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**Inspector General for Emergency Management (IGEM)
Inquiry into the 2019/2020 fire season in Victoria**

Past and current practices of land and vegetation management

The general public has a distorted view of where hazard reduction is relevant. In SW Victoria, the local newspapers are inundated with complaints about the lack of control of grass on roadsides, with the implication that this is the cause of fires (and particularly the horrific forest fires in eastern Australia). There has been no attempt by the authorities to provide the general public with factual information to counter the ignorant expressed opinion.

Roadside vegetation is one area that needs to be investigated, to get the facts. We believe that there is little evidence that roadside vegetation has been responsible for damaging fires. On the contrary, there is plenty of evidence in the Hamilton region that damaging fires have resulted from fires on farms (burning of animal carcasses, welding, use of angle grinders, harvesting etc). And some of those fires have spread into Crown Lands and created considerable damage. There have been at least 5 instances in the past few years. There is also evidence of fires starting from electricity poles, many of which are situated in paddocks and not roadside reserves.

The problem with the public's distorted view of causes of bush fires/grass fires (and their recommendation for fuel reduction as the sole answer) is that there is pressure to enforce regulations that cannot really have much impact on reducing the hazard on severe fire danger days and may well have serious negative impacts environmentally.

There is a constant complaint that the burning of road reserve has effectively almost stopped in many areas of rural Victoria. That appears to be a consequence of fewer people now on the land, and thus a difficulty in getting enough labour to actually do the work. What can be done about that? Because of the problem, there has been agitation to allow farmers to graze the roadsides – or to allow drovers with stock from drought-affected areas to do that. The latter is not actually welcomed by most farmers because of animal health issues, pressure on fences and water supplies. Environmentally, such activities would severely damage areas of currently pristine native grasslands, which are extremely scarce in Victoria. Drivers on the roads also have concerns about safety.

Research on hazard reduction burning on fire control and ecological impacts

As above, there is a real need to establish the facts about the effectiveness of prior fuel reduction burns in controlling the forest fires under varying environmental conditions.

The current evidence appears to be that when the conditions are extremely severe (high temperature, high windspeed, low humidity, drought conditions) then the condition of the forest floor has little impact on the progression of the fire. There must be evidence from the current fires to establish the reality. And then to publish it, so that everyone knows the score. There are anecdotal stories from isolated incidents that get publicity (and influence the beliefs of some individuals) but it is the overall scene that must be considered.

While it is popular to consider the case for historical Aboriginal fire control methods, their methods are not likely to be followed by us. They approached the matter carefully, selecting days and weather conditions that do not allow escapes. On the contrary, there are damaging fires every year started by fuel reduction burns by the authorities, who have limited time and a lot of work to do in a small window of time. That was especially true in the years when the ill-advised 5% annual target for burning of the Crown Lands was applied.

The Aboriginal burning practice did not really extend to the tall, wet forest of Gippsland and other areas of eastern Australia. The myth that they regularly burned such forests has been extensively assumed and promoted but where is the evidence? However, there is plenty of evidence that they operated extensively in woodlands and grasslands, where they exercised great control to achieve their objectives.

Damaging fires, including escapes, are added to by adherence to weather and fuel condition criteria for burning that relate to a past era, before the drying of our climate. Thus, the standards applied regularly allow the burns to reach flame height of 10 m or more, severely damaging even Brown Stringybark forests. That would not have happened when Aborigines burned the dry country forests and woodlands. There is a need to recalibrate the indicators that are followed today, to determine when a control burn may be safely conducted that will not create extensive damage to the forest and/or allow escapes onto private land.

Legislation to reduce fire risk on Crown Land and private properties

A critical legislative issue here is the need to restrict the lighting of fires in the open during the fire season. That should apply to private property as well as all public lands. There is no such requirement in Victoria, which possibly has the highest danger. Some States have restrictions, as in WA, where fires may not be lit in the open in many Shires from October to April. Reducing fire escapes from camp fires, burning of rubbish and animal carcasses, using angle grinders and welders in open paddocks, etc, is something that could make a significant difference. Campers in reserves and parks also contribute to such events. Many of these people are tourists from the cities or overseas who have little understanding of the risks. One estimate some years ago put this cause at the same level as lightning strikes. Yet it has been completely ignored by government.

'Blacking Out' practices with wildfires and prescribed burns

The environmental damage done from the fire is made much worse when unburned remnants are deliberately torched after the fires have been controlled. This automatic, unthinking practice has to stop because it removes the habitat that many species of fauna need to recover. There have to be other ways developed for dealing with the perceived threat from such unburned remnants.

The need for mosaic burning

If fuel reduction burning is to continue on a large scale then attention has to be given to environmental impacts on fauna and flora. There is no doubt that unburned patches of sufficient size have to be preserved in every operation if we are not to lose many species. The so-called 'landscape-scale' of operation relied on such patches arising through accident but manifestly that did not happen, at least not to an adequate extent. For example, some areas of 5,000 or more ha in the dry country were deliberately burned in one operation in the last 10 years where nothing remained unburned. That practice just has to stop if we are to preserve species such as the Mallee Emu-wren and Malleefowl. We are largely dealing now with 'islands' of vegetation – there is no prospect of re-colonisation from adjacent bushland areas that were there in Aboriginal times.

Early attack capability

Finally, the greatest single tool for controlling bushfires would be to vastly improve the early attack capability when lightning or arsonists strike. As we have all seen, the failure to attack the fire in the first hour makes it improbable that a fire that starts on a day of dangerous weather fire can be stopped before it does a great deal of damage. This capability will require much greater investment in people and aircraft. Yet, it really is the most effective way of dealing with future fires. Of course it has a high cost – but the cost of damage done by fires that escape is arguably far greater.

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