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NSW Government Bushfire Inquiry Submission

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Your Story

From 1980 to 2016 I owned and managed a grazing enterprise at Hanging Rock in the mountains south east of Tamworth.

I have always lived in bushfire prone locations and have observed fires over a very long time.

I have been a member of the Rural Fire Service since 1980. In that time I filled the position of Captain for 13 years, Deputy Captain for 3 years Group Officer for 12 years, currently Senior Deputy Captain.

I have represented NSW Farmers on Bushfire Management Committees.

I represented NSW Farmers on the Hotspots Steering Committee while the Nature Conservation Council developed a methodology for landholders to undertake ecological fire regimes.

In the 2019-2020 season I attended:

1. Godo's Road Fire
2. Pearsons Trail Fire
3. Pages Creek Fire
4. Port Stephens Cutting Fire
5. Cowsby Fire.

As a result of my 40 years' experience with the Hanging Rock Brigade I was called onto provide considerable local knowledge in addition to working on the fireline for Godo's Road, Pearsons Trail, Pages Creek and Port Stephens Cutting. I was tasked to the Cowsby fire as Div Com to advise what resources were required in preparation for a Task Force to take over.

The Inquiry is to consider, and report to the Premier on, the following matters.

The causes of, and factors contributing to, the frequency, intensity, timing and location of, bushfires in NSW in the 2019-20 bushfire season, including consideration of any role of weather, drought, climate change, fuel loads and human activity.

My best summary of the factors behind the frequency, intensity, timing, extent and location of the fires experienced in the 2019-2020 fire season is: "200 years of 'white fella' management of the bush overlaid by a hotter climate".

My estimation of the factors behind the severity, intensity and spread of the fires is 75% the hot, dry weather since 2016 and 25% fuel loads. While fuel loads were high in some areas in cooler, damper conditions the intensity of the fires would have been less severe and more manageable.

The Pages Creek fire impacted a large portion of our former property. The fire burnt through country that until now was too wet to burn. In February 2019 National Parks conducted a hazard reduction in a large section of Ben Halls Gap Nature Reserve adjoining our former property. The

local RFS Brigade, adjoining landholders and the National Park Service had been waiting for over seven years for suitable conditions to conduct this operation. At the high altitude (sub alpine ecosystem with some cool temperate rainforest) it was too green and damp to enable a satisfactory burn to trigger regeneration. The Pages Creek Fire burnt through the hazard reduced again in January 2020. This is country that has a fire cycle in excess of 20-30 years.

The presence of fire and the frequency of fire in these areas is entirely the result of a hotter, dryer climate resulting in extremely dry vegetation and soil conditions. The dry conditions meant that fallen timber and leaf litter were not holding any moisture. It was not uncommon to see large fallen logs that in previous seasons would not burn disappear into a pile of white ash.

In our region we have observed a gradual warming and drying of the climate in recent years. This has had an impact on the fire regime we employed on our property. Our normal practice was to burn small areas of native grass and forest each winter. The area of burn was generally five to 10 acres at any one time. It was possible to judge the weather conditions to ensure that by dark the fire had gone out. This was possible because of low temperature, high humidity, moist damp soil and high dew and frost levels.

The fire cycle in native grass was around seven years. The stock would graze the fresh vegetation, slowing the build-up of dry cured grass and allow the softer native species to persist.

Fire intensity was sufficiently low to enable it to go out in the evening when it came up against a more recently burnt area, a vehicle wheel track or even a wallaby or wombat run.

However, the warmer dryer winters 2017, 2018, 2019 meant that such a fire regime was not possible. Combined with the growth generated by late winter rain in 2016 and the prevailing weather condition meant that there was a build-up of fuel throughout the district.

It has been too dangerous to proceed with a planned hazard reduction surrounding Hanging Rock village. The hazard reduction has been planned for a number of years but in that time, it has been either too wet or too dry to proceed in a safe manner. When the conditions were suitable the window was too narrow to enable the logistics to be put in place.

The fire conditions we have experience in recent years are a direct result of the impact of a warming planet on the climate drivers affecting weather in Australia. The data is clear that the circulation of the weather systems have been slowed by the increasing global temperature.

In our region the current dry conditions commenced in the Eastern Hunter Valley in 2014 and gradually spread over a very wide area, becoming State-wide by 2019. The disturbing aspect of the dry conditions from 2014 through too early 2109 is that the climate drivers that we know produce drought were not evident. The Indian Ocean Dipole and Southern Oscillation index remained neutral until 2019 when the Indian Ocean Dipole became positive and increased the severity of the hot dry conditions. The exception was that the Southern Annular Mode seems to have had a drying effect for much of this period.

Of the five fires I attended in 2019-2020 four were ignited by lightening one by arson. The arson fire resulted when harvesting equipment in the pine plantation was set on fire following the theft of fuel.

The preparation and planning by agencies, government, other entities and the community for bushfires in NSW, including current laws, practices and strategies, and building standards and their application and effect.

The local region has maintained a high level of maintenance and regularly updated equipment within the constraints of budgetary limitations. It would be fair to say that brigades were adequately prepared for a busy fire season. The number, extent, intensity and geographical spread of the fires stretched available resources beyond their physical limits. The call on resources was at a level never before experienced.

By late winter 2019 it had become obvious to those with bushfire experience that a potentially dangerous fire season was approaching. The long dry period, non-existent soil moisture excessively

cured ground fuel and dry forests indicated that we could be facing fire intensity at a scale we had not previously experienced. This called for high-level contingency planning at both a State and Federal level. At the Federal level this did not happen. At State level senior RFS management and National Parks Service seemed to understand the threat, (I cannot comment on Forestry Corporation).

In some areas high fuel loads and hot, dry, windy conditions contributed to the severity and intensity of the fire. High fuel loads in some areas can be attributed to a number of factors:

- Community objections to smoke from controlled burns saw a number of controlled burns cancelled in late winter, early spring 2019;
- Insufficient budget allocations for the land management agencies (National Parks, Forestry Corporation, Crown Lands) to enable sufficient allocation of resources to undertake their prescribed land management activities on the scale needed to prevent fuel levels to build up to dangerous levels.
- Fire trail management is similarly constrained by the availability of resources and requires agencies such as RFS to prioritise fire trails on the basis of the question: "Can we fight a fire off it?" (A fire trail may be categorised as essential based on its importance as a containment line while another which is required for access to that area but not necessarily a containment line gets a lower priority.)

While it is true that there were dangerously high fuel levels in some areas, particularly close to assets it must be recognised that wild fire in rain forest has nothing to do with a lack of controlled burning or hazard reduction.

On the subject of fire trails on private property there are some required for access to high fire prone areas that are no longer available or are blocked off. The RFS has on occasion negotiated with private landholders for fire trail access through their property on the understanding that if registered as a fire trail it would only for emergency service use when required. The location of these fire trails have been made available to private mapping providers and the trails are shown on GPS programs. The result is that landholders have blocked them off to prevent public access or use.

Responses to bushfires, particularly measures to control the spread of the fires and to protect life, property and the environment, including:

Immediate management, including the issuing of public warnings

In the fires I worked on Fire Control made extensive use of my local knowledge and 40 years' experience in the area. Most of the control strategies and the location of control lines and fire behaviour were acted on.

On the other hand my past experience as a Div Com has shown local knowledge is not always reliable.

The geographic spread of incidents stretched equipment and human resources beyond limits not previously experienced. The availability of crews, particularly in remote areas with small brigades necessitated crews from larger centres being required to travel relatively long distances to attend incidents. As these crews were from within the Region they were not provided accommodation close to the incident and were required to return home at the end of each shift. The result was that they were on duty longer than 12 hours.

The sheer volume of fires stretched available resources to an extent not previously experience. Many fires were unavoidably undermanned. With greater resources and crews some fires could have been contained earlier, however in the circumstances this was not possible. The available aircraft, vehicles and personnel could only be stretched so far. One of the fires I worked was probably 10 crews short of what would have been applied to it under a normal incident management situation.

The workload put considerable demands on most volunteers, the majority of whom had to maintain an income and could not devote unlimited time to the effort. The workload also put considerable

strain on fatigue management. In instances where long travel times are required for local Brigades shorter shifts on the fire line should be considered. However some crews chose to remain on scene past shift time waiting for relief crews to reach them. The only solution is to have more volunteers available. To this end a system of reimbursing employers for the wage expenses of volunteers so they can keep paying those employees while they are on active duty. Payment to self-employed volunteers needs to be included.

The strain on volunteers and resources is directly related to the extent and severity and duration of the fire season.

In my experience the communication from District headquarters to brigades to advise of crew requirements, proposed tasking and to determine availability of personnel worked well.

Resourcing, coordination and deployment

As mentioned previously I have 40 years' experience as an RFS volunteer which means that I have experienced the pre Rural Fires Act system of Local Government management of Brigades and now under the Rural Fires Act system of a centrally managed organisation. We could not have coped with the 2019-2020 fire season under the Local Government controlled system.

My experience has been in steep, mountainous forest country, prior to the advent of the Rural Fire Service and the ability to source trained crews from other areas we were very much on our own. Brigades from the flatter country considered firefighting in the mountains too dangerous.

The availability and coordination of the available resources was as good as I have experienced. There is a high degree of coordination required for such large scale and multiple incidents and this seemed to be handled well given the circumstances and the logistics required for the deployment of stretched, crews, plant, aircraft and equipment.

It is inevitable that there will be some criticism of the command structures in a large multiple agency response and calls for local on-ground autonomy of decision making. However in my experience the person on the end of the hose often has a better overview of the incident and required tactics and strategy than the Incident Controller with the responsibility to oversee the whole operation.

The provision of welfare did at times become a bit chaotic with use of multiple agencies for logistical support and multiple sources of catering.

Equipment and communication systems.

Larger capital equipment budgets may have facilitated a larger fleet of fire fighting vehicles, but the question is: "Would there be enough volunteers to crew them?"

Working with multiple agencies on the fire ground did present some communication problems, particularly with Forestry Corporation. While Forestry Corporation vehicles are equipped with Fire Ground Radio the crews on the fire line tend to use UHF instead. Their radio protocols are not up to standard with the use of names, generally nick names, instead of call signs. There was also the need to use two radio channels, one for communication with crews on the fire line and another for communication with plant. This was confusing when supporting both ground crews and plant. Use of Fire Ground Radio for communication with fire line crews and UHF for plant would have relieved the situation.

An issue that arose in the rugged mountainous terrain was radio dead spots. In some valleys there was a loss of communication with Fire Control on digital PMR radios. VHF Fire Ground radio also experienced dead spots when communicating with other crews working on the same incident. Similarly mobile phone reception is unreliable in the mountainous conditions I was working in. The deployment of portable radio repeaters should become a priority.

On all the incidents I worked on it was necessary to move to another location to get mobile phone reception. If required to convey a lengthy message or discuss an issue with Fire Control it was

necessary to leave the location to get phone reception to avoid tying up busy radio channels. This can only be overcome by addressing mobile black spots or equipping units with satellite phones.

And to make recommendations arising from the Inquiry as considered appropriate, including on:

Preparation and planning for future bushfire threats and risks.

Consideration of preparedness for future fire seasons should not treat the weather/climate, fire extent and behaviour experienced in 2019-2020 as a “new normal” rather as a precursor of what is to come, probably in the near future.

Consequently preparation by Government and the community for future fire seasons needs to pay closer attention to the scientific data relating to climate and weather patterns and their impact on bushfires. While fire has been a feature of the Australian landscape for millennia there does not appear to be any evidence that what we faced in 2019-2020 has an historical precedence. The data indicates that extreme fire conditions will increase in intensity and at shorter intervals.

Most Australian ecosystems have evolved over many thousands of years and been shaped by the sustainable fire management of Australia’s First Peoples. Those management practices have been progressively abandoned since the arrival of Europeans and the establishment of a British colony in Sydney Cove.

The culture, land management practices, the economic system, individual land title and legal system work against the continuation of the First Peoples sustainable fire regime. The construction of fences to delineate land ownership and to manage livestock and the legal requirement for landholders to manage fire within their property boundary are a barrier to sound ecosystem management. Ecosystems do not recognise land title boundaries.

Any attempt to reduce the threat of extreme to catastrophic fire conditions will need to adopt a system of cooperative fire planning and native vegetation management across multiple property titles. The aim has to be to develop a mosaic of varying fuel levels across a defined landscape or ecosystem. While future climatic and weather conditions will be difficult to manage the objective has to be to attempt to minimise the scale and extent of the impact of wild fire.

While the First People’s management employed the regular use of fire it must be remembered that they were dealing with a different climate to that which exist now and will exist into the foreseeable future.

The challenge of native vegetation management in the current and future climatic conditions is how to undertake and manage sustainable fire regimes in a hotter, dryer climate. The use of fire as a native vegetation management tool comes with inherent risks which include the narrowing window to undertake the activity and the scale of the task across a vast landscape.

The technique of establishing hard containment lines and introducing aerial incendiary to burn out the interior can lead to hotter fire conditions than is ecologically appropriate. This technique requires considerable planning, logistical coordination and a lengthy approval process. Quite often suitable conditions have passed by the time the planning and approval is in place. The narrowing window of opportunity to use this technique will require a lot of resources to be deployed over a wide area in a very confined time frame. The required resources are unlikely to be available in the quantity required to achieve the desired result. It would require a massive commitment from Government.

An alternative approach to establishing a mosaic of ecologically sustainable fire regimes would be a labour intensive approach. It would require a larger workforce than is currently available to land management agencies with staff dedicated to a particular location to constantly monitor vegetation, climate and weather conditions and authorised to act quickly when conditions for a safe burn become evident. Assessment of the conditions can change very quickly and what seem possible in the morning may not be possible later in the day and vice versa. Staff would require a high level of training and understanding of the ecology, fire behaviour and weather/climate of their assigned area. Again this would require a massive commitment from Government.

This approach is not very different to the cultural burning practices of First Peoples with the obvious difference that there is now a very different climate to deal with.

While Government has imposed “hazard reduction” targets based on areas subject to controlled burns. This is an inappropriate measure of the effectiveness of controlled burns as a native vegetation management tool. A more appropriate management tool to assess the value of controlled burns or native management to protect life, property and ecosystems is to adopt a target for “effective native vegetation management”.

A first step is to change the language and approach to managing native vegetation with fire. We need to change the terminology from “hazard reduction” to “native vegetation management” or “ecosystem management”. “Native vegetation management” might be the more socially acceptable term. How that native vegetation is managed should be determined by the location and type of vegetation or ecosystem in question. This will require different management approaches to vegetation close to assets from those required for more remote locations.

It is essential that the hazards and risks close to assets be managed in a manner that will minimise the threat to those assets. This means that native vegetation density and fuel loadings will be less within predetermined distances from assets depending on vegetation type, volatility and terrain.

Land use planning and management and building standards, including appropriate clearing and other hazard reduction, zoning, and any appropriate use of indigenous practices.

The economic rationalist approach to building houses in high bushfire risk areas would be: “If you want to be there you accept the risk”. However that is a socially unacceptable approach. People are attracted to high risk areas because they are attractive places to live (most of the time). Consequently it is the responsibility of Government to design planning strategies to minimise the negative impacts when things inevitable go bad. Building standards need to be implemented that as far as possible minimise the impact of fire on the building and make it as safe as possible to defend. Planning laws will be required to allow authorities to identify areas where it is too dangerous to build.

Land use planning needs to reflect suitable land use and appropriate management taking into account public safety, environmental and economic factors.

Appropriate action to adapt to future bushfire risks to communities and ecosystems.

Native vegetation management and clearing laws play a vital role in land use planning. To achieve ecologically sustainable native vegetation management at a landscape scale a system of property planning for rural and peri urban properties is required. Landholders should be required to hold a simple authorised property plan indicating native vegetation management strategies with the aim of protecting assets and ecosystems.

My experience in native vegetation policy included being part of the NSW Farmers Association negotiating team during the development of the Native Vegetation Act 2005 and later as a Board Member and Acting Chair of the Namoi Catchment Management Authority. With this background I am aware that there is a possible methodology to implement such a planning regime, the caveat is that it will be politically difficult to implement.