

STRATEGIC DIRECTIONS ACHIEVEMENT REPORT

2019



AFAC Limited (ABN 52 060 049 327)

Level 1, 340 Albert Street, East Melbourne VIC 3002

P +61 3 9419 2388

E afac@afac.com.au

www.afac.com.au



Victorian fire and emergency service agencies come together to celebrate International Women's Day 2019. Photo: AFAC

| CONTENTS

From the CEO	5
Acknowledgments.....	6
Background	6
Supporting resilient communities through risk reduction	7
Introduction of mandatory residential fire sprinklers.....	8
Preventable Residential Fire Fatalities in Australia	8
AFAC Climate Change Group	9
Bushfires and Community Safety Position.....	9
‘Waru’ Artwork Project	10
Providing trusted response and facilitating the transition to relief and recovery	11
Fire and Emergency New Zealand’s Adoption of AIIMS for Command and Control Arrangements.....	12
Building Capacity and Capability in Recovery	12
PIEMA – Development of the Pacific IncidentManagement System (PacIMS)	13
The Australian Incident Reporting System (AIRSNAT) National Dataset Data Review and Analysis	13
Australian Institute for Disaster ResilienceMajor Incidents Report.....	14
The source of credible and timely information	15
Towards a National Warnings Framework.....	16
Improved bushfire simulation capability.....	16
Automating billing and reporting of aviation resources and costs	17
AFAC National Resource Sharing Centre Deployments	17
Tottenham Fire Community Information.....	18
Effective governance and resource management	19
National Mental Health and Wellbeing Study of Police and Emergency Services.....	20
Australian Institute for Disaster Resilience Evaluation.....	20
Male Champions of Change Fire and Emergency Report	21
AFAC Doctrine	21
Emergency Management Volunteer Scholarships.....	22
Informed by knowledge and research	23
AFAC Conference	24
Developing leadership capability for emergency service volunteers and staff	24
Resilience@Work (RAW) Mindfulness Program	25
Using evidence to inform Fire and Emergency New Zealand’s recruitment approach	25
Centre of Excellence for Prescribed Burning	26

| FROM THE CEO

It is my pleasure to provide the annual AFAC *Strategic Directions Achievement Report* for 2018–19.

Fire and emergency services continue to identify and adapt to changes taking place across our environment, our communities and our workplaces. Many AFAC members operate in their own unique and often dispersed locations, creating considerable value for sharing experiences from across the sector so they we may develop our capacity holistically and collectively.

Central to our work is our service to the community. AFAC's five Strategic Directions provide guidance to fire and emergency service agencies to ensure their activities focus on supporting resilient communities, providing trusted response, producing credible and timely information, conducting effective governance and utilising research and knowledge. They position emergency management agencies to better meet the challenges of changing community needs and expectations, an ageing, growing and diverse population, changing climate, natural disasters, national security and organisational change. Addressing these challenges will lead to greater community confidence, trust and support and promote our journey toward a more disaster resilient Australia

Through case studies, the 2018–19 report demonstrates the work completed over the last 12 months in conjunction with AFAC members and our partner agencies. The report is a sample of initiatives undertaken, rather than an exhaustive list of all work relating to the Strategic Directions.

The work undertaken by AFAC and its members goes to the heart of the overarching principles articulated in the Strategic Directions: primacy of life, trust and confidence, interoperability and accountability.

The Strategic Directions have become fundamental to the work of fire and emergency services. A shared commitment, a unified vision and focus in achieving the Strategic Directions, have ensured our sector is well placed to serve our communities well as we progress forward.

I extend my thanks and gratitude to all AFAC members, and other emergency management agencies and industry, for the commitment and collective achievements during the year.



Stuart Ellis, AM
Chief Executive Officer

AFAC
2019



Photo: AFAC



Photo: Keith Pakenham, CFA

| ACKNOWLEDGMENTS

The Australasian Fire and Emergency Service Authorities Council (AFAC) expresses gratitude to all members and affiliate members for their commitment to delivering on the third *Strategic Directions Achievement Report*.

AFAC acknowledges the staff within agencies who shared their own case studies. In the third report, this has included examples from Country Fire Service (SA),

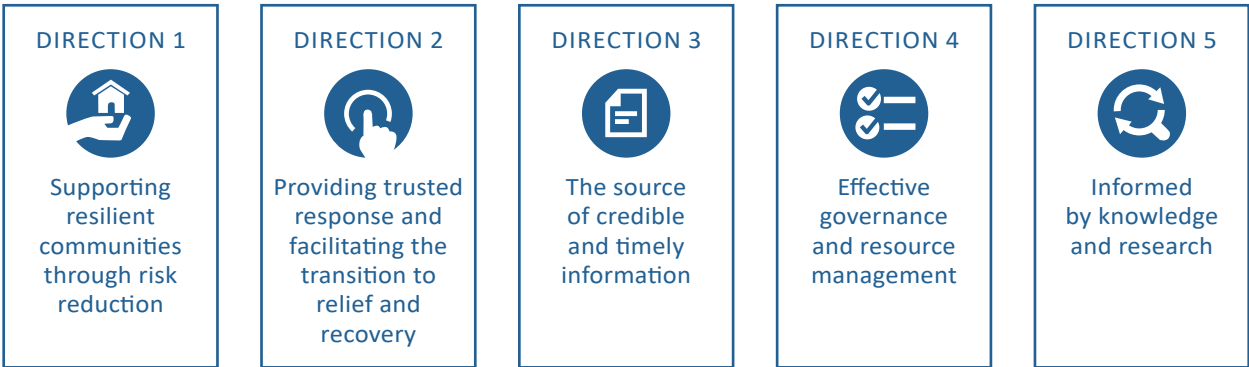
Department of Fire and Emergency Services (WA), Metropolitan Fire Brigade Victoria, Fire and Emergency New Zealand, Victoria State Emergency Service, and Fire and Rescue New South Wales. These contributions have ensured the final result is wide-ranging and reflective of the work undertaken by the fire and emergency services industry.

| BACKGROUND

Strategic Directions for Fire and Emergency Services in Australia and New Zealand 2017–2021 was endorsed by the Australia–New Zealand Emergency Management Committee (ANZEMC) and the Law, Crime and

Community Safety Council (LCCSC) in 2016. The Strategic Directions, consist of five priority areas that reflect a shared vision and joint commitment to safe and secure communities in Australia and New Zealand.

THE FIVE STRATEGIC DIRECTIONS ARE:



The expectation within the AFAC National Council is that the Strategic Directions will be considered in the development of each agency’s strategic plan. Together with states and territories and the Australian and New Zealand governments, the priorities are shaping the future of emergency management.

AFAC is proud to present the *Strategic Directions Achievement Report 2019* to ministers who have responsibility for law, policing and emergency services. This report provides examples of industry and jurisdictional activities in support of the Strategic Directions.



DIRECTION 1

Supporting resilient communities through risk reduction

- > Introduction of mandatory residential fire sprinklers
- > Preventable residential fire fatalities in Australia
- > AFAC Climate Change Group
- > Bushfires and Community Safety position
- > 'Waru' artwork project

AFAC member agencies work to build community resilience through the provision of a broad range of risk reduction activities to reduce the impacts of emergencies and disasters on communities.

AFAC member agencies are transforming in response to community expectations and need, and have taken a more proactive approach to disaster risk reduction.

AFAC agencies develop and deliver a range of strategies designed to reduce risk whilst also enhancing community resilience. By operationalising the practice of risk reduction to develop resilience, strategies are based on the following principles:

- > Disaster risk reduction (DRR) is a strategy to enhance disaster resilience.
- > Partnering with communities on risk reduction initiatives will optimise the resilience of communities and enhance recovery.
- > Strategies and approaches build on existing community strengths and capacity and facilitate connectedness through participatory approaches.
- > Strategies acknowledge shared responsibility for DRR between emergency management agencies, other organisations, communities and individuals and seek to develop and utilise partnerships.
- > Risk reduction and resilience building is a shared responsibility across sectors and communities.
- > Strategies are underpinned by sound research and practice. AFAC members collect data and use this to inform their approach and continuously improve.

The industry is aware of the inherent disaster risks and the need to provide advice, education and information to society to mitigate those risks.

Once policy, planning decisions, construction options, compliance requirements and individual choice have been determined, the focus turns to preparedness and risk reduction with and for the community. At the same time the industry has a standing capability for response to any residual risk, should an emergency still occur.

The industry is not solely responsible for reducing risk or creating resilient communities. It is however, one of the sectors collectively responsible for supporting the achievement of those goals. In that context, a range of risk management and mitigation activities and services specifically to help communities better understand risk and take appropriate action to mitigate and manage that risk are delivered.

A range of approaches and strategies are utilised to enhance public safety. These include community education, community engagement, community development, partnership development, legislation, building codes and standards, influence and advocacy for innovation and improvements, and broader risk mitigation activities and initiatives.

| INTRODUCTION OF MANDATORY RESIDENTIAL FIRE SPRINKLERS

INITIATIVE DRIVER – The NSW coronial inquiry into a fatal apartment fire in Bankstown recommended a cost effective, fit-for-purpose sprinkler system design(s) be developed and considered as a mandatory requirement for new Class 2 and 3 buildings under 25m in height in the *National Construction Code* (NCC).

AIM – To successfully introduce a requirement for reliable and cost-effective residential fire sprinklers to be installed in a greater number of residential buildings across Australia, through mandating these provisions in the NCC.

FEATURES – Fire and Rescue NSW (FRNSW) undertook significant research with the support of CSIRO, Fire Protection Association (FPA) Australia and AFAC.

The research found fires in modern homes achieved flashover in 3–4 minutes compared to older homes, where fire spread in 29 minutes. The research demonstrated the effectiveness of reliable and cost-

effective fire sprinkler systems in controlling the spread of fire.

A Proposal for Change to the NCC was developed, underpinned by this research, to incorporate two new sprinkler designs that reduced costs without compromising life safety objectives. The proposal was successful and the mandatory inclusion of sprinklers came into effect on 1 May 2019.

Supporting this initiative, AFAC and FPA Australia established the Home Fire Sprinkler Coalition Australia (HFSC) homefiresprinklers.org.au.

The HFSC aims to be the leading national resource for independent, non-commercial information about home fire sprinklers.

OUTCOMES – All new Class 2 and 3 buildings above three storeys and up to 25 metres across Australia will be required to have fire sprinklers installed. This requirement significantly improves occupant and firefighter life safety.

| PREVENTABLE RESIDENTIAL FIRE FATALITIES IN AUSTRALIA

INITIATIVE DRIVER – On average, more than one fire-related death occurs in a residential context every week in Australia. Deaths from residential fires have significant impacts on the community, and on firefighters who attend these incidents.

AIM – The Bushfire and Natural Hazards CRC, Macquarie University and AFAC funded the research project, led by Metropolitan Fire Brigade (MFB), to create a record of all preventable residential fire fatalities since the end of a previous AFAC study in 2005.

The study also aimed to identify specific socio-demographic characteristics, risk factors and other related information associated with victims of residential fire. For people aged over 65 years, it aimed to identify those in receipt of government funded community aged care services.

FEATURES – The study was based on the collection and analysis of coronial records from the National Coronial Information Service (NCIS) database. It found at least 900 people have died in preventable residential fire fatalities from 2003 to June 2017 and provides a jurisdictional analysis identifying key statistics.

OUTCOMES – Preventable residential fire fatalities in Australia remain a significant public health problem, with an average of 64 fatalities each year. That equates to approximately the same number of deaths as occurred during the Black Saturday bushfires (173) every three years.

The study makes several recommendations including developing a national residential fire strategy with an aim of reducing preventable fire deaths towards zero.

| AFAC CLIMATE CHANGE GROUP

INITIATIVE DRIVER – AFAC member agencies already feel the impacts of climate change and experience firsthand how communities are being affected. Climate change is a priority for the emergency management sector. Resources are being allocated and strategies are being developed in recognition of the increasing risk that comes with climate change.

AIM – To establish a national collaborative approach for AFAC members of Australia and New Zealand to manage and respond to the increasing risks of climate change.

FEATURES – In May 2019, AFAC National Council established the AFAC Climate Change Group (CCG) to assist AFAC members in addressing the challenges of climate change. The CCG is comprised of key individuals from fire and emergency services of Australia and New Zealand, the Bureau of Meteorology and research institutions. The group seeks to develop a body of work to enable AFAC

and the Australian Institute for Disaster Resilience (AIDR) to strategically support effective climate change planning and action for AFAC members, their stakeholders and communities. AFAC National Council endorsed the *AFAC Climate Change Group Strategic Work Plan 2019–2021*. The priorities identified cover six focus areas: research and development; sector governance planning and policy; communication, stakeholder engagement; workforce; resourcing and integration into the AFAC Collaboration Framework.

OUTCOMES – In addition to AFAC’s national discussion paper on climate change, the AFAC CCG has developed a revised national position on climate change and a nationally consistent talking points resource to support AFAC members when discussing issues post-incident related to climate change.

| BUSHFIRES AND COMMUNITY SAFETY POSITION

INITIATIVE DRIVER – The AFAC position *Bushfires and Community Safety* allows AFAC member agencies to design and conduct their own prevention, mitigation, preparedness and response activities for bushfire based on nationally consistent principles.

AIM – To review and update the AFAC position *Bushfires and Community Safety*. The position articulates the collective view of AFAC member agencies regarding the principles that underpin their work to protect lives and property during bushfires. To make the doctrine more useful, it identifies the actions agencies may take to apply these principles.

FEATURES – AFAC’s Community Safety Group led the review of the *Bushfires and Community Safety* position. Members recognised the importance of this doctrine, as an earlier version of the position was examined as part of the 2009 Victorian Bushfires Royal Commission.

The new position strengthens the key principles and explains the context of today’s bushfire environment to ensure the application of these principles is more accessible for fire agencies. There are five principles covering the areas of human life; collaboration; education and awareness; leadership capacity and capability; and land use planning and building controls.

The doctrine recognises the complexity of the environment, the increased bushfire risk associated with a changing climate and human behaviour. Based on research and evidence, the position provides guidance for AFAC members in applying the principles within their own context.

OUTCOMES – The AFAC position *Bushfires and Community Safety* contributes to a nationally consistent approach to enhancing community safety for bushfires, based on the latest research and best practice of AFAC members.

| 'WARU' ARTWORK PROJECT

INITIATIVE DRIVER – The project was part of the work to support building resilience in the Goldfields Aboriginal communities through risk reduction.

AIM – The 'Waru' artwork project aimed to paint a firefighting appliance with local Aboriginal artwork and build closer relationships and break down the barriers to effective service delivery between the local Aboriginal community and the Department of Fire and Emergency Services (DFES) Regional Office.

FEATURES – The 'Waru' artwork project provided emergency services personnel with imagery and knowledge, grounded in the local Aboriginal community and environment which creates a sense of place to which staff and volunteers can identify. The artwork allows DFES staff and volunteers to visually acknowledge the local community on an everyday basis and provides a sense of identity associated with the region in which they work.

OUTCOMES – A strong trusting relationship with the Aboriginal community has been built by working together to develop a regionally identifiable artwork to be displayed on emergency services vehicles.

Both partners have built an understanding of each other's role in the community, developed knowledge about how each group approaches a situation and how they adapt to achieve the best results, built social relationships that assist in service delivery, and raised community awareness of where assistance can be found to help prevent, prepare, respond and recover to an emergency.

The community feels empowered through this partnership which helps to determine the best way to address future interactions with emergency services. This has also reduced reliance on emergency services and resulted in improved service delivery.



The 'Waru' artwork imagery (left and bottom) and Aboriginal Advancement Unit Team Members with local Aboriginal Elder Uncle Aubrey Lynch (top right).

Photo: DFES



DIRECTION 2

Providing trusted response and facilitating the transition to relief and recovery

- > Fire and Emergency New Zealand's adoption of AIIMS for command and control arrangements
- > Building capacity and capability in recovery
- > PIEMA – development of the Pacific Incident Management System (PacIMS)
- > The Australian Incident Reporting System (AIRSNAT) national dataset data review and analysis
- > Australian Institute for Disaster Resilience Major Incidents Report

The practice of emergency management incorporates the framework of prevention, preparedness, response and recovery (PPRR), underpinned by the principles of risk management – where the risks to life, property and the environment from a range of hazards are identified and appropriate measures taken to address them.

Fire and emergency service agencies provide the best incident management services. This includes responses before, during and after the event, expert advice and advocacy for community safety outcomes.

Through the shared commitment by the industry to provide a trusted response, practitioners and technical experts are working to review and develop new operational doctrine which outlines the method for the provision of incident and disaster management and interoperability. They foster and promote the sharing of case studies, emanating from the delivery of their services. There is a commitment to undertake

analysis of emerging trends and to provide advice and guidance on information and data requirements to best capture agency activities and performance. The AFAC National Resource Sharing Centre continues to facilitate a coordinated approach to combating more frequent and intense weather events exacerbated by climate change.

There is a strong focus, in this and other Strategic Directions, on incorporating knowledge and research into the practice of emergency management. It is important that such research is available so that practitioners and technical experts can keep pace with contemporary expectations and requirements.

Associated with this Strategic Direction, AFAC and several of its member agencies have a long-standing partnership with the fire and emergency service organisations in Pacific Island countries.

Fire and emergency services reliably respond when required by —

FIRE AND EMERGENCY NEW ZEALAND'S ADOPTION OF AIIMS FOR COMMAND AND CONTROL ARRANGEMENTS

INITIATIVE DRIVER – Due to increasing volume and intensity of incidents, it is crucial for Fire and Emergency New Zealand (FENZ) to have unified and prescriptive response policies and procedures.

AIM – The current command and control arrangements are different for urban and rural crews. To become a truly unified organisation FENZ must develop policies, procedures, and guidelines that support both urban and rural operations at incident level, in an integrated way.

FEATURES – FENZ has committed to writing a new command and control manual that is based on AIIMS; the Australasian Inter-Service Incident Management System. AIIMS is integrated into all Australian fire and emergency service agencies and focuses on the key principles of flexibility, adaptability and scalability, and forms the basis for establishing a common operating picture within an all-hazards, all-agencies environment.

OUTCOMES – This is a decision for FENZ as an agency and will allow urban and rural operations to operate under the same doctrine with common terminology and structures, while retaining interoperability with Australian counterparts.

When an incident reaches multi-agency emergency management levels, FENZ will continue to work with other agencies under the Coordinated Incident Management System (CIMS) structure. All FENZ executive officers will continue to be well versed in CIMS and be part of any wider emergency response. This is irrespective of whether FENZ is lead agency or not.

BUILDING CAPACITY AND CAPABILITY IN RECOVERY

INITIATIVE DRIVER – West Australia's experience in recovery has grown in recent times with exposure to emergency events resulting in significant impact on communities. Despite this increasing experience across the state, local governments reported that levels of skills, resources and capacity was low across social, natural, economic and built recovery environments.

AIM – To establish a network for individuals who have roles and responsibilities in recovery, to build collaborative relationships and develop recovery capability and capacity across the state.

FEATURES – Community recovery following an emergency event is complex, involves numerous stakeholders and is characterised by demand for agency collaboration. Local collaboration contributes to an effective, coordinated recovery response and building these relationships before an emergency has been identified with successful outcomes.

The Department Fire and Emergency Services (DFES) state recovery team have implemented two key initiatives that aim to build capacity, capability and knowledge across the recovery sector:

- Recovery Network: in partnership with Western Australia Local Government Association (WALGA), the recovery network will facilitate sharing of recovery best practice, processes, experience, case studies and lessons learnt. A quarterly live webinar is held and available via YouTube.
- Recovery Cadre: Lessons learnt from the Waroona Yarloop bushfires in 2016, including the requirement for a team of pre-identified, capable personnel to deploy in support of affected local government(s). The cadre will provide an appropriately skilled deployable resource to ensure recovery is supported and aligned to the national principles for disaster recovery.

EXPECTED OUTCOMES – There are many individual and collective benefits from a network in addition to an increase in knowledge. Some may be immediate whilst others may not be realised until later.

PIEMA – DEVELOPMENT OF THE PACIFIC INCIDENT MANAGEMENT SYSTEM (PACIMS)

INITIATIVE DRIVER – AFAC members support the Pacific Islands Emergency Management Alliance (PIEMA) by having a coordinated capability development approach to strengthen interoperability of disaster and emergency management agencies across the Pacific.

AIM – Investment is required to support interoperability of the three key emergency management agencies in the Pacific – national disaster management offices (NDMOs), police and fire – to improve their capacity to prepare for and respond to disasters. The development of the Pacific Incident Management System (PacIMS) introduction and awareness course provides opportunity for common and consistent language and basic emergency management standards and for strongly aligned doctrine between agencies across the region.

FEATURES – The initiative is supported by the PIEMA Program 2019–2021, funded by Australia and New Zealand Governments. Three regional workshops across Melanesia, Micronesia and Polynesia were organised in early 2019 to deliver a joint Working in Emergency Operational Centres and the Pacific Incident Management Awareness Course adapted from AIIMS. A ‘train the trainers’ approach was applied. These workshops were supported by both local trainers and 15 AFAC member trainers from urban and rural fire and rescue agencies and state emergency services.

OUTCOMES – The trainings were well received across the regions and by the participants. In Vanuatu, the NDMO staff who were trained in PacIMS initiated and led awareness courses in Port Vila and two provinces (Shefa and Tafea) for country and provincial level contexts.

THE AUSTRALIAN INCIDENT REPORTING SYSTEM (AIRSNAT) NATIONAL DATASET DATA REVIEW AND ANALYSIS

INITIATIVE DRIVER – For almost 20 years, AFAC has been collecting annual data on incident reporting measures from member agencies and aggregating this data into the Australian Incident Reporting System (AIRSNAT) database. The usefulness of this dataset has been limited by the requirement for specialist database programming knowledge to upload, export and analyse AIRSNAT data.

AIM – To demonstrate the value of the AIRSNAT dataset to AFAC and to develop a strategy to streamline future data collection, management and analysis.

FEATURES – Through the Bushfire and Natural Hazards CRC’s Tactical Research Fund, AFAC has worked with researchers from La Trobe University’s Centre for Data Analytics and Cognition to assess the AIRSNAT database.

Researchers developed recommendations for improvements to the management and structure of

the database. These improvements will better align management of AIRSNAT with the business needs of AFAC members.

The team reviewed the nature, quality and usability of the data to develop case studies demonstrating how the national dataset can be better used to understand sector trends.

These case studies have demonstrated that there is significant value to AFAC captured in AIRSNAT. However, to get the most out of the dataset, more work is required to streamline the uploading of data and to make that data readily accessible through a simple interface.

OUTCOMES – An upgraded AIRSNAT database provides AFAC members with a business intelligence tool to better understand business performance and to support the implementation of initiatives in public safety.

AUSTRALIAN INSTITUTE FOR DISASTER RESILIENCE

MAJOR INCIDENTS REPORT

INITIATIVE DRIVER – The *Major Incidents Report 2018–19*, provides an overview of major incidents in Australia, as identified by emergency services, and summarises key observations at a national level to identify and analyse recurring and emerging insights across hazards, sectors and jurisdictions. The *Major Incidents Report* is published by the Australian Institute for Disaster Resilience (AIDR) under the authority of the Australian Government Department of Home Affairs.

AIM – The intent of the report is to highlight significant incidents that have consequences for fire and emergency services and provide background information about the incident and corresponding response and recovery. In a climate of increasing severity, complexity and occurrence of disasters across Australia and globally, the inclusion of key observations supports the ongoing reflection and sharing of insights, lessons and learning.

FEATURES – The *Major Incidents Report 2018–19* provides an overview of major incidents in Australia from July 2018 through to June 2019. The report harnesses the lessons management capability of the sector and presents key observations of each incident and information on multi-agency collaboration, community engagement and recovery operations. These observations give agencies opportunities to learn from others' experiences and implement learnings across a variety of hazards and emergency management elements.

OUTCOMES – The *Major Incidents Report 2018–19* is published on the Australian Disaster Resilience Knowledge Hub: www.knowledge.aidr.org.au/resources/major-incidents-report.

The report is launched in Melbourne in August 2019 at the 2019–20 pre-season briefings by the Director-General, Emergency Management Australia.



The *Major Incidents Report 2018-19*. Photo: AIDR



DIRECTION 3

The source of credible and timely information

- > Towards a national warnings framework
- > Improved bushfire simulation capability
- > Automating billing and reporting of aviation resources and costs
- > AFAC National Resource Sharing Centre deployments
- > Tottenham fire community information

Fire and emergency services are committed to providing credible and timely information to enable individuals and communities to make appropriate, informed and timely decisions. Response by emergency services is not always possible, particularly during natural disasters when the scale of the emergency may overwhelm response efforts.

To address this, the industry has focused on the development of new operational capabilities to keep the community well informed before, during and after events, acknowledging that this output is as important as operational response.

Technology is maximised, including data and provision to mobile devices, to rapidly advise and warn the community about emergencies that are likely to impact them. New technologies support dispatch of resources in a more timely and efficient way.

Fire and emergency services in Australia and New Zealand have collaborated to establish a database of personnel who are qualified and available to

deploy interstate and internationally on mutual aid missions, enhancing national capability to manage the largest emergencies and promoting Australia and New Zealand's role as good global citizens supporting international partners in times of need.

Working closely with other agencies such as the Bureau of Meteorology, the industry incorporates predictive forecasts and warnings, available intelligence, including local knowledge and historical information, to develop warnings messages that identify the likely impact of the hazard on communities. The intent is to provide consequence based warnings, inclusive of key safety messages and recommended actions to increase community preparedness prior to and during the emergency.

This is underpinned by the investment from the industry in the development of predictive models which can provide the best available advice based on existing information.

| TOWARDS A NATIONAL WARNINGS FRAMEWORK

INITIATIVE DRIVER – In October 2017 the Commissioners and Chief Officers Strategic Committee (CCOSC) committed to a nationally consistent three-level warning framework across multiple hazards. A project plan was developed by the AFAC Warnings Group to establish a sound evidence base through undertaking community focussed research, to underpin the development of a national warnings framework.

AIM – The research was to understand how the community currently understands warnings and acts to reduce their risk. Hazards included were bushfire, cyclone, flood, earthquake, extreme weather, extreme heat, and tsunamis.

FEATURES – The social science research project involved three distinct phases.

Phase 1 – 5,400 respondents were surveyed to provide benchmark data about how the community understands and acts in response to warnings.

Phase 2 – 49 community focus groups and workshops were conducted nationally.

Phase 3 – 5,400 respondents were surveyed and provided the opportunity to design an optimised warning system that made sense to them, and that they believed would encourage communities to act.

OUTCOMES – Key findings of the research included:

- The community supports a three-tier warning system across multi-hazards and believe the warnings system should be simple and flexible.
- There is value in the ‘nested model’ – a warning level with a call to action statement included.
- The community supports a triangle as the main icon for warnings.
- A yellow, orange and red colour progression to show increasing warning severity.
- Hazard type shown should increase in severity as the event escalates.

| IMPROVED BUSHFIRE SIMULATION CAPABILITY

INITIATIVE DRIVER – Increasing community and political expectation for credible information on bushfire spread and impact to support strategic risk reduction and incident management.

AIM – Bushfire simulators are computer-based systems that predict the growth, movement and intensity of bushfires as they burn through the landscape. The systems implement fire behaviour models in a landscape context, using weather, fuel, topography and suppression data to calculate future fire spread and intensity. The aim is to develop bushfire simulations with improved accuracy in a wide range of landscape types that provide information readily available to agencies and the community.

FEATURES – The fire spread simulator Phoenix Rapidfire is used by most fire agencies in Australia. Fire Prediction Services was established in 2017

to manage, support and further develop Phoenix Rapidfire under licence.

An updated version of Phoenix was released by Fire Prediction Services to fire agencies in 2018 that contained new features to improve operation and usability. User support arrangements, including a user manual, were also established to support with issues encountered with the operation of Phoenix RapidFire.

A workshop was conducted with key fire users to develop comprehensive business requirements to inform future simulator development. A cost benefit analysis was initiated to support any investment decisions.

OUTCOMES – A more reliable bushfire simulator with enhanced operational support has been provided to fire agencies to support strategic risk reduction and incident management.

AUTOMATING BILLING AND REPORTING OF AVIATION RESOURCES AND COSTS

INITIATIVE DRIVER – Agencies have long relied on manual and paper-based accounting of aerial firefighting data and costs which leads to a laborious, delayed and often inaccurate record. Advances in satellite tracking technology and the ongoing refinement of the ARENA package presents an opportunity to automate the recording of aerial response to bushfire and other hazards, allowing for agencies to make informed decisions about dispatching aircraft more efficiently, and provide a more accurate measure of resources and costs.

AIM – To link aircraft tracking equipment to the ARENA interface, train pilots, operators, agency dispatch and financial staff in the use of this refined capability, assisting the transition to a new electronic process.

FEATURES – Satellite tracking equipment was installed in operator's contracted aircraft. Software developers incorporated the incoming tracking data into ARENA, created a user-friendly interface and linked it to the existing database. A training package for operators and agency staff including visual presentations, onsite visits, one-on-one training and user manuals was implemented.

OUTCOMES – Agencies will use the new dispatch and electronic flight records in the coming 2019–20 season and operators will verify the tracking data and incorporate it into the billing processes, allowing immediate electronic recording of dispatches and facilitate timely accounts payable processing. New reports will allow agency users, such as incident and financial controllers, to access a wide range of information including which aircraft are working on fires, where retardant drops are focussed and, for the first time, real time information about costs incurred.

AFAC NATIONAL RESOURCE SHARING CENTRE DEPLOYMENTS

INITIATIVE DRIVER – The Commissioners and Chief Officers Strategic Committee (CCOSC) tasks the AFAC National Resource Sharing Centre (NRSC) to support interstate and international deployments of fire and emergency service personnel between Australian states and territories, New Zealand, and Canada and the United States of America (USA). The AFAC NRSC provides consistent national doctrine to support deployments as well as coordinating expertise in logistics and resource management.

AIM – That the AFAC NRSC manages international deployments of personnel to the USA and Canada, and supports movements of resources between Australian states and territories and New Zealand by providing real time information on fire and emergency services personnel eligibility for interstate and international deployment requests.

FEATURES – Approximately 140 Australian and New Zealand personnel were successfully and safely deployed to the USA and over 90 personnel to Canada in 2018.

The AFAC NRSC provided central coordination and management for these deployments. Working with the operational hubs of NSW Rural Fire Service and Emergency Management Victoria and liaising closely with Fire and Emergency New Zealand, real time reports and information provided from the AFAC NRSC Registry database supported the efficient and timely deployment.

The AFAC NRSC Registry database was also used to support the deployment of personnel to assist with interstate requests for assistance to Queensland, Tasmania and Victoria during 2018–19 by providing up to date information.

OUTCOMES – International partnerships were strengthened, and Australian and New Zealand personnel gained significant personal development opportunities on international deployments. Domestically, jurisdictions were supported to manage incidents that they were unable to deal with using their own resources, and a truly national approach to managing the largest incidents was promoted.

| TOTTENHAM FIRE COMMUNITY INFORMATION

INITIATIVE DRIVER – To inform and advise the community.

AIM: – To provide trusted, timely communications response to assist with facilitating the transition to relief and recovery.

FEATURES – On Thursday 30 August, Metropolitan Fire Brigade (MFB) was called to a factory fire on Somerville Road, Tottenham, and spent 16 days at the site fighting one of the largest structure fires faced in a decade. This event was of high community interest due to the impacts on health, the environment, business continuity, and the closure of roads, schools and kindergartens. MFB provided regular updates on the incident, as well as health and safety advice.

OUTCOMES – In the first 24 hours of the incident, MFB issued eight community warnings, 49 social media messages, a media release, conducted three media conferences, over 10 radio and TV interviews, and held two community meetings.

Over the course of the incident, 28 community warnings were issued, six media conferences and three community meetings held and 133 social media messages issued. MFB participated in numerous live radio and TV interviews and responded to over 50 written media enquiries.

Media coverage and community engagement was positive and MFB worked closely with EPA, Melbourne Water, the local council and Worksafe to assist in consequence management.

MFB's role in helping to minimise community impacts and highlight relief and recovery efforts was well reflected in the information provided to the community and helped position the organisation as a leading, trusted voice for incident management that provides effective, best practice communications capability to support operations and the community.



The Tottenham fire in Melbourne's west took 16 days to extinguish and required frequent community updates. Photo: MFB



Effective governance and resource management

- > National mental health and wellbeing study of police and emergency services
- > Australian Institute for Disaster Resilience evaluation
- > Male Champions of Change Fire and Emergency report
- > AFAC Doctrine
- > Emergency Management Volunteer Scholarships

Fire and emergency service organisations operate in dynamic and complex environments characterised by degrees of uncertainty, ambiguity and change. Leading emergency service organisations require robust governance and resource management that is legitimate, transparent and accountable.

While AFAC member agencies provide specialist emergency management services, they also manage significant capital infrastructure, information management systems, communications networks, large fleets, equipment and resources in Australia and New Zealand.

AFAC member agencies recognise that their greatest asset is their people. Our agencies represent a workforce of 288,000 personnel. 254,000 are registered volunteers, 34,000 are paid staff in career roles and 6,000 are retained or part-time staff. A diverse and geographically dispersed workforce, however, requires optimal human resource management strategies, industry-wide workforce planning and targeted capability development.

Meeting the needs of a geographically-dispersed, volunteer workforce requires innovative, targeted and flexible strategies for their recruitment, engagement and retention. AFAC members recognise this need and work with volunteer associations to share their expertise in this field.

Emergency management is inherently risky, and managing a large workforce requires an evidence-based approach to issues of national and international importance. Data to inform decision making, of the creation and review of national and international standards, worker health and safety, and mental health and wellbeing are all key priorities for the fire and emergency services. While AFAC members operate within legislative and regulatory arrangements, they share their collective knowledge and expertise by collaborating to achieve consistent outcomes that reduce duplication of effort and ensure the safest possible environment for the community and personnel.

NATIONAL MENTAL HEALTH AND WELLBEING STUDY OF POLICE AND EMERGENCY SERVICES

INITIATIVE DRIVER – Despite extensive, anecdotal evidence that police and emergency services personnel are at greater risk of experiencing a mental health condition, there was no comprehensive, national dataset to provide a picture of the impacts on the workforce. This data void has created challenges in understanding the true extent of mental health issues in the sector and in advocating for genuine change and reform.

AIM – The Bushfire and Natural Hazards CRC partnered with Beyond Blue to undertake the *Answering the Call* project; the most comprehensive survey of the mental health of police and emergency service staff and volunteers undertaken in Australia. The data generated in this study forms the basis for understanding the mental health of the workforce and for designing and evaluating interventions to determine the best ways to provide support.

FEATURES – AFAC member agencies were major contributors to this survey, completed by 21,014 participants. The survey identified and reinforced the degree to which employed and volunteer emergency service workers are impacted by poor mental health:

- > one in three employees experience high or very high psychological distress
- > almost one in 2.5 employees and one in three volunteers have a mental health condition
- > employees and volunteers are more than twice as likely to have had suicidal thoughts than adults in the general population.

OUTCOMES – Participating agencies received the de-identified results for their own agency. Data is being used by all AFAC agencies to review their mental health support strategies.

AUSTRALIAN INSTITUTE FOR DISASTER RESILIENCE EVALUATION

INITIATIVE DRIVER – The Australian Institute for Disaster Resilience (AIDR) was initially funded for a period of three years, with a possibility of additional funding for two 12-month periods. There was a contractual requirement to conduct an independent evaluation of AIDR toward the end of the initial three years.

AIM – The purpose of the evaluation was to understand the impact and effectiveness of AIDR and inform potential future vehicles for delivering the emergency management and disaster resilience services the Commonwealth requires.

FEATURES – An evaluation plan, with clear evaluation components, questions and methodology was first agreed to so there was a shared understanding of what was required. The evaluation was independently conducted and involved the review of operational evidence and interviews with over 60 informed and experienced people from across the country.

OUTCOMES – The evaluators were requested to address specific questions on strategy, governance, management, efficiency and impact. The evaluation process has shown that AIDR is well governed and well managed, has delivered considerable value for money and has made an impact on disaster resilience.

The 11 specific deliverables in the contract were also examined in detail. The conclusion was that the AIDR team delivered on their contract obligations and over achieved in a number of areas. Opportunities for improvement were also identified in each of the specific deliverables.

AIDR has been funded for another 12 months and will incorporate suggested improvements into the delivery of products and services.

| MALE CHAMPIONS OF CHANGE FIRE AND EMERGENCY REPORT

INITIATIVE DRIVER – Low levels of workforce diversity and inclusion across fire and emergency services in Australia are not only out of step with public expectations – the situation poses serious risks to future capability and to workforce wellbeing.

AIM – The Male Champions of Change (MCC) Fire and Emergency group aims to enhance participation of women across the sector and to create inclusive and welcoming workplaces where everyone can thrive. The open publication of a progress report serves to provide information while holding leaders to account, highlighting transparency a critical element of their reporting. This is the first annual report published by this group.

FEATURES – The report features numerous examples and cases studies where initiatives aimed at supporting more diverse and inclusive workplaces are taking place across AFAC member agencies.

Importantly, the report publishes the gender makeup of the workforce by agency for the first time.

OUTCOMES – The detailed data highlighting the significant under-representation of women in the sector. The reporting has been broken down to level in the organisation and into front line service delivery or enabling roles.

The *MCC Fire and Emergency Progress Report 2017/18* shows women's representation across the workforce sits at 22 per cent overall.

Of concern, women make up only seven per cent of management roles in frontline service delivery – these operational roles include firefighters which are on the critical pathway to many senior leadership and executive level positions in the sector. Ten per cent of current operational executives (key management personnel) in fire and emergency services are women.

| AFAC DOCTRINE

INITIATIVE DRIVER – AFAC Doctrine is one of AFAC's most important intellectual property assets. The suite of sector-agreed, evidence-based doctrine is vested as the official view of the AFAC National Council.

AIM – To support AFAC members in defining accountabilities and practice to measure organisational performance against. By aligning research to organisational strategies, doctrine can define best practice and support learning, knowledge management, succession planning and benefit culture.

FEATURES – AFAC Doctrine comprises over 100 evidence based publications and includes positions, guidelines and training resources.

OUTCOMES – In 2018–19 AFAC delivered:

- > Seven new doctrine:
 - Community Safety Messaging: Use of the NBN in Emergency Events
 - Data Quality Assessment
 - Emergency Services Support Role to Deliberate High Threat Incidents
 - Fire Safety in the Built Environment
- Intervention Programs in Australia for Juveniles Who Display Fire Risk Behaviours
- Managing Bushfire Smoke Exposure
- Managing Tree Hazards
- > Six revised doctrine:
 - Bushfires and Community Safety
 - Class A Recycled Water for Firefighting Purposes
 - Responding to Incidents Involving Landfill Gas Leaching
 - Selection Use Care and Maintenance of PPE
 - Smoke Alarms in Residential Accommodation
 - Wind Farms and Bushfire Operations
- > Six new doctrine proposals:
 - Aerial Appliances Strategy Guideline
 - Fire Safety for External Facades
 - Flood and Severe Weather
 - Managing the use of Canines in Urban Search and Rescue
 - Selection, Use, Care and Maintenance of Operational Equipment
 - Volunteer Impact Assessment Guidelines

| EMERGENCY MANAGEMENT VOLUNTEER SCHOLARSHIPS

INITIATIVE DRIVER – The Emergency Management Volunteer Scholarship program was established through a \$2 million Australian Government grant to support volunteers' access to accredited emergency and disaster management related qualifications.

AIM – To provide scholarships to Australia's emergency management volunteers to assist with overcoming the financial barrier to participation in formal study, and strengthen community resilience by funding further skills and knowledge development of emergency management volunteers.

FEATURES – The scholarship program consisted of five application rounds from August 2017 to March 2019. Volunteers could apply to complete a whole course or individual units delivered by universities or vocational education providers in emergency and disaster management related fields. Applicants completed selection criteria to explain how their proposed unit or course would build capacity in and strengthen community resilience. Applicants also outlined how undertaking study would benefit their volunteer agency. Scholarship recipients covered the up-front cost of their study and were reimbursed on successful completion of their unit or course.

OUTCOMES – Across the five rounds of the scholarship program, AIDR made scholarship offers totalling over \$170,000. Scholarships were awarded to volunteers from all jurisdictions and across a wide range of volunteer agencies. Feedback from volunteers who have completed study includes:

'You can read and research autonomously, but with formal study, you're directed through to the latest developments with the industry.'

— Kath, Australian Red Cross volunteer

'The goal with my studies is to be able to continue to develop these pathways of resilience and sustainability now and into the future.'

— Kylie, NSW RFS volunteer

'I have become a Unit Commander within my volunteer organisation during the time I have been completing my study and I feel the benefit of the knowledge I have acquired in every aspect of my work.'

Kira Hartland — Marine Rescue NSW
Bachelor of Emergency Management

#VOLLIESCHOLARS



The Emergency Management Volunteer Scholarship program supported volunteers to grow their knowledge and skills. Photo: Kira Hartland



DIRECTION 5

Informed by knowledge and research

- > AFAC conference
- > Developing leadership capability for emergency service volunteers and staff
- > Resilience@Work (RAW) Mindfulness Program
- > Using evidence to inform Fire and Emergency New Zealand's recruitment approach
- > Centre of Excellence for Prescribed Burning

AFAC values the creation of knowledge, be it from research, experience or observation. A research committee of the AFAC Board was created this year to provide strategic guidance to AFAC Council about research needs. The Committee has a role in facilitating the achievement of this Strategic Direction – Informed by Knowledge and Research. The Committee's initial focus is to understand the current research investment landscape.

The national doctrine developed by member's agencies as AFAC doctrine, the handbooks developed by Australian Institute for Disaster Resilience (AIDR) as well as the many public safety training products are all informed by research where relevant and by evidence from experience. Care is taken to acknowledge and document the source of information so that it is properly valued.

A comprehensive professional development program supports learning to deepen understanding and help create knowledge. Events are critical to broadening this knowledge base to more people, so that it becomes common knowledge. The signature national event, the AFAC conference, is a partnership whereby researchers, practitioners and policy makers actively

share and learn, and this year also included the AIDR Australian Disaster Resilience Conference, which extends our collective reach to broader audiences.

AFAC's Knowledge, Innovation and Research Utilisation Network (KIRUN) again hosted a national lessons management forum for the second time in 2018 and for the first time this was held in partnership with AIDR. This resulted in a broader stakeholder participation, with lessons from a community perspective being a part of the program.

The dissemination of research outputs tailored to end-user needs is facilitated by AFAC groups and networks and is extended into a broader emergency management domain through AIDR. Over the past year the tight nexus between AFAC collaboration groups and research teams has facilitated vast improvements in the contribution to warnings and to predictive services.

As research outputs from the Bushfire and Natural Hazards CRC (BNHCRC) are becoming more prolific, the nature of the engagement of AFAC and our members with the BNHCRC Research has shifted from research to research utilisation.

| AFAC CONFERENCE

INITIATIVE DRIVER – The annual AFAC conference creates a platform that delegates can share research, ideas, innovation and expand professional networks across the emergency management sector.

AIM – To be Australasia’s largest and most comprehensive emergency management conference and exhibition.

FEATURES – The AFAC conference is unique in its offering of a comprehensive program alongside Australasia’s largest trade exhibition staged by the industry for the broader emergency management sector.

Now in its 15th year, the partnership with the Bushfire and Natural Hazards CRC (and prior to that the Bushfire CRC) in the AFAC conference has strengthened the connection between research and utilisation with end users.

The six-stream program provides a platform for knowledge sharing and gives people within the industry an opportunity to share the latest

in research and practice. A competitive Call for Abstracts process ensures the program is of a high standard and represents a range of perspectives. Complementing the conference program is a professional development day, where workshops and field trips provide opportunity for more in-depth learning.

OUTCOMES – The conference continues to provide opportunities to share knowledge and leading-edge thinking together with facilitating opportunities for networking and professional development. New partnerships have been made with other national conferences, including the Institution of Fire Engineers Australia, Women and Firefighting Australasia and the Australian Disaster Resilience Conference. These partnerships have brought new perspectives and audiences together to learn from each other, cementing the AFAC conference as the premier emergency management conference and exhibition in the region.

| DEVELOPING LEADERSHIP CAPABILITY FOR EMERGENCY SERVICE VOLUNTEERS AND STAFF

INITIATIVE DRIVER – Events such as Black Saturday fires and the 2011 Northern Victoria floods have focused attention on the capacity of agencies such as the Victoria State Emergency Service (VICSES) to lead the community before, during and after these events. Enhancing leadership capability across the emergency management sector will support the increasing community expectations about emergency management agency performance.

AIM – The project aim is to ensure the leadership capability framework is easy to understand, has relevance to the needs of our members, and supports the VICSES strategic plan by identifying workforce gaps and development pathways.

FEATURES – Research that identifies three leadership behaviour categories applicable to emergency service members can be applied at four organisation levels. Stage one of the project ensured the language and

categories are recognisable and understood. Stage two mapped existing training to the three categories to promote opportunities to develop leadership capability. Training gaps will be identified, and the behaviour categories will be used to develop training and other support tools.

OUTCOMES – The leadership capability framework was launched to unit management teams in June 2019 and members started to discuss what leadership looks like and how to support leadership capability development. The project will support individuals taking responsibility for their own development in applying the leadership behaviours. Recognition and promotion of good leadership behaviour examples, and strategies to target a lack of leadership behaviour will also be implemented. The framework will support demonstration of effective leadership during emergencies and grow increased organisational reputation and community confidence.

| RESILIENCE@WORK (RAW) MINDFULNESS PROGRAM

INITIATIVE DRIVER – At Fire and Rescue NSW (FRNSW), the need to be prepared for any challenge faced, meant that leading edge practices to proactively build resilience in both our firefighters and support personnel must be adopted.

AIM – To meet this commitment and help combat psychological stressors arising from work and personal lives, University of NSW's Workplace Mental Health Research Program and the Black Dog Institute along with Fire and Rescue NSW, recently completed a study to examine whether an online mindfulness-based resilience program could boost psychological resilience in high-risk workers (firefighters).

FEATURES – The Resilience@Work (RAW) Mindfulness Program originally contained 6 sessions which were 20 minutes in length.

The program teaches firefighters a set of core skills and strategies derived from the principles theoretically underpinning acceptance and commitment therapy (ACT), mindfulness based cognitive therapy (MBCT), mindfulness based stress reduction (MBSR) and compassion focused therapy (CFT). The program was customised for FRNSW and now comprises 10 sessions of 15 minutes available on smartphone, tablet or PC.

OUTCOMES – The study, undertaken across 24 FRNSW stations and published in the Journal of Medical Internet Research, found online resilience training via the RAW Mindfulness Program significantly increased levels of psychological resilience and successfully boosted mindfulness, optimism, healthy coping strategies and the likelihood of a firefighter to seek out other support services.

| USING EVIDENCE TO INFORM FIRE AND EMERGENCY NEW ZEALAND'S RECRUITMENT APPROACH

INITIATIVE DRIVER – Creating a diverse and highly skilled workforce is a key aim of Fire and Emergency New Zealand (FENZ). At present, FENZ's workforce does not reflect the population it serves.

AIM – To use evidence in the development of the recruitment strategy and to test the effectiveness of changes in recruitment practices.

FEATURES – The development of FENZ's recruitment strategy and practices are being informed by key pieces of research:

- > Career perceptions – this qualitative project explored young people's perceptions of the firefighter role
- > Career recruitment – as part of a larger study exploring the process of identifying as a firefighter, FENZ collected data on participant perceptions of the recruitment process
- > Interventions that work for recruiting diversity – this evidence review identifies interventions that have been successful in increasing the diversity of new recruits.

OUTCOMES – During the last and current national recruitment round, FENZ used this evidence to plan the attraction campaigns to better target people from the under-represented groups. This resulted in the highest ever number of applications from women. FENZ also had an increase in applications from those who identified as Māori, Pacific Island and Asian.

'The research confirmed we needed to change our campaigns to attract a more diverse group of applicants. It gave us confidence and helped us understand what platforms to use to connect with our target demographic, as well as how to create interest and "put it on the radar" of the under-represented groups currently within FENZ.'

— Rochelle Martin, National Recruitment Manager

| CENTRE OF EXCELLENCE FOR PRESCRIBED BURNING

INITIATIVE DRIVER – The Centre of Excellence for Prescribed Burning (Centre of Excellence) is an initiative of the Australasian Fire and Emergency Service Authorities Council (AFAC) and the Forest Fire Management Group (FFMG), who recognised the need to bring together prescribed burning practitioners across Australia to derive a set of national principles and frameworks for prescribed burning. Between 2011 and 2017, the groups worked together to deliver the National Burning Project, which produced a suite of guidelines, principles and frameworks applicable to all agencies engaged in planning and implementation of prescribed burns.

During the National Burning Project, the Centre of Excellence emerged as a concept that would help to implement the principles and continue to foster cross-border relationships that promote collaboration towards a holistic and consistent approach to prescribed burning across Australia and New Zealand.

AIM – The Centre of Excellence leads and supports the development of innovative, evidence-based principles, policies, programs and practice for prescribed fire.

FEATURES –

- Management and development of prescribed burning knowledge.
- Implementing and supporting capability development initiatives for prescribed burners.
- Promoting leading prescribed burning research and practice to a growing audience.

OUTCOMES – The Australian Disaster Resilience Knowledge Hub, housing the national guidelines and principles, has been visited over 5,000 times. The Centre of Excellence runs regular webinars covering current research and practice, viewed by over 1700 people.

The Centre of Excellence is also facilitating engagement across the sector through an Indigenous Burning Network, workshops, clinics, field trips and social media that encourage sharing of best practice and research amongst practitioners.



The Centre of Excellence supports a consistent approach to prescribed burning in Australia and New Zealand. Photo: Centre of Excellence for Prescribed Burning

**Copyright © 2019, Australasian Fire and Emergency
Service Authorities Council**

All rights reserved. Copyright in this publication is subject to the operation of the Copyright Act 1968 and its subsequent amendments. Any material contained in this document can be reproduced, providing the source is acknowledged and is not used for any commercialisation purpose whatsoever without the permission of the copyright owner.



AFAC is the National Council for fire and emergency services

Level 1, 340 Albert Street, East Melbourne VIC 3002

P +61 3 9419 2388

E afac@afac.com.au

www.afac.com.au