



VNPA response to the Final Report of the 2009 Victorian Bushfires Royal Commission

Issue: Fuel Reduction Burning

Summary

We strongly support the Commission's **Recommendations 57, 58, 59 and 65**, all of which ask for greater accountability in both fuel reduction and biodiversity objectives of prescribed burning programs, and a considerable increase in monitoring and science-based research.

We are very concerned with **Recommendation 56**, which asks for a simplistic 5% statewide annual target for prescribed burning. We believe it will be very difficult to achieve, and can lead to perverse outcomes both for public safety, and biodiversity (see 'The statewide burn target problem', below).

Accountability for public safety and biodiversity protection can best be achieved through the development of a series of regional (or preferably local) science-based strategic burn targets across the state, designed to suit different habitat types and achieve different public safety imperatives. This allows for regional accountability, and helps to avoid the perverse outcome of unnecessary increased burning in remote areas like the Mallee, at the expense of many strategic burns elsewhere.

We believe a series of regional, science-based targets for planned burns across the state would ensure that the Commission's recommendations regarding accountability and transparency are delivered, but in a suitably sophisticated manner.

How should accountable burn targets be established?

The sensible path to follow (one which allows effective burning to continue and also ensures the ongoing refinement of burn targets) would be to move as swiftly as possible towards a series of science-based local/regional planned burning targets across the state:

- Initially, a minimum target of 5% per annum would apply immediately to the 'dry foothill forests'.
- This would be accompanied by a science-based long-term monitoring program that would assess the effectiveness of planned burns for fuel reduction and for biodiversity protection.
- A series of interim burn targets should be set up across Victoria on a regional basis, following careful assessment of prescriptions for fuel reduction and biodiversity protection in the various fuel management zones.
- The monitoring program should be rolled out across all of these areas, as the interim targets are set. Importantly, it will take time to build the skills and resources to do this properly.



(Burning in these areas, subject to current planning processes, would continue in the meantime.)

- Local/regional targets should take account of wildfire in that area, and be accountable for meeting local prescriptions and objectives. A failure to achieve the target in one area would not cause an increase in burning elsewhere. Similarly, exceeding a local target in one area would not cause less burning elsewhere.
- There should be a periodic re-assessment, every four years, of local/regional targets and burn prescriptions, based on the monitoring program and any other appropriate research.

The Royal Commission's key findings and recommendations

On page 279 of the final report, the Commission sums up its key findings in relation to land and fuel management:

- *“The Commission identified a number of important areas that require attention in relation to land and fuel management:*
- *The current prescribed burning regime in Victoria inadequately reduces the risks associated with bushfires.*
- *Accountability for achieving publicly recognised targets and effective implementation of prescribed burning is not evident or supported by transparent resourcing.*
- *There is a poor understanding of biodiversity and the effects of different fire regimes on biodiversity.*
- *There are unresolved tensions between bushfire risk mitigation and environmental conservation reflected in fuel management activities and roadside clearing.*
- *The legislative complexities associated with road safety, biodiversity and bushfire risk mitigation affect roadside management activities. “*

The relevant recommendations of the Commission are:

RECOMMENDATION 56

[The VNPA supports all planned burning recommendations except this one.]

The State fund and commit to implementing a long-term program of prescribed burning based on an annual rolling target of 5 per cent minimum of public land.

RECOMMENDATION 57

The Department of Sustainability and Environment report annually on prescribed burning outcomes in a manner that meets public accountability objectives, including publishing details of targets, area burnt, funds expended on the program, and impacts on biodiversity.

RECOMMENDATION 58

The Department of Sustainability and Environment significantly upgrade its program of long-term data collection to monitor and model the effects of its prescribed burning programs and of bushfires on biodiversity in Victoria.

RECOMMENDATION 59

The Department of Sustainability and Environment amend the Code of Practice for Fire Management on Public Land in order to achieve the following:



- provide a clear statement of objectives, expressed as measurable outcomes
- include an explicit risk-analysis model for more objective and transparent resolution of competing objectives, where human life is the highest priority
- specify the characteristics of fire management zones—including burn size, percentage area burnt
- within the prescribed burn, and residual fuel loading
- adopt the use of the term 'bushfire' rather than 'wildfire'.

RECOMMENDATION 65

The Commonwealth establish a national centre for bushfire research in collaboration with other Australian jurisdictions to support pure, applied and long-term research in the physical, biological and social sciences relevant to bushfires and to promote continuing research and scholarship in related disciplines

The planned burning task

For public safety, there is a clear need to perform fuel reduction activities on public (and private) land, so as to reduce the severity of bushfires, and enable fire-fighting activities to be more effective.

And for biodiversity protection, there is a clear need to perform planned burning in many habitat types in Victoria, so that fire regimes fall within the range of natural variation that helps the survival of fire-dependent native plants and animals.

Burning prescriptions for all areas should be clear and science-based, and the prescriptions and their application should be subject to a regular audit.

The challenge for land managers, and the community, is to develop planned burning regimes that can produce both outcomes as effectively as possible.

The statewide burn target problem

We do not believe that a single statewide burn target is the best way to achieve management accountability. It can lead to perverse outcomes and, even if the target is met, it is not a reliable indicator that the best fuel reduction and/or biodiversity outcomes have been achieved.

The main problems with a single large statewide burn target are:

- It tends to encourage more burning in remote areas, where large burns can be conducted relatively easily, and discourage burning near townships where even small burns can be very difficult to achieve and require large resources, but contribute little to the statewide target.
- When weather conditions make burning difficult in one part of the state, burns must increase in another part of the state. This acts against local strategic planning of burns.
- It does not take into account areas of wildfire. In other words, the target remains the same, even if large areas of the state burn in bushfires in a given year.
- It discourages highly strategic planning, and gives no indication of the effectiveness of the burns in relation to public safety or biodiversity objectives.



How is prescribed burning currently planned?

Public land in Victoria is currently divided into four zones for planned burning (in some cases five zones). These zones occur across all public land, including state forest and national parks.

Zone 1: usually adjacent to townships; burnt for fuel reduction purposes only.

Zone 2: often occupying restricted corridors across public land; burnt primarily for fuel reduction purposes, but with the intention of matching ecological objectives as far as possible.

Zone 3: usually larger remote areas burnt primarily for ecological objectives, but with the intention of also helping with fuel reduction objectives.

Zone 4: often small areas, such as rainforest pockets or tourist features like waterfalls, which should be protected from fire at all times.

All these areas contain a great range of forest types (there are more than 300 habitat types across Victoria), each of which responds differently to fire, and requires fire at different times and different frequencies. Some may do well with quite frequent autumn fires, some may prefer very long intervals between fire, and many may need a complex mosaic of different 'age classes' and types of burn. Many Mallee birds and mammals, for example, require large areas of long-unburnt Mallee country.

Prescribed burns do not (and should not) occupy the whole treatment area. Instead burn specifications, particularly for ecological purposes, should detail the percentage of area to be burnt, the patch size, season of the burn and the severity of the burn. And both ecological objectives and fuel reduction objectives should be stated. Currently, however, prescriptions are rarely clear, and reporting on whether objectives are met scarcely, if ever, happens.

These recommendations must not be ignored!

The Commission's detailed recommendations below must not be lost, or watered down, in the Government's commitments to implement the report. The Commission has importantly asked the Government to:

- *provide a clear statement of objectives, expressed as measurable outcomes*
- *include an explicit risk-analysis model for more objective and transparent resolution of competing objectives, where human life is the highest priority*
- *specify the characteristics of fire management zones—including burn size, percentage area burnt within the prescribed burn, and residual fuel loading*

and that:

- *The Department of Sustainability and Environment significantly upgrade its program of long-term data collection to monitor and model the effects of its prescribed burning programs and of bushfires on biodiversity in Victoria,*

and should also:

- *report annually on prescribed burning outcomes in a manner that meets public accountability objectives, including publishing details of targets, area burnt, funds expended on the program, and impacts on biodiversity*



Nor should the Government ignore the crucial recommendation that:

The Commonwealth establish a national centre for bushfire research in collaboration with other Australian jurisdictions to support pure, applied and long-term research in the physical, biological and social sciences relevant to bushfires and to promote continuing research and scholarship in related disciplines.

The Commission's expert panel and the target issue

The Commission's recommendation for a statewide 5% prescribed burn target is not supported by evidence from the Commission's own Expert Panel.

Indeed, in the closing day of the panel's hearings, members of the expert panel commented on the lack of certainty in applying a 5-10% target across all treatable public land, and in clarifying this, most members in response to questions from Counsel for the State seem only willing to apply that target to "foothill forests", or "dry foothill forests" with any confidence. (The following references are to Commission documents.)

Mr Tolhurst, for example, says (15246/7-15):

"My understanding of what we were talking about is, if you like, almost a trial sort of use of prescribed burning and we were talking about particularly of progressing this in the foothill forest areas where there would be less contention in terms of the impact of the fire and we knew it was an area of high priority in terms of protection of life and property. So our discussion there was revolving around the first implementation, if you like, of a trial."

Dr Bradstock adds (15247/11-20):

"I think what we said was if you went for something around 5 per cent in foothill forests that it was our consensus that at least that would be okay in terms of vegetation responses, though we noted that there is very little information about animals. So that was part of the deal. We reckoned that the vegetation could cope with that; plenty of evidence to suggest that it could. We don't know much about animals. We need to monitor it if you are going to do it. But that's not a reason not to do it."

Dr Clarke agrees (15247/27-15248/4):

"Absolutely. I endorse Dr Bradstock's comment, particularly in relation to fauna and our ignorance of the impact on fauna. But the evidence to date suggests that that doesn't look like a dangerous level in that habitat. I guess the other thing we were emphasizing in 20(b) was we think this is a habitat that's important for human life and values and assets, and one in which a trial could take place without major risk to ecological values, but that we would want to monitor that."

Asked to clarify his position, he adds (15248/21-25):

"..I think the panel was of the opinion in this particular habitat type of foothill forest the risk was worth taking, provided there is a commitment to learning as we do it, and that couldn't be said for other habitats about which we know less."



And Mr Cheney (though asking for 8 per cent rather than Bradstock and Clarke's 5 per cent), also agrees that the target applies to the foothill forests. (15250/10-16):

"I would also like to say that the panel agreed that this should be a program, not a trial. The word "trial" has come up, which is tending to say we should confine this to a relatively small area. No, the panel said that we should apply this as a program across the dry foothill forests of Victoria as an area basis, not in one specific area."

And Mr Adams adds (15250/31-15251/5):

"But I also think we were quite clear that, as a program, we say that it would take at least 10 years to implement it and that it should be monitored, but it is a program of the five to 10 per cent in the foothill forests, yes, but in the sense of a "trial" we end up on a semantic point."

It is clear that the panel, when clarification was sought by Counsel for the State, was saying that the proposed at least 5% target was intended to apply to the foothill forests, and that there was a degree of uncertainty even there which can only be clarified through long-term monitoring.

Dr Clarke submitted a Clarification of his expert opinion to the Commission on 28th February. In that statement he makes it very clear that in his opinion (with his underlining):

"The available scientific evidence suggests that annual prescribed burning of 5% may be justifiable in dry eucalypt forest, if the primary goal is appreciable (perhaps 50%) reduction of risk to life and economic assets... on days of severe fire weather. There is also some evidence to suggest that in this particular habitat the ecological consequences of this level of prescribed burning are unlikely to result in irreversible or undesirable change. Since this habitat type is also the one encompassing or abutting the majority of economic assets at most risk from unplanned fire in this state, it would appear to be the habitat type in which the greatest reductions in risk to life and property might be obtained.

"However scientific evidence of the appropriate level of prescribed burning (percentage of the landscape or habitat type) needed to achieve desirable reductions in risk, while avoiding ecological harm, is not available for most other habitat types in the state. Consequently, in my opinion it is inappropriate to apply a target of 5-10% across the public estate of Victoria. Similar risk and ecological analyses to those conducted in foothill forests need to be conducted in other habitats with the goal of setting appropriately tailored targets for these habitats. In the absence of such evidence and analyses upon which to base targets for these other habitat types, there is a need in the interim, for careful and transparent setting of local/regional objectives to justify all prescribed burning activity in those habitats."

The expert panel's recommendations above are consistent with the VNPA's recommendations for initially establishing a 5% burn target in the foothill forests, to be followed by the establishment of a series of science-based regional targets across the state, and that all these targets should be seen as interim targets subject to monitoring and re-assessment over time.