

# Community Connections

As the fire season of 2019/2020 revealed all too clearly, the impacts of bushfires on Australian communities can be devastating. Several factors are increasing the risk of bushfire-related disasters in Australia, including population growth in bushfire-prone areas and the impacts of a heating climate. In this context, it is important to consider ways of building community resilience to bushfires.

This is particularly important within the 'shared responsibility' disaster management model adopted by Australian governments. Under this model, protecting Australians from disasters is not solely the responsibility of the government, or of emergency management organisations, but is shared across the community.

Past research has shown that cohesive communities, with well-established communication and cooperation networks, are often better prepared for bushfires and have the capacity to bounce back more quickly after disaster. Such communities are less reliant on external support, are better able to share knowledge, encourage and facilitate preparation activities more effectively, and are more supportive of each other during challenging recovery processes.

So, what does a cohesive community look like? And how do community networks enhance resilience? In this report, we examine how a community in southern New South Wales (NSW) used community connections to build bushfire resilience.

On 4th January 2020, Kangaroo Valley was hit by the Currowan Fire – one of many devastating bushfires burning during what is now known as Australia's Black Summer. Researchers at the University of Wollongong subsequently conducted 47

interviews with Kangaroo Valley residents, emergency service volunteers, local service providers, healthcare workers and business owners.



*Kangaroo Valley (photo – Dave Macquart).*

Through these interviews, it became clear that strong community connections operate in Kangaroo Valley across all four phases of the disaster cycle: mitigation, preparation, response, and recovery (see Figure 1). These connections were critical to how the region met the challenges of a damaging bushfire. Nevertheless, Kangaroo Valley, like most communities, had its points of contention and communication challenges before, during, and after the Currowan Fire.

This *Bushfire Research Brief* highlights some of the benefits and challenges to developing and maintaining community cohesiveness in disaster-impacted regions. We specifically focus on formal and informal community networks initiated, managed, and conducted by residents of Kangaroo Valley. Our findings are organised according to how community connections operated within each phase of the disaster cycle.

Because our study was focused primarily on the activities and perceptions of the local community, we do not describe the important mitigation and response work undertaken by government-funded organisations such as the Rural Fire Service (RFS), NSW National Parks and Wildlife

Service (NPWS), and the NSW State Emergency Service (SES). However, many of the volunteers and staff of these organisations were local community

members who actively participated in the networks we have examined. These people have therefore been included as highly important community information sources.

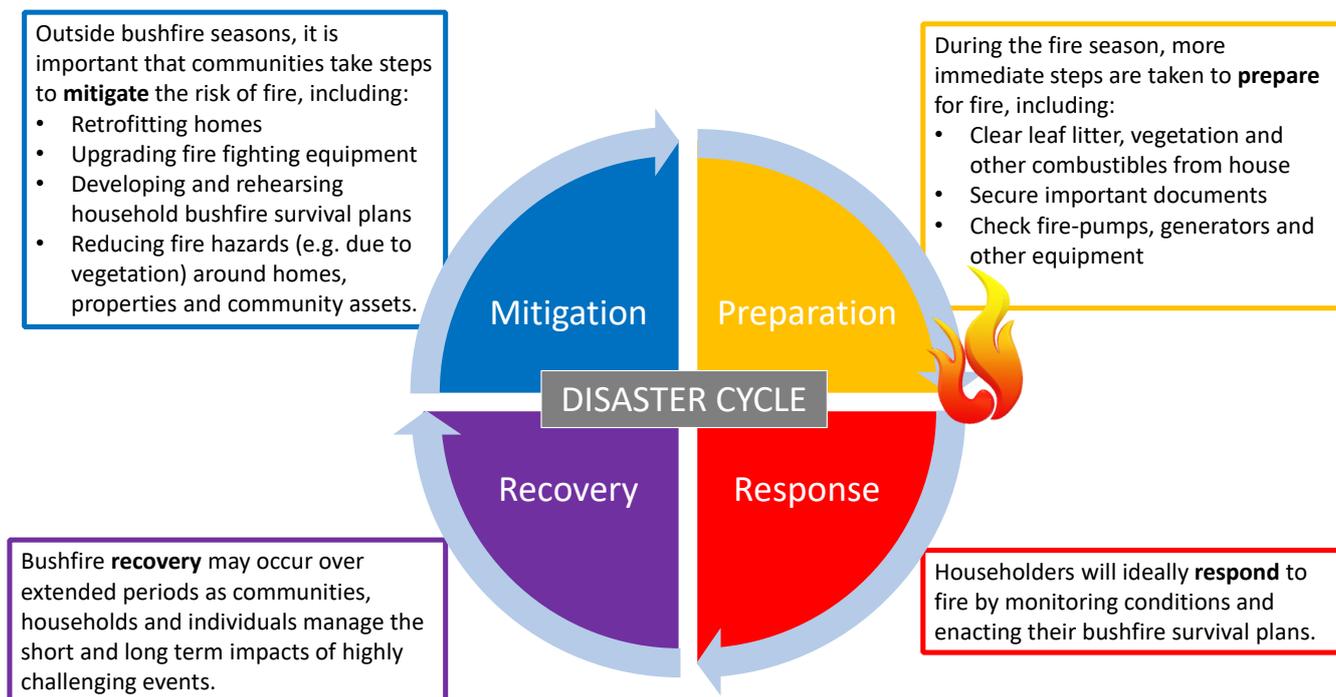


Figure 1: Phases of the disaster cycle.

## Kangaroo Valley and the Currowan Fire

Located two hours drive south-west of Sydney, Kangaroo Valley has a population of around 900 people in 500 households. It is a popular tourist destination, which increases the population substantially during summer months.

The Currowan Fire began on 26th November 2019 more than 100 km south of Kangaroo Valley. It would eventually burn for 74 days across 320,385 hectares. The fire-front reached Kangaroo Valley during the afternoon of 4th January 2020. A weather station in Nowra, 24 km away, measured air

temperatures of 43°C and wind speeds over 55 km/h that day, but residents described much stronger local winds and higher temperatures.

The fire destroyed approximately 48 homes, representing 10% of homes in Kangaroo Valley. In addition, over ten holiday cabins and many tens of sheds were destroyed, along with equipment and extensive infrastructure on many properties. Many thousands of animals died, including livestock.



Kangaroo Valley Main Street (photo – Paul Cooper).

# Mitigation

All participants in our research were aware they were living in a bushfire-prone area before the arrival of the Currowan Fire. Many perceived the fire risk as having increased in recent years, as more heat and less rain has made the environment in Kangaroo Valley drier. In response, many residents had taken important steps to mitigate bushfire risk, both on their own properties and across the community.

## Getting to know your neighbours

Many residents recognised that developing friendly connections with neighbours and other community members can be a form of mitigation in and of itself.

As we will see below, knowing who your neighbours are, having their contact details, and being able to offer or request support can be enormously helpful through a disaster.

*“Because we're few and far between here. There's not that many people around. We've always made a point of knowing our neighbours and being on good terms with them.”*

Even community activities that are not specifically focussed on bushfires (e.g. neighbourhood holiday parties, school events or agricultural shows) can help create the kinds of community networks that build resilience. These activities are also opportunities for residents to share bushfire knowledge or to seek advice.

## Kangaroo Valley Community Bushfire Committee

More formally, the work of the Kangaroo Valley Community Bushfire Committee (KVCBC) provides a valuable example of residents building resilience within their community.

The KVCBC was established in 2018 by a group of community members concerned

about the likelihood of bushfire. KVCBC members have a variety of backgrounds and experiences that have proved valuable to their work in risk assessment and community organisation, including as RFS volunteers, local trades people, academic researchers, logistics specialists and lawyers.

KVCBC undertook an analysis of bushfire plans for the local government area and determined that these were too general to address the specific geography and local infrastructure/assets of Kangaroo Valley. They then developed a discussion paper identifying specific vulnerabilities to critical infrastructure, and began discussions with local government and emergency management organisations, including the RFS, to advocate for changes to local disaster plans.

These efforts created new networks of information sharing between the community, local government, and emergency services. Drawing on models developed in other bushfire-prone regions, KVCBC also instituted a multi-tiered approach to community organisation in Kangaroo Valley.

## Neighbourhood Groups

In December 2018 the first 'Bushfire-Ready Neighbourhood Groups' were established in Kangaroo Valley. These first groups were established in the Upper Kangaroo River area as a result of a community meeting and a 'grass roots up' participatory process. At the community meeting the location and boundaries of nine neighbourhood groups were agreed, each with a neighbourhood coordinator and deputy. A significant number of documents, maps, knowledge and other resources were then developed by members of the community over the course of 2019 and shared with other groups that were subsequently established in the wider Kangaroo Valley community.

## Property mitigation

Some community members had also taken significant steps over many years to increase the resilience of their properties. For some, this began with the building of bushfire-resilient homes, often to meet council, National Construction Code (NCC), and RFS development requirements. For those with older homes, this meant undertaking retrofitting measures (see our separate *Bushfire Research Brief*).

An important step taken by a smaller number of households was to 'Research and Rehearse'. This included carrying out detailed research on building materials, fire safety equipment and facilities (including bunkers and sprinklers), fire behaviour, and the necessary physical and mental capacity to stay and defend a property or to evacuate safely. Importantly, some households rehearsed, or role-played, how they would respond to the various stages of the impact of a fire.

Undertaking such activities outside the fire season ensured they were done slowly and calmly, without the anxiety of a high-risk fire season or an approaching fire. Leading into the preparation phase, the knowledge and skills of these residents was frequently shared among friends and neighbours through formal and informal communication networks.

*"The trouble is, that's when fires happen. It happens in times when you're kind of almost the least capable of dealing with it. I suppose that's why you really need plans, isn't it?"*

## Challenges

In developing a volunteer-run community group such as KVCBC, there are several important issues to address, including:

- Clearly defining accountabilities and communication pathways between the committee, government (including local and state government) and official emergency management bodies.

Within the 'shared responsibility' model, responsibilities are often ill-defined, potentially leading to confusion over roles, unresponsiveness between parties, and conflict.

- The volunteer nature of KVCBC opens it up to challenges that government-funded agencies are less likely to face. This includes safeguarding the long-term viability of the group. As committee members move away from the region or step down from their roles, succession plans are necessary to ensure the group's work will continue.
- Equally, such groups are dependent on the presence of community members with appropriate skills, and with the capacity to devote substantial time to the group. This may not be possible in all communities.

Other challenges to community connectedness and mitigation include:

- Some mitigation measures have the potential to cause conflict in communities. For example, Kangaroo Valley community members continue to hold differing views on whether adequate levels of hazard reduction burning had been completed before the 2019/2020 fire season.
- All communities are comprised of diverse groups with differing needs, agendas, or viewpoints. In Kangaroo Valley, for example, some participants reported tensions between permanent residents and 'weekenders'. Effective communication requires managing connections between diverse groups that may not always agree or may not share the same interests.
- Without the direct threat of a fire, it can often be difficult to encourage people to devote time and resources to fire mitigation. Again, opportunities to share information and practical advice among the community can motivate more community members to address future fire risk outside the fire season.

# Preparation

Kangaroo Valley residents entered the 2019/2020 fire season on high alert, aware that the extremely dry conditions and hot weather were creating significant risk of fire. For many, this prompted the hard work of preparing properties.

## Preparation

activities escalated in late November 2019 as residents became aware of the Currowan Fire burning south of the Valley in the Morton National Park. The fire progressed north throughout December, giving Kangaroo Valley residents an unusually long time to prepare for its likely impact.

*We knew there was a National Park between us and where the fire started, so we knew it was a matter of time. ... We knew that we were going to get that fire. We started prepping for it.*

All participants in our research carried out some preparation activities on their properties, with many undertaking substantial work that included do-it-yourself retrofitting of their homes, clearing of vegetation close to homes, and installation of sprinkler systems.

## Searching for information and resources

As it became increasingly clear that the Currowan fire would likely hit Kangaroo Valley, many residents became concerned about their ability to adequately prepare in a safe and effective manner. Particularly for those with no previous bushfire experience, this prompted a search for as much information as possible about the likely impacts of the fire and how to address them. It also included the search for necessary equipment, including difficulties finding fire pumps, hoses, and protective clothing.

Residents drew on a range of external information sources, including internet

research, news media reporting, and government advice.

Advice shared via community networks was also seen as highly important, including from local emergency services volunteers, business owners, friends, and neighbours. Figure 2 traces some of the significant flows of information between community groups within Kangaroo Valley. Often, this information was converted into direct action. For example, several participants told us that their bushfire survival plans had been somewhat vague, or something they had discussed but never committed to paper. They remembered being told by local RFS volunteers, “If you don’t have a written plan, you don’t have a plan.”

While the KVCBC did not advise residents on decisions to stay and defend or leave, or on specific preparation actions on their properties, members of the committee did share examples of their own bushfire survival plans. This gave some residents valuable suggestions on what should be included, and the granular detail that good bushfire survival plans require.

## Stay and Defend or Leave?

Significantly, information shared via the RFS, members of the local Brigade, and by community-based networks led several participants to change their bushfire survival plans in the weeks before the fire.

At community meetings and in discussions with residents, RFS volunteers and others stressed that the expected fire would be of extreme intensity, would require significant physical and mental capacity to fight, and would mean that many properties were simply not defensible. This led several participants who had been considering staying and defending to decide that their safest option was to leave.

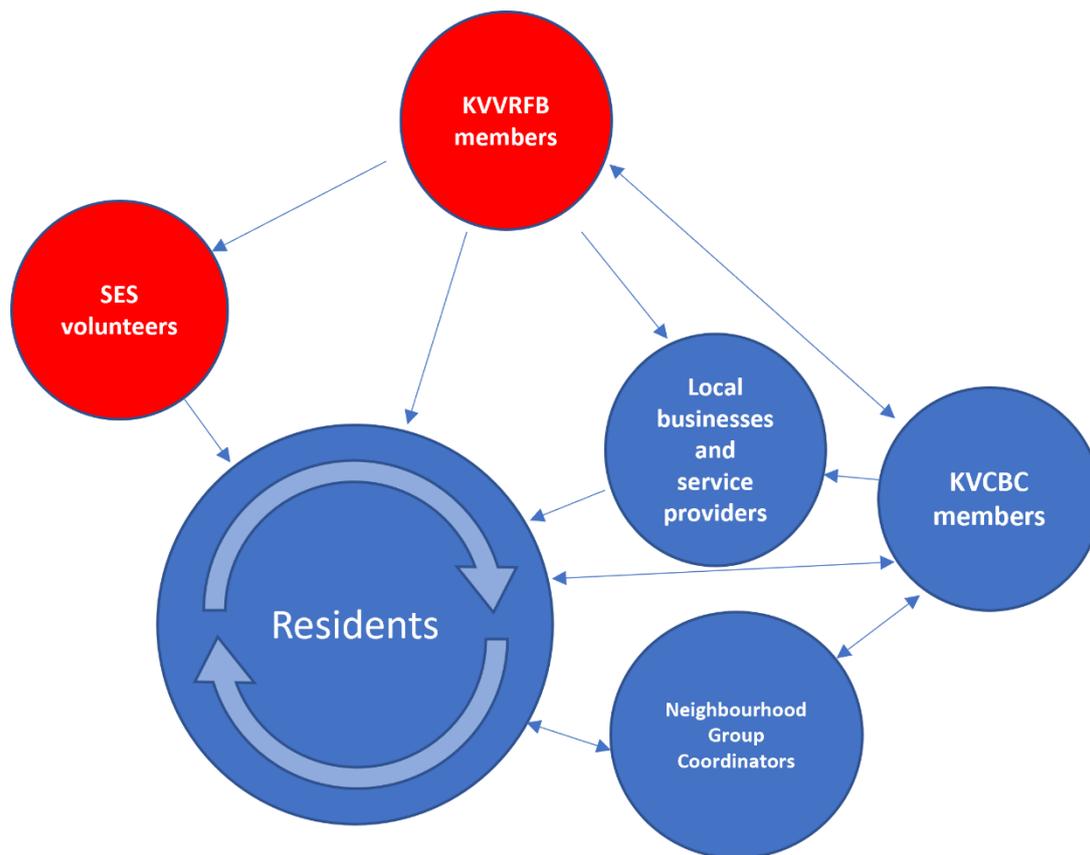


Figure 2: Bushfire preparedness information pathways between groups in Kangaroo Valley (red denotes emergency management organisations).

## Neighbourhood Groups

The ‘Bushfire-Ready Neighbourhood Groups’ proved to be a valuable pathway for sharing information and providing support in the mitigation, preparation and response phases leading up to and following the Currowan Fire.

The small clusters of around ten or more households that formed themselves into ‘Bushfire-Ready Neighbourhood Groups’ each had a co-ordinator who created a contact list and kept in contact via WhatsApp, email, or other communication method.

The co-ordinator was able to disseminate information and collect data on which households intended to stay-and-defend and which were leaving prior to the arrival of the fire. This data was provided to the local Brigade and thence to fire crews from outside the Valley.

Neighbourhood group members were also able to communicate with each other, providing updated information and offering or requesting assistance.

*“We’ve got a WhatsApp group in our street. And that was great, because different people knew different things. And different people were watching different things.”*

These groups not only created information pathways, but also assured members that they were not alone through a highly stressful and potentially traumatic experience.

The coordinators of some groups, notably those in the Upper Kangaroo River area, purchased UHF radios for communication in the event of a telecommunications blackout.

## Challenges

Although local community information networks were highly valuable in the preparation phase, providing information or advice to fellow residents was also a challenging responsibility that carried its own stresses.

Local service providers and shop owners, for example, found themselves unexpectedly operating as informal information hubs, being asked by anxious and, at times, underprepared community members or visitors to the area to advise on necessary actions.

This challenge suggests:

- The continued need for greater bushfire education among bushfire-prone communities outside the fire season, so that residents are not anxiously trying to locate information at times of high-risk.
- The need for greater understanding of the flows of information within communities, and how emergency management organisations can assist known community centres likely to become ad-hoc information hubs during disasters.



*Devastated landscape around Kangaroo Valley – previously covered with thick Eucalypt forest and heathland (photo – Dave Macquart).*

# Response

By the time the Currowan Fire hit Kangaroo Valley on January 4th, many residents had left the area. Of the households interviewed, 73% either stayed with friends and family in other areas of Southern NSW or travelled to Sydney. Twenty-six per cent stayed in Kangaroo Valley. Of those: one participant sheltered at the Kangaroo Valley Showgrounds, which was a designated Neighbourhood Safer Place; one sheltered with a neighbour who had decided to stay and defend; one was forced to evacuate their own property at the last minute, under terrifying conditions, and sheltered in town. Sixteen per cent stayed and defended their properties throughout the impact of the fire.

## Neighbourhood Groups

The Bushfire-Ready Neighbourhood Groups established through the mitigation and preparation phases played an important role during the emergency response and recovery phases. For example, these networks enabled neighbours to keep in touch with those still in Kangaroo Valley who were able to report on current conditions and the fire's impact.

*"All our street and a bit beyond have their own bushfire community group. We were keeping each other well informed. We knew who was staying and whose plan was to go, and we'd let each know."*

These groups were also important in providing emotional support among individuals experiencing a highly stressful event. Through these groups, residents were assured they were part of a supportive community, rather than having to deal with this disaster on their own.

## Sheltering with neighbours

Some residents with properties considered to be well-prepared for bushfire provided shelter to neighbours through the emergency response phase. In some circumstances, this was a planned part of bushfire household survival plans. In others, this was a last-minute decision in response to changing conditions.

## Challenges

For Neighbourhood Coordinators, liaising with their Neighbourhood Groups and individual households was a substantial amount of work and carried a significant weight of responsibility. Coordinators who did not stay in Kangaroo Valley through the fire were perhaps better placed to manage that work, since those who stayed were extremely busy preparing, defending, and clearing up their own properties.

Some the participants in our study also reported the need to better define the role of the Neighbourhood Coordinators well in advance of a bushfire. There was some expectation that coordinators would provide a level of support for vulnerable residents that was well beyond the intended original scope of the role, for example.

Some residents also expressed concern for neighbours who they felt were under-prepared or who did not have the capacity to stay-and-defend the fire even though they had stated that they intended to do so. While assisting neighbours to prepare and respond reflects strong community connections, at times this assistance may have put people at risk. This highlights the need for strong and comprehensive mitigation and preparation strategies across the community.

# Recovery

Recovery after disaster is a complex, gradual process that is often seen as “bouncing back” to a pre-disaster life, but which in reality may see communities transformed into something new. It includes processes of rebuilding lost homes and other structures, as well as recovery from the damaging impacts of disaster on the physical and emotional health and wellbeing of individuals.

## Immediate needs

In the first days and weeks after the Currowan Fire, many residents were dealing with the loss of their home or other buildings on their property. Having experienced devastating loss, survivors then needed to navigate a range of complex

processes, including locating temporary accommodation, replacing important documents, contacting insurers, and applying for government assistance. Without electricity, phone or internet on their properties, these processes were made even more challenging.

A community-led response was critically important to how many residents coped through this period. One local resident had established an online fundraiser to ‘buy a beer’ for RFS volunteers in appreciation of their work through the disaster. The fundraiser raised over \$10,000, far more than was needed to buy beers, so it was repurposed to establish a ‘one stop shop’ Drop In Centre to help meet the needs of the community.



*The building used as the Drop In Centre, looking towards the village centre (photo - Paul Cooper).*

Within a matter of three days, the centre was set-up in an empty shopfront in the main street. Through the hard work of local volunteers, it was quickly able to help survivors locate places to stay, contact their insurers and banks, and apply for funds from charities and government sources.

It was also a place to share experiences with other residents and to gain emotional support through community connections.

The Drop In Centre was widely praised by participants in our research. It offers a powerful example of how individuals with

the time, skills, and willingness to support their community can make a substantial difference post-disaster.

## Environmental loss

It is important to acknowledge that residents whose homes survived the fires nonetheless endured a highly stressful experience and may have needed to manage a range of other significant losses.

The fire’s impact on the local environment is one example of this. Prior to the fire, many felt a responsibility to care for and protect

the surrounding bushland and local wildlife. Witnessing and living within the fire-damaged landscape has been highly challenging, and many residents have worked to help restore the damaged environment.

The Drop In Centre helped manage several aspects of this loss by providing food supplies for local wildlife, which were available to be collected from the centre and then distributed by residents, for example.

*“The devastating thing for us was just seeing it all totally torched, and nobody could say whether the rainforest would ever come back from that. But happily, we can now say that some of it is.”*

Landcare groups have also been an important community connection through this process. Local Landcare volunteers advised residents on re-planting, distributed new plants, and assisted with post-fire weed management.



*Hungry wombat steals a free meal after the Currowan Fire (photo - Paul Cooper).*

## Longer-term impacts

More than a year after the Currowan Fire, many of those who lost their homes were still dealing with the challenges of rebuilding. Complex development approval processes resulted in extended delays for some.

Along with the logistical and financial challenges of rebuilding, many residents continue to deal with emotional and mental

health challenges more than a year after the fires.

Again, close relationships with neighbours and other community members had significant benefits in navigating these elements of the recovery process. Many participants praised the support they received from the local community, which had assured them they were not alone during difficult times.

*“We had a barbeque get together just before the COVID shut down and there’s lots of emails going out now not just about the fire and recovery, but sort of just keeping the community together.”*

Unfortunately, because of the COVID-19 pandemic, opportunities to gather as a community or within smaller neighbourhood groups were less common than they might otherwise have been. Although some residents described the early COVID lockdowns as a welcome break from busy post-fire lives, others struggled with feelings of disconnection.

## Recovery and Mitigation

While still recovering from the Currowan Fire, Kangaroo Valley residents began work to mitigate future fire risk.



*Bushfire-Ready Neighbourhood Planning Stall at the Kangaroo Valley Show, February 2020 (photo - Paul Cooper).*

This included work by members of the KVCBC who assessed the preparation and

responses to the Currowan Fire and made submissions to government inquiries. The KVCBC also strengthened the capacity and geographical range covered by Neighbourhood Groups, and provided a clear descriptions of the roles and responsibilities of coordinators. Liaison between the local RFS Brigade and the community has also strengthened, including a KVCBC initiative to develop of a web-based Kangaroo Valley Bushfire Preparedness geo-spatial map.

Local Neighbourhood Coordinators have also met to discuss their work through the fire and consider improvements in the case of future disasters.

## Challenges

The way in which the Kangaroo Valley community established the Drop In Centre offers a valuable model of community-led recovery and support. Some of the challenges in repeating its implementation for future fires and whether it can be implemented in other communities include the following.

- The centre was initially established by a community member with the skills and time to quickly set-up and then maintain a multi-faceted disaster recovery hub, supported by a small number of core volunteers. Not all communities are likely to have residents with these capacities.

## Additional resources

Fraser, Peg (2018) *Black Saturday: Not the End of the Story*, Monash University Publishing

Gibbs L, et al. (2020) *10 Years Beyond Bushfires Report*, University of Melbourne, Melbourne.

Eriksen, C., McKinnon, S., & de Vet, E. (2020). Why insurance matters: insights from research post-disaster. *Australian Journal of Emergency Management*, 35(4), 42-47.

The Australian Institute for Disaster Resilience (AIDR) YouTube page has a range of informative videos, e.g. [What is Disaster Recovery](#) and [Mental Health Recovery After Disaster](#).

After The Disaster: ABC Radio Podcast <https://www.abc.net.au/radio/programs/after-the-disaster/>

The CSIRO Bushfire Best Practice Guide: <https://research.csiro.au/bushfire/bushfire-basics/>

- Volunteers were providing support to traumatised individuals, without time for training in trauma-informed care, with potential consequences for their own mental health.
- Having been established quickly, there was also little time to train volunteers in some of the key skills needed to maximise the efficiency of the Drop In Centre (e.g. computer data entry). This placed added pressure on the small number core of volunteers.
- Community centres of this kind will require long-term use of a shopfront, community building, or similar space, which may not always be available.
- The skills and knowledge developed through successfully running the Kangaroo Valley centre will be lost if key volunteers move away from the area.

These challenges suggest that activities in the mitigation and preparation phases of disasters should also include planning for recovery.

Specific community recovery and support plans should therefore be developed so that similar centres can be quickly established and made fully functional immediately following future disasters. Such plans can now build on the success of the Kangaroo Valley Drop In Centre, and include elements such as recruitment and training of volunteers, selection and preparation of premises, and sharing of knowledge through robust communications strategies.



*A Kangaroo Valley home in the immediate aftermath of the Currowan Fire (photo – Dave Macquart).*

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## **Building Community Resilience to Bushfires: A Case Study of Kangaroo Valley**

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*If this document has raised challenging issues for you, Lifeline Australia provides crisis support 24 hours a day: call 13 11 14 or see <https://www.lifeline.org.au>*

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