Essentially, a world-class forest reserve system should only be put in place if Governments are willing to put the financial resources into the active management of those reserves.

At the present time, the overall fuel loads in some forest areas are many times the levels that would have been achieved in the pre-European settlement times. In a number of other areas, the current frequency of burning is far greater and at different times of the year than what the ecosystems have evolved to withstand. As a result, some of the fire management and fuel load management plans for Australia's forests may be completely at odds with nature.

Hazard reduction burning is one option

The Victorian Auditor General's report from May 2003 recognised the need for an increased focus on the 'strategic management of hazard reduction on public land to ensure that appropriate targets are set, resources are provided for their achievement and performance is monitored'. But as was the case with the New South Wales Joint Select Committee Inquiry into Bushfires in 2002 and the statements reflecting the intensity of the fires in January 2003, there is an on-going difficulty with relying on hazard reduction burning to reduce forest fuel loads.

There is a requirement to focus on improved fire prevention and hazard management on all land tenures. On public lands in particular, a series of reports on bushfires have identified the 'consistent failure to achieve hazard reduction targets'. Several major reasons are put forward for these outcomes. Firstly, there may be as few as 10 days a year on which hazard reduction burns can be undertaken (Inquiry into the 2002-03 Victorian Bushfires). Secondly, there is a lack of financial resources within agency budgets to undertake the level of hazard reduction burning required in any one year (Victorian Auditor General's report May 2003). Thirdly, there are not enough trained personnel available to complete the prescribed area of hazard reduction burning. Finally, the processes for obtaining approvals to undertake the hazard reduction burning are needlessly complex and detailed.

While it is important to have appropriate safeguards in place to protect the environment and the community's assets from hazard reduction burning operations, these four factors indicate that other options must be identified to effectively reduce the fuel loads in our forests. Other

measures should be identified, based on the overall level of hazard reduction required, the possible risk of wildfires occurring and the potential for undertaking those hazard reduction activities within a limited budget and suitable timeframe.

With the expansion of Australia's national park estate has come an increasing fire risk to forest ecosystems and the properties that adjoin those reserves or national parks. In previous times, if some of the forests were managed by State forestry agencies, there was a committed effort to protect the whole assets from the threat of fire, based on a number of solutions which included prescribed burning. Those forests were located in a mosaic with national park areas and farmland, providing a complementary resource that supported biodiversity outcomes and afforded some additional protection from the threat of fires. This was part of the community service obligations forced onto the State forestry agencies.

Following the reduction in areas of native forest available for timber production, there has been a decline in two important elements for suppressing, mitigating or preventing wildfires. Of great, but as yet unrecognised, importance is the loss of forest workers from the major forestry regions. These people have a sound working knowledge of the forests, maintained access roads, were available to fight fires as soon as they arose and had equipment such as bulldozers, readily available to cut firebreaks.

The second element relates to the changing health of forest ecosystems, once they are turned into permanent and relatively unmanaged reserves. In coastal New South Wales, State Forests outlined in their submission to the Joint Select Committee Inquiry on Bushfires in 2002, that there is a typical thickening of the understorey vegetation and these changes are leading to forest dieback in many areas.

By not preventing vegetation thickening and greatly reducing the natural occurrence of low intensity fires, the current forest management approaches are providing the high fuel load levels that support high intensity bushfires which can spread rapidly after lightening strikes. Alternative solutions, as part of a more comprehensive approach to deliver healthy forests and minimise the threat of wildfire attack, must be employed and will depend on the willingness of State and Territory governments to deliver these solutions through an improved legislative and policy framework.

A framework for delivering healthy forests

"A key priority of the plan is more active forest and rangeland management to reduce the accumulation of fuels and to restore ecosystem health." (United States Healthy Forests Initiative, August 2002)

The current state of many forest areas affected by the January 2003 bushfires should outrage all sectors of the community. This inquiry provides an opportunity for all Australian Governments to consider the possibility of delivering a framework that supports the long-term development of healthy forests. It should include the means for delivering a more comprehensive set of fire prevention, management and suppression regimes that are more closely aligned with the types of vegetation and ecosystems that Governments are attempting to protect.

Active forest management remains the key element to this approach and instead of claiming that there isn't enough time or money to undertake all of the hazard reduction or prescribed

burning that is required, other options must be added to the list of forest management strategies. Eleven months after the last major bushfires fires and some areas show no sign of forest regeneration at all, including the moist gullies – this can surely not be allowed to continue, given that better forest management solutions are available.

Burnt forest areas of Kosciusko National Park (December 2003)

In a similar manner to the situation faced in Australia, the United States has faced five years of low rainfall, leading into a series of major wildfires. As a response to the growing concerns over these wildfires, the United States President put forward the Healthy Forests Initiative. That initiative is now encapsulated in that country's federal legislation under the *Healthy Forests Reafforestation Act 2003*. The key driver of this initiative, and the underlying legislative support, is that actively managed, healthy forests should not be susceptible to the same intensity and spread of wildfires as has occurred in recent times.

In the United States, a mix of solutions are being drawn together, including the utilisation of forest thinning, to reduce the excessive fuel loads while returning some vitality to the forest ecosystems. In Australia, the recognition that there is neither the time or resources to complete the prescribed hazard reduction burns each year, should lead the State and Territory governments to considering other options for reducing fuel loads in the forests.

Based on the best-available science, forest thinning should be allowed in all reservation areas where it is undertaken in controlled manner, but not necessarily through all parts of the forests. In other words, the most effective approach would be to have a mosaic of thinned and unthinned forests across the landscape. The thinning regime could be determined by Government agencies, based on the vegetation and ecosystem requirements.

By undertaking these thinning activities in a mosaic across the forest landscape, the forests will be afforded additional protection by having workers and equipment close-by to put out fires as soon as possible following lightning strikes. Roads would be maintained to help with access through the forest and by limiting both the intensity and spread of fires, this approach would help the fauna to escape the fires or provide refuges within the landscape.

The thinning regimes that could be applied to forests could be combined with grazing, prescribed burning and possibly firewood harvesting to control fuel loads. While a co-operative approach between State agencies could identify the most effective options to support fuel load reductions, there are concerns about the delivered costs of these solutions.

After deciding on the most appropriate mix of activities, the coordinating agency could allocate the work to community groups and the private sector through stewardship contracts. To pay for their efforts of reducing fuel loads and maintaining road access through the forests, these groups could be allowed to sell their wood.

The mosaic approach of applying a mix of hazard reduction solutions through government activities and under stewardship contracts would provide communities with a low-cost means for delivering healthy forests, while protecting catchments, endangered ecosystems, lives and assets.

Adaptation to climate change and protecting our water resources

The National Association of Forest Industries has serious concerns over the likely impacts of climate change on Australia's forests, if the scientists predictions are correct. A drying landscape in some areas and an increased exposure to drought, when combined with increasing forest fuel loads would mean that there is an increasing risk of lightning strikes leading to high intensity fires that are occur more regularly and are extremely difficult to

control. Many ecosystems would be placed under considerable threat from intense and environmentally destructive fires.

The impacts that can be observed from the January 2003 bushfires are the destruction of endangered species habitats, soil sterilisation, soil erosion, damaged fisheries and the spread of invasive weeds. Quite certainly in some areas, there is also the permanent loss of some ecosystems. For the alpine ash forests burned in the 1983 fires and again in 2003, there is no sign of recovery across large areas of this forest type.

As part of the adaptation response, agencies need to be in a position to respond to the fires as soon as they occur. For example, the lightning showers that ignited the Canberra 2003 bushfires, also hit the Tumut region. Through the awareness of the industry and their committed effort to put out fires immediately, they had almost all of the fires under control within the first 24 hours and only one fire lasted into a third day. This represents the industry's commitment to protect the forest assets.

For our water catchments, there are two major impacts on water that have to be considered as part of a multi-agency approach to managing our forest assets. Over the longer term, there is the loss of a considerable volume of water to the forest regeneration process. It has been predicted by the CRC Catchment Hydrology that, in less than half of the burnt area, forest regeneration will reduce water yield into the Murray River system by approximately 430 GL per annum. The total volume of water diverted from the whole Murray Darling Basin is just over 12,000 GL per annum. Thinning these regenerating forests, even if they are in national parks, will be one option for reducing their impacts on water yields.

In the shorter term, the sterilsation of the soil and loss of vegetation cover has seen the major movement of sediment and topsoil into the river systems and finally the dams for servicing cities, such as Canberra. The costs of having to dredge out those dams in addition to the costs of introducing additional water filtration facilities needs to be compared against the costs of improving the way that Australia's forests are managed.

In addition to these direct costs for delivering water, as the efficient markets for water continue to develop and become more refined, additional liabilities could arise. Will farmers then be able to sue governments if their water entitlements are consumed by regenerating forests? If there are landslides or contamination of water resources following bushfires will the States, as land managers, being liable for the additional costs of water filtration?

All of these factors need to be weighed and supported through further research or a better use of the existing research. The results of the CSIRO Project Vesta forest fire behaviour experiments may provide crucial information to assist with the development of new, more appropriate forest management options. By actively managing the forests to improve their health, it should be possible to minimise the impacts of bushfires on the forest ecosystems, the damage to community assets and the requirements on fire fighters to protect our communities.

What happens after the wildfires?

The recent experiences of the nation's bushfires indicate the importance of developing a strategy for rehabilitating the burnt forests. Just as multiple agencies have an important stake in preventing, mitigating or suppressing wildfires, they should be concerned about the

impacts of the fires. In some cases, there will be a requirement to repair roads or minimise the impacts on water catchments. From a forest industry perspective though, the greatest concern centres around the loss of whole ecosystems.

Following the January 2003 bushfires, the fire-susceptible alpine ash forests have been destroyed across significant areas of the national park estate. In some cases, the lack of ground cover and heavy rain has led to major landslips and the closure of Elliott's Way in Kosciusko National Park. Some photos indicating the extent of the forest damage are provided below.

It is essential that for this sort of forest, there is a mechanism in place to remove most of the dead standing timber under stewardship contracts (although some should remain for habitat purposes), where the wood could be salvaged by industry or be used to produce renewable energy. As happened with the 1939 ash forests in Victoria, the area should be re-seeded to support the effective regeneration of the ecosystem. In the absence of any such approach, there is almost no possibility of the alpine ash forests returning to those areas. The loss of ecosystems, soil erosion and weed invasion are the major changes occurring at present. Any standing dead timber will be fuel for the next bushfire.