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Senate Finance and Public Administration Committees:
Lessons to be learned in relation to the Australian bushfire
season 2019-20

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Submission to the Senate Finance and Public Administration Committees by the Australian National University

Dear Committee members,

Please find enclosed a submission from the Australian National University (ANU) to the Senate Inquiry into Lessons to be learned in relation to the Australian bushfire season 2019-20.

This submission has been coordinated by the ANU Climate Change Institute and includes authored contributions from ANU scholars across disciplines and Colleges, including from the College of Law, the College of Health and Medicine, the Public Policy and Societal Impact Hub and the Australian Centre for the Public Awareness of Science. We address four of the terms of reference.

We would welcome the opportunity to meet with Committee members to discuss our submission further.

Yours sincerely,



Professor Mark Howden,
Director, ANU Climate Change Institute

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Roles and responsibilities of governments – a legal perspective

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Key messages:

- **Fire and emergency management should be seen as a whole-of-government and cross-sectoral issue**
- **Fire and emergency management needs to be mainstreamed into government thinking but should not be the dominant interest in all sectors**

Emergency management is traditionally seen as the responsibility of the emergency services, such as fire brigades and state emergency services. Vulnerability to fires, and the ability to protect life, property and other assets, is, however, largely defined by activities and policy settings in other sectors. This interplay of policy means that fire and emergency management should be seen as a whole-of-government and cross-sectoral issue. The community expects that different parts of government, along with non-government actors, will operate in a coordinated manner.¹

An integrated policy approach to hazard or emergency management would require all policy sectors, when formulating policy to consider the impact their policy choice may have on the ability of a community to prevent, prepare for, respond to or recover from a natural hazard event.

There is a distinction between the extent and strength of policy mainstreaming. The extent of emergency management policy integration refers to the width or range of sectors that consider emergency management imperatives, whereas the strength of policy refers to the 'relative priority given to ... [emergency management] policy integration in the policymaking system, and the energy with which it is pursued.'²

Laws that have various policy imperatives can impact upon a community's ability to prevent, prepare for, respond to and recover from a natural hazard event. Examples of how laws may fit within the PPRR spectrum are shown below:

Prevention Planning law Environment protection	Prepare Planning law Insurance Hazard Mitigation funding
Response Emergency management legislation Tort (civil liability) Legal position of volunteers	Recovery Post event enquiries – coroners, Royal Commissions. Civil liability litigation

¹ Michael Eburn and Bronwyn Jackman 'Mainstreaming fire and emergency management into law' (2011) 28(2) *Environmental and Planning Law Journal* 59-76.

² Andrews Ross and Stephen Dovers, 'Making the Harder Yards: Environmental Policy Integration in Australia' (2008) 67 (3) *The Australian Journal of Public Administration* 245.

That table begins to identify the range of agencies that have roles and responsibilities in relation to bushfire planning, mitigation, response, and recovery and the spread of responsibilities across the levels of government and demonstrate that all areas of government; the legislature, the judiciary and the executive government at Commonwealth, state and local level can impact upon fire vulnerability.

Under the Australian Constitution the **Commonwealth government** has the power to make laws with respect to insurance, external affairs (that is relationships with other countries including obligations created by treaty), the waters beyond state limits etc. This means the Commonwealth can make laws to govern environmental management in areas of national environmental significance.³ The Commonwealth funds states by allocation of tax revenue and funds emergency planning and response. Apart however from these specific areas, decisions about taxation, corporate responsibility, the location of Commonwealth assets, the operation of the Australian Defence Force, law reform in areas of civil liability and the liability of the Crown, funding social security etc. can all impact upon vulnerability. Giving tax deductions to install sprinklers, better funding social security so those on welfare could afford insurance premiums, limiting the ability of the Defence force to conduct live fire training would all have impact on vulnerability to bushfire but may impact on other policy objectives.

State governments also make decisions that may not seem directly relevant to vulnerability but do have an impact. The decision of how to allocate budgets between fire and emergency services and other demands on states; land use planning decisions could be made to reduce exposure but that will face objection from private landowners. Therefore, laws about private property and fundamental freedoms may be decisions by departments that do not see any themselves as being involved in fire risk mitigation.

Local governments in turn are charged with planning for local land use but local land planning decisions must be consistent with regional and state plans. Local governments are the creation of state governments and are bound to implement state policies that may encourage fire and other hazard prevention policies but also encourage growth and development to ensure housing for and economic viability of communities.

Where there are disputes about decisions to limit action in the name of fire or hazard protection then those may be challenged in courts and courts and the common law have their own principles. Applying those may restrict governments, or an individual's, right to act but depending on the issue those decisions may increase or decrease risk.

³ See *Environment and Biodiversity Conservation Act 1999* (Cth)

Fire and emergency management needs to be mainstreamed into government thinking but that does not mean it either can, or should, be the dominant interest. If fire management was too strongly integrated across policy sectors, that is if it was the dominant or primary concern of all government sectors, considerations such as amenity of the environment and issues of cultural, ecological or environmental significance could be ignored. That could, however, create an environment that was neither attractive nor sustainable. It would be imprudent to require that fire management be the dominant or only concern in land use or environmental planning. It would be impossible and inappropriate to have fire protection as the single, overriding issue to be considered at the cost of all other important community considerations, but that does not mean that it should not be a factor to be considered.

Responding to the hazards of bushfire smoke - a health perspective

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Key messages:

- *All Australian jurisdictions should disseminate air quality data (actual hourly particulate matter (PM2.5) data)*
- *More investment is needed in air quality monitoring, forecasting and research on public health messaging, and exposure reduction measures*
- *An independent expert committee on air pollution and health is needed to guide decision-making nationally*

The unprecedented magnitude and duration of bushfires over summer 2019 / 2020 lead to an extraordinary challenge with hazardous air pollution across most of eastern Australia.

The following 3 recommendations aim to minimize future health risks associated with bushfire smoke.

1. Public access to local, user-friendly air quality information and reliable smoke forecasts is essential for managing personal exposure as well as clinical deterioration in sensitive individuals exposed to bushfire smoke. We strongly recommend that all Australian jurisdictions present actual hourly particulate matter (PM2.5) data. Real time, hourly averaged PM2.5 concentrations are the most appropriate metric to guide personal behaviour that minimises exposure to bushfire smoke.
2. Consistency of air quality information and related public health advice across jurisdictions is essential for protecting populations from bushfire smoke exposure. Health messages related to air quality need to be evidence-informed and specific for at-risk groups and the general public. More government investment is needed in air quality monitoring, forecasting and research on public health messaging, and exposure reduction measures to protect Australians from bushfire smoke.
3. We call for an independent national expert committee on air pollution and health protection to be established to support environmental health decision making in Australia. This new expert committee should have a clear mandate and resources to develop evidence-based, accurate, practical and consistent advice on health protection against bushfire smoke, and air pollution more broadly, across jurisdictions.⁴

⁴ Reference: Vardoulakis S, Jalaludin B, Morgan GG, Hanigan IC, Johnston FH. 2020. Bushfire smoke: urgent need for a national health protection strategy. Medical Journal of Australia. DOI:10.5694/mja2.50511

Federal-State responsibilities and coordination

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Key messages:

- ***State and Territory governments should take the lead responsibility for fire planning, management and response with the Commonwealth providing a subsidiary and supportive role***
- ***Action in areas of unique Commonwealth responsibility, such as use of defence forces, should complement State and Territory plans and responses***
- ***A clear and effective interface is needed between levels of government***
- ***Government should undertake periodic public risk assessments of Australia's vulnerability to natural and non-natural disasters.***

This contribution to the ANU submission focusses specifically on the role of the Federal government. It is designed (hopefully) to provide some useful high-level observations for the committee to consider.

Traditionally the Federal government has played only a small role in bushfire management and response. Fire planning, management and responses are generally seen as a primary responsibility of the States and Territories. This reflects both Australia's constitutional arrangements and the fact that fires require highly localised planning and responses. Federal support has traditionally been available but has usually come after the fire has passed in the form of emergency welfare payments, the provision of social services and some support for rebuilding.

Primary responsibility

It is fair to say that the scale of the 2019-20 fires took many by surprise. For many people living on the eastern seaboard, it would have felt like an all-encompassing national emergency. It is perhaps for this reason that a political expectation arose early that the Federal government play a more active role in supporting fire responses than in the past.

The nature of the Federal government response at the time suggests that it could have been better prepared for the scale and longevity of the fires and the public expectation this created. It is possible that a lack of clarity about the Federal government role in these unprecedented circumstances compounded the challenge.

The response to the bushfires contrasts strongly with that taken to COVID-19. Here, governments moved quickly to establish coordination arrangements (including through National Cabinet) which have been respectful to the inherent roles and value brought to the table by the Federal government and each State and Territory. These arrangements have proved effective and have strong community support.

The success of National Cabinet in responding to COVID-19 might create a temptation to use similar arrangements for bush fires. This should be resisted. While improved coordination between the Commonwealth and States is clearly desirable in response to bushfires, fires are inherently local in their nature. Planning and responding to fires require a deep understanding of local conditions and the ability to deploy local resources. In our system of government, this responsibility is best discharged at a State level.

Observation 1: Planning, preventing and responding to fires requires deep localised knowledge and resourcing. State governments should take the lead responsibility for fire planning and management. In border areas, States and Territories should be primarily responsible for developing effective coordination protocols. Within these protocols, the Commonwealth's role should be subsidiary and supportive to the primary role of the States and territories. Coordination mechanisms should respect this and encompass clear protocols for escalating support in the case of fires at the size and duration of those we experienced in the 2019-20 season.

Role for the Commonwealth

While fires should be seen as primarily a State responsibility, the Commonwealth can and should play a positive supporting role. This role needs clarity and should be based on a clear understanding of the value the Federal government activities brings to all phases of fire planning, mitigation, response and recovery.

It is beyond the scope of this submission to detail what the contribution of the Federal government should be. But from observation of the 2019-20 fires, some possible issues include:

- assessing and responding to the impact that current national and international policy settings and developments, such as global responses to climate change, may have on the frequency, severity and nature of fires;
- the extent to which existing Federal activities and responsibilities in areas like environmental monitoring and research are fit for purpose. We note that successive

national State of the Environment reports have highlighted the inadequacy of long-term environmental monitoring and data collection.

- the role to be played by health and communication policy, and the regulation of insurance and charities in more appropriately supporting State fire strategies and responses;
- an appropriate role for, and procedures around, the use of the Australian defence force in responding to and recovering from fires;
- the role of the Federal welfare system in supporting those affected by fires, including the potential for income-contingent loans to be used as a mechanism to support businesses affected by disasters; and
- the role of Australia's diplomatic service in liaising with overseas governments in the deployment of fire-fighting resources.

In considering an appropriate role for the Federal government it will be important to ensure that coordination arrangements within the Federal government provide a clear and effective interface with State and Territory governments. This interface needs to encompass both political engagement and the engagement of officials. Those engaged in interface activities need to have a thorough understanding of the respective roles of the Federal government and the States and Territories. It would be logical for Emergency Management Australia to be the primary point of contact at an official level.

Observation 2: The Federal government contribution to fire planning, mitigation, response and recovery should focus on adding value to State and Territory plans and efforts. Action in areas of unique Commonwealth responsibility, such as use of defence forces, should be designed to complement and fit in with State and Territory plans and responses. A clear and effective interface is needed between levels of government.

National risk assessments

The last 12 months in Australia provides a stark reminder of the nation's vulnerability to disaster. While very different, fires and pandemic have had a major impact on our community and our economy. For the most part Australia has shown great resilience in meeting the challenges these events have created.

Stepping back, however, it is not clear that the Federal government has systematically examined, assessed and planned for the full range of key risks confronting the nation. On the surface, some risks, such as that of terrorism, have received much more attention within

government than others. Without an overarching risk assessment, it is difficult to have confidence that the nation is prioritising its efforts appropriately.

Given this, there would seem merit in government engaging experts and the community in undertaking a periodic (say every 10 years with two yearly updates) overarching risk assessment for the nation, covering the risk of natural and non-natural disasters. Care is needed to ensure that such a document is not unduly alarmist and that it provides a sound basis for looking across the types of risks we face and the capabilities and plans that may be needed in response. The scoping of the assessment would need to complement existing defence and security planning and be designed to feed into and support government (Federal, State and local) and community disaster planning.

Such exercises do, of course, have inherent limitations which need to be respected. But our overall judgement is that a national risk assessment would provide a stronger basis for priority setting and future planning and responses.

A national risk assessment would naturally need to be led by the Federal government but would need to consult States, Territories, local government and the community. It should draw on domestic and international expertise and include mechanisms for community engagement and consultation. A version of the assessment should be made public. The Federal government department or agency responsible for its preparation should be accountable to parliament through the normal Senate Estimates and Parliamentary committee processes.

Observation 3: There would be merit in government undertaking a periodic public national risk assessment that looks at the Australia's vulnerability to natural and non-natural disasters. The assessment should complement existing risk assessment exercises and should focus on ensuring the nation has appropriate plans and capabilities in place to address the full range of risks (and likelihoods) it faces.

The Federal Government response to previous Royal Commissions and inquiries: gaps and opportunities

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Key messages:

- ***Very few recommendations for Federal Government have come out of post-disaster inquiries (<1% of total)***
- ***There is little analysis available regarding the Federal Government response to these recommendations, although this is possible in theory***
- ***Cross sector learning from disasters requires the establishment of and commitment to a collaborative entity with this focus***

Identifying and understanding the Federal Government's response to recommendations from previous bushfire Royal Commissions and inquiries has, until recently, been virtually impossible. Once Royal Commissions have reported there is no obligation upon agencies that are the subject of recommendations to report on their response to the recommendations. Agencies may respond or they may not. Governments and agencies may implement measures that are consistent with the recommendations but that action may, nor may not, be a response to the inquiry. The 2009 Victoria Bushfires Royal Commission was unique in that the Commissioners recommended (recommendation 66) that 'The State appoint an independent monitor or the Victorian Auditor-General to assess progress with implementing the Commission's recommendations and report to the Parliament and the people of Victoria by 31 July 2012'. During the operations of the Implementation Monitor it was possible to obtain some indication of how governments and others had responded to previous inquiries. That sort of information is not available, in a single place, with respect to other inquiries.

The possibility of analysis of the recommendations, and potentially the response, to previous post-event inquiries has been significantly enhanced by the recent open access data base of all inquiries post-1886⁵, of which over one third deal with bushfires and nearly another third all-hazard (thus including bushfire). The data base includes searchable access to the >1100 recommendations of 55 major inquiries between 2009-17. Only three of 55 major inquiries were federal and all three were parliamentary; the rest were State/Territory. The vast bulk of recommendations concern State and Territory agencies, mostly emergency service

⁵ <https://www.bnhcrc.com.au/utilisation/ddr>

organisations, who in various ways monitor and report against these recommendations. Regarding the response of the Australian Government, the data are thin and it is not clear that response has been monitored: 9 of 55 inquiries made a total of 23 recommendations concerning the role of the Australian Government (0.2% of all recommendations). The response to or implementation of these recommendations by the Australian Government could be tracked via responsible federal agencies should the Commonwealth wish to do so. Initial analysis has established⁶ the presence of significant common themes across inquiries and the value of utilising the large body of analysis and recommendations they have made. Note that while common themes do recur across inquiries, there are areas surprisingly unattended to, including personal and household responsibility, the role of the private sector, volunteers and recovery.

With respect to other issues identified in the Terms of Reference and call for submissions, the nature of and response to recommendations can be similarly pursued. Some issues have been explored through research projects, for example land use planning⁷. There is considerable scope for more such analysis.

The larger issue in the long term is whether Australia has the desire and capacity to continuously learn from events and disasters across space and time, and across jurisdictions, NGOs, communities and business sectors. The value of cross-agency, -government and -sector learning is inarguable, however it requires structures, processes and resources for nationally coordinated, locally relevant, sustained and adequately resourced policy and operational learning. The existing lead organisations of AFAC, AIDR and the BNHCRC⁸ fulfil the role to an extent, and collaborate, however this is not their primary role, resources are constrained, and the 2021 cessation of the BNHCRC signals a diminishing of capacity (including of hosting and maintaining the inquiries data base). Australian governments, along with key research and response partners, should consider the need for an enduring entity focused on disaster policy and practice learning and continual improvement capacity, akin to but broader in scope than the modest and specific US Wildlands Fire Lessons Learned Center⁹. The response to the 2019-20 bushfires may be top of mind currently, however the need for such continuous improvement will continue and, in all likelihood, become more acute.

⁶ <https://knowledge.aidr.org.au/media/5505/ajem-33-2-16.pdf>

⁷ <https://www.bnhcrc.com.au/publications/biblio/bnh-6665>

⁸ **AFAC:** Australasian Fire and Emergency Service Authorities Council

AIDR: The Australian Institute for Disaster Resilience

BNHCRC: Bushfires & Natural Hazards Cooperative Research Centre

⁹ <https://www.wildfirelessons.net/home>

Reducing the impact of natural disasters and adapting to them by mitigating climate change

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Key messages:

- *Action includes addressing the causal factors that are increasing the frequency, intensity and duration of natural disasters i.e. climate change*
- *Reducing the impacts of climate change requires greenhouse gas reduction, starting with strong interim targets for 2030*
- *Adaptation requires re-thinking the goals of fire management, fire planning, fire-fighting technologies and resourcing to meet the new risks.*

The best and most recent scientific analysis shows that human-induced climate change is very likely to be making disasters such as the recent bushfires more frequent and more intense: On-the-ground observations and climate models show that the Fire Weather Index (FWI) has been increasing with time. Specifically, it has been computed¹⁰ that the extreme values of FWI experienced in SE Australia in 2019/20 have increased by at least 30% since 1990 due to human-induced climate change. Projected into the future, this work shows that 2019/20 FWI levels will be at least four times more likely with a 2°C temperature rise, the upper end of the Paris Agreement targets.

Dangerous fire weather conditions in south-east Australia are well-known to be driven by: 1) drought conditions, 2) high temperatures, particularly daytime temperatures 3) low relative humidity and 4) strong winds. The 2019 drought was one of the most severe (if not the most severe) in the historical record. Australia had the lowest rainfall on record and the highest temperature on record (e.g. the average maximum temperature was 2.09°C above the 1961-1990 baseline). The increases in temperature have been definitely attributed to climate change¹¹ whereas reductions in rainfall are more complex. In SW and SE Australia there is a clear fingerprint of climate change in the long-term trends to lower rainfall¹², but the effect is less clear in other regions. The 2019 drought was in particular influenced by the strong positive Indian Ocean Dipole which may continue to intensify in a warming world¹³.

Drought is particularly important for fire danger in SE Australia as it causes leaf drop, increasing fuel load and because it reduces fuel moisture, increasing ease of ignition. In addition, the relative humidity was extremely low due to long term trends associated with

¹⁰ [Oldenborgh et al. \(2020\)](#)

¹¹ [Kokic et al. \(2014\)](#)

¹² [Impact of lower inflows on state shares under the Murray–Darling Basin Agreement \(2020\)](#)

¹³ [Abram et al. \(2020\)](#)

climate change¹⁴ and the drought conditions during 2019. Lastly, many particularly intense fires in the south-east of Australia are associated with strong winds drawn from the hot continental interior that are channelled ahead of powerful cold fronts. These appear to be getting more frequent and stronger with climate change and are projected to increase by up to a factor of four by the end of this century¹⁵. These and other connections of fire risk with climate change mean that reduction of disaster risk needs to include mitigation of climate change.

Australia is a significant part of the world economy and a major fossil fuel exporter, and to date has arguably hindered rather than enhanced international consensus processes for climate change mitigation. One of the prices we pay for this position is contributing to the increasing scale and ferocity of climate-driven disasters. If we want to protect the Australian way of life for our children and their children, we must act to reduce our contribution to greenhouse gas emissions as a matter of urgency and demonstrate leadership and support for other nations to do likewise. The starting point for this action would be to establish clear and structured plans for greenhouse gas reduction aligned with the Paris Agreement goals, starting with strong interim emission-reduction targets for 2030. Importantly, many robust analyses have shown that rather than causing economic and social damage, proactive and balanced approaches to addressing climate change will actually lead to a stronger economy without the huge and growing costs in terms of lives, livelihoods, quality of life and the environment that have become all too evident in the 2019-2020 bushfire period.

The recent bushfire crisis and the current COVID-19 crisis has demonstrated that Australia can act radically and effectively to meet short term crises. However, if we want to avoid such actions becoming a semi-annual event – impacting heavily on the Australian way of life and the Australian environment – we must also address the issue of reducing greenhouse emissions with equal urgency.

Despite the clear evidence that mitigation of greenhouse gas emissions is urgent, our climate has already changed substantially enough that adaptation to these new conditions is needed. The evidence is also clear that the climate changes will very likely continue to result in weather patterns that increasingly deviate from historical norms for some time. This means that we have to re-think the goals of fire management, fire planning and fire-fighting technologies and resourcing. This could include a diversity of hazard reduction approaches including mechanical as well as fire-based approaches. Hazard reduction objectives should

¹⁴ Yuan et al. (2019)

¹⁵ Hasson et al. (2009)

be integrated with asset protection and biodiversity / forest age class and structure requirements. Such actions would help us stay ahead of the changes to fire danger rather than continually being behind the eight-ball.

Funding arrangements for disaster mitigation

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Key messages:

- *More Federal funding for disaster mitigation would reduce the spending required for relief and recovery*
- *The National Partnership Agreement Disaster on Risk Reduction improves on previous mechanisms through inbuilt review processes but does not increase overall funding*

Australia's capacity to mitigate disasters is constrained by the level of funding dedicated for this purpose. There remains a large discrepancy in the total funding provided by the Federal Government for disaster mitigation compared with what it provides for relief and recovery. This is a long-standing situation that has been raised in a number of previous disaster management reviews and commissions of inquiry. For example, as early as 2002 the Council of Australian Governments recommended a substantial increase in funding for disaster mitigation¹⁶, as did the Productivity Commission in 2014¹⁷. This remains to be addressed.

The previous major national funding mechanism for disaster mitigation was the National Partnership Agreement on Natural Disaster Resilience which provided total annual matched funding to the States and Territories of approximately \$26 million per year. In addition, approximately \$4 million was provided annually to the jurisdictions for projects of national significance. This agreement was replaced by the National Partnership Agreement (NPA) on Disaster Risk Reduction in March 2020. This mechanism is designed to support the implementation of disaster risk reduction measures under the National Risk Reduction Framework, which aligns with the international Sendai Framework for Disaster Risk Reduction 2015-2030. The NPA Disaster Risk Reduction improves on its predecessor because of its direct line of sight to Australia's implementation of the Sendai goals; alignment with State and Territory risk assessments; provision of incentive for States and Territories to obtain value for money on mitigation spending; and perhaps, most importantly because it requires review and evaluation of overall and specific project outcomes. However, the quantum of federal funding to 2024 has not increased. Considering the recent catastrophic bushfire season and the likelihood of the continuation of a trend toward an increasing incidence of extreme weather due to climate change, these funding levels urgently need to be increased.

¹⁶ Commonwealth of Australia, 2004. Natural Disasters in Australia: Reforming mitigation, relief and recovery arrangements, A report to the Council of Australian Governments by a high level officials' group, August 2002.

¹⁷ Productivity Commission, 2014. Natural Disaster Funding Arrangements, Inquiry Report no. 74, Canberra.

A national strategy for climate change and health

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Key messages:

- ***A national framework for the health issues arising from climate change is needed***

Climate change poses the most significant threat to the long-term health and wellbeing of Australians. This tragic summer of 2019 / 2020 delivered an education in the relationship between climate change and health, with extraordinary heat and the devastating bushfire leading to a bushfire smoke crisis the likes of which have never been experienced internationally. We know that in addition to the lives lost directly from bushfires, many hundreds of Australians lost their lives due to bushfire smoke exposure. Many more will have died as a consequence of higher temperatures, trauma and social upheaval.

There is much to learn from this summer to protect, preserve and improve the health of Australians. Better preparation for such a summer with planning for heat, fire risk reduction and for potential air pollution would have reduced morbidity and mortality. Better coordination between State and Federal government with emergency response information such as fire apps and air pollution information tools would have been helpful. The need for this cooperation could have been predicted much earlier. Finally, the health benefits of environmental protection, including action on climate change, cannot be understated.

There has been much work done in Australia on climate change and health, and yet there is no national strategy or framework. Within the Department of Health, the responsibility for the health issues that arise from climate change falls as one of several responsibilities of the Australian Health Protection Principal Committee (AHPPC). The national framework provided is around environmental impacts and individual events, rather than the comprehensive national framework of the kind suggested by the Climate and Health Alliance¹⁸. A national framework would recognise the interdependent issues and risks that are posed by climate change and facilitate appropriate discussion across different levels of government. A national climate change framework could change the bushfire response from a reactive, emergency model, to one of proactive, preventative intervention improving outcomes for both people and the environment.

¹⁸ CAHA Framework for the National Strategy on Climate Health and Well-being for Australia
https://d3n8a8pro7vhnmx.cloudfront.net/caha/pages/40/attachments/original/1498008324/CAHA_Framework_for_a_National_Strategy_on_Climate_Health_and_Well-being_v05_SCREEN_%28Full_Report%29.pdf?1498008324

Scientific Advice to government: the case for multiple sources of expertise

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Key messages:

- *Scientific advice on the link between the bushfires and climate change was interpreted in political rhetoric as a narrow choice between acting on climate change or supporting regions relying on the coal industry.*
- *The bushfires and COVID-19 underline the urgent need for fostering multi-disciplinary, multi-sectoral networks across science and policy with the capacity to anticipate crises.*
- *Such networks would cultivate skills in collective public reasoning and communication where members learn to jointly work through different dimensions of complex policy challenges. CPAS is drawing on international models to explore the building of one such network with members of the Australian Public Service and would welcome collaboration.*¹⁹

Role of Science in the Bushfires

The political response to the bushfires was constrained by an oversimplified understanding of the role of science in public policy. Scientific evidence on both climate change and the link to the frequency and intensity of bushfires was interpreted in a narrow way without regard for the necessary complexity of science and the indispensable role of judgment.

Those who rejected the need to act on climate change regularly cited a 'lack of evidence' or circulated alternative hypotheses to those underlined not just by the climate science community but also other experts with knowledge of what was happening on the ground (for example, fire chiefs countered the claim that arson played a major role)²⁰. Science (or the supposed inadequacy of evidence) became the focus of politicised attack.

This politicisation of science has been widely observed in the study of numerous conflicts where political opponents attack or proffer the evidence rather than deal with the underlying political issues at stake.²¹

The bushfires (and other crises including COVID-19) are too serious for this pattern of political engagement with scientific advice to continue. There is an urgent need for supporting ways in which we can better negotiate competing demands in the public interest²²

¹⁹ For example: The [Centre for Evidence and Policy](#) at the University of Cambridge, UK which brings together academics and government, and the [International Network for Government Science Advice](#) (INGSA) which is devoted to building better ways of using science to inform policy in countries across the world.

²⁰ <https://www.abc.net.au/news/2020-01-11/australias-fires-reveal-arson-not-a-major-cause/11855022>

²¹ Weingart, P., 1999. Scientific expertise and political accountability: paradoxes of science in politics. *Science and public policy*, 26(3), pp.151-161

²² Pearce, W., Mahony, M. and Raman, S., 2018. [Science advice for global challenges](#): Learning from trade-offs in the IPCC. *Environmental Science & Policy*, 80, pp.125-131.

Transdisciplinary Resources for Improving the Use of Science in Policymaking

There is now a significant and well-established tradition in transdisciplinary research that integrates multiple disciplines to address complex challenges that cut across many sectors. Bushfires and climate change exemplify these challenges. There is already work in Australia that represents integrative expertise on this subject.²³

From a transdisciplinary perspective, Government and federal Parliament should make use of expertise in social sciences and humanities as well as different domains of scientific research. Social scientists have done extensive work on the very social and cultural challenges that constrain action on climate change in Australia, for example, in the context of farming and coal mining communities.²⁴ They have also explored possible ways and opportunities for addressing these challenges. This work represents a rich resource for advice on pathways to sustainable and 'just' transitions.

Key Recommendation

Government and the federal Parliament should explore options for fostering the creation of building transdisciplinary networks for scientific advice.

There is a wealth of lessons to be learned from international developments in this domain²⁵. Australia also has the opportunity to lead the world in building more effective ways of using science to inform decision-making on bushfire management and climate change action at different levels of government.

²³ Head, L., Adams, M., McGregor, H.V. and Toole, S., 2014. [Climate change and Australia](#). *Wiley Interdisciplinary Reviews: Climate Change*, 5(2), pp.175-197.

²⁴ Hayman, P., Rickards, L., Eckard, R. and Lemerle, D., 2012. Climate change through the farming systems lens: challenges and opportunities for farming in Australia. *Crop and Pasture Science*, 63(3), pp.203-214.

²⁵ Doubleday, R. and Wilsdon, J., 2012. Beyond the great and good. *Nature*, 485(7398), pp.301-302.