



Summary South Australia's 2019-20 Bushfire Season

Independent review



CITATION

Queensland Fire & Biodiversity Consortium (2021), *Summary South Australia's 2019-20 Bushfire Season*, Healthy Land & Water

About Healthy Land & Water

Healthy Land & Water is the **peak environmental group** for South East Queensland. For over 20 years, it has been dedicated to investing in and leading initiatives to **build the prosperity, liveability, and sustainability of our 'future region'**.

We are experts in research, monitoring, evaluation and project management. Our team has led many thousands of projects to restore waterways and landscapes, improve native habitats, manage weeds, protect native species, inform policy and educate communities on the best ways to improve and protect the environment for future generations.

Working in partnership with Traditional Owners, government, private industry, utilities and the community, Healthy Land & Water delivers innovative and science-based solutions to challenges affecting the environment. The combination of scientific expertise and on-ground management works to deliver Healthy Land and Water's mission to **lead and connect through science and actions that will preserve and enhance our natural assets and support resilient regions long into the future.**

About the Queensland Fire and Biodiversity Consortium

Healthy Land & Water's *Queensland Fire and Biodiversity Consortium* is a network of land managers and stakeholders devoted to providing a coordinated response and best-practice recommendations for fire management, fire ecology and the conservation of biodiversity in the state of Queensland through education, community engagement and applied research.

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Traditional Owner Acknowledgement

We acknowledge that the place we now live in has been nurtured by Australia's First Peoples for tens of thousands of years. We believe the spiritual, cultural and physical consciousness gained through this custodianship is vital to maintaining the future of our region.

Commitment to our Reconciliation Action Plan

Reconciliation Australia has officially endorsed Healthy Land & Water's comprehensive [Reconciliation Action Plan \(RAP\)](#), which is a practical guide to how the organisation will deliver meaningful changes across the business in support of reconciliation.

Contact details

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List of Acronyms

AIIMS – Australasian Inter Service Incident Management Systems
AVL – Automatic Vehicle Location
BMAPs – Bushfire Management Area Plans
BOM – Bureau of Meteorology
BOPS – Burn Over Protection Systems
CFS – Country Fire Service
DEW – Department of Environment and Water
EM Agencies– Environmental Management Agencies
EM Act - Environmental Management Act?
FDS – Fire Danger Season
FFUs – Farm Firefighting Units
FSA – Forestry South Australia
GRN – Government Radio Network
IMTs – Incident Management Teams
MFS – Metropolitan Fire Service
PPE – Personal Protective Equipment
PPRR – Planning preparation Response and Recovery
RDA – Rapid Damage Assessment
SAFECOM – South Australian Fire and Emergency Services Commission
SAPOL – South Australian Police
SBMP – State Bushfire Management Plan
SEC - State Emergency Centre
SES – State Emergency Services

1 Introduction

The intensity of the South Australian summer of 2019-20 was unprecedented, resulting in a series of devastating bushfires throughout many parts of the state. Fires at Duck Ponds, Port Lincoln (November 2019); Yorketown, Yorke Peninsula (Nov 2019); Cudlee Creek, Adelaide Hills (Dec 2019); Kangaroo Island (Dec 2019, Jan 2020) Keilira, South East (Dec 2019); and Miltalie, Eastern Eyre Peninsula (Dec 2019), tested firefighters around the clock. Losses attributed to the fires included three human lives, 196 homes, 660 vehicles and 68,000 livestock as well as \$200 million of agricultural production. About 280,000 ha of land was burnt and several National Parks were totally or partially burnt.

An independent review of the circumstances surrounding this summer of fires was announced by the South Australian Premier, the Hon. Steven Marshall MP, and Minister for Police and Emergency Services, the Hon. Corey Wingard MP, on 28 January 2020.

Due to COVID-19, the review was forced to cancel its planned public ‘town hall’ consultations but gathered information through targeted interviews and online engagement. While the review did not get a chance to collect information directly from those affected communities’ first-hand, the information feeding into it was comprehensive. It included 576 submissions, extensive online engagement through the YourSay website, and around 60 detailed interviews. Most public focus was on prevention and preparedness as illustrated in Figure 1. A breakdown of the top ten themes raised in the submissions in more detail is illustrated in Figure 2.

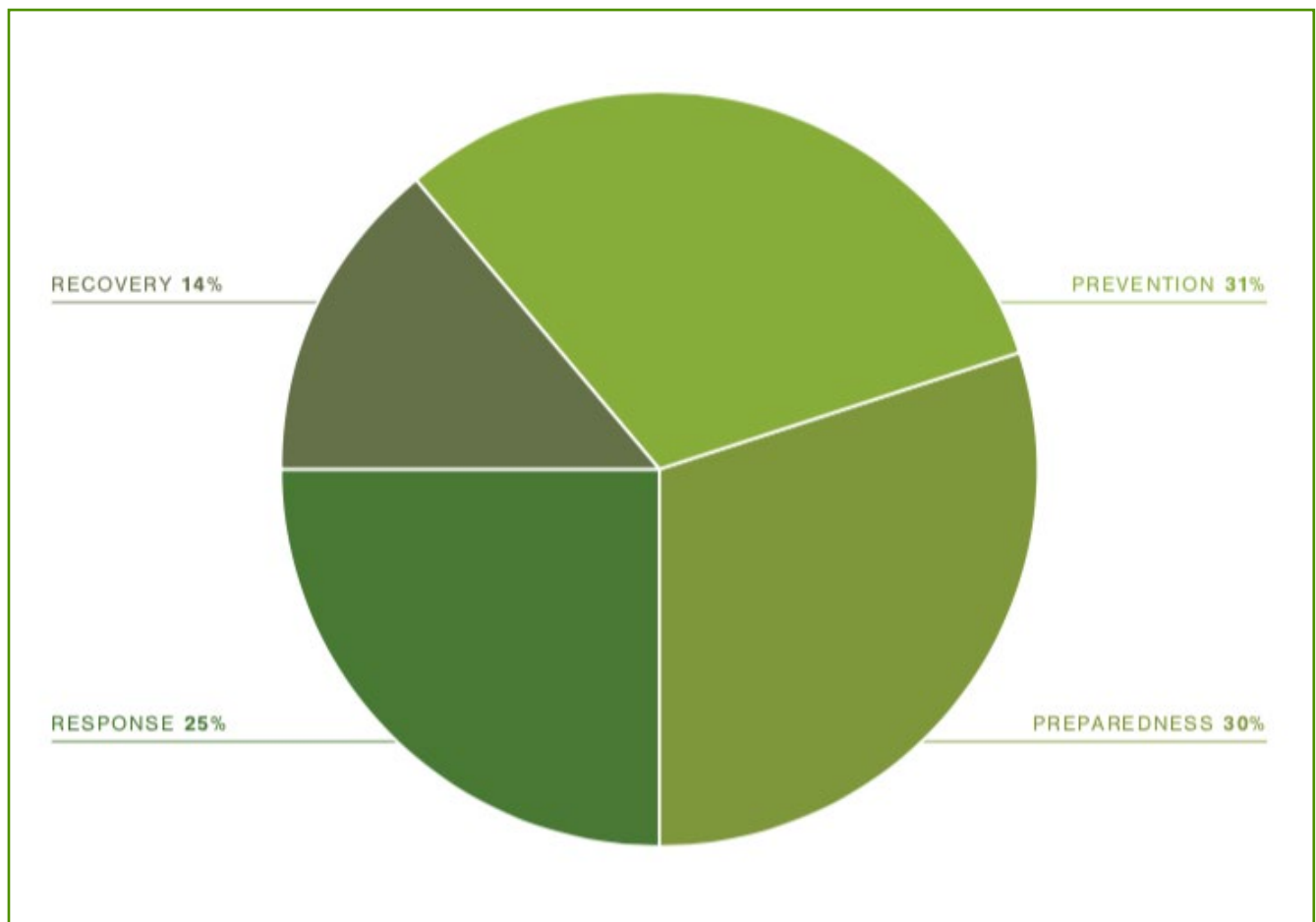


Fig. 1. Public submissions by Planning; Preparation; Response and Recovery (PPRR) theme (p. 11).

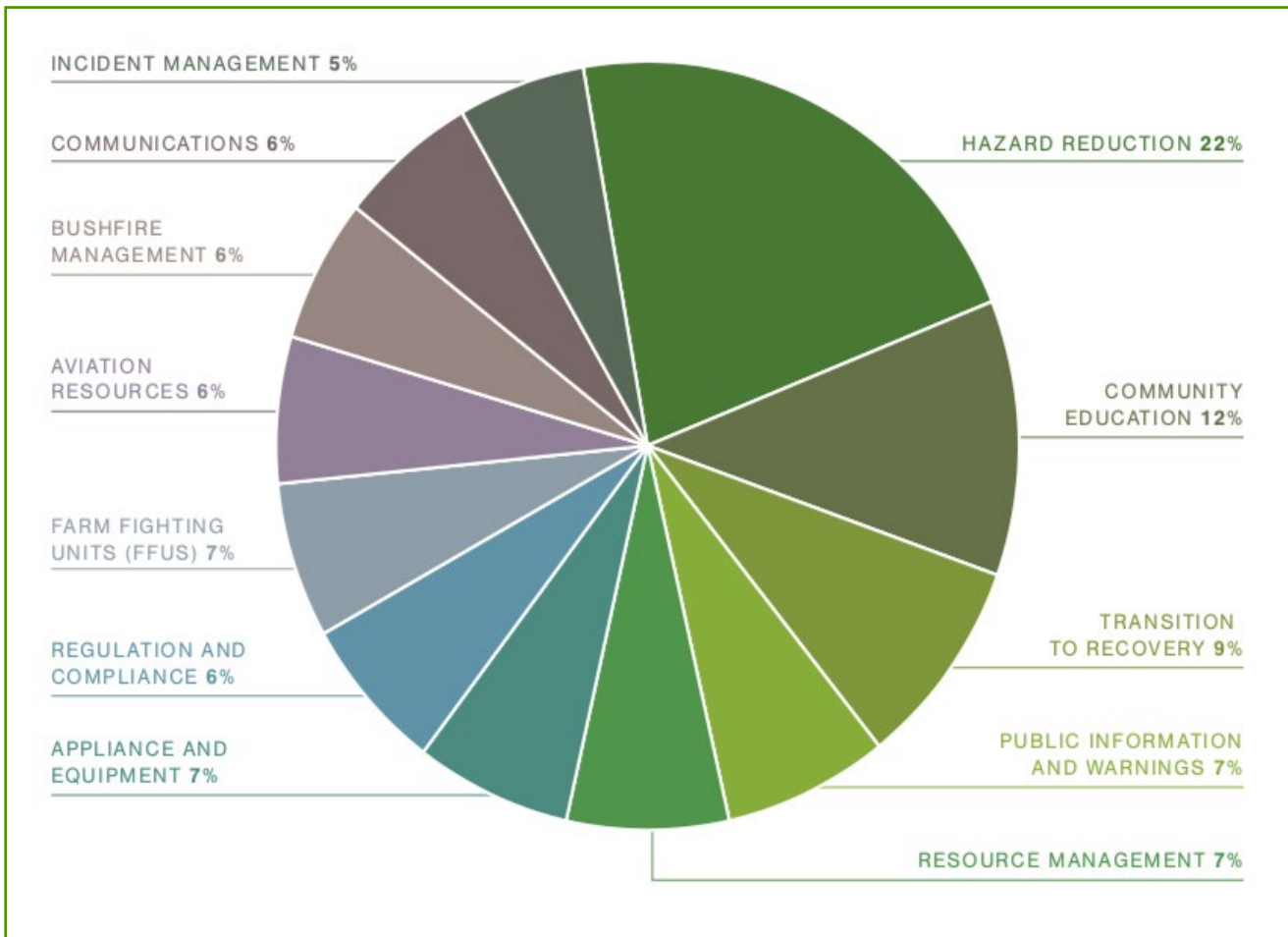


Fig. 2. Top ten themes raised with the review based on Terms of Reference (p.11).

The review adopted a three pronged approach around the key questions: 'what worked?'; 'what did not work?' and 'what can we fix before the next bushfire season?' (p. 3, 4).

The independent review reflects a desire to produce evidence-based, practical recommendations to guide policy makers in managing future fires. It focuses on the Australian Emergency Management principles: Planning; Preparation; Response and Recovery (PPRR) (p. 7).

This report summaries the key findings and additional points of relevance for each chapter based on the PPRR principles, with accompanying page numbers to the original review. Please see the [Independent Review into South Australia's 2019-20 Bushfire Season](#) for a full list of findings (Appendix 5, p.114) and list of recommendations (Appendix 6, p. 118).

2 Common issues

An analysis of the Planning; Preparation; Response and Recovery (PPRR) and data around the three review questions identified a range of common issues at each stage of the emergency.

Key findings summary and points of relevance	Page 31
<p>Extreme weather</p> <p>While many have asserted that greater hazard reduction would have mitigated the 2019-20 South Australian bushfires, expert opinion suggests that the weather conditions were so extreme that no level of hazard reduction would have prevented the fires.</p> <p>p. 4; p. 37. More detailed research is needed – especially to help predict pyro convection.</p>	
<p>Overnight conditions did not provide the usual respite</p> <p>In fact, firefighters and decision makers faced some of their worst conditions at night.</p> <p>p. 34. Fires burnt with at least as much ferocity at night as they did during daylight. If these types of conditions are now normal, they will force a new paradigm managing resources such as volunteers to contain bushfires overnight.</p>	
<p>24-hour State Emergency Centre (SEC) decision making</p> <p>With unprecedented conditions bringing no relief overnight, the usual strategy of having lower-level staff in the SEC at night hampered its operations as some of these staff were not sufficiently senior to make decisions on behalf of their agency.</p> <p>p. 40. Senior staff who can speak or make decisions on behalf of their organisation need to be present in the SEC 24/7.</p>	
<p>Review recommendations not implemented</p> <p>South Australia has had 15 fire reviews since 1983 and many of the recommendations – particularly of later reviews – have not been implemented as expected.</p>	
<p>South Australian Fire and Emergency Services Commission (SAFECOM) mission-creep</p> <p>The review heard concerns about SAFECOM overstepping its legislated role and function.</p>	
<p>SAFECOM Board conventions</p> <p>Unlike other board conventions, the SAFECOM Chief Executive also chairs the SAFECOM Board raising questions about why this arrangement is in place and whether it delivers the best outcomes for emergency services agencies.</p>	
<p>State emergency planning arrangements</p> <p>The review observed that the state emergency planning framework is effective if it is followed and agencies do not improvise or cut corners but it is important that people fulfil the roles outlined in the <i>Emergency Management Act 2004</i>.</p>	

3 Prevention

A number of issues surrounding bushfire management structure, operations and resourcing have impeded work on prevention.

Key findings summary and points of relevance

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Bushfire management framework

This framework has been compromised because the 2009 amendments to the *Fire and Emergency Services Act 2005* relating to prevention and mitigation have not been fully implemented.

Reporting requirements for the State Bushfire Management Committee

The reporting and administrative arrangements for this committee do not fit its stature and role. Such a committee should have a statutory requirement to report annually to State Parliament and should be required to incorporate an appropriate level of expertise and authority. It needs additional administrative resourcing with dedicated high-level executive staff.

State Bushfire Management Plan

The *State Bushfire Management Plan* is intended to be a strategic coordination document which provides guidance on all elements of bushfire management across the PPRR spectrum, but it has not been presented to the Minister and has no lawful effect. The review believes it needs to be redeveloped in accordance with the requirements of the *Fire and Emergency Services Act 2005* as a matter of urgency.

Bushfire management planning process

The bushfire management planning process is inconsistent and not integrated across agencies, and risk assessments in *Bushfire Management Area Plans* (BMAPs) are inconsistent with international standards. Accountability for mitigating risks is also unclear. The BMAP process and monitoring systems should be redeveloped with clear lines of accountability and resourced appropriately.

Spatial tool

The Country Fire Service (CFS) needs the latest technology including spatial modelling tools and online reporting to ensure that the bushfire planning and management processes are agile and responsive. Communities also need to be involved in the development of BMAPs to better understand bushfire risks in their area.

Data for risk intelligence

Data for risk intelligence (particularly operational information) does not flow freely and automatically and this impedes incident management and state coordination. Improved systems are needed for sharing data across agencies along with a whole of government approach to data management. Real time data should also be made available to the public through a central source.

Hazard management

Approval processes for fuel reduction, particularly in managing native vegetation or prescribed burning, are confusing and poorly understood by the community. Hazard reduction compliance is patchy and lacks standardisation. Community awareness programs and increased CFS capacity for managing hazard reduction is recommended, along with guidelines and resourcing to assist in managing compliance. Fuel reduction strategies such as prescribed burning, are incorrectly viewed as a panacea for reducing the risk of bushfire – much depends on the context. It should also be noted that, for greatest effect, prescribed burns must occur across public and private land.

p. 53. The Department of Environment and Water (DEW)/ Country Fire Service (CFS) Burning on Private Land Project is an excellent mechanism for providing support in the peri-urban areas but it needs to be significantly expanded into rural areas by building operational capability of CFS volunteers and landholders.

p. 56. For greatest risk reduction, prescribed burn programs must be applied at a landscape scale across both publicly and privately owned land... the South Australian State Government commenced the 'Burning on Private Land Project' in 2016 (and it) ... has been well received with over 90% of landowners approached approving burns on their land.

4 Preparedness

The evidence around the preparedness phase points to a need for wide-ranging investment including:

Key findings summary and additional points of interest

Page 60

Public information

Public information on preventable fires and high-risk activities; safe evacuation, what to bring to *Safer Places* and *Places of Last Resort*.

p. 64. A need for continued investment in the CFS's existing community engagement and education programs. These programs should be targeted via the BMAP process.

Modernising the vehicle fleet

Modernising vehicle fleet, particularly with AVL capability – Vehicles also need Burnover Protection Systems (BOPS).

p. 70. South Australia's firefighting fleet does not have Automatic Vehicle Location (AVL) capabilities which is considered a non-negotiable safety measure that should be implemented.

Real-time lightning tracking and rapid response

Real-time lightning tracking and rapid response with pre-planning for aerial reconnaissance and suppression and specialist remote ground crews for inaccessible terrain where lightning is forecast.

Appropriate facilities for Incident Management Teams (IMTs)

p. 64. Facilities for IMTs in a campaign event do not meet accepted guidelines and impede the teams' effectiveness in delivering SEC directions and operational demands.

p. 64. The CFS should receive resourcing and funding to establish several strategically located, all-hazard operational management facilities that can effectively accommodate an IMT and Zone Emergency Support Team (ZEST).

Interoperable systems and processes

A whole of government incident management system, or information sharing across Emergency Service agencies, VHF radios for agencies and contractors to improve communications with the fireground.

p. 81. Cooperative firefighting in South Australia could be improved by standard interoperable equipment and procedures across agencies.

p. 81. This review notes the need to invest in Very High Frequency (VHF) radios for the Metropolitan Fire Service (MFS) and in handheld VHF radios for contractors to support communications from the fireground when the Government Radio Network (GRN) is congested.

p. 82. All agencies should run a GRN radio operation refresher course at the start of the fire danger season to eliminate issues caused by human error.

Intelligence about infrastructure assets

Asset protection priorities and post fire impact damage assessment.

p. 67. Asset protection priorities must be made clear to reduce the loss of critical infrastructure such as telephone towers, with memoranda of understanding (MOUs) between Environmental Management agencies and providers.

Policies about deploying resources

No formal policy exists in relation to interstate deployments. Such a policy should be explored to protect the welfare of firefighters.

5 Response

South Australia needs to be prepared for longer, more dangerous fire seasons with accommodation for visiting firefighters and additional aerial firefighting equipment.

Key findings summary and points of relevance

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Farm Firefighting Units (FFU)

Fire Fighting Units (FFUs) are a valuable resource and those actively engaged in firefighting need to be accounted for and appropriately directed, possibly using Australasian Inter Service Incident Management Systems.

(AllMS). A policy is needed around standards of equipment and Personal Protective Equipment (PPE) carried by these units.

Crew accommodation

There is insufficient space to accommodate the number of responders brought in to deal with campaign fires which needs to be addressed for future emergencies.

Aerial capability

South Australia should boost its own aerial mapping and line scanning capability so that it does not need to rely on aircraft from other states which are not always available. In addition, the review heard that there is a potential gap in leasing northern hemisphere aircraft for aerial firefighting as our summers get longer, drier, and hotter with more fires already starting outside the traditional Fire Danger Season (FDS).

p. 88. Effective mapping and line scanning is critical during a bushfire and this capability should be finalised and in place before the start of the next FDS.

p. 90. The important factor will be having suitable aircraft available to respond quickly and effectively around the state when most needed.

SEC capability

An oversight in sharing fire prediction maps during the fire season resulted in the SEC not always having access to all of the available information. Arrangements should be made with the Bureau of Meteorology (BoM) to provide expert advice on fire risks to support SEC decisions. All agencies generally agree that the SEC operated effectively when activated but it was difficult to staff overnight with experienced personnel. Given that some of the fires intensified overnight, this was a problem.

p. 90. Public-facing maps need to be created that make the current location, speed, and predicted impact zone of the fire truly clear.

Plant and equipment

Having arrangements in place to access equipment such as water tankers or bulldozers owned by businesses or local government on high fire risk days or in a fire incident has been suggested as a useful measure. However, devising an arrangement to appropriately compensate the owners remains a question. Equally, measures are required to ensure the safety of operators.

Public information and warnings

Emergency messaging was not clearly understood during the 2019-20 bushfires. The 'AlertSA' app and the CFS website were not as effective as intended in providing community information about fire location and risk and there was some confusion about maps. The community lacked information about the direction and estimated time of the fire arriving.

p. 93. The review concludes that value adding by having a senior experienced CFS officer to translate the technical instructions to 'plain English' will help the community understand what it has to do.

p. 93. Incident Management Teams (IMTs) and fireground leaders need access to people with local knowledge including suitably trained and qualified forest industry professionals to assist with decision making. P 4. "those with local knowledge excelled and helped with decision making in what was a fast moving dynamic situation".

6 Recovery

The scale of the fires and their duration created particular difficulties in providing appropriate support to victims and there have been far-reaching impacts on the welfare of people and wildlife.

Key findings summary and points of relevance

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Transition

The transition from operational response to recovery was considered by most stakeholders to be too slow to effectively help the victims of the bushfires.

Damage assessment

While there is strong demand for Rapid Damage Assessment (RDA), the processes involved cannot keep up and the RDA, it is not providing a level of accuracy or consistency to aid decision makers or government officials. This has resulted in the slower coordination of recovery activities.

Welfare

As expected, the psychological impacts of the 2019-20 fire season on fire and incident management crews resulted in the highest recorded levels since 2005 of access to psychological support services for fatigue, stress and trauma, and critical incident stress responses. The number of burnovers was the highest ever recorded, adding to the stress and trauma experienced by fire crews.

Fire victims are also likely to experience trauma over a prolonged period. Hence the review urges the provision of ongoing adequate mental health and other supports to firefighters and bushfire affected communities to meet an expected increase in demand for services.

The State Recovery Office is recording community experiences to help the recovery process and prepare the community for the next disaster through sharing experiences, both positive and negative, and there is a national project to collect stories about the 2019-20 bushfires to form part of Australia's historical record.



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