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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?

If you are lodging your submission on behalf of a group or organisation, what is the name of the group or organisation? Australasian Fire and Emergency Service Authorities Council Ltd

Your Submission

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

I am attaching a submission on behalf of AFAC.

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

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

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

Supporting material provided:

AFAC Submission - Royal Commission into Natural Disaster Arrangements_1.0.pdf



Royal Commission into National Natural Disaster Arrangements

Submission by:

Australasian Fire and Emergency Service Authorities Council (AFAC)

who are:

The National Council for Fire and Emergency Services

The Australasian Fire and Emergency Service Authorities Council (AFAC) welcomes the opportunity to make a submission to the Royal Commission into National Natural Disaster Arrangements. The submission is based on consultation among AFAC membership as well as our broader understanding of the context of the Royal Commission.

We ask the Royal Commission to note that the submission should not be taken as the position of any single AFAC member. Also, some of our members will have contributed to the Royal Commission through jurisdictional submissions, and nothing in this advice should be taken as implying that our members do not fully support their jurisdictional submissions where made.

As part of this submission, various documents produced by AFAC have been cited. These documents form the foundation of information used for this submission and are referenced in the text with hyperlinks where possible. AFAC takes a leading stance in the publication of industry doctrine which has been drawn on where relevant. This doctrine ranges from high-level, principles-based capstone material, through to technical guidance. Individual agencies make practical and realistic operational decisions on how they interpret and implement this doctrine.

Section 1 begins with an overview of AFAC and its role in relation to Australasian Fire and Emergency Services. **Section 2** is a response to each of the terms of reference of the Royal Commission, which will describe relevant AFAC initiatives that illustrate how AFAC is addressing the issues identified. **Section 3** addresses other matters of importance AFAC seeks to raise with the Commission.

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SUMMARY

The Australasian Fire and Emergency Service Authorities Council (AFAC) welcomes the opportunity to make a submission to the Royal Commission into National Natural Disaster Arrangements. The submission is based on consultation among AFAC membership¹ as well as our broader understanding of the context of the Royal Commission.

Australian and New Zealand fire and emergency service agencies are members of AFAC and core contributors to the national collaboration AFAC fosters. There are four key AFAC initiatives that support AFAC member agencies, and contribute to the safety of the Australasian community that AFAC highlights to the Commission:

- AFAC National Resource Sharing Centre (NRSC): delivering coordination of interstate and international resource deployments
- AFAC National Aerial Firefighting Centre (NAFC): delivering national arrangements for the provision of aerial firefighting resources for combating bushfires
- AFAC Centre of Excellence for Prescribed Burning: delivering further development of innovative, evidence-based principles, policies, programs and practices for prescribed burning; and
- Australian Institute for Disaster Resilience (AIDR): working with government, communities, NGOs, not-for-profits, research organisations, education partners and the private sector to support a disaster resilient Australia.

These AFAC business units and initiatives are industry driven with a strong degree of ownership by fire and emergency agencies. Membership of AFAC acts as a force multiplier for fire and emergency service agencies, giving them access to and influence over the creation of national doctrine, gaining insight and learning of best practice across AFAC agencies and allowing them to draw on resources from across Australia, New Zealand and beyond to support emergency management.

AFAC has 34 national collaboration groups to support members. National collaboration is a cost-effective and structured way to share learnings and experience, and collectively contribute to the development of national positions, procedures and guidelines to support integrated emergency management. AFAC, with its collaboration groups, partnerships and initiatives such as the AFAC NRSC, AFAC NAFC, AFAC Centre of Excellence for Prescribed Burning and AIDR, are important national capabilities within Australia supporting fire and emergency services.

Our submissions to the Royal Commission can be summarised as follows:

- AFAC was created by the fire and emergency service industry and has existed for over 25 years as a national and trans-Tasman facilitator of common standards, doctrine and resource sharing. AFAC fills the national coordination requirement that is left by current constitutional arrangements that make fire and emergency management a jurisdictional responsibility, with the additional advantage that New Zealand is an integral member.

¹ refer Appendix 1: AFAC member organisations

- AFAC leads a number of significant initiatives that make Australians safer in the face of natural disasters. These include risk mitigation in the natural and built environment; warnings; predictive services; national training and professionalisation; common doctrine, national aerial firefighting procurement and strategy, and national resource sharing.
- AFAC does these things effectively, efficiently, and as close to the end user as possible given that the end users are AFAC's owners and members. AFAC is the outcome of the industry within Australasia having come together and implemented its own solutions to identified gaps in national coordination in a bottom-up fashion. It was apparent from some commentary over the past summer that AFAC's role and work is not always understood and AFAC has not sought to grandstand on the national stage. We do not, however, consider that there were any significant gaps in the national coordination of the firefighting effort in 2019-20 and none have been identified to us. We cannot identify any structure for national resource sharing that would be more effective than the sector coming together collaboratively as it does now, and we advocate for the current arrangements to be funded to continue into the future.
- AFAC's role in national aerial firefighting procurement and coordination is key. Aerial firefighting has come to be understood as a critical tool in the nation's firefighting toolbox, but it is a technically demanding and expensive one. AFAC's NAFC has been successfully delivering in this field since the early 2000's and represents a tried and tested way of the states and Commonwealth collaborating together to achieve innovative outcomes for the Australian public. These arrangements should be viewed as an embedded part of national disaster management capability and should continue to be funded adequately to keep pace with innovation and public expectations of aerial firefighting. The Commonwealth needs to commit to ongoing sustained funding of NAFC, to ensure contractual benefits can be achieved. Short term announcements at the height of the fire season are not effective in sustaining a national aerial firefighting capability.
- AFAC plays a central role in bringing fire and emergency service agencies together to consider and implement climate change adaptation and mitigation strategies. AFAC supports action to address climate and disaster risk and acknowledge that further actions must be taken to mitigate the impacts of natural disasters. This includes improved understanding of the far-reaching implications of climate change for emergency services, including but not limited to increasing resources for response, and strengthening the planning and policy frameworks for how and where we live and work.
- The declaration of a national emergency could be a useful tool to raise public consciousness and could be linked to the release of additional central funds to support emergency management activities. The legal powers however, to direct emergency management within jurisdictions are best left where they reside now. Revision of the regulations governing Defence Assistance to the Civil Community could allow for more timely and effective deployment of ADF resources. The ADF's role should in our view remain a supporting one and the ADF should not be tasked, and is not in our view trained and equipped, to actively manage incidents. If additional funding is available for boosting hazard response resources

on a national level, this should be applied to a national resilience pool of equipment made available on a needs basis to state-based emergency managers.

- While Phoenix Rapidfire has proven effective in assisting in the simulation and prediction of fire spread, it would be greatly enhanced if it were merged with CSIRO's SPARK capability. There is a gap between current capability (Phoenix Rapidfire) and the simulation capability the fire agencies need, and SPARK most effectively meets this requirement. The Cost Benefit Analysis is complete and demonstrates significant value in further investment and this should come from a co-funded Commonwealth and state/territory project. The result would be a product that serves fire and land management agencies as the next generation of fire simulation in Australia and provides the best opportunity to protect Australian communities.

While there is no specific research to draw on at this stage, it would be reasonable to conclude that the relatively few (albeit highly regrettable) deaths this summer; the timely and effective advice and warnings; the sustained and coordinated operational response on the ground and in the air for over six months was, at least in part, due to initiatives nationally developed through the auspices of AFAC leading to improved efficiency and operational effectiveness.

AFAC remains ready to assist the Royal Commission and to answer any questions or expand on any concepts and recommendations made herein.

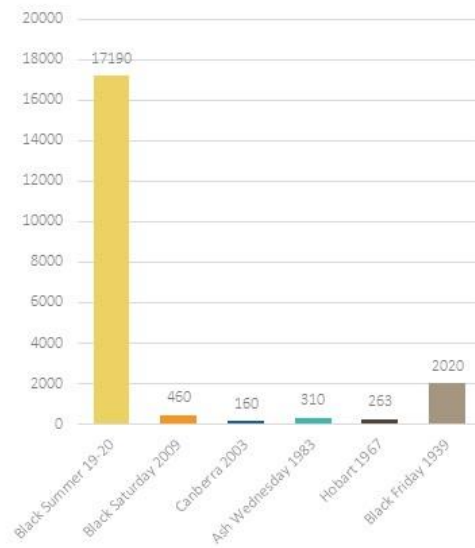
AFAC member agencies have contributed to data collection to form the overview of key indicators from significant fire events from 1939 to the 2019-20 season (see following figure). This data highlights the tragic number of lives lost, while at the same time illustrating how this number could have been even worse when compared to the area burnt and location of the fires during this season.

Historical comparison of fire impacts*

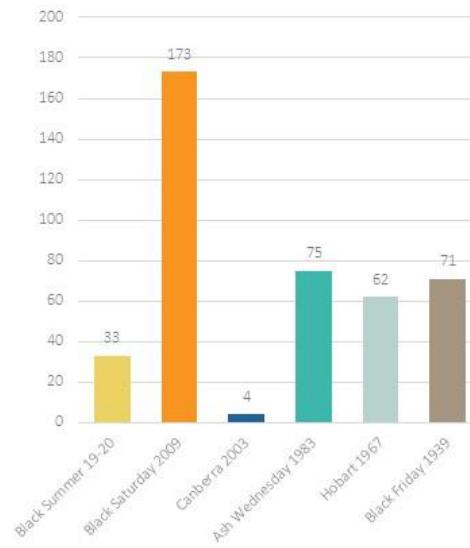


1939 – 2020

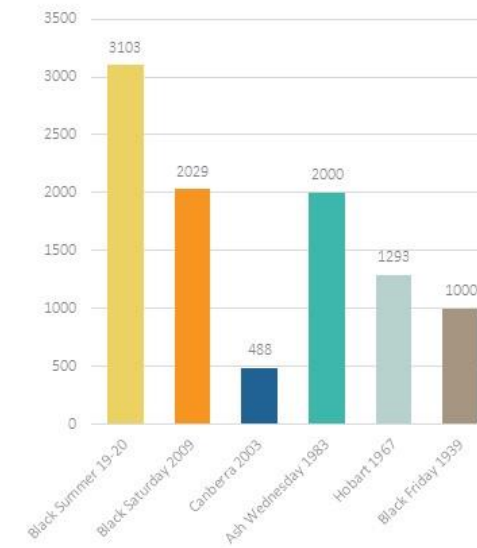
Size (thousand ha.)



Lives lost



Homes lost



*2019-2020 data is drawn from ACT, New South Wales, Victoria, Queensland, Western Australia and South Australia

Figure 1: Overview of significant historical fire events 1939-2020

1 OVERVIEW OF AFAC AND ITS ROLE

AFAC is the Australian and New Zealand National Council for Fire, Land Management and Emergency Service authorities. AFAC represents 31 members and 21 affiliate members, totalling a combined workforce across all AFAC agencies of 288,000, encompassing permanent, part-time and volunteer firefighters and emergency workers. The list of AFAC member organisations is provided in **Appendix 1**. Land management, fire and emergency management agencies across Australia and New Zealand are proactively involved in AFAC. AFAC engages with members through a collaboration framework as well as event facilitation, professional development and by influencing regulations and standards. It exists to support the fire and emergency service industry, making communities safer and more resilient. AFAC has no direct role in the delivery of services to the community. AFAC plays no role in representing its members in industrial matters.

AFAC facilitates national and trans-Tasman collaboration through the [AFAC Collaboration Framework²](#), which encompasses 34 groups, technical groups and networks. AFAC members regularly come together to share knowledge, utilise research and create solutions that shape practice and guide the industry's development. In this way, the AFAC Collaboration Framework adds value to and is highly regarded by the fire and emergency services industry and ultimately enhances community safety.

These groups, technical groups and networks, organised across the five Strategic Priorities (refer **Section 1.1**) identified by the sector and endorsed by all governments, offers agencies the opportunity to collaborate, share ideas and initiatives and learn from agencies across Australia and New Zealand. These groups provide a core knowledge capability within AFAC, engaging over 800 senior agency personnel from AFAC's 31 members and leads to the development of national doctrine that is critical to the consistent utilisation and application of research and knowledge.

AFAC has developed a suite of doctrine publications which articulates good practice based on the knowledge and experience of our members and informed by research where it is available. It is evidence-based, constantly reviewed and endorsed as the official view by the AFAC National Council and sector leaders.

1.1 AFAC Strategic Directions

The work of AFAC is influenced by the [Strategic Directions for fire and emergency services in Australia and New Zealand 2017–2021³](#). The Strategic Directions provide clarity on intent and identifies actions at a national level for fire and emergency services in Australia and New Zealand. AFAC recognises that a collaborative approach is critical to achieving the Strategic Directions which gives fire and emergency services a national voice and broader impact, while enhancing collective capabilities (AFAC 2017a).

The five Strategic Directions are:

1. Supporting resilient communities through risk reduction;
2. Providing trusted response and facilitating the transition to relief and recovery;

² www.afac.com.au/teams/all

³ www.afac.com.au/auxiliary/publications/strategy

3. The source of credible and timely information;
4. Effective governance and resource management; and
5. Informed by knowledge and research.

1.2 AFAC is a not-for-profit company

AFAC is a not-for-profit company, owned by the fire and emergency agencies that are its members. This has proved to be a highly efficient and collaborative structure, which has been in place for over 25 years. It has been a notable feature of emergency management in Australia since Federation that the Commonwealth government has no constitutional role in managing emergencies affecting individual states and territories, and the existence of AFAC arises from a recognition that national collaboration is indispensable in providing consistent and quality services at a state level. AFAC is also fortunate to have New Zealand as part of the AFAC family, and collaboration between Australian and New Zealand agencies takes place seamlessly, with New Zealand very rarely being treated as a 'foreign' jurisdiction for AFAC's purposes. This is an important issue that will be addressed later in the submission.

AFAC manages three companies and four business units, (effectively national capabilities) which are represented below:

- National Resource Sharing Centre
- Australian Institute for Disaster Resilience
- National Aerial Firefighting Centre
- Emergency Management Professionalisation Scheme



1.3 AFAC manages the National Resource Sharing Centre

AFAC established the [National Resource Sharing Centre](#)⁴ (NRSC) tasked with the administration and coordination of interstate, and some international, fire and emergency service resource deployments. The AFAC NRSC coordinates and facilitates interstate deployments through its established partnerships and national arrangements, authorised by the Commissioners and Chief Officers Strategic Committee (CCOSC). AFAC NRSC effectively operationalises the decisions of CCOSC and is an enabler of national capability for fire and emergency services. AFAC is also the conduit for international resources from New Zealand, Canada and the United States of America. Arrangements with New Zealand proceed very much as domestic deployments do, as Fire and Emergency New Zealand is a member of CCOSC: the Australian government has designated AFAC NRSC as the Coordinating Authority for wildland fire management resource deployments with the United States and Canada, under formal arrangements between our respective countries.

The AFAC NRSC also developed the current version of and maintains the Australasian Arrangement for Interstate Assistance (AIA); pursues collaboration opportunities with international jurisdictions including developing appropriate deployment arrangements where practical; maintains the National Statement of Capability for Fire and Emergency Services and provides support, if requested, to jurisdictions involved in deployments. Its value has been clearly demonstrated in supporting the management of large-scale incidents, facilitating interstate and international deployments and AFAC is clearly the primary coordinator for international firefighting resources.

1.4 AFAC is the managing partner of the Australian Institute for Disaster Resilience

The [Australian Institute for Disaster Resilience](#)⁵ (AIDR) develops, maintains and shares knowledge and learning to support a disaster resilient Australia. Building on extensive knowledge and experience in Australia and internationally, AIDR works with government, communities, NGOs, not-for-profits, research organisations, education partners and the private sector to enhance disaster resilience through innovative thinking, professional development and knowledge sharing.

AIDR is a consortium managed by AFAC as a business unit and supported by its partners: the Australian Government Department of Home Affairs (which funds AIDR), the Australian Red Cross and the Bushfire and Natural Hazards Cooperative Research Centre.

1.5 AFAC manages the National Aerial Firefighting Centre

The [National Aerial Firefighting Centre \(NAFC\)](#)⁶ is a business unit of AFAC. Formed in 2003 by AFAC with the agreement the Australian states and territories, with the support of the Australian Government, to provide a cooperative national arrangement for the provision of aerial firefighting resources for combating bushfires. Originally a separate company for funding purposes, since 2018, NAFC has operated as a business unit of AFAC, the National Council for Fire and Emergency Services.

NAFC's purpose is to deliver improved aerial support to states and territories through national collaboration and cooperation; delivering excellence and a safe, effective and efficient aerial capability; supporting and enhancing fire and emergency management in Australia.

⁴ <https://www.afac.com.au/initiative/nrsc>

⁵ <https://www.aidr.org.au/>

⁶ <http://www.nafc.org.au/>

NAFC coordinates the leasing of a national fleet of specialised firefighting aircraft on behalf of state and territory emergency services and facilitates the sharing of these aircraft between states and territories during the fire season, by maintaining a resource sharing agreement. The collaborative arrangements for the national aerial firefighting fleet have been instrumental in protecting communities and saving lives and property over past bushfire seasons.

'Standing charges', the costs of securing major aircraft such as Large Air Tankers and Type 1 Helicopters are shared between the states, territories and federal government to a fixed limit. Operating charges are paid by the states and territories.

Key areas of work which enable NAFC to deliver improved aerial support include:

- Collaborative procurement of specialised aerial services: NAFC coordinates the leasing of highly specialised firefighting aircraft on behalf of state and territory fire agencies. These aircraft supplement aircraft that are engaged directly by, or owned by, individual states and territories. The leasing arrangements allow the aircraft to be easily shared between states and territories and moved around the country to address prevailing bushfire risk.
- Sharing of aircraft resources: It would not be practical, sensible or cost-effective for each individual state and territory to maintain the necessary specialised resources required to deal with all situations. One of the main benefits of the national arrangements is the ability of states and territories to access increased capacity, or surge capacity, for aerial fire suppression at times of peak bushfire activity. A single Resource Management Agreement (RMA) is maintained between NAFC and the states and territories to share aerial resources.
- Support systems: NAFC also provides collaborative national support systems for aircraft operations to support fire and emergency management. All contracted aircraft are tracked in real time through a national satellite-based system. NAFC has developed a national shared information system, known as ARENA, which assists states and territories with effective management and administration of aviation resources.
- Standards: NAFC also has a key role in ensuring standardisation of operating practices for use of aircraft in fire management across Australia. Appropriate standardisation contributes to achieving best-practice and underpins effective sharing of aircraft and support resources.

Under a funding agreement with the Commonwealth, the Australian Government currently contributes through NAFC in the order of \$15 million annually (exclusive of GST) towards the fixed costs of making the contracted fleet available. For 2018-19 and 2019-20, the Australian Government made additional contributions of \$11 million, in each year, to support the provision of additional capability. For 2019-20, the Australian Government made a further additional contribution of \$20 million specifically to provide four additional large airtankers across the country for the bushfire season. One of these additional airtankers was based in NSW, and one in the ACT.

State and territory agencies utilising the contacted aircraft for bushfire suppression or other emergency response meet all operating costs.

In 2018 NAFC submitted a business case to the Australian Government to redress the loss in value of the federal funding that had occurred through inflation and exchange rates and to further increase ongoing federal funding support for aerial firefighting. Although not yet confirmed in writing, the Prime Minister has indicated that the NAFC business case has been considered and that an ongoing increase in federal funding can be expected in the 2020 federal budget.

1.6 AFAC has created an Emergency Management Professionalisation Scheme

The [Emergency Management Professionalisation Scheme \(EMPS\)](#)⁷ exists to advance the cause of professionalisation in the practice of emergency management in Australia and New Zealand. 'Professional' and 'Professionalisation' refer to the technical and ethical standards of practice that we set for ourselves. Progression through EMPS is open to everyone regardless of whether they are paid or volunteer, and regardless of the particular emergency management function they undertake. There are currently 24 EMPS Certified Practitioner and EMPS Registered Practitioner roles open for application (refer **Appendix 2**). They range from Incident Management Team functions to specialist operational roles.

1.7 AFAC Initiatives

In addition to the business units listed above, AFAC has created several other initiatives.

AIIMS

- AFAC is the custodian of the [Australasian Inter-service Incident Management System \(AIIMS\)](#)⁸ (AFAC, 2017b). AIIMS is an integral part of emergency management doctrine for the fire and emergency services industry in Australia and effectively is a 'glue' that binds fire and emergency service operating systems. The system enables Australian agencies to come together to manage and resolve incidents through an integrated and effective system of response.
- Australian Emergency Services agencies use AIIMS to provide a consistent incident management approach. Through the application of AIIMS in training, exercising and incident response, people from fire and emergency services, government, not-for-profit agencies and industry have been able to build trust and confidence in each other's ability to work together and effectively manage the most challenging of incidents.
- *AIIMS 2017* is the latest edition endorsed by AFAC National Council, published in June 2017. It replaced *AIIMS-4* as the Incident Control System used by all fire, emergency service and land management agencies within Australia. AIIMS has been examined by numerous reviews and previous Royal Commissions. As recently as 2014, the Hazelwood Mine Fire Inquiry made the following recommendation endorsing AIIMS:

'Recommendation 2: The State establish, for any future incident, integrated incident management teams with GDF Suez and other Victorian essential industry providers, to: require that emergency services personnel work with GDF Suez and other appropriate essential industry providers; and implement the Australasian Inter-service Incident Management System.' (Teague et al., 2014)

⁷ <https://www.emps.org.au/>

⁸ <https://www.afac.com.au/initiative/aiims>

Centre of Excellence for Prescribed Burning

- AFAC has established a [Centre of Excellence for Prescribed Burning](https://knowledge.aidr.org.au/collections/centre-of-excellence-for-prescribed-burning/)⁹ (Centre of Excellence) as a business unit of AIDR to lead and support further development of innovative, evidence-based principles, policies, programs and practices for prescribed burning. AFAC has placed the Centre of Excellence within AIDR as prescribed burning is a significant disaster risk reduction strategy in bushfire prone areas. Agencies have recognised that a coordinated approach across jurisdictions through the Centre of Excellence will best support the delivery of prescribed burning outcomes.
- National collaboration is a cost-effective way to collectively contribute to the development of national policies, procedures and guidelines to support integrated landscape management. The potential for national-level standardisation, coordination, optimisation and resource sharing for prescribed burning is considerable. The national capability to conduct prescribed burning is critical to all land management, regardless of tenure, public or private. The principles and tools developed by the Centre of Excellence provide the basis to support this.

⁹<https://knowledge.aidr.org.au/collections/centre-of-excellence-for-prescribed-burning/>

2 RESPONSE TO THE TERMS OF REFERENCE OF THE ROYAL COMMISSION

2.1 The responsibilities of, and coordination between, the Commonwealth and State, Territory and local Governments relating to preparedness for, response to, resilience to, and recovery from, natural disasters, and what should be done to improve these arrangements, including with respect to resource sharing

We think that it is unlikely that we need to go into technical detail on how constitutional responsibility for these matters is currently assigned, and other respondents to the Royal Commission will no doubt set this out in greater detail. From AFAC's perspective, what is notable is that the distributed responsibility for emergency management is what caused AFAC to exist in the first place: in other words, AFAC's mission is dictated in part by the fact that there is no arm of government currently tasked with ensuring national collaboration and coordination of emergency management.

It is a key point for the Royal Commission to understand that the Australasian fire and emergency services sector, through its National Council AFAC, has worked for many years to collaborate on and coordinate activities at all points of the Prevention, Preparedness, Response and Recovery (PPRR) spectrum of emergency management, in the absence of formal constitutional arrangements mandating the same. Put another way, the sector identified this issue for itself and has come up with its own tailored and fit-for-purpose solution in the form of AFAC. We find that this is not always well-understood or appreciated by observers from outside the sector.

Another important advantage of the AFAC model is that New Zealand is an integral part of the 'National Council' and indeed the AFAC President was CEO of New Zealand Fire and Emergency Services in recent years. With New Zealand an accepted AFAC member, this facilitates knowledge and resources being shared between Australia and New Zealand without invoking the formality of government to government agreements. As an AFAC member, New Zealand resources deploy to Australia under the auspices of the AFAC AIA, discussed earlier.

National planning such as COMDISPLAN and the constitutional arrangements that allow the Commonwealth to become involved where a state or territory is overwhelmed are important to the national picture, but in practice seem to operate more as reserve powers, and tend to be used more to facilitate matters such as Defence Assistance to the Civil Community (DACC) requests rather than bringing the Commonwealth directly into the operational space.

In terms of preparedness and resilience, there are several initiatives that we would point towards and foremost among them would be the Australian Institute for Disaster Resilience (refer **Section 1.4**). This is a good example of the Commonwealth engaging with and using existing AFAC collaborative structures to support national preparedness and we think provides a model for how other initiatives could be delivered in the future.

Bushfires and Community Safety position

AFAC's national (and trans-Tasman) collaboration model allows consistent, best-practice doctrine to be developed and shared between emergency management agencies across Australia. AFAC led the development of a Bushfire and Community Safety Position in 2001. The position was revised in 2005 after the learnings of the Canberra bushfires and again in 2010 and 2012 after the Black Saturday fires and subsequent Royal Commission. The current version of the [Position](#)¹⁰ was reviewed in 2018 and approved by AFAC Council in April 2019 (AFAC, 2019).

The focus of the Position is on supporting individuals and communities to build resilience and develop capacity to manage the threat and occurrence of bushfire to best protect lives and property. Its scope includes preparation and planning phases, as well as response to bushfire, including in the immediate aftermath and during the transition to recovery.

AFAC has formulated a set of principles to support member agencies in the development of best practice as they work with communities to enhance public safety during bushfires. These principles are evidence-based, reflecting current research and agency experience regarding bushfire and human behaviour and the response of individuals to perceived risk when threatened by bushfire.

The principles are as follows:

1. Human life should be valued above all else.
2. There should be a collaborative approach to the management of bushfire risk, with early community engagement, and with all partners working together to take action to protect communities and save people's lives.
3. Community awareness and education programs and resources should recognise that prepared and knowledgeable communities are more resilient to the impact of bushfire.
4. Emergency management leaders should have the capacity and capability to provide quality leadership and expert guidance to the community during a bushfire.

Codes and Standards for Development in Bushfire-Prone Areas

AFAC members support a national approach to development control in bushfire-prone areas. This includes strategic land use planning to avoid placing vulnerable development in those high-risk locations likely to be affected by high intensity fires as well as providing practical and cost-effective bushfire mitigation measures for new buildings as well as for retrofitting for existing developments.

The fire services through AFAC have significant involvement in developing and revising national standards and codes related to building and other development in bushfire prone areas. These include the Building Codes Committee advising the Australian Building Codes Board about the **National Construction Code**, the Standards Australia Committee responsible for AS3959 (**Construction of Buildings in Bushfire-Prone Areas**), and the Standards Committee of the National Association of Steel Framed Housing Inc which produced the NASH Standard for **Steel Framed Construction in Bushfire Areas**.

¹⁰ <https://www.afac.com.au/insight/doctrine/article/current/bushfires-and-community-safety>

In 2018, AFAC registered a negative vote at Standards Australia for the latest version of AS3959 due to a perceived weakening of the Standard without sufficient research and data to justify the changes. Since then AFAC has been participating in reviewing AS3959 to incorporate new information and improve its effectiveness especially in anticipation of the new Australian Fire Danger Rating System and to allow new climate data to also be incorporated. The design fire danger index employed in AS3959 needs to be reviewed and upgraded to accommodate climate predictions.

Recently AFAC has drafted quantified performance requirements for buildings and bushfire shelters for use in the National Construction Code. These which will be subject to public consultation and should improve the basis for designing buildings. Other aspects of bushfire mitigation are also needed such as bushfire spray systems, water supplies for firefighting and access standards for both fire appliances and evacuation.

National Warnings

In October 2017, the AFAC Commissioners and Chief Officers Strategic Committee (CCOSC) identified warnings as a national priority and committed to establishing a nationally consistent three-level warning framework across multiple hazards. Following this decision, the National Public Information and Warnings Working Group identified a need to establish a sound evidence base to support the design of a national warnings system.

The Group identified the opportunity to leverage off the Australian Fire Danger Rating System program's social research to conduct a national research project relevant to warnings. This was conducted using additional funding from various jurisdictions together with SES agencies nationally, to explore community understanding of warnings relating to bushfires, cyclone, severe weather, flood and heat.

Following a desktop review of existing jurisdictional research, the research consisted of three stages:

- national benchmark survey – more than 5,400 respondents to measure community understanding of existing warnings and frameworks
- qualitative research – 48 focus groups (340 participants) held in all jurisdictions to assist with designing a warning framework
- quantification of optimised models – quantitative research to identify the system which promotes the greatest levels of comprehension was tested with more than 5,400 additional respondents.

Key findings from the first two phases of the research (quantitative and qualitative research phases), were presented to CCOSC in May 2019. The third phase of the research has now been completed and in summary, the research shows there is a compelling case for a nationally consistent three level warning framework using a nested model with associated calls to action, and consistent application of colours, iconography and warning names.

In September 2019, a steering group of jurisdictional representatives was held to design a conceptual warnings system for the applicable hazards, which was presented for CCOSC consideration in October 2019. Key elements endorsed by CCOSC were:

- **Warning level names.** Building on the existing bush fire warnings framework that has been adopted for multiple hazard types in many jurisdictions, it was acknowledged that most agencies would not support a departure from 'Emergency Warning' as the highest level of warning.

The research found that 'Watch and Act' has the highest level of unprompted recall, however, it also creates the greatest confusion because it is a mix of active and passive language. The research suggested a number of alternatives including 'Act Now' or 'Take Action', however the quantitative survey results did not provide a clear alternative to Watch and Act.

The steering group recommends maintaining 'Advice' as the lowest level. So, the three-level warning would remain as:

1. 'Advice'
2. 'Watch and Act'
3. 'Emergency Warning'

- **A nested model of warning name and action statement.** The research supports the establishment of action-oriented statements to warning products, to give the community a clear action to reduce their risk from a hazard. The steering group recommends developing a bank of action statements (e.g. 'Leave now', 'Evacuate immediately', 'Seek shelter now') that could be used in warning products.
- **Development of a consistent set of hazard icons.** The research supports adopting a consistent design to hazard icons, including:
 - triangle shaped icons with sharp corners
 - an escalating colour palette of yellow, orange and red
 - icons to show the hazard type (e.g. flame, house in flood waters, cyclone) which could also increase in size depending on the warning level
 - the addition of a 'Reduced threat' icon or level to signal that immediate action is no longer required.
- **Development of consistent warning hazard frameworks.** To underpin the system, there is a need for consistent hazard frameworks, similar to the Scaled Advice and Warnings for Bushfires developed in 2009.

For bushfire, it is expected that this work would be completed alongside the Australian Fire Danger Rating System program. For other hazards, hazard leads (including the Bureau of Meteorology) would guide the development and rollout of these decision support tools.

At the October 2019 CCOSC meeting, members provided in principle support for the proposed Australian Warning System and asked the group to continue to progress this work. AFAC commends this National Warnings approach to the Commission for consideration and endorsement. The introduction of the proposed National Warnings could be accelerated for rapid implementation and while there has been consideration of it being rolled out in conjunction with the new Australian Fire

Danger Rating System, anticipated to be finalised in 2022, AFAC is of the view that the National Warnings could be introduced sooner.

Fire Danger Ratings

The Australian Fire Danger Rating System (AFDRS) is a program of national significance to refine forecasting of fire danger and enhance fire danger communications to government, industry and members of the public, in support of greater community safety. AFAC manages the Program Management Office supporting the development of the AFDRS, which is largely being developed through the NSW Rural Fire Service (RFS).

While still useful, the current Fire Danger Ratings are largely based on science that is more than 60 years old. Subsequent research has improved our ability to more accurately predict fire behaviour and the potential threat to the community. The new AFDRS combines the latest science, experience and data – including fire behaviour models for a wider range of Australian vegetation types – to deliver more accurate information to emergency services, land managers and the community.

Extensive social research was completed across Australia to understand where the current Fire Danger Rating System did not meet the needs of the community. Based on the information from this research, options for improved public-facing designs, that support greater community comprehension and action, are being developed. The new AFDRS is anticipated to be rolled out in 2022 and because of the science, technology build and implementation requirements, cannot be readily accelerated.

Fire Predictive Services

While Phoenix Rapidfire has proven effective in assisting in the simulation and prediction of fire spread for over 10 years, it would be greatly enhanced if it were merged with CSIRO's SPARK capability. There is a gap between current capability (Phoenix Rapidfire) and the simulation capability that fire agencies need. A review of Phoenix and CSIRO's SPARK capability has found that significant work is needed to meet these requirements, but the gaps and challenges are significantly lower if SPARK is chosen to be the basis of a new national simulator capability. After detailed review and analysis, Fire Prediction Services Ltd has committed to a staged development of SPARK in partnership with CSIRO to meet the business requirements however, it requires funding.

Although there is considerable enthusiasm for the concept of a next-generation simulator capability across fire agencies, some agencies have reservations about the transition costs and short-term costs and benefits at individual agency level. Other agencies are proceeding to use and adapt SPARK in its existing form and the opportunity for a national approach will soon be lost. A relatively modest injection by the Commonwealth would assure state and territory fire agencies and SPARK could be introduced quickly to provide enhanced fire prediction.

A Cost Benefit Analysis (CBA) is complete and demonstrates significant value in further investment and this should come from a co-funded Commonwealth and state/territory project, managed through Fire Prediction Services Ltd, a not-for-profit company managed through AFAC. The result would be a product that serves fire and land management agencies as the next generation of fire simulation in Australia.

This CBA reveals significant **benefits of a new national bushfire simulator at more than ten times the estimated costs**. The Net Present Value and Benefit-Cost Ratio (BCR) values are very high under multiple scenarios of benefits and under a broad range of cost estimates. Under the most likely scenarios, benefits were between ten times and thirty times estimated costs. The work performed in undertaking this CBA reveals a compelling qualitative story and broad support for the development of preeminent national bushfire simulation capability.

The Commonwealth is currently seeking agreement from states and territories to develop a National Bushfire Intelligence Capability (NBIC). The NBIC would provide nationally consistent and authoritative information for bushfire hazard and risk information across the Prevention, Preparedness, Response and Recovery continuum including for resilience and climate adaptation decision making. NBIC would leverage data produced to date (for example from boundary mapping, Fire Danger Rating System, SPARK, wildfire simulation, smoke and air quality forecasting, and climate projections) and aims to provide an agreed framework for the coordination and use of national bushfire hazard data and risk information. The NBIC would establish an information base with an initial focus on prevention and preparedness functions before expanding to include recovery. NBIC could also expand to support higher stakes demands for response functions and near real-time situational awareness. AFAC is supportive of this initiative.

Fire and emergency service national training

Disaster management and natural hazard mitigation in a contemporary landscape is difficult and complex to plan and undertake and requires training, experience and resources. Maintaining a well-trained, resourced and equipped incident response, firefighting and prescribed burning capability is central to effective natural hazard mitigation. In addition there are a range of staff, systems, doctrine and services such as: strategic planning; operational planning; community engagement; predictive services; fire analysis; incident control and risk, safety and ecological assessments that are essential to maintain an effective landscape and natural hazard management capability.

AFAC supports this through several collaboration groups that are involved in capability and training including:

- Learning and Development Group
- Operational Equipment Technical Group
- Operational Performance Technical Group
- Volunteer Management Technical Group
- Personal Protection Equipment Technical Group.

AFAC creates and maintains the nationally endorsed [skill sets and competencies](#)¹¹ as part of the Public Safety Training Package). The competencies are supported by training material produced in coordination with its member agencies. A national library of training material is maintained by AFAC on its website, for its members. Various areas of work are included such as the Australasian Inter-Service Incident Management System (AIIMS), fire and emergency response, aerial firefighting and other technical aspects addressing various levels of skill.

¹¹ <https://www.afac.com.au/auxiliary/shop/product-category?ID=16>

During the 2019-20 bushfire season, public safety agencies, including police, fire, emergency service and defence personnel, and the Australian community they serve faced unprecedented challenges. Interoperability is essential when public safety agencies are required to respond to such disasters across the country. Interoperability, however, is dependent on comprehensive and robust education and training systems to prepare our personnel to perform effectively and together in emergencies.

Public safety agencies long ago recognised the importance of quality education and training and for over 20 years have demonstrated their commitment to building their workforce capability. development of national training packages, qualifications and competency standards. Through collaboration, sharing professional expertise and knowledge public safety agencies have improved their understanding of each other's systems of work and have come together to share their education and training expertise and resources. This work has reaped benefits as was evident in the recent emergencies.

The Public Safety Industry Reference Committee (PSIRC) is the body through which public safety agencies collaborate in the Vocational Education and Training (VET) sector and AFAC is a member. The PSIRC comprises employer and employee representatives responsible for the national training package qualifications for police, defence, fire, fire investigation, emergency services (including operations, response and leadership), disaster recovery, biosecurity, aquatic search and rescue and community safety. The PSIRC provides industry advice to the Australian Industry Skills Council (AISC) about public safety workforce capability needs.

We anticipate that the Royal Commission will become aware of the importance of ongoing public safety sector education and training. Police, fire, emergency services, and defence have a decades long history of working collaboratively on behalf of public safety stakeholders. It is in the best interest of the Australian community that the public safety sector continues this work together to build our national education and training and workforce capability.

This collaborative approach is the most effective model for building public safety sector capability and capacity. A fully prepared public safety sector is what is required to meet the needs of governments and communities in preparing, responding to and recovering from bushfire emergencies and other catastrophic events.

The 2019-20 bushfires demonstrated the need for public safety stakeholders to work together collaboratively. The improved levels of inter-organisational team work recently demonstrated could not have been achieved without the public safety education and training that exists, the sharing of resources and the adoption of public safety training standards. Many lessons continue to be learnt and the sector is keen to future proof national capability and to provide ongoing high-quality training to public safety responders.

National training packages are developed and reviewed through Skills Services Organisations. Agencies representing the public safety sector are contributing the greater part both financially and through in-kind contributions to the development of their Training Packages. These contributions are essential for the development and review of national public safety industry qualifications, skill sets and units of competency using subject matter expertise. The cost of such work is considerable and continues to grow, particularly as the complexity, breadth and depth of disasters and incidents in an environment of increasing demand.

Of particular importance to this sector is the need to have agile systems of work that can respond rapidly in line with the seasonal nature of the industry. A lesson learned in summer 2020, should be identified, a solution proposed, and a change be in place in time for preparation for the next season.

Under the current VET structural arrangements for training package development and review, funds are only provided to Skill Service Organisations. Given the complexity and diversity of the work performed, the development of the sector's Training Packages is best led and undertaken by public safety agencies. Under the current funding arrangements, public safety agencies doing this work are doing so at their own expense and find it increasingly difficult to allocate scarce resources to this activity. Funding to public safety agencies to progress this increasingly demanding and crucial work is essential.

It has been estimated that this comes to several million dollars annually. It should be noted that this is just for the development of the training packages and does not include the actual training cost incurred for delivering education and training to frontline personnel.

The public safety sector is best placed to manage the review and maintain their training packages and to include research findings, lessons learned and technological developments. AFAC advocates to the Royal Commission that public safety stakeholders, police, fire, emergency services, and defence manage their own training packages and be funded to do so.

National Aerial Firefighting Centre

The [National Aerial Firefighting Centre \(NAFC\)](#)¹² was outlined at **Section 1.5**. The governance for NAFC is provided by the NAFC Strategic Committee, a sub-committee of AFAC Board.

Use of aircraft to assist in the suppression of bushfires in Australia is an operationally efficient and cost-effective technique that provides valuable support to firefighters for protection of communities and environmental values. All governments in Australia recognise the importance of having access to a sophisticated aerial firefighting capability to respond to bushfires, protect communities and to support firefighters on the ground. NAFC's purpose is to deliver improved aerial support to states and territories through national collaboration and cooperation; delivering excellence and a safe, effective and efficient aerial capability; supporting and enhancing fire and emergency management in Australia.

Aircraft contribute to fire suppression efforts in a wide variety of roles including:

- reconnaissance and surveillance
- first attack by dropping fire suppressants
- asset protection by dropping fire suppressants or retardants
- limiting the spread by dropping fire suppressants or retardants on the flanks of the fire, and
- transportation of firefighters.

Aircraft can provide the speed and weight of attack that is so important for initial response to incipient bushfires. Direct suppression of bushfires by aircraft is rarely effective on its own. Aircraft can be successful in a fire suppression role, but usually only when used in a coordinated effort with

¹² <http://www.nafc.org.au/>

ground firefighters. Aircraft can be of limited benefit in conditions that are often experienced during bushfires such as high winds, heavy smoke and low visibility.

Not all aircraft are effective in all situations. It is important to have a mix of specialised aircraft available, and to match appropriate aircraft to required tasks.

Longer bushfire seasons

In the past, the peaks of the bushfire seasons in the northern and southern hemispheres, when demand for specialised, heavy lift aircraft is greatest, have normally been some months apart, so the issue of competing needs tended to occur at the margins, not the peak, of the fire seasons. AFAC's NAFC is aware of longer fire seasons in both the southern and northern hemispheres in recent years. Authorities also predict that the number of days of severe fire weather will increase in most parts of Australia.

NAFC and state and territory agencies continue to closely monitor and research the situation and maintains close communications with overseas counterparts.

Although some firefighting aircraft are shared with the northern hemisphere, over three-quarters of NAFC contracted aircraft remain resident in Australia year-round. Aircraft shared with the northern hemisphere do so under contractual guarantees that they will fulfil their Australian obligations. There may, however, be risks to these arrangements in the future, with increased demand for larger assets from other countries.

Experience has shown that securing additional heavy fixed-wing and rotary-wing assets from overseas at short notice is problematic and unreliable. This was reinforced during 2019-20 by late advice regarding availability of funding for acquiring large air tankers, leading to delayed and problematic delivery. NAFC will continue to work with States and Territories on appropriate resourcing strategies that do not rely on short notice acquisition of assets from overseas to meet surges in demand and requirements for aerial firefighting at non-traditional times of the year.

Management, supervision and support

Aircraft require high quality, specialised management, supervision and support to ensure they operate efficiently, effectively and safely in controlling bushfires.

The nature of the 2019-20 season, with ongoing requirements for aerial support over extended periods, stretched the availability of qualified aviation personnel in most states. All states and territories, and New Zealand, made available trained specialist personnel, through the NRSC, to support aircraft operations during 2019-20. Moving specialist personnel around Australia to support surges in aerial firefighting activity has become relatively routine in recent years and is a key feature of the collaborative arrangements, facilitated by the AFAC NRSC. In an environment where the levels of bushfire activity in individual jurisdictions can vary widely from year to year and even within a season, this makes the best overall use of specialised personnel, who rely on high levels of training and experience.

As with the aircraft assets, however, the 2019-20 season posed some challenges with sharing specialist personnel, as high bushfire risk conditions occurred concurrently across multiple jurisdictions. Accordingly, specialist aviation personnel were also sourced internationally through the NRSC. International support was crucial in ensuring continuity of supply of aerial firefighting capability.

CCOSC has previously noted some challenges in providing sufficient aviation personnel across the country and has endorsed finalising a review of the AFAC Fire Aviation Training and Assessment Framework as a key step to improving aviation management and support capability. This framework will also now be known as the Fire and Emergency Aviation Training and Assessment Framework, reflecting that agency aviation capabilities increasingly support an all-hazards environment.

Large fixed wing airtankers

In recent years a newer generation of large, fixed wing airtankers has become available. These airtankers provide increased productivity and cost effectiveness and offer improved drop system technology, overcoming previous limitations.

Over the 2014-15, 2015-16 and 2016-17 fire seasons, NAFC contracted and undertook evaluations of several newer generation Large Airtankers (LATs) including a Very Large Airtanker (VLAT), on behalf of Victoria and NSW. These evaluations demonstrated that larger airtankers provided a valuable capability that complemented the existing fixed and rotary wing firefighting aircraft fleet.

Use of the LATS over recent years has also demonstrated that this class of aircraft is ideal to rapidly provide surge capacity in areas where other resources are limited or fully engaged. LATs are able to quickly deploy and operate effectively across a broad geographic theatre, including in multiple jurisdictions in the one day. NAFC believes that there is merit in considering alternative leasing and ownership provisions of LAT, to ensure more secure availability over an extended fire season.

Aerial firefighting opportunities

Firefighters are likely to face extended, hotter fire seasons in the future, with more days of extreme fire danger. Along with changing demographics and land use patterns, this is likely to continue to increase demand for aerial firefighting resources. There is an imperative to continue to develop the current national collaborative arrangements to ensure efficient use of resources and to provide reliable access to surge capacity. There will also be a need to consider the provision of enhanced capabilities necessary to meet forecast increased demand.

AFAC's NAFC is working with states and territories to develop and adopt a national aerial firefighting strategy. The national strategy will consolidate a co-ordinated, collaborative approach to the capabilities that will be required in the future, including aircraft, people and supporting infrastructure and systems. A national fleet strategy and technology roadmap will be included in the strategy to:

- clearly delineate Australia's projected future capability requirements to the world aerial firefighting market
- address market-driven risks with current approaches, and lead to a more modern, sustainable fleet
- aim to provide some appropriate capabilities on a national basis, funded and available to all states and territories to meet surges in demand, and to provide access to capability at times of the year which may be otherwise be uneconomic for individual states
- in particular, large fixed-wing airtankers are likely to be an important component of enhanced bushfire suppression capability in Australia. A shared, national large fixed-wing airtanker capability is logical and is an attractive strategy

- provide a suite of appropriate procurement options for securing capabilities, for suitable periods during each year. Options could include, for example, full-service contracting, purchase or fractional ownership.

Aerial firefighting at night, or in the early morning/late evening, has the potential to enhance firefighting capability and to better protect communities. Fighting fires at night offers the opportunity to take advantage of more favourable conditions including lower temperatures and higher humidity, and to continue work done during the day. Night Vision Goggles and infrared technology has advanced significantly in recent years, opening the possibility of safe and effective firebombing at night.

During 2018, Emergency Management Victoria (EMV) conducted a trial of night firebombing in collaboration with the Civil Aviation Safety Authority and NAFC. The 2018 trial demonstrated that night firebombing could be a practical and effective tool. For 2019-20 NAFC has contracted two helicopters capable of firebombing at night, both based in Victoria. NAFC would be pleased to assist any jurisdiction seeking to improve their ability to fight fires at night, acknowledging that there may be significant additional cost.

The use of Remotely Piloted Aircraft ((RPA) or drones) offers many possibilities. The 2019-20 season saw drones being used extensively and increasingly in NSW, ACT and other states for a range of tasks including rapid damage assessment. At the present time, effective use of RPA in bushfire and emergency operations in Australia is constrained to some degree by regulatory considerations and by various operating limitations. Costs can also be relatively high compared to conventional aircraft. NAFC and states and territories will continue to work with the RPA industry and regulatory authorities to identify and develop suitable applications and operating procedures for RPA.

During the 2019-20 season ARENA reliably provided an effective system to administer and support the large fleet of aircraft deployed. It is noteworthy that, as a national system, ARENA made it easier for personnel to assist and coordinate with other states, whilst also facilitating interstate assistance. There is potential to further enhance ARENA, especially to support aircraft operations in the field. There is also potential to extend the functionality to support management and administration of resources other than aircraft.

Given suitable development funding, it is also possible for ARENA to incorporate risk-based decision-support tools, that draw on data already being collected in the system, to assist with resource allocation and dispatch

Recent bushfire seasons across Australia have seen increased emphasis on the use of conventional aircraft and RPA as platforms to obtain timely and accurate information. In turn this has improved the information and intelligence available to incident management teams, and to the communities affected by bushfire. This function has been further aided by recent improvements in sensor and communication technology, and the ability to rapidly process and integrate airborne data into agency systems to provide a range of valuable information products. Notable examples during 2019-20 include Firebird 208 and Firebird 100, Type 3 (light) contracted helicopters equipped with specialist infra-red sensors and sophisticated image processing and communication systems. There is potential to further enhance and streamline airborne information gathering by:

- Developing a national consolidated system for receiving and storing data, and generating and distributing, information products. The underlying technology has been successfully tested in the ACT during 2018-19 and 2019-20.
- Including cameras and sensors on a wider range of aircraft, to the point where potentially all aircraft (including RPA) flying in conjunction with bushfire operations would feed data to the consolidation system in real time, for integration with other data and distribution to users.
- Expansion of the mesh radio network that provides high bandwidth communications of data, images and video from airborne platforms into the data consolidation and product distribution system.

As noted earlier in this submission, provision of sufficient trained specialist personnel to properly manage and support aviation operations proved challenging across the country during 2019-20, and indeed had posed challenges in previous years. The current project to revise the AFAC Fire and Emergency Aviation Training and Assessment Framework will assist in guiding agencies in the provision of up-to-date specialist training, within the Nationally Recognised Training framework. It is noted, however, that, other countries who have experienced similar issues are increasingly utilising national training centres for aviation specialists.

A virtual national aviation training centre offers efficiencies in training and skills maintenance as well as ensuring contemporary best-practice across the country. It is envisaged that a national aviation training centre would make extensive use of on-line learning and simulation techniques. Accessibility and effectiveness of simulation has increased markedly in recent years.

Commissioners' and Chief Officers' Strategic Committee and AFAC National Resource Sharing Centre

Resource sharing (other than for aerial firefighting) is an area in which the Commonwealth has not hitherto made a direct financial contribution. The Commonwealth (through EMA) is nonetheless involved in the Commissioners' and Chief Officers' Strategic Committee (CCOSC), which has representatives on it of operational Chiefs and Commissioners from around Australia and New Zealand. The Commonwealth through Emergency Management Australia (EMA) supported the creation of CCOSC, within AFAC, as a representative jurisdictional group to provide agile decision-making in the event of emergency events requiring a national perspective. CCOSC takes operational decisions about how resources (other than aircraft) are shared across Australia and New Zealand. EMA co-chairs CCOSC and is involved in its deliberations.

The AFAC National Resource Sharing Centre (AFAC NRSC) is tasked by CCOSC to deliver its decisions and to work at a more detailed level to facilitate the sourcing and movement of resources. The way in which the current system works is that where the question arises of sharing ground resources within Australia and New Zealand, CCOSC will meet by emergency teleconference and make in-principle decisions about what resources can be made available to assist. The key point is that the resources that are being shared belong to the states and territories (and New Zealand). Their deployment is reliant on the authority of the relevant Commissioner or Chief Officer, or indeed the Minister in the ACT.

AFAC noted with some interest the commentary that arose at certain points of the past summer to the effect that there was no national coordination of the response. There is an important distinction to be drawn here: in one sense the response itself is not nationally coordinated because the

response is a state matter. The idea that a national body would start interfering in operational decisions being made about how to fight a fire in New South Wales or Victoria would be a surprising one to many people and would no doubt meet with some scepticism from state and territory governments and their emergency management agencies. The fact is that the expertise about how to fight fires in the fuels and terrain of jurisdictions resides within that state and territory. There is no other national or supra-national body that somehow 'knows better' or could have done a better job.

On the other hand, there was significant national coordination of the domestic and international resources being directed to fires in Queensland, New South Wales and Victoria in the 2019-20 fire season, and any suggestion to the contrary was made without knowledge of the relevant facts. The AFAC NRSC commenced work in September 2019, at first on the fires in Queensland and then as the season went on, in relation to the New South Wales and Victoria fires as well. There were a number of CCOSC emergency teleconferences at the beginning of the operational season, but once national coordination was well established and direction had been given, the AFAC NRSC managed the process and supported national coordination of resources to meet the needs of the affected states.

The statistics speak for themselves: there were over 7,000 individual firefighter deployments¹³ over the season; every state and territory in Australia, as well as New Zealand, Canada and the USA contributed to the effort, and hundreds of fire management specialists were imported from North America to assist. Although at times the capability of individual states and territories to support operations was stretched, we never exhausted the capacity of the USA and Canada to assist, and there had also been some exploratory talks to address other global sources of firefighters with the appropriate training and experience to work in the Australian bushfire context.¹⁴

The arrangements for resource sharing between Australian states and territories and New Zealand have evolved significantly over recent years. The first known example of large-scale resource sharing was in 1994 for the fires in New South Wales that year. Further significant movements of resources interstate took place in 1999 (Sydney hailstorm), 2001 (NSW fires), 2002-03 (Victorian Alpine Fires), 2006-07 (Victorian Alpine Fires) and 2009 (Black Saturday). Many of these resource movements took place on an ad hoc basis, with little in the way of underpinning documentation and based on personal relationships and at best bi-lateral understandings. There was no national picture, or a shared 'common operating picture'. The Forest Fire Management Group previously developed a resource sharing agreement but this was applicable to land management agencies only, which tended not to move large numbers of personnel.

2013 saw the drafting of the first 'Arrangement for Interstate Assistance', which set out to draw together existing guidelines and documents and codify the basis on which fire and emergency service resources would be shared across Australia and New Zealand. This document took some time to perfect, with the first widely accepted version being implemented in 2016. An updated version

¹³ An individual deployment refers to one person travelling interstate or internationally to take part in fire suppression efforts. People may have travelled for between 2 and 30 days so this figure is not a representation of the number of days worked by interstate and international deployees, which would have been in the tens of thousands.

¹⁴ We note with gratitude the many international offers of firefighting assistance we received, and indeed at times managing these offers was taking up significant resource within AFAC. The fact is that it would be dangerous to assign personnel to a bushfire without the specific training in fire behaviour and firefighting tactics that all Australian, New Zealand and North American firefighters receive.

was submitted to MCPDEM for endorsement in 2019, which was designed to obtain governmental backing for the legal indemnities and waivers that underpin resource sharing rather than these being laid at the door of individual agencies.

2013 also saw the creation of CCOSC within AFAC at the initiative of the AFAC Board. CCOSC was designed to provide a jurisdictionally based operational group of decision-makers across Australia and New Zealand who could discuss issues relating to resource sharing and allocation and make decisions and commitments accordingly. The membership of CCOSC is therefore made up of those individuals who have legal responsibility for and control of the operational workforce within their jurisdiction.

In 2016 the AFAC NRSC was established at the direction of CCOSC to implement the decisions of CCOSC and primarily:

- to develop national doctrine and 'Arrangements' for deployments of firefighters to and from Canada and the United States of America, and
- to develop and maintain the Arrangement for Interstate Assistance (AIA) as the policy and doctrine underpinning interstate (and New Zealand) fire and emergency service resource sharing arrangements.

These had grown organically and were still pitched at an agency to agency level rather than having the formal authority of the Australian government through EMA. This position was regularised, with new 'Arrangements' (not formal government to government Agreements), being finalised in 2016 and 2017. These Arrangements specifically nominated AFAC to be the Australian coordinating body¹⁵ for wildland fire management resource sharing between the USA and Australia, and Canada and Australia.

The AFAC NRSC coordinated outbound deployments to Canada in 2017, and the USA and Canada in 2018. It also coordinated resource sharing for TC Debbie in 2018, the Queensland fires of 2018, and the Tasmanian fires of early 2019. With this experience, the AFAC NRSC was well-placed to undertake national coordination of the response to the Black Summer fires of 2019-20 and was successful in moving thousands of interstate and hundreds of international firefighters in support of operations.

There are always lessons to be learned from major events of this nature, and AFAC NRSC has already commenced the process of obtaining feedback from agencies and individuals involved in the coordination efforts over summer in order to support continuous improvement. Some of the emerging issues that we have already identified include:

- It has been identified that aircraft resource sharing also needs to be maintained by the NRSC and that it should be responsible for both ground (firefighter, vehicle and key equipment) and aerial (large capability aircraft and holdings of retardant and firefighting foam) resource sharing. Integrating the operational enabling elements of NAFC into the NRSC will provide a more holistic approach and true national view of resource sharing at any one time.
- Greater standardisation of the way resources are described will streamline future coordination. For historical reasons, firefighting vehicles are described differently in different jurisdictions and there is also variation in the way that teams are organised (for

¹⁵ The Arrangements originally referred to NAFC; NAFC has since become part of AFAC

example a 'strike team' which is a generally accepted way of organising response resources across Australia, may vary depending on the vehicles used and standard operating procedures of the state of origin from 12 to 28 people). This is not in itself an issue, but points to the requirement for a nationally agreed terminology to facilitate resource ordering and ensure that expectations are matched between sending and receiving parties.

- Further standardisation of training and credentials will increase confidence in the capability of resources being deployed. There has already been a large amount of work done to provide national training standards through the Public Safety Training Package, and to standardise roles through the Australasian Inter-service Incident Management System (AIIMS) (refer **Section 1.7**). AFAC has also created the Emergency Management Professionalisation Scheme (EMPS)(refer **Section 1.6**), which brings together training and experiential requirements to provide national benchmarking of capability in key roles. While the use of the Public Safety Training Package and AIIMS are well-embedded, further progress could be made by the sector in using EMPS to ensure that people who deploy interstate and internationally have both the training and the practical experience they require to operate safely and effectively.
- With further standardisation, it would be possible to implement a standard ordering system for resources across the country. There is already a standard request letter specified by the AIA; this does, however, require a certain amount of free-text description of resources and confirmation that what is requested matches what is provided. A standard ordering system can reduce the time taken to fill orders and could also improve national situational awareness of what resources are available to be supplied on request.
- 2019-20 was the first year the NRSC became heavily involved in coordinating domestic resource sharing. In our view the need has been clearly established, and resource sharing over the summer of 2019-20 would not have been as effective or efficient without it, to the extent that we believe significantly fewer resources would actually have been able to be deployed without national coordination.
- This means in our view that the AFAC NRSC requires additional staff and dedicated office space at AFAC for the future, and modest (\$2.5 million pa) funding submissions have already been made to that effect to the Commonwealth. We consider, however, that the current model of the CCOSC meeting to make resource sharing decisions and the AFAC NRSC, as an industry-owned body, implementing those decisions is the correct one, and we think that the AFAC NRSC should continue to be owned and given direction by the agencies who ultimately control the resources being shared.
- There are three key reasons why the NRSC needs to stay and be operated by AFAC:
 - **It works.** The NRSC has been a significant success in both securing and maintaining strong arrangements with both Canada and the United States, with the movement of large numbers of firefighting personnel between Australia and North America over the last three years. Having the NRSC operated through AFAC exactly mirrors the arrangements in Canada with the Canadian Interagency Forest Fire Centre (CIFFC).
 - **Subsidiarity.** The principle of subsidiarity is highly relevant in the case of the AFAC NRSC. There is no reason to centralise this function within the Commonwealth when the states and territories are already effectively conducting resource sharing through the AFAC NRSC. It is being operated at the appropriate level, supporting state and territory governments.

- **Strong sense of industry ownership and responsibility.** The AFAC NRSC has been developed, is operated and maintained by AFAC with the support of personnel from AFAC agencies. There is a strong sense of ownership, responsibility and commitment. When resource sharing is not required, there are plans for the AFAC NRSC to facilitate strengthening of national resource sharing arrangements.

One final consideration for resource sharing is that, as has been discussed already, the ultimate decision about whether resources can be moved between Australian states and territories, New Zealand, and further afield rests with the agencies and individuals who control those resources i.e. CCOSC. In other countries, notably the UK, a 'national resilience' pool of resources has been created using central funds to develop a capability reserve which remains under national control, albeit during times of 'business as usual' the capability is housed and utilised regionally.

During the 2019-20 Black Summer fires, challenges were encountered on occasion with finding sufficient firefighting vehicles to give to deployed firefighters: while it is feasible to fly crews from WA or New Zealand to the east coast of Australia, it is more difficult to bring fire trucks in; and the number of trucks available is a limiting factor for providing surge capacity. Our sense is that there were more crews available at times than trucks.

Consideration should, in our view, be taken to creating a national reserve of bushfire firefighting vehicles. These vehicles would be allocated to jurisdictions that would house and maintain them and could use them for business as usual activities; but if a significant event were to occur those vehicles would be under national control and could be required to be released and assigned to wherever they were needed nationally. There are a range of bushfire firefighting vehicles that could usefully be acquired on this basis and they might not be the larger trucks: there are significant applications for lighter 4x4 units that are often in high demand for firefighting in rough terrain.

2.2 Australia's arrangements for improving resilience and adapting to changing climatic conditions, what actions should be taken to mitigate the impacts of natural disasters, and whether accountability for natural disaster risk management, preparedness, resilience and recovery should be enhanced, including through a nationally consistent accountability and reporting framework and national standards

Climate change planning

AFAC acknowledges the relationship between disaster risk reduction, sustainable development, and climate change (AFAC, 2018a). Mitigating the impact of climate change effectively contributes to disaster risk reduction, emergency management, and the resilience of communities into the future. AFAC has established an AFAC Climate Change Group to assist its members in addressing the challenges of climate change from a sector perspective.

The recent bushfires across the 2019-20 season have reinforced that long-term climate change in Australia is an undeniable reality. The 2019-20 bushfire season in New South Wales and southeast Queensland began much earlier than usual in winter, with far reaching impacts and losses to communities, industry and wildlife. The losses go far beyond anything that has occurred in previous

years in these areas. The risks and impacts of bushfires not only cause direct loss of life, physical injuries and mental health issues but large populations are also at risk from the increasing health impacts associated with bushfire smoke.

Scientific evidence provided to AFAC indicates that climate change is extending the length of fire seasons and increasing their intensity. This creates an earlier start to bushfire seasons and an overall more intense season, particularly in south-eastern Australia. Natural variations in climate modes continue to play a role and we should not expect every bushfire season to be worse than the last as a result of climate change.

A discussion paper produced by AFAC's Climate Change Group (AFAC, 2018b) unambiguously highlights the impacts of climate change on the extent and intensity of bushfires and includes advice to the emergency management sector of how to respond. This response is not just to the physical risks posed by climate change, but also prepare for the transitional risks and legal risks. The Group have a workplan and all member organisations have plans and policies in place responding the challenge of climate change in their sector.

Australia's arrangements for improving disaster resilience is guided by the UN *Sendai Framework for Disaster Risk Reduction 2015-2030*, in addition to a range of national frameworks and policies. The National Disaster Risk Reduction Framework (COAG, 2018) from the Department of Home Affairs was endorsed by Council of Australian Governments (COAG) on 13th March 2020 and identifies climate change as the fundamental driver for building disaster resilience in Australia. The Australian Institute of Disaster Resilience (AIDR) is a key partner of AFAC and is Australia's knowledge centre for disaster resilience.

In October 2018, AFAC Council endorsed the following principles to support efforts to address the physical, transitional, and legal risks facing AFAC member agencies related to climate change.

Principle 1: Informed and risk-based decision-making.

Responses to climate change should have regard to best available evidence in the context of uncertainty, allowing for flexibility and iterative adjustments to plan and resource for current and future climate scenarios. AFAC members where possible will support and contribute to climate change research and improve access to data and information to underpin a contemporary understanding of associated risk. Decisions should avoid negative social and ecological consequences, and not undermine the sector's ability to adapt to climate change over the long-term.

Principle 2: Sustainability

AFAC members should work toward improving energy efficiency and seeking alternative energy solutions across the supply chain, buildings, fleet, and equipment. Transition criteria should inform design, acquisition, and maintenance decisions to reduce emissions, while maintaining high reliability and continuity of services during periods of high demand. We will seek innovative opportunities for ethical and collaborative procurement, exceeding standards where possible.

Principle 3: Working in partnership

AFAC members recognise that we must be part of a whole of government and community effort to transition and adapt to climate change. Agencies should continue to collaborate with communities and across levels of government and non-government sectors on these important topics. The scope

and complexity of climate change demands a collaborative, sector-wide commitment in Australia so fire and emergency services remain effective, flexible and adaptable.

Principle 4: Knowledge sharing

Community knowledge and understanding of climate change is a cornerstone in the effectiveness of mitigation and adaptation strategies in effectively responding to climate change. AFAC members have a role in supporting communities to have access to the right information to contribute to community resilience efforts, to make decisions on how best to prepare for, respond to, and recover from climate-related disasters. Through AFAC members' leadership and participation within AFAC's Collaboration Framework and cross agency/sector forums, we will work toward a common understanding of the risks associated with climate change, acknowledging that adaptation principles recognise that risk should be managed by those best placed to manage it. Such collaborations aim to lead to better outcomes for AFAC members, our stakeholders, and the communities we support.

Principle 5: Inclusion, diversity and equity

AFAC members should consider its workforce in the short, medium and long-term in the face of climate change risk and anticipated impacts, adhering to principles of intra- and intergenerational equity. AFAC members have already committed to and established national mechanisms to actively advance gender equity across our organisations and the wider community.

Principle 6: Integrated approach and continuous improvement

Climate change affects all member organisations' decisions across strategy, policy and operational environments. Agencies should ensure efforts are aligned, transparent, and integrated through governance arrangements. Climate change should be considered in all areas of strategy and planning by embedding best available climate change projections in to strategic and operational decision-making. Climate change work items should be integrated into AFAC Group work plans.

The pathway to climate change adaptation, mitigation and resilience will require learning and reflecting to improve the effectiveness of efforts to address this challenge.

Additionally, the Overview of Prescribed Burning in Australasia (AFAC, 2015a) observes that the smoke from high intensity bushfires such as the 2009 Black Saturday Fires can release huge emissions of greenhouse gasses (GHS) to the atmosphere, including CO₂, and that if occurrences of severe bushfires can be reduced in frequency, severity and extent, a substantial reduction of GHG emissions may be achieved. The report notes that, as prescribed burning is a recognised means of mitigating the extent and severity of such bushfires. It also offers potential to reduce carbon emissions (by reducing the amount and ferocity of unplanned fire) and help mitigate predicted climate change impacts. This relationship has been scientifically demonstrated in northern Australia where over 80 programs for Carbon farming have already been successfully implemented. The efficacy of using prescribed burns to reduce overall greenhouse gas emissions in southern forests, and the extend of benefit that could be derived, is unresolved. The Risk Management Framework – Smoke Hazard and Greenhouse Gas Emissions (AFAC, 2015b) provides more detailed information in relation to measuring the impact of prescribed burns on the climate in comparison to the impact of bushfires.

In summary, AFAC supports action to address climate and disaster risk and acknowledge that further actions must be taken to mitigate the impacts of natural disasters. This includes improved understanding of the far-reaching implications of climate change for emergency services, including

but not limited to increasing resources for mitigation and response, and strengthening the planning and policy frameworks for how and where we live and work.

2.3 Whether changes are needed to Australia’s legal framework for the involvement of the Commonwealth in responding to national emergencies, including in relation to the following:

2.3.1 thresholds for, and any obstacles to, State or Territory requests for Commonwealth assistance

Two particular points consistently arise when considering jurisdictional requests for Commonwealth assistance. The first is the requirement that jurisdictions should have fully utilised their own capacity and commercial options before requesting Commonwealth assistance. Although at first blush this sounds reasonable, in fact a sensible approach to strategic resource management includes both managing fatigue of resources and keeping a ready reserve to be able to deal with other incidents as they arise or to sustain prolonged operations.

We are not saying that all requests for Commonwealth assistance should be accepted and we would expect that there would always be a discussion following a request about whether there are available commercial options or whether jurisdictions are able to sustain operations using their own resources for a while longer. But we think that there is a general expectation among the public, who after all have paid for Commonwealth owned resources through their taxes, that those resources will be made available for emergency management activities where it is reasonable and sensible to do so.

The second, related point is that particularly where requests for Australian Defence Forces (ADF) resources are concerned, the ADF has consistently taken the view that requests should not be made for particular personnel or equipment but the request should be for an ‘effect’ i.e. what does the requesting jurisdiction want to achieve. The ADF will then decide how best to deliver that effect.

Again, this may sound sensible in principle, but in practice it may ignore the fact that jurisdictions may well have the best understanding of what is required in terms of personnel or materiel. In our view, the conversation should perhaps be a little more fluid between the requester and the Commonwealth, and the Commonwealth should be open-minded to being asked for a specific asset. Equally, jurisdictions must clearly understand that ‘no is a perfectly good answer’, and if a particular asset or resource can’t be made available then that can be made clear by the Commonwealth.

Support from the ADF has been provided over several years including using RAAF Bases such as Richmond north west of Sydney, as a Large Air Tanker base. As the 2019-20 fire season developed, local Defence support from within NSW increased and the NSW RFS are best placed to provide details of that local support.

In previous years, much of the ADF support provided outside Queensland has been subject to the prospect of the ADF charging for the service. This was proposed to the Tasmanian Fire Service in 2017-18 when seeking reconnaissance services.

Seeking ADF support changed in the 2019-20 fire season, when the Prime Minister acted to remove the impediments to seeking Defence support under the existing DACC arrangements. As we note above, under the existing Regulations, state and territory governments are required to “exhaust all government, community and commercial options” before requesting ADF assistance. In our view this is a clear explanation for why the ADF support provided prior to the call out was limited.

With the removal of that impediment and the calling out of the Defence Reserve, the support of reportedly up to 6,000 ADF personnel across Australia over January and February 2020 provided invaluable support. The ADF is ideally positioned to provide logistical support. While not directly involved in the firefighting effort, the ADF have been invaluable in assisting with logistics around providing accommodation, facilities, catering, transport, engineering support, reconnaissance from the air and evacuating civilians from isolated townships.

AFAC does not support the ADF becoming involved directly in firefighting. While it is feasible that elements of the ADF could be trained and equipped, there is a significant likelihood that this would duplicate existing state and territory capabilities and, in all likelihood, would not be regularly used. If they were to be deployed ahead of local volunteers, there is a real likelihood that local volunteers would withdraw from providing their services, as the perception would be that this is now being provided by the ADF. If additional funding is available for training and equipping firefighters we suggest that this would be most efficiently directed through existing emergency management structures, and could be directed to the national resilience pool of resources we propose above.

2.3.2 whether the Commonwealth Government should have the power to declare a state of national emergency

While this would seem at first blush to be sensible, the question would be what for, and what powers would attend the declaration of a national emergency. There has been discussion in the past about the optic of declaring an emergency¹⁶ and the fact that in and of itself it can provide reassurance to the public as well as underscoring the gravity of the situation. Those can in themselves be useful outcomes. The question of whether the declaration of a national emergency should in some way give the Commonwealth additional powers over the states and territories is probably best left to constitutional experts.

AFAC does not, however, support these powers in any way being directed to ADF elements being in command of emergency management. Proposals in the media suggested that the ADF establish a ‘disaster response command’ to overcome the ‘coordination’ problems experienced this summer. AFAC is not clear what these coordination problems were and is not convinced a command within the ADF would lead to these being overcome. Resource allocations over summer were guided by the agreed priorities for resource allocation proposed by EMA and agreed by CCOSC. They have subsequently been endorsed by ANZEMC.

The ADF establishment of a ‘disaster response command’ has every likelihood of duplicating Emergency Management Australia and would wind back the clock to the Defence ‘Natural Disasters

¹⁶ See, for example, reports into the Black Saturday fires in Victoria, and the Port Hills fire and Tasman fires in New Zealand

Organisation' in place many years ago. Such a suggestion fails to recognise the deep commitment by AFAC agencies to existing coordinated resource sharing arrangements, overseen by the CCOSC and facilitated through the AFAC NRSC.

2.3.3 how any such national declaration would interact with State and Territory emergency management frameworks

As set out in our response to the previous term of reference, it is assumed that declaration of a national state of emergency would have some sort of legal effect. Given however that state and territory emergency management frameworks are designed to be self-contained, it would be a matter for careful consideration as to whether a declaration by the Commonwealth should have any practical effect in terms of state and territory frameworks and indeed what the constitutional basis for that would be.

In our view the Commonwealth would want to think very carefully before seeking to take upon itself any sort of executive powers over state and territory emergency management arrangements in an emergency. We would express considerable scepticism that the Commonwealth has access to any increased skills in emergency management beyond what is already available in the states and territories, and much as we have admiration for the logistical capabilities of the ADF we do not see that it possesses capabilities in combatting natural hazards in excess of what the civilian agencies can muster.

In short, our view is that the declaration of a national emergency could be an excellent tool to raise public consciousness, and could perhaps be linked to the release of additional central funds to support emergency management activities, but the legal powers to direct emergency management within jurisdictions are probably best left where they reside now.

2.3.4 whether, in the circumstances of such a national declaration, the Commonwealth Government should have clearer authority to take action (including, but without limitation, through the deployment of the Australian Defence Force) in the national interest

We have discussed this in the context of the terms of reference above: to be clear, while we think that easier access to ADF support in the management of emergencies would add value for Australians, the legal framework within which that is done does not require changing and the principle should remain in peacetime that the ADF provides support to the civil power, and does not take over responsibility for public safety or emergency management.

3 OTHER ISSUES

Management of future research

After 15 years of research being managed by two independent Cooperative Research Centre (CRC) boards, and with the current Bushfire and Natural Hazards CRC (BNHCRC) Board seeking greater independence and diversity from fire and emergency agencies, the AFAC Board and National Council are ready to manage and direct their own research priorities, projects and utilisation. Reflecting this priority, AFAC has created a Research Committee, which reports to the AFAC Board and advises AFAC Council on priorities, projects and utilisation.

The concern of AFAC, while applauding the Federal Government for recently indicating further research funding is likely to be directed to bushfire, is that there is the potential for future efforts to become research for research's sake and not research that is useful and applied by the end users – fire and emergency agencies. AFAC requires relevant, useful and readily applied research and to better influence the fire and emergency research agenda. If research is not collectively managed through the industry body, then AFAC has real concern that the research will not assist in leading the development of national doctrine and best practice.

The BNHCRC research program has extensively been linked to individuals in agencies, or individual agencies as end users, at the expense of the AFAC Collaboration Framework, which engages the 31 member agencies through shared knowledge, experience and is the source of national doctrine across the 34 Collaboration Groups. To pursue end user focussed research outside of these AFAC Collaboration Groups significantly reduces the benefit AFAC has provided to both the Bushfire CRC and BNHCRC and arguably, what has made these CRC's so successful – strong industry engagement through collaborative end users leading to industry led research utilisation.

The BNHCRC Conference has shared the success it has, because it is programmed as the first day of the nation's largest fire and emergency management conference 'AFAC', which has attracted over 4,000 participants in recent years.

In AFAC's view, the CSIRO are well placed to undertake future, longer-term research projects, potentially 3-5 years in duration, which were previously managed by the CRC's. While AFAC has established and continues to maintain strong links to the CSIRO, particularly around bushfire, many of these longer-term projects have a broader number of end users beyond fire and emergency services, and CSIRO are well placed to also engaged with them.

AFAC is in a strong position to oversee shorter term research projects, particularly ensuring effective research utilisation by the sector. It proposes that the Australian Institute for Disaster Resilience (AIDR), which is a business unit managed by AFAC, while also being a consortium with the Australian Red Cross (30 per cent stake) and the BNHCRC (10 per cent stake), is well placed to manage a future, more modest research capability on behalf of the sector.

Such an arrangement was presented to Emergency Management Australia in 2019 and had their support. AIDR is a highly effective knowledge broker, maintaining a 'Knowledge Hub' and generating national doctrine on emergency management and resilience through its 'National Handbook' collection. Together with AFAC, with its unmatched Collaboration Framework of 34 groups, this arrangement would ensure research is user driven, meeting the needs of the sector and is relevant, useful and readily applied.

AFAC's proposal of integrating future research capability within industry, is totally aligned to the intent of the CRC program: to use the experience, knowledge and familiarity of 15 years of CRC research, to establish an industry led and sustainable research entity. It is an industry driven solution with a strong degree of ownership by fire and emergency services. This is, however, not the view of the BNHCRC Board, which has stridently argued for a further research centred capability, not an industry driven capability. AFAC understands that decisions regarding the future research capability for the sector now rest with the Department of Industry, Innovation and Science.

APPENDIX 1: AFAC member organisations

Full Members (31)

Australian Capital Territory

ACT Emergency Services Agency
ACT Parks and Conservation Service

New South Wales

Fire and Rescue NSW
Forestry Corporation of NSW
NSW Rural Fire Service
NSW State Emergency Service
Office of Environment and Heritage – NSW National Parks and Wildlife Service

Northern Territory

Bushfires NT
Northern Territory Fire, Rescue and Emergency Services

New Zealand

Fire and Emergency New Zealand

Queensland

Queensland Fire and Emergency Services
Queensland Parks and Wildlife Service

South Australia

Department for Environment and Water (National Parks and Wildlife Service)
ForestrySA
South Australia Country Fire Service
South Australian Metropolitan Fire Service
South Australian State Emergency Service

Tasmania

Parks and Wildlife Service Tasmania
Sustainable Timber Tasmania
Tasmania Fire Service
Tasmania State Emergency Service

Victoria

Country Fire Authority, Victoria
Forest Fire Management Victoria – Department of Environment, Land, Water, and Planning
Metropolitan Fire and Emergency Services Board, Melbourne
Parks Victoria
Victoria State Emergency Service

Western Australia

Department of Biodiversity Conservation and Attractions WA, Parks and Wildlife Service
Department of Fire and Emergency Services

National

Airservices Australia

Department of Home Affairs, Emergency Management Australia

Parks Australia

Affiliate members (21)

Australasian Road Rescue Organisation

Australian Maritime Safety Authority

Australian Red Cross

Brisbane City Council

Bureau of Meteorology

Council of Australian Volunteer Fire Associations

Department of Conservation New Zealand

Department of Health and Human Services, Victoria

Emergency Management Victoria

Geoscience Australia

Hong Kong Fire Services Department

HQ Plantations Pty Ltd

Melbourne Water

Ministry of Civil Defence & Emergency Management

National SES Volunteers Association

NSW Environment Protection Authority

Office of Emergency Management NSW

Pacific Islands Fire Service Association

South Australian Fire and Emergency Services Commission

State Emergency Management Committee Secretariat WA

Surf Life Saving Australia

APPENDIX 2: EMPS credentials currently open for application



EMPS Certified Practitioner roles

- Certified Strategic Commander
- Certified Incident Controller
- Certified Fire Investigator
- Certified Public Information Officer
- Certified Operations Officer
- Certified Planning Officer
- Certified Logistics Officer
- Certified Burn Controller
- Certified Fire Behaviour Analyst

EMPS Registered Practitioners

- Registered Level 2 Incident Controller
- Registered Level 3 Incident Controller
- Registered Planning Officer
- Registered Intelligence Officer
- Registered Public Information Officer
- Registered Level 2 Operations Officer
- Registered Level 3 Operations Officer
- Registered Logistics Officer
- Registered Finance Officer
- Registered Prescribed Burn Planner
- Registered Prescribed Burn Operations Officer (Complex Burns)
- Registered Divisional Commander
- Registered Fire Investigator
- Registered Fire Behaviour Analyst
- Registered Arduous Bushfire Firefighter

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