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Submission Number: NND.001.00941

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What is your submission based on? I am making this submission based on my professional knowledge, qualifications or experience or on behalf of a group or organisation

What is your area of professional expertise? Research

If you are lodging your submission on behalf of a group or organisation, what is the name of the group or organisation?

Your Submission

In your experience, what areas of the bushfire emergency response worked well?

There was effective communication by fire agencies and the community consistently had a good understanding of the nature of what was to come.

In your experience, what areas of the bushfire emergency response didn't work well?

A lack of robust science in critical areas meant that agencies were making high-consequence decisions with limited insight of what the outcome will be. This is in terms of both preparedness and response. Key areas are listed below. Further detail is provided in the document attached to this submission. Areas where limited knowledge affected preparedness and response are:

- A poor understanding of climate / fire links means that the there are substantial challenges in predicting when and where unmanageable fire behaviour is likely to occur
- Limited applied research into hazard reduction burning means that there is no consensus on what the ideal strategy should be
- Hazard reduction burning can only be done when the weather is suitable. The science is immature in this area so there are few tools that can be used to assist planning.
- Limited research into applied fire management methods means that we are not able to objectively evaluate our firefighting performance.
 This limits potential for improvement
- Important applied problems in fire research are not being addressed by current research structures (agency staff or universities).

In your experience, what needs to change to improve arrangements for preparation, mitigation, response and recovery coordination for national natural disaster arrangements in Australia?

Recommendations in addressing research gaps are presented in an attached document. Key points include:

- That fire agencies increase research capacity to address applied problems and enhance communication with non-agency researchers.
- That a national approach to collecting and collating data relating to fires and hazard reduction be applied to ensure high quality information that can be used for sciences.
- That key research topics be addressed (particularly applied fire management and weather / landscape flammability dynamics)
- That current research structures be evaluated to determine how to increase long-term research that has practical outcomes.

In addition, it is recommended that further investments be made in research application. In particular, the development of tools that address practitioners needs.

Is there anything else you would like to tell the Royal Commission?

Do you agree to your submission being published? Yes I agree to my submission being published in my name