

Productivity Commission Inquiry into Natural Disaster Funding Arrangements

Submission by the
Australasian Fire and Emergency Service Authorities Council (AFAC)

1. Introduction

The following submission has been prepared by the Australasian Fire and Emergency Service Authorities Council (AFAC) in consultation with AFAC member agencies (see Appendix 1). We ask the Commission to note that necessarily, our submission is an aggregate of points of view and should not be taken as the position of any single AFAC member. Also, some of our members will have contributed to the Inquiry directly, or through jurisdictional submissions, and nothing in this submission should be taken as implying that our members do not fully support their jurisdictional submissions where made.

AFAC works closely with the Bushfire and Natural Hazards Cooperative Research Centre and supports the views expressed in its separate submission to the Productivity Commission.

While the AFAC submission is made in the context of the Inquiry terms of reference, rather than attempting to discuss individual terms in turn, we have addressed our comments to the main issues as we see them.

2. About AFAC

The Australasian Fire and Emergency Service Authorities Council (AFAC) is the peak body for Australasian fire, land management and emergency services, creating synergy across the industry. Established in 1993 to collaborate on matters of international, national and regional importance, AFAC is supported by the staff at the *AFAC office*. AFAC currently has 33 member agencies and 14 affiliate members. The senior agency representatives of all full members make up the *AFAC Council*. AFAC Ltd is a not for profit company limited by guarantee and is governed by a *Board*, elected from the AFAC Council.

The total membership has a \$4bn annual expenditure and has a workforce of 37,000 full-time, 6,000 part time and 256,000 volunteers. AFAC member agencies provide emergency services throughout Australia and New Zealand, from the northern tip of Western Australia to the southern region of New Zealand. By AFAC agencies sharing each other's extensive capabilities, experience, knowledge and learnings, communities benefit from the economies of scale, reduction in the duplication of effort and the strengthening of industry capability. This continuously improves community safety and resilience in an effective, efficient and collaborative way.

AFAC is the trusted source of incident management doctrine, information and advice; its member agencies are actively engaged in broader emergency management, working with other practitioners

and policy makers. AFAC member agencies are leaders in preparing for and responding to emergencies, managing risk and collaborative emergency management. AFAC is an important aspect of rapid problem solving at the industry level and optimising the use of resources. The organisation fosters and promotes strong relationships between members and with partners in emergency management.

The AFAC office undertakes activities which support, enhance and improve the capability of fire and emergency services, making communities safer and more resilient. These activities include a range of collaboration activities ensuring the industry benefits from joint initiatives and learning; driving event facilitation, professional development focussed on competency development, learning culture and skills maintenance; influencing standards, research participation and utilisation and thought leadership. The AFAC office provides linkages to the Federal Government, other industries, the tertiary sector, research partners and other key stakeholders in emergency management.

Emergency Management services remain a State/Territory responsibility across Australia with the Federal Government being responsible for aspects of information, coordination and of course the provision of recovery funding once particular ceilings have been reached. Provision of emergency management services remains a key function of establishing and retaining safe, fair and just communities. For the last 15 years, emergency services have seen an increase in demand for response to out-of-scale incidents and natural disasters. This has been matched by growing community expectations on fire and emergency services and significant scrutiny and review.

AFAC supports member agencies by helping fire and emergency services to share, collaborate and innovate and create greater synergy across the industry. AFAC does this by providing forums and mechanisms for members to work together in a structured way. Communities across Australasia benefit from the resultant sharing of ideas and lessons, economies of scale, reduction in the duplication of effort and the strengthening of the emergency management capability. This is also reflected through increased sharing of resources and inter-state deployments supporting one another.

3. About AFAC Member Agencies

AFAC member agencies are a critical component of the disaster risk reduction and emergency management system of Australia. They are a major contributor to supporting resilient communities and the provision of expert advice on a range of hazard-based risks. They have been and continue to be perceived as accountable for emergency event outcomes that extend beyond that for which they have formal responsibility. They take pride in supporting communities to be more informed of the relevant risks, alert and prepared as individuals, families and communities, in partnership with others to achieve safer and more resilient communities.

AFAC member agencies operate under commonwealth, state and territory legislation which authorise them to protect life, property and the environment and mitigate and control fire and other emergencies. This is achieved through policy development, planning, preparation and mitigation measures, as well as response. AFAC members are generally not responsible for recovery operations.

In many instances AFAC member agencies have little or limited influence over many policy, settlement planning decisions, construction options, compliance requirements and individual choices. This being the case, AFAC agencies focus on preparedness and risk reduction, whilst maintaining responsibility for response to any residual risk should an emergency occur.

In the introductory text of the Handbook of Disaster Policies and Institutions, Handmer and Dovers note: “In a major event, for them [emergency managers] the stakes are high, with lives and economies at immediate risk, resources inadequate and political and media scrutiny intense, interfering and unforgiving. Information will be inadequate, modeling ambiguous and rumours rife. Emergency management is often tested in public with immediate feedback, and in front of a constituency too often dedicated to allocating blame.”¹

Volunteers comprise the most significant percentage of emergency service workers in Australia and are drawn from local communities. Broadly they support peri-urban and rural areas of Australia although State Emergency Service (SES) units also provide services in capital cities and urban centres and volunteer brigades are active in much of Melbourne and outer Adelaide. Capital cities and in many jurisdictions regional cities and larger towns are serviced by paid and/or part-time workforce. Some agencies operate under an ‘integrated’ service delivery model, a combination of volunteer, part-time and paid workforce.

AFAC members, while also responsible for a range of human caused hazards, are the natural hazard leaders for:

- Fire
- Flood
- Storm
- Cyclone
- Earthquake
- Tsunami
- Heatwave (in some cases)

Response services include:

- **Firefighting** – structure fires; bush, grass and scrub fires; combustible liquids; aviation and marine
- **Search and rescue** - road and industrial; swift water/flood; confined space; vertical/high angle; Urban Search and Rescue (domestic and international); land search
- **Flood Response** – sandbagging; barrier management; portable pumping; transport; silt flushing
- **Storm and Cyclone Response** – Temporary structure repairs; removal of hazardous trees
- **Hazmat** – Chemical; biological; radiological; nuclear; decontamination services; scientific advice; marine/waterways
- **Consequence Management** – rapid damage assessment; burned area assessment
- **Incident Management** – incident control; planning; intelligence; public information; operations; investigation; logistics; finance
- **Incident Support** – spatial information; mobile communications; fleet management; portable automatic weather stations
- **Logistics Support** – base camps; offices; plant (contracted and agency owned); medical clinic; hospital support facility; portable shelters

¹ Handmer J, Dovers S (2013) *Handbook of Disaster Policies and Institutions*, Introductory Text Page 1

- **Aviation / Aircraft** – fire bombers, crew transport, intelligence/surveillance/reconnaissance; supervision and command; transport of stores, fuel and equipment; aerial ignition; rescue and evacuation; fuel supply;
- **Aviation support** – fuel supply; portable support facilities

Mitigation, resilience and recovery services include:

- **Identifying and mapping risk:** informing communities in practical ways
- **Strategic risk assessments:** across landscapes, communities and assets, both public estate and privately owned
- **Providing education and support:** community members and schools
- **Engaging with at-risk communities:** seeking to support special needs
- **Inspecting mitigation measures:** maximizing benefits of existing standards and policies, minimizing exposure to potential emergency events.
- **Supporting volunteerism:** both through structured organisations and spontaneous volunteering
- **Supporting the community fabric:** through local involvement in community activities and contributing to social capacity and self-reliance.

4. Contemporary Challenges in Emergency Management

Overall there has been a steady evolution from local specialist responses towards a more coordinated ‘all-agency, all-hazards, all the time’ approach. This evolution has been driven by the increasing connectedness of modern economies and societies, demands on resources particularly during out-of-scale events and growing community expectations. Within this diverse framework AFAC members face many common problems and needs.

For AFAC this will generate growing demands for interdisciplinary coordination, a need for increasing professionalisation of emergency services leaders and a growing requirement for the industry to harmonise and collaborate.

To be properly understood Emergency Management needs to be placed in context – as one facet of an holistic approach to national security. It is shown in Figure 1 and discussed below.

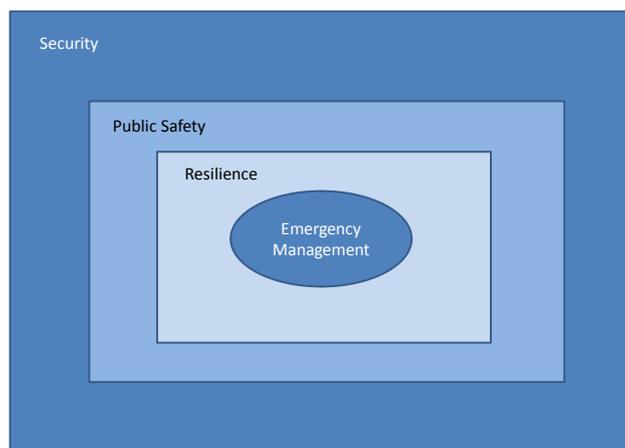


Figure1. Emergency Management in its National Security Context

At any given time Australia faces challenges to its security from a range of sources which can put institutions, people, society and the economy at risk. A priority of government is to ensure the public's safety in the face of these natural and man-made threats. Community safety results from being risk aware, and mitigating from the danger although absolute safety is unattainable.

Every year Australian communities face devastating losses caused by natural disasters. Bushfires, floods, storms, heatwaves, other hazards and their associated consequences have significant impacts on communities, the economy, infrastructure and the environment. Events such as these are an inescapable part of living in Australia and cannot be avoided. As a result the Australian approach to enhancing public safety accepts the inevitability of these events but aims to improve the community's resilience to them. Resilience is measured by the community's ability to withstand and recover from emergencies and disasters.

A key element in community resilience is effective emergency and incident management. Emergency Management comprises a range of measures to manage risks to communities and the environment and, specifically, the organisation and management of resources for dealing with all aspects of emergencies. Australian emergency management is based on strong cooperative, coordinated and consultative relationships between governments at all levels together with voluntary and private agencies.

Importantly, emergency management needs to be recognised as primarily a local matter, decentralised to the most appropriate level albeit that oversight and coordination is more holistic. The issues that need to be faced and the range of practical solutions vary considerably across localities which reinforces the responsibilities of states and territories, and their local governments, having primary responsibility for emergency management.

5. AFAC Response to Productivity Commission Issues Paper

In providing the comments and recommendations below AFAC remains ready to assist the Commission with its Inquiry and to answer any questions or expand on any concepts and suggestions made herein.

5.1. A well-defined and robust emergency management system

Research emanating from the Bushfire Cooperative Research Centre has provided an important insight into improving emergency management and climate change adaptation. Specifically the *Handbook of Disaster Policies and Institutions* (Handmer and Dovers, 2013) provides quality and most contemporary insights into the problems and complexities of disaster and emergency management and the instruments and institutions used to manage them.

There are many stakeholders in emergency management and a systems approach is needed. No one element can solve the problem alone; it is complex and there is a lot at stake. The research provides a clear explanation as to the evolution of emergency management from 'acts of god' to 'socially constructed disasters'²; how this came to be and the key challenges as a consequence. Amongst those evolutionary challenges is the impact on AFAC member agencies as service providers and having to evolve to meet current and future challenges and expectations.

² Handmer J, Dovers S (2013) *Handbook of Disaster Policies and Institutions*, Chapter 1, Page 20

The role of AFAC Member Agencies in Policy Development

AFAC member agencies are a critical component of the disaster risk reduction and emergency management system. They have the lead for a number of natural hazards, have extensive experience in managing major incidents and are responsible for operationalising national policy initiatives.

During an event, it is the Commissioners and Chief Officers who are required to stand next to Premiers, Chief Ministers and Prime Ministers and be held to account; instil trust and confidence; and resolve the emergency so recovery can proceed. Subsequently it is they who are scrutinised by investigations, coronial inquiries and royal commissions.

With this in mind, it is important that the most senior and public emergency management officers are involved in the development and refinement of national policy. Mechanisms to formalise their role in this regard are being explored with the Australian and New Zealand Emergency Management Committee (ANZEMC), although largely they are not represented on this national committee.

AFAC advocates for greater involvement of hazard and emergency management expertise in all aspects of disaster risk reduction and mitigation and believes there is scope to further formalise their role and representation at ANZEMC.

The Role of Local Government

Local government has first-hand knowledge of their communities' social, economic, infrastructure, and environmental needs and play a crucial role in providing support before, during and after a disaster. Their contribution to disaster risk management is crucial to reducing exposure and sensitivity to the impacts of all events in the long-term as well managing during times of crisis.

There is an intrinsic link between local government and AFAC member agencies, which is played out through local brigades and SES units operating and being supported in local government areas across the country. In Queensland and Western Australia, local government continues to have operational responsibilities for elements of emergency services. Another area of close working relationship is where fire services in particular are asked to comment on development applications in bushfire prone areas. This combined expertise, when joined with Police, is an important capability in Australia's emergency management arrangements. Like AFAC member agencies, local government requires funding support and an authorising environment that provides an opportunity for them to build capability and capacity to meet the demands placed upon them, and truly engage in planning and preparation for emergencies.

AFAC strongly supports the strengthening of local government's role in disaster mitigation and emergency management.

Remove Prevention from the Lexicon

The COAG Bushfire Inquiry³ first raised the concern regarding the term prevention and proposed an alternative, 'Risk Modification' in the context of a Five 'R's approach: **R**esearch, information and analysis; **R**isk Modification, **R**eadiness, **R**esponse and **R**ecovery. Risk modification has largely been overtaken by the term 'mitigation'. What is important is to acknowledge that the term prevention, currently embedded in the Australian PPRR⁴ doctrine of Emergency Management, has the unfortunate connotation that we can prevent natural disasters and therefore, mitigation or risk reduction is not required. Promoting a prevention culture or expectation in relation to natural disasters is unhelpful and misleading.

While emergency management policy staff and practitioners understand what is meant within a PPRR context in regard to prevention, this is not a shared understanding by the public. Continuing to use the term reinforces a misconception and has the awkward potential of establishing an expectation that emergency services and emergency management more broadly cannot meet. Removing reference to 'prevention programs' and simply prevention more broadly in relation to natural disasters will in some way, assist in reinforcing to the public that mitigation and risk reduction is necessary; is a shared responsibility and prevention of the occurrence is simply not possible.

AFAC advocates that 'prevention' is a term that is unhelpful in regard to natural disasters, creates unrealistic expectations and should not be used in this context.

Supporting Incident Management

AFAC notes the Commission has been asked to assess the "full scope of current Commonwealth, state and territory expenditure on natural disaster mitigation, resilience and recovery." This assessment will identify reforms to achieve a balance between disaster recovery and mitigation funding to help communities prepare for disasters.

AFAC submits that Incident Management is a crucial component of disaster mitigation, resilience and recovery. Incident Management optimises any response to an emergency and within certain parameters minimises losses and maximises community safety.

A common incident management system for Australia is fundamental to our ability to deploy personnel to other jurisdictions and still have them operate safely and effectively. Conditions at an emergency incident are often fast-moving, uncertain and challenging, and it is critical to the safety of responders and the success of the mission that there should be a common approach to the way in which the incident response is organised and managed. AFAC members introduced the Australasian Inter-service Incident Management SystemTM (AIIMS) in the 1980's. It is the common incident management doctrine for fire and emergency services in Australia and is also used by 300 other users such as government departments, local government, ports, airport, mining companies and major infrastructure. AIIMS is now in its fourth edition (published in 2013).

³ Ellis, Kanowski and Whelan: *National Inquiry on Bushfire Mitigation and Management*, Government of Australia, 2004

⁴ Commonwealth Government (2004) *Emergency Management in Australia – Concepts and Principles – Manual Number 1*, Page 4

Incident Management is a highly specialised and specific function that requires considerable expertise, experience and knowledge. The effectiveness of agency personnel performing incident management roles has come under considerable scrutiny through royal commissions, inquiries and reviews, particularly into disasters where bushfire was the hazard and the impact on life and property was significant.

As the industry body for emergency and incident management professionals, AFAC has initiated National Certification for incident management and the establishment of a National AIIMS Certification Register (NACR). This project to certify those performing emergency and incident management roles against professional standards established by the industry and will support performance, raise standards and maintain currency of personnel conducting this critical function. The intention is to support practitioners (who carry considerable weight of responsibility) keep pace with requirements in a rapidly changing environment, continually advance their expertise in this specialised area and to optimise the effectiveness of the managing emergencies in highly stressful circumstances.

As a crucial component of the emergency management system that optimises response and minimises the need for recovery, AFAC considers there is a strong argument for the Commonwealth to make some contribution to the development and maintenance of national AIIMS accreditation, across both emergency services and other users. Ensuring our emergency management practitioners are well trained, current and maintaining industry standards will maximise incident management performance and minimise the need for resources to be directed towards recovery.

Proposed Considerations:

- Roles and responsibilities for emergency management be clearly established at all levels of government, supported by nationally agreed policy instruments and funded accordingly.
- AFAC member agencies are officially/formally engaged by key jurisdictional and national emergency management committees and forums, particularly ANZEMC (Australian and New Zealand Emergency Management Committee) so that their expertise and experience are taken into account when making important mitigation investment decisions.
- AFAC member agencies are adequately funded to provide expanding risk mitigation and community resilience activities.
- Re-calibrate emergency management terminology to remove Prevention from the lexicon.
- COAG support the introduction of a national certification initiative for AIIMS users to strengthen incident management capability, maximising incident management outcomes and minimising the need for recovery resources.

5.2. Strong, contemporary and defensible knowledge base

Over ten years ago AFAC established the inaugural centralised research facility for bushfire, the Bushfire Cooperative Research Centre. Never before has the emergency management industry had the opportunity to partner with academia and produce a strong, robust and insightful evidence-base upon which contemporary emergency management can be based.

Under the auspices of the newly established Bushfire and Natural Hazards Cooperative Research Centre (BNHCRC), the research has now expanded to include a broader range of natural hazards.

Understanding the hazards, mapping the risks, identifying vulnerabilities, making the best investment decisions and continually improving emergency management policy and practice are the hallmarks of the BNHCRC research program.

This crucial research is of benefit not only to emergency management practitioners but to policy-makers, private enterprise and to members of the public, all of whom need to make confident, well-informed decisions in the interests of the safety and wellbeing of themselves and their communities.

Without this research centre, not only will AFAC member agencies struggle to find capability and capacity to undertake the necessary research themselves, the opportunity to continually reassess and monitor Australia's approach to its natural hazards and disaster mitigation would be significantly constrained.

Applying Research to Policy and Practice

A recently completed synthesis of 10 years of community safety research conducted through the Bushfire Cooperative Research Centre has identified six themes that have emerged from the ten years of research:

- there is a mismatch between agency, community/individual understanding of decision-making;
- trust;
- the conflict between information versus news;
- the need for tailoring of information;
- the issue of community versus individual action, and
- risk perception, campaigns may not be achieving desired effect

This year community safety expert practitioners from a diverse range of emergency management agencies from across Australia and NZ met to discuss the synthesis report and the research that informed it. They identified that if mitigation, resilience and community preparedness are to be improved a policy response is needed, supported by a longer term strategy endorsed by government and executed by emergency management agencies.

Actions to promote resilience and mitigation should be informed by greater community engagement and facilitated, supported community action at a grass roots level. Further, these actions should be evaluated against consistent and appropriate measures. Preparedness messages should use consistent, understandable messages across jurisdictions and agencies, and should acknowledge successful mitigation initiatives.

There needs to be a greater focus on building competence in community development in emergency management practitioners involved in risk mitigation education, with an awareness of the importance of social capital. This will enable local, regional and state-level programming to recognise the complexity of the challenges and support flexible, and targeted, local planning.

Priorities for the future include undertaking high quality evaluations of risk mitigation interventions, and utilising theory based interventions that are informed by empirically tested theories of behaviour change experts and researchers.

Data-driven Decision Making

AFAC members are both creators and consumers of essential data for emergency management purposes. With a lot at stake, they are acutely aware of the need to make better use of data to inform not only their decisions, but decisions made by all players in the emergency management system.

Since March 2013 AFAC has been facilitating a number of workshops in an attempt to better understand all the issues around data and its management and explore opportunities to produce collaborative, sustainable and effective solutions.

From discussions it is evident the fundamental problem is that emergency management agencies, along with government, communities, industry and other stakeholders often do not have reliable, timely and accurate information to make informed decisions and manage the risks posed by natural and other hazards. Further, within emergency management organisations there is not sufficient capability and capacity to analyse, interpret and use information to make well-informed business, strategic and operational decisions.

Proposed Considerations:

- Funding is maintained to the BNHCRC and their work has greater visibility and application into policy development, disaster mitigation decisions and institutional service delivery arrangements.
- A consolidated and concerted effort is made to make available essential data to support evidence-based decision-making.

5.3. Criticality of Community Safety and Warnings

Of critical importance to reducing the impact of natural disasters and mitigating the short term impact of emergency events is the ability for emergency management organisations, the public and asset owners to receive early warning of impending emergency. This early warning provides opportunity for institutions and people to deploy appropriate safety, survival and asset protection measures in a timely and effective way, including re-location to a safer environment. Early warning however, is predicated on a number of factors including:

- The ability for responsible authorities to issue timely and relevant warnings in the first instance;
- Strong knowledge base of the hazard and the potential risk and vulnerabilities arising from that hazard;
- Where and how to access information and knowing what to do with it once you have it
- The ability to process significant amounts of data, analyse and interpret that data and produce information that is easily and effectively digestible by those who need it;
- A pre-existing knowledge of what to do should an emergency event unfold;
- It is sometimes impossible to issue a warning before an emergency occurs.

As a trusted source of credible information and advice AFAC member agencies carry a weight of responsibility for warnings. For these agencies the ability to gather, analyse and prepare information in a rapidly developing emergency is a major challenge. Financial constraints and

competing priorities are hindering their ability to fully establish their capability. The required capability is similar to that of Defence, whereby highly specialised units undertake intelligence and analysis activities which is used by Defence command to inform their strategic decisions. This capability largely does not exist within AFAC member agencies.

Community Education, Engagement and Awareness

As mentioned earlier, AFAC member agencies have statutory responsibility for mitigating the impact of bushfire and other hazards including storms, floods, cyclones and tsunamis, and in some cases heatwave. In order to meet their statutory responsibilities in relation to mitigation, fire and emergency management agencies deliver (within funding and resourcing constraints) a range of community education, engagement and awareness programs to increase awareness of local risks and to encourage the adoption of preparedness strategies at an individual, household and community level as a risk mitigation strategy.

Awareness activities include the provision of advice through the distribution of brochures, displays at community events, doorknocks, media campaigns including social media, and website information. Such activities are designed to raise awareness of the risk of local hazards impacting communities, and to encourage people to seek further information through participation in community engagement programs where more tailored advice is provided. Research conducted through the Bushfire CRC has highlighted the need for tailoring of information to be effective. The aim of these community engagement programs is to encourage behaviour change such that residents are able to increase their self-reliance through increased preparedness.

Preparedness measures may include developing a survival plan that identifies what the household will do in the event of a disaster occurring, preparing an emergency kit, and undertaking risk mitigation activities around the home through the modification of the structure, vegetation and landscaping.

Successive inquiries following major bushfires in Australia, including the COAG Inquiry on Bushfire Mitigation and Management, the Report of the Inquiry into the 2002 – 2003 Victorian Bushfires, and the Victorian Bushfires Royal Commission, all recommend increased efforts be directed toward the provision of community education programs.

Finding 3.1 of the COAG Inquiry states, “Well informed and well-prepared individuals and communities complement the roles of land managers and fire agencies. This shared responsibility offers the best way of minimising risks to people, property and the environment. Effective community education, awareness and engagement programs targeted to the needs of local communities are required to achieve this objective”.

However fire and emergency service agencies responsible for the delivery of community engagement programs have identified a number of barriers to the conduct of such mitigation activities within their own agencies. These include the historical and cultural context that they operate within where operational response activities are in high demand, budget constraints with the majority of agency funding directed to response, the fact that mitigation education requires long term effort with no apparent immediate benefits, coupled with a lack of evidence to demonstrate its effectiveness, and agencies not having the skills or capacity to undertake these activities.

Children and Youth Education

In the wake of the Black Saturday bushfires disaster, the 2009 Victorian Bushfires Royal Commission recommended that “Victoria [should] lead an initiative of the Ministerial Council for Education, Early Childhood Development and Youth Affairs to ensure that the national curriculum incorporates the history of bushfire in Australia and that existing curriculum areas, such as geography, science and environmental studies include elements of bushfire education” (Teague, McLeod & Pascoe, 2010, Recommendation 6).

Further, the COAG Inquiry of 2004 recommended that, “state and territory governments and the Australian Government jointly develop and implement national and regionally relevant education programs about bushfire, to be delivered to all Australian children as a basic life skill. These programs should emphasise individual and household preparedness and survival as well as the role of fire in the Australian landscape.”

Despite these recommendations, the delivery of school based education programs for bushfire and natural hazards continues to be sporadic and ad hoc with inconsistent implementation and uptake of programs across the country, despite the efforts of fire and emergency management agencies to develop high quality school education resources aligned to the national curriculum.

One such program that was developed by AFAC with assistance from SES agencies was the Natural Hazards Children’s Education and Awareness program, funded under the National Emergency Management Projects funding. The program was provided to every primary school across Australia – State, catholic and independent – and supported by a media advertising campaign.

Feedback from schools and teachers delivering the program is that it is relevant to the Australian context, engages children in the target group, and meets leading edge teaching and learning practices through the use of smart board technology. Fire agencies with responsibility for bushfire mitigation across Australia are now working together to produce an education resource for Australian schools. The program is based on 10 x 30 second safety stories that were made by CFA Victoria following the Black Saturday fires of February 2009. These bushfire safety stories utilise the same characters as the SES program, and the education resources will follow a similar format to that produced for SES.

Research in a variety of areas, including health education and road safety education, has shown that when the content of a safety message is sensitive to age-related changes in perspective and the delivery of the message capitalises on the prevailing influence within the social context, the child’s ability to understand and assimilate that message is significantly enhanced and the adoption of preventative strategies increases.

Bushfire CRC research examined age-related changes in children’s understand of causality and prevention as applied to the bushfire context. It also examined the role of parents, friends and teachers in the development of this understanding.

Proposed Considerations:

- Greater investment is made in creating and enhancing the capability of emergency management providers to issue credible and timely warnings. There is a significant gap in

capability to analyse and interpret significant amounts of data and produce easily understood information that informs critical decision-making.

- A longer term strategy is endorsed by government and funding provided to emergency management agencies, to build their capacity to undertake community engagement activities and to deliver community engagement programs that build resilience and community preparedness at a local level.
- High quality evaluations of risk mitigation interventions be undertaken and those programs that are shown to be successful are replicated widely.
- Mandate the teaching of education programs in Australian schools about bushfire and other natural hazards as a basic life skill.

5.4. Stronger, More Purposeful Use of Advice from Hazard Expert

AFAC member agencies consider that settlement and reconstruction planning, one of the strongest mitigation instruments, is significantly under-utilised.

It is important to note that whilst fire and emergency service agencies are referral authorities and are experts in particular hazards, developers and planners are often not obliged to take their expert advice into account. There are many examples where a range of hazard experts have advised against developing in certain areas only to see developments go ahead in known high risk environments.

Experience has also shown that following natural disasters, reconstruction efforts do not adequately consider the need to do things differently and often re-create the risk. The recent decision in Victoria to disregard the Victorian Bushfire Royal Commission recommendation regarding re-constructing in high bushfire risk locations is a prime example.⁵

Urban and regional planning has an increasingly significant contribution to make in managing the risk of bushfire and flood in particular. Integration of spatial planning and bushfire risk was regarded as a policy priority in Australia in 2002. A landmark national report on natural disaster management identified “land use planning which takes into account natural hazard risks”, including bushfire risk, is the “single most important mitigation measure in preventing future disaster losses in areas of new development”.⁶

Research conducted through the Bushfire CRC on urban and regional planning for risk mitigation, involved a series of literature reviews on integrating spatial planning, bushfire risk and emergency management in the context of climate change. It considered the emergence of land use planning as an issue in bushfire risk and emergency management through Australian bushfire inquiry reports, dating back 80 years.

Analysis of a number of these reports highlighted the importance of planning as early as the 1939 Stretton report into the Black Friday bushfires in Victoria, which noted a lack of policy integration between the range of departments concerned with ‘land utilisation’ control.⁷ Moving

⁵ The Australian, (2014) *Victoria says bushfire planning reforms restore ‘fairness’*, Internet accessed 2 June 2014

⁶ COAG, (2002), *Natural Disasters in Australia: Reforming mitigation, relief and recovery arrangements*, Page 17

⁷ Victorian Parliament (1939) , *Report of the Royal Commission to inquire into the causes of and measures taken to prevent the bushfires of January 1939 and to protect life and property in the event of future bushfires*, Stretton, L: Chapter II, Page 11(d)

into the 1960s, inquiries noted the importance of vegetation management and the potential impact of the growing urban fringe. The issue of changing settlement patterns and the move away from regional areas emerged in the 1970s. Despite this ongoing interest, the 1980s signalled the real beginning of the growing influence of planning in the recommendations from these inquiries.

From this point forward, calls for coordinated (or improved) planning response encompassing mapping and zoning, that specified bushfire protection measures within planning instruments, became a significant recurring theme of bushfire inquiry reports such as 2004 COAG Bushfire Inquiry and the 2009 Victorian Bushfire Royal Commission.

Ultimately, there needs to be a public values test built into planning instruments that takes into account the hazard and risk advice provided by relevant experts and balances this against the right of developers and property owners to purchase and build in particular landscapes. Significant recovery resources will be saved if more appropriate planning decisions are made taking into account the advice of hazard experts. Failure to do so only leads to significant recovery costs for governments, insurers and individuals.

One option that has been adopted in New Zealand (for earthquake risk – The Earthquake Commission) is the establishment of a national insurance fund, underwriting losses for specific hazards with the cost being built into domestic insurance policies. Perhaps this could be factored into local government rates to capture those who do not insure. Such an arrangement provides a subsequent layer of support, and if managed nationally, provides the benefit spreading the risk across the entire country. This approach is aligned to compulsory injury insurance embedded in motor vehicle registrations and effectively cost shifts an element of recovery resources from government to the individual land holder.

Proposed Consideration:

- Settlement planning, supported by appropriate legislation, needs to consider the impact of the event before it happens; being proactive to build back differently when the inevitable event does occur.
- Planning instruments require all development undergo a public values test and take into account the hazard and risk advice provided by relevant experts.
- A percentage of development and re-development funds are directed to maintaining and protecting the investment, to accommodate future risk and mitigation liabilities.

5.5. Managing Fire in the Landscape

Many communication strategies describe fire as threatening and arriving without warning, however, fire is also part of the Australian natural landscape and essential for many ecological processes.⁸

The recently endorsed 2014 National Bushfire Management Policy Statement for Forests and Rangelands⁹, as did the 2004 COAG Bushfire Inquiry, has as a principle to ‘learn to live with fire

⁸ See http://www.ahc.sa.gov.au/ahc-resident/Documents/bushfire_warning_messages.pdf

⁹ Australian Government (2014) *National Bushfire Management Policy Statement for Forests and Rangelands*, Page 9

so that bushfires are understood and respected'. It also has a national goal to 'maintain appropriate fire regimes in Australia's forests and rangelands'. The beneficial use and the ecological roles of fire are not well understood by communities.

Prescribed burning is an effective lever in the mitigation of the immediate and longer-term impacts of landscape fires on vulnerable communities and critical infrastructure. Prescribed burning is the application of good fire at the most appropriate time and place, to prevent unplanned 'bad' fire that often has devastating consequences. Prescribed burning lowers fuel hazards for periods of up to 20 years. Areas of lower fuel hazard enable more fires under a broader range of conditions to be suppressed at an earlier time and at smaller sizes. The overall fire load and fire risk is lowered under these conditions.

The 2009 Victorian Bushfire Royal Commission conducted hearings by a panel of experts as well as sourcing research from the Bushfire Cooperative Research Centre to conclude that prescribed burning was the only practical measure that could be undertaken at a landscape scale to reduce the potential impact of bushfires on Victorian communities.¹⁰ Across the landscape, reducing the fuel load is the variable that can be achieved that has the potential to reduce the impact of bushfires.

The National Burning Project is a joint venture between AFAC and the Forest Fire Management Group (FFMG). It is a 10 year undertaking which commenced in 2010. The project consists of twelve sub-projects that are linked to form a framework of coordinated actions to improve the efficiency and effectiveness of prescribed burning in meeting public policy objectives in Australia and New Zealand.

The initial work on the projects was funded by the Attorney General's Department through the National Emergency Management Program (NEMP). More recent work has been funded by agency contributions. Agency contributions will again provide link funding for key priority sub projects until other related project funding or a more sustainable funding can be sourced. A redirection of funding from recovery to supporting the National Burning Project will provide a national approach to prescribed burning ensuring the latest research is supporting best practice on the ground.

Proposed Considerations:

- Acknowledge at all levels of government that prescribed burning is the only viable broad-scale mitigation measure for large fires and fund projects to improve this activity accordingly.
- The Bureau of Meteorology's core weather forecast service provision should include prescribed burning forecast services that are freely available to agencies.
- Funding is provided to complete the National Burning Project that in turn will assist the planning and safe delivery of prescribed burning across Australia.

¹⁰ Victorian Government (2009) *Victorian Bushfires Royal Commission*, Chapter 7 Land and Fuel Management

5.6. National Considerations

Incentives to support cost-effective decision-making

The Report of the Inquiry into the 2002-2003 Victoria Bushfires Inquiry recommended, “That Government work with the insurance industry to explore options for incentives such as a reduction in premiums for those who take appropriate self-protection measures on their properties, similar to incentives for anti-theft home security.”¹¹

Following the inquiry, attempts by CFA Victoria to explore this option with the insurance industry were unsuccessful, as self-protection measures that are known to be effective, such as the householder installing an independent water supply and pump to be used in the active defence of their home during a bushfire, would require the householder to be present to initiate such systems immediately prior to the passage of a fire front. There would be no guarantee that human intervention would be available at this time, either by the householder or fire agency, and therefore the insurers were unwilling to support this approach.

Subsequent advice by the Insurance Council of Australia indicated that the annual losses to bushfires did not warrant specific incentives to encourage households to undertake local mitigation. AFAC includes this advice here to highlight that pursuing some financial incentives do not appear to be the most appropriate approach to shift costs from recovery to mitigation.

Pursue Overseas Models

Deloitte Access Economics, in their 2013 Report to the Australian Business Roundtable for disaster Resilience and Safer Communities find that “without action, the forecast annual cost in real terms of natural disasters (across government, business and communities) in Australia is expected to reach \$23 billion by 2050.¹² They go on to further advise that money spent on pre-disaster mitigation activities now could reduce the future cost of natural disaster relief and recovery by 50% by 2050.

Overseas examples have provided some validation to this view. During a recent (May 2014) presentation on the UK floods, the presenter highlighted that analysis had been conducted identifying that that any £1 spent on mitigation in the UK linked to flood response, needed to achieve a £8 saving¹³. This presentation was delivered by a member of the UK Environmental Agency, responsible for flood response in the UK. While the source of this analysis was not identified at the time, further investigation should be pursued by the Commission.

National Strategic Comparison of Security Expenditure

At Figure 1 in this paper AFAC sets out Emergency Management within the context of National Security. Emergency management initially occurs at the most fundamental level in Australian society: awareness and decisions made by individuals when facing natural and man-made disasters; planning and preparation by households; resilience of local communities; planning decisions by local governments; response by local emergency services; incident management at

¹¹ Victorian Government (2003): *Report of the Inquiry into 2002-2003 Victorian Bushfires*, Recommendation 13.104, Chapter 13, Page 138

¹² Deloitte Access Economics (2013), *Report to Australian Business Roundtable for Disaster Resilience and Safer Communities*, Chapter 2, Page 17

¹³ Caroline Douglass, (2014) UK Environmental Agency, presentation to VICSES and NSWSES

local and regional control centres. These factors directly affect the survival of individuals and communities. In many instances little if any national funding is provided to support this awareness, preparation, decision making and incident management. Significant Commonwealth funding has been applied to support recovery.

In contrast, comparing broader elements of national security, billions of dollars are expended to reduce the threat of terrorist events. Counter terrorism is political threat to security; natural disasters are geographical. It is not for AFAC to argue where the greatest threat is. Clearly however, far great losses have been experienced through natural disasters than through terrorism. Arguably this has been because of the mitigation put in place to reduce the risk.

Nationally we need to reflect on expenditure on mitigation, response and recovery from disaster events, and security expenditure for counter terrorism. Where is the greatest threat, loss and benefit for community safety, and do we have the current balance between threat of a terrorist attack and the known realities of natural disasters correctly set? AFAC cannot answer this question and is unaware of the security budget, but notes \$4bn is spent annually on ES¹⁴ and \$8bn has been spent in recent years on recovery. AFAC would be keen for this inquiry to explore the merits of directing relatively small resources by the Commonwealth to improve the resilience of communities against natural disasters and the incident management capability of emergency services to optimise the operational response and minimise the need for recovery resources. This improved capability will in turn be beneficial for any national security contingency, whether it be a natural disaster, man-made event or politically motivated. For the Commonwealth to ignore supporting these elements of emergency management when being reviewed as part of this Inquiry would ignore an opportunity to gain increased national capability that could be applied to a range of threats and circumstances.

Proposed Considerations:

- Develop a clear measure, perhaps using the UK approach adopted for flood mitigation, to demonstrate expenditure on mitigation achieves a clear saving in consequence.
- Review national expenditure on other threats such as counter terrorism in comparison to that of natural disasters and identify areas where improvements in emergency management capability will in turn benefit national security.

6. Conclusion

In this submission AFAC has sought to provide a broad overview of the contribution AFAC member agencies provides to the national emergency management capability of Australia and how supporting and improving capability provided by AFAC member agencies will in turn, improve and optimise mitigation and operational response, reducing the resources required for recovery.

AFAC has highlighted that community resilience and emergency management are elements of broader national security environment, but an area where there have been significant and tragic losses from natural disasters that in turn have led to substantial costs and payments by the Commonwealth. The AFAC submission has focussed on five areas:

- A well-defined and robust emergency management system

¹⁴ ES = Summary budget figure of all AFAC agencies

- Strong, contemporary and defensible knowledge base
- Criticality of Community Safety and Warnings
- Stronger, More Purposeful Use of Advice from Hazard Experts
- Managing Fire in the Landscape
- Incentives to support cost-effective decision-making

These considerations led to a series of proposed considerations for the Inquiry. AFAC would be pleased to provide further information and advice on specific areas where assistance is required.

AFAC supports the broad notion that great effort and resources applied in planning, preparation and supporting optimal response by emergency services will reduce the need for recovery resources.

Australia's fire and emergency services are a significant national resource that routinely reduces the likelihood, consequence and impact of natural and man-made emergencies and disasters on

Australian communities across the nation. This in turn reduces the call on recovery resources and in turn, the call on Commonwealth expenditure.

7. References

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Victorian Government 1939, *Report of the Royal Commission to inquire into the causes of and measures taken to prevent the bushfires of January 1939 and to protect life and property in the event of future bushfires*

Australian Government (2014) *National Bushfire Management Policy Statement for Forests and Rangelands*

Deloitte Access Economics, 2013 *Building our nation's resilience to natural disasters*

APPENDIX 1

AFAC Members

Australian Capital Territory Emergency Services Agency	National Rural Fire Authority, New Zealand
ACT Parks and Conservation Service	New South Wales Rural Fire Service
Australian Capital Territory State Emergency Service	New South Wales State Emergency Service
Airservices Australia	New Zealand Fire Service
Attorney-General's Department (Emergency Management Australia)	Northern Territory Emergency Service
Bushfires NT	Northern Territory Fire and Rescue Service
Country Fire Authority, Victoria	Office of Environment and Heritage, New South Wales (NSW National Parks & Wildlife Service)
Department of Environment and Primary Industries	Parks and Wildlife Service Tasmania
Department of Environment, Water and Natural Resources - South Australia	Parks Victoria
Department of Fire and Emergency Services, Western Australia	Queensland Fire and Emergency Services
Department of National Parks, Recreation, Sport and Racing - Queensland Parks and Wildlife Service	South Australian Country Fire Service
Department of Parks and Wildlife, Western Australia	South Australian Metropolitan Fire Service
Fire and Rescue New South Wales	South Australian State Emergency Service
Forestry Corporation of New South Wales	Tasmania Fire Service
Forestry Tasmania	Tasmania State Emergency Service
ForestrySA	Victoria State Emergency Service
Metropolitan Fire and Emergency Services Board, Melbourne	

AFAC Affiliate Members

Australasian Road Rescue Organisation (ARRO)	HQPlantations Pty Ltd
Bureau of Meteorology	Melbourne Water
Department of Conservation New Zealand	Office of Bushfire Risk Management, Western Australia
EMQUAL	Office of the Emergency Services Commissioner
Fire Services Commissioner Victoria	Pacific Islands Fire Service Association (PIFSA)
Geoscience Australia	South Australian Fire and Emergency Services Commission (SAFECOM)
Hong Kong Fire Services Department	Surf Life Saving Australia