Hotspots workshop participants stand amongst burnt-out trees and learn how the landscape affected the behaviour of the Carwoola-Taliesin bush fire. Image: K. McShea, Hotspots Fire Project

Community engagement in the post-disaster landscape

An evaluation of effectiveness of the Hotspots Fire Project in facilitating community-led disaster recovery and promoting community resilience in Carwoola NSW.

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Glossary

Built domain
'Those human-made assets that underpin the functioning of a community.' (Community Recovery Handbook 2011, p.89).

Bush Fire
'Unplanned vegetation fire. A … term which includes grass fires, forest fires and scrub fires both with and without a suppression objective' (Bushfire Glossary 2012 p.5).

Bush Fire Survival Plan
The NSW Rural Fire Service recommends that all households should plan and prepare for bush fires. A series of tools (printed kits, websites) are available for people to create their own plans.

Community
The definition of community for this project will be people within the Carwoola locality, and any other people who felt impacted by the Carwoola-Taliesin fire that occurred in February 2017. Carwoola, according to the 2016 ABS Census has a population of 1428 people and has 532 houses. Carwoola comprises hobby farms, small acreages, rural residentials as well as three forested nature reserves. It is defined as an 'advantaged' population (Whittaker & Taylor 2018).

Community Recovery
According to the *Community Recovery Handbook 2,* published by the Australian Government Attorney-General's Department in 2011, community recovery should be coordinated across four integrated environments: social, economic, natural and built. A successful recovery process 'promotes practices that minimize the community's risk to all hazards and strengthens its ability to withstand and recover from future disasters, which constitutes a community's resiliency' (FEMA 2011, National Disaster Recovery Framework, p.11).

Community-led Recovery
'Centre[s] on the community, to enable those affected by a disaster to actively participate in their own recovery' (Community Recovery Handbook 2011, p.23).

Community Resilience
A community's ability to withstand future disaster (Argyrous & Rahman 2016).

Disaster
Disasters 'are *unexpected* and they *disrupt* individuals, households, livelihoods and communities' (Community Recovery Handbook 2011, p.7).

Economic domain
The system whereby the affected community's material and service needs are met through appropriate labour and employment, business development, land use, financial resources, and interaction with the broader economy (Argyrous & Rahman 2016).

Environmental domain
Encompasses the natural and cultural resources of the community (Argyrous & Rahman 2016).

Fire Management
'All activities associated with the management of fire prone land, including the use of fire to meet land management goals and objectives' (Bushfire Glossary 2012, p.13).

Fuel
'Any material such as grass, leaf litter and live vegetation which can be ignited and sustains a fire. Fuel is usually measured in tonnes per hectare' (Bushfire Glossary 2012, p.16).

Mitigation
'Minimizing the effects of disaster. Examples: building codes and zoning; vulnerability analyses; public education' (Warfield n.d.).

Peri-urban
'Areas beyond the metropolitan fringe, at the interface between city and country but within the economic and social catchment of a large metropolitan area' (.id Consulting 2018).

Prescribed Burning
'The controlled application of fire under specified environmental conditions to a predetermined area and at the time, intensity, and rate of spread required to attain planned resource management objectives' (Bushfire Glossary 2012 p.24).

Preparedness
'Planning how to respond [to a disaster]. Examples: preparedness plans; emergency exercises/training; warning systems' (Warfield n.d).

Recovery
A 'complex social and developmental process … [which] provides an opportunity to improve aspects beyond previous conditions by enhancing social infrastructure, natural and built environments, and economies' (Community Recovery Handbook 2011, p.3)

Response
'Efforts to minimize the hazards created by a disaster. Examples: search and rescue; emergency relief.' (Warfield n.d).

Social domain
The 'relationships and connected by networks of communication ... [it] consists of individuals, families and common interest groups that form whole communities' (Community Recovery Handbook 2011, p.73).

Executive Summary

The Hotspots Fire Project is a program providing landholders and land managers with the skills and knowledge to actively participate in fire management. It teaches how fire can be used as a land management technique to promote biodiversity, as well as to protect assets.

Hotspots Fire Project is run jointly by the NSW Rural Fire Service (NSW RFS) and the Nature Conservation Council of NSW (NCC). It is steered by a Committee which includes representatives from the following organisations: NCC; NSW RFS; Southeast Queensland Fire and Biodiversity Consortium; Forestry Corporation; Local Government NSW; Local Land Services; Office of Environment and Heritage; NSW National Parks and Wildlife Service; and NSW Farmers.

Hotspots was recently run for residents of Carwoola NSW. Carwoola is a peri-urban area located just outside Canberra. In February 2017, the area was impacted by a major bush fire, which burnt 3,134 hectares of land and destroyed over 50 buildings – 11 of them houses.

This is the first time the Hotspots program has been run as a recovery tool for a disaster-affected community. The program was adapted for Carwoola to include: two series of two-day workshops for residents; a third workshop day that was also a community café session; training for local Stoney Creek (now Carwoola) RFS brigade to conduct bush fire risk assessments for houses; and on ongoing monthly community café with information sessions.

Workshop activities and messaging were adapted to address fears of fire. Local land-holders were encouraged to see fire as an integral part of the Australian landscape, and possibly as a useful land management tool. The overall aim was to make Carwoola's residents and landscape more resilient to future bush fires.

Demand for the Hotspots program – in particular the workshops and property risk assessments – was high to begin with. Fifteen months after the fire, interest from the community has waned.

This report looks at the Hotspots program with the view to identifying what worked and areas for improvement. Demand for post-disaster services is likely to increase given the increasing numbers of disasters. Understanding how all these elements come into play, along with sharing beneficial information and support is fundamental to future government programs offering post-disaster assistance.

Community involvement

The Hotspots program was adapted and run at the request of the local RFS brigade, in response to increased demand for information about fire prevention and mitigation strategies from Carwoola residents. Interestingly, this demand seems to have occurred, not because people did not have bush fire survival plans, but because people had not been able to put their existing bush fire survival plans into action during the Carwoola-Taliesin fire. This had a major impact across the community.

In developing a program that met this need, the Hotspots workshop and associated activities have been successful in reaching residents close to the footprint fire. Two key community groups did not get involved. These were: people whose properties had suffered major damage during the fire; and people who did not feel vulnerable as a result of the bush fire ie residents of the nearby Primrose Valley. Their involvement with ongoing Hotspots café sessions could be encouraged over time.

Adaptation

The program adaption was done to enable the Hotspots messages to reach people over an extended period of time, not just through a two-day workshop. These adaptions, which came from the NSW RFS, placed a heavy emphasis on fire prevention and mitigation strategies. This was appropriate at the beginning of the program. Now that the impact of the fire has lessened for those that were not burnt out, there is the opportunity to place more emphasis on the environmental messages from Hotspots.

The Hotspots monthly café session offers opportunities for further adaption by the Carwoola community to continue to build relationships with each other and with their community groups (not only the NSW RFS). Feedback from community members indicates that a refocusing of the café's purpose would be welcome.

Program delivery of the Hotspots workshop was adapted in recognition that some participants would still be experiencing trauma and loss. This proved to be the case with a small number of participants. Working with people post-disaster is challenging, and consideration should be given about how NSW RFS and NCC staff can be offered training and support to do this. This training and support should also be extended to volunteers in the NSW RFS.

Timing

Hotspots started its formal program 7 months after the Carwoola-Taliesin fire. This was timed to begin before the start of the 2017-18 fire season. This worked well, as demonstrated by high enrolment in the workshop.

The short timeframe to prepare the course resulted in reduced promotion and less time to build constructive relationships with people in the community who could have helped support and promote Hotspots environmental, and cultural messages. This could often be the case post-disaster, as the key people in the community (often working on a volunteer basis) are likely to be working on other post-disaster community projects.

Effectiveness

The Hotspots program has demonstrably assisted Carwoola residents with their recovery, especially in the social and built environments. Workshop participants and residents who have asked for house risk assessments have identified bush fire risks on their own properties and acted to mitigate those.

Carwoola residents also displayed great interest in the environmental messages from Hotspots and indicated that they felt more connected to the local landscape as a result. Given the degraded landscape of the area, there is opportunity for residents to do implement learnings from the Hotspots workshops.

There is reluctance from people to use fire as a management tool – especially to help promote biodiversity. It would be interesting to further understand what the barriers are. Potential indicators include: fear of fire; lack of knowledge about what, when and how to burn; or uncertainty around the legal responsibilities of undertaking a prescribed burn.

The Hotspots team, in conjunction with the local NSW RFS, should be congratulated for the way in which they have helped Carwoola residents become more resilient to future bush fires. Listening to their needs; adapting the program to meet those needs; reducing feelings of vulnerability; whilst empowering them to take actions that will mitigate bush fire risk. Hotspots Fire Project has been a key part of helping these residents recover from the 2017 Carwoola-Taliesin fire.

Introduction

This project explores how the Hotspots Fire Project, delivered jointly by the NSW Rural Fire Service (NSW RFS) and the Nature Conservation Council of NSW (NCC), can best facilitate community-led disaster recovery and promote community resilience in bush fire-affected peri-urban and rural communities in NSW. Its aim is to develop a method of ongoing evaluation that will enable the Hotspots program to continually improve this support. This process of improvement is important, given the increased likelihood of bush fires (see Figure 4) and the increased number of people living in areas vulnerable to bush fire, both in NSW and throughout Australia (see Figure 5).

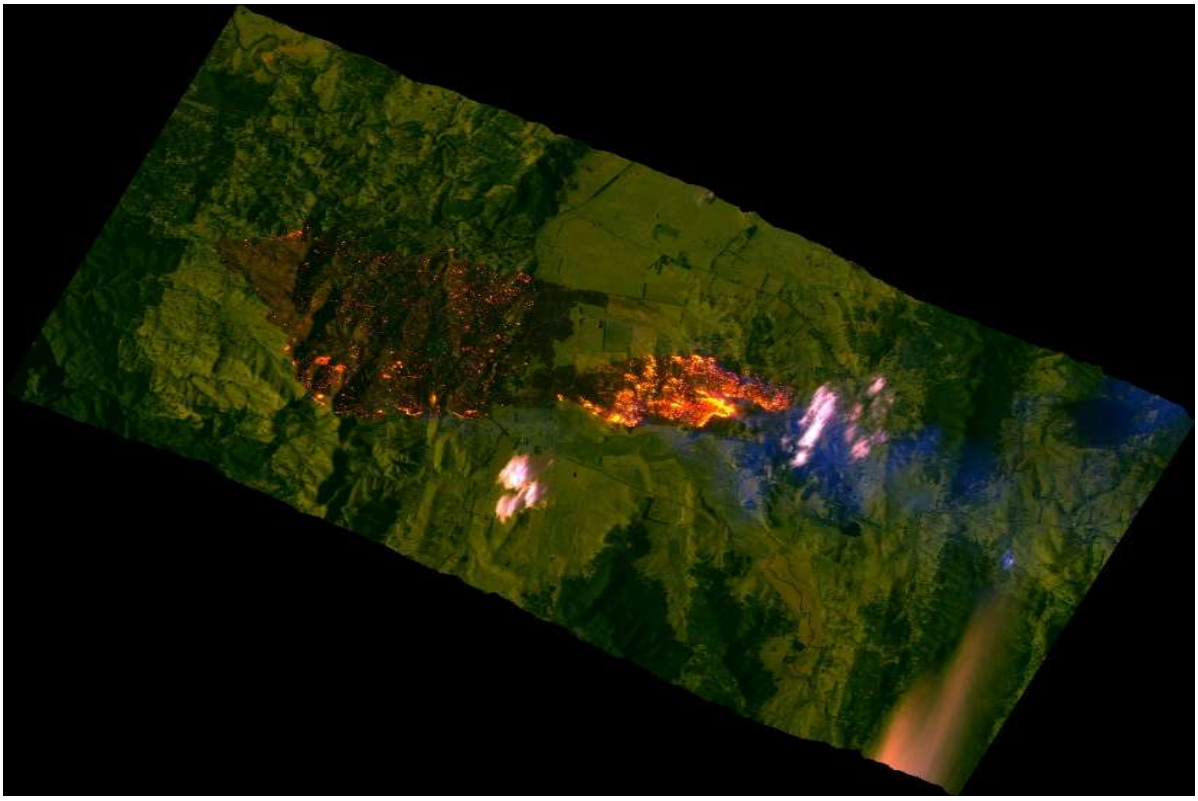

Figure 1: Line scan image of the Carwoola-Taliesin fire, showing the fire's footprint. Image: NSW RFS.

On 17 February 2017, the Carwoola area of NSW was impacted by a major bush fire (see Figure 1) that destroyed over 50 buildings, including 11 houses, and left many residents feeling distressed and powerless (Whittaker & Taylor 2018). Many people realized that their previous bush fire survival plans and mitigation measures had been inadequate, and almost immediately after the fire began approaching the local RFS brigade for help (A6 2018 pers. conv. 25 April). The local RFS brigade saw the Hotspots Fire Project program as an opportunity to engage community members and build their bush fire resilience, and therefore to facilitate their recovery, in a way that it had not been able to do pre-bush fire (Hanzl 2017). At the local brigade's request, and with the support of the local fire district, the Hotspots program was adapted and delivered to Carwoola residents (Hotspots Fire Project 2017). After

Figure 2: The Hotspots Fire Project Workshops contained a range of activities that encouraged participants to see fire as an integral part of the Australian landscape that can be used as a tool, rather than only perceiving it as a bush fire threat. Activities included taking part in a prescribed burn, and property owners creating their own fire land management plan that would consider both asset protection and promotion of biodiversity.
Images: J. Cramp and K. McShea, Hotspots Fire Project

initial workshops (see Figure 2) and training delivered to RFS brigade members in September-October 2017, Hotspots is now ongoing in the form of monthly café and information sessions hosted by the local RFS brigade. Full details of the program implementation can be found in Appendix A: Key dates and scope of the Hotspots Fire Project program.

Figure 3: The Disaster Management Cycle.
Image: Environmental Studies 2013

The NSW RFS traditionally supports communities in the mitigation, preparation and response to bushfires (see Figure 3). This is the first time that the Hotspots Fire Project has been run as a recovery tool with a bush fire-affected community. Recovery from disaster can be a difficult and lengthy process. For affected individuals and communities to 'bounce back better', and become more resilient to future disasters, they must be empowered to make complex decisions to enable their social, economic, built and/or natural environment recovery (Community Recovery Handbook 2011).

Hotspots was originally developed to educate rural land owners about fire and land management techniques to manage risk to people and property, and to maintain and improve the landscape's biodiversity (Hotspots

2018). Carwoola, a peri-urban area located close to Canberra, is comprised of just over 500 small rural holdings on a degraded landscape which was formerly farmland. These landscape conditions combined with the fact that most landholders commute to Canberra for work and arguably lack the knowledge of, and connection to, the landscape that more rural communities possess, Carwoola would not have normally been considered for the program (P. Paterson 2018 pers. conv. 24 April).

However, as there was clear demand for information from Carwoola residents, the Hotspots program aims – to give people knowledge and techniques to empower them to utilize fire land management techniques that will build their own, and the landscape's, resilience to fire (Hotspots Fire Project 2018) – seemed appropriate for the situation. The Hotspots program managers made the decision to run program before the start of the 2017-18 fire season (J. Cramp 2018 pers. conv. 23 April).

From as far back as the 1980s, academics in the disaster management space have recommended that affected communities should have meaningful input into their own recovery (Olsahanky et al 2006, Vallance 2011). This is referred to as 'community-led' and 'participatory' recovery. This approach argues that each community affected by disaster needs to be empowered to identify its own problems, solutions, and how they want to achieve those – in order to recover.

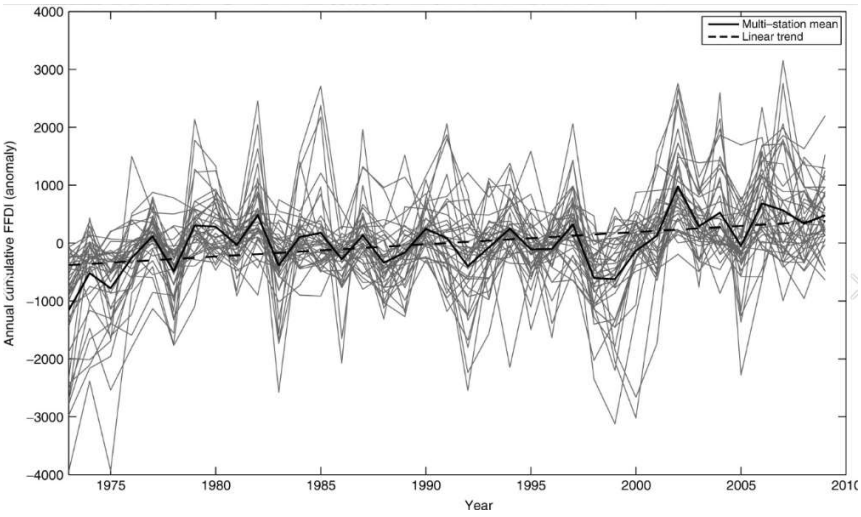

Figure 4: Australia's risk of bush fire is steadily increasing due to climate change.
Image: Clarke et al 2012, based on Bureau of Meteorology data.

Running Hotspots to meet community demand after a disaster is a clear example of a government program facilitating community-led recovery. Community-led recovery from disasters such as bush fires and floods is currently agreed to be best practice by academics, policy areas and practitioners in Australia (Australian Government Attorney-General's Department 2011, Vallance 2011) – as is the development of community resilience to these hazards (Council of Australian Governments 2011).

Despite this seeming accord, on-the-ground implementation of post-disaster community-led recovery continues to be a challenge (Owen 2018). Not least problematic is that the very word 'community' suggests a homogeneity of identities and views that probably did not exist pre-disaster – and which have the potential to become even more fragmented after the experience of a disaster (Mulligan 2017).

Understanding community recovery needs, and whose recovery needs they are meeting, is therefore critical for practitioners such as the Hotspots Fire Project program managers, who are aiming to adapt their program to build both community and landscape resilience to facilitate disaster recovery. Fortunately, adaptation is one of the Hotspots program's strengths. Experienced in working with a wide variety of rural communities, in a wide variety of ecological landscapes, Hotspots staff have always adapted the content of their workshops to meet the needs of the people in the locality they are working with (J. Cramp & P. Paterson 2018 pers. conv. April).

Adapting to meet the recovery needs of disaster-affected communities is important. The need for successful disaster recovery programs for rural and peri-urban communities is likely to get more urgent in future years. Bush fires like the Carwoola-Taliesin fire are increasingly becoming a question of not 'if', but 'when' and 'where'.

Australia is facing an increased risk of bush fires due to climate change (CSIRO and Bureau of Meteorology 2016). Figure 4 demonstrates how the McArthur Forest Fire Danger Index (FFDI), which rates the risk of fire based on temperature, humidity, wind and dryness, is trending upwards nationally around Australia, and has been since 1973 (Clarke et al 2012).

This is combined with increased vulnerability as peri-urban settlements expand around our major cities (Bardsley et al 2015, Llausas et al 2016). Population growth in peri-urban areas has been at a rate of 1.7% per annum between 2006 and 2016, as shown in Figure 5. During this period, NSW and ACT have had a combined population growth in peri-urban areas of over 65,000 people (.id Consulting 2017). Peri-urban areas are demonstrably linked to increased risk of bushfire, due to factors such as proximity of dwellings to bushland, and relative inexperience of peri-urban dwellers with fire (Llausas et al 2016).

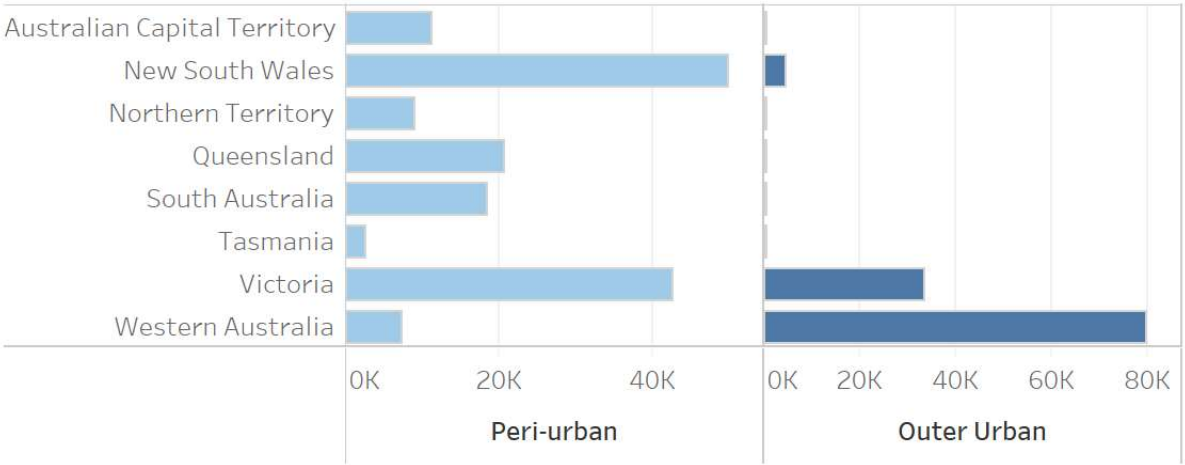

Figure 5: Population growth in peri-urban areas between 2006 and 2016.
Data Source: .id Consulting Pty Ltd., ABS Regional Population Growth.

Project Aim and Objectives

The aim of this research project is to evaluate the effectiveness of the method of ongoing evaluation to enable the Hotspots Fire Project in continually improving its support of bush fire-affected rural communities in NSW.

It has the following objectives:

- Understand how the Hotspots Fire Project was adapted and implemented to meet the needs of a disaster-affected community and to increase its resilience to future fires;
- Evaluate how effective the Hotspots Fire Project action has been in contributing to the development of a resilient community in Carwoola NSW;
- Evaluate how the Hotspots Fire Project actions met post-disaster community recovery needs in Carwoola NSW, and
- Evaluate whether the Hotspots actions in Carwoola have continued over time to meet changing needs;
- Critically assess whose recovery needs were being met by the Hotspots Fire Project – whether it was the entire community or a subset; and
- Raise discussion points for future Hotspots Fire Project actions to meet its aims and objectives with people living in disaster-affected landscapes.

Methodology

This project used a participatory action research methodology. This approach bridges research and action to produce knowledge that is useful for all people involved in the program – the Hotspots program managers as well as its future participants.

This participatory action approach can be understood as an action inquiry cycle as depicted in Figure 6. The Hotspots program is the planned intervention and action. This research project describes its effects; evaluates the outcomes of the action, and then puts forward recommendations to be implemented next time it is run with a disaster-affected group of people. The themes investigated were implementation and effectiveness (see Table 1).

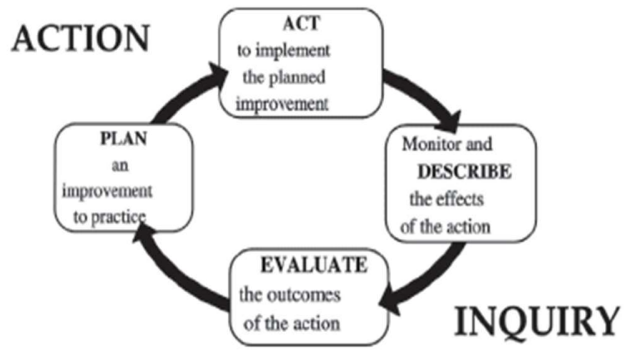

Figure 6: The 4-phase representation of the action inquiry cycle (Tripp 2005).

To measure implementation, the research gathered qualitative data through semi-structured interviews with selected program staff, workshop participants and non-participants.

Nine semi-structured interviews were held with 12 people. Interviewees were asked open-ended questions to gather qualitative data that related to the themes under investigation. Program staff, local brigade volunteers and workshop participants were interviewed to explore why and how the

Carwoola Hotspots action was planned; how effective the implementation was found to be; and suggested improvements for future implementation. Selected non-participants who were impacted by the bush fire were interviewed to understand why they felt that the program did not meet their needs; and to possibly suggest how the program could be adapted to meet their needs into the future. Hotspots and NSW RFS employees who are referenced in this report are referred to by name. Each interviewee who is a resident of the Carwoola area is referred to as A1 through to A7.

Table 1: Key themes used for analysis of interviews and online survey
Theme 1: Implementation
Key Evaluation Question 1: How has the community been involved in the process of determining their recovery needs?
Key Evaluation Question 2: Is the Hotspots program adapting to the community needs over time?
Key Evaluation Question 3: How well-timed was the Hotspots Fire Project in meeting community needs?
Theme 2: Effectiveness
Key Evaluation Question 4: To what extent has the Hotspots Fire Project produced a resilient community?

All interviewees were asked to review a draft of this report to ensure that it accurately reflected their experiences and opinions. This, along with the choice of multiple interviewees, was to help ensure validity of the research.

To measure effectiveness, this research project used 'A Monitoring and Evaluation Framework for Disaster Recovery Programs' that was developed by the Australia and New Zealand School of Government in 2016. This assess community recovery against the four integral aspects of recovery – social, built, natural and economic – outlined by Australian Federal Government policy (see Figure 7) (Community Recovery Handbook 2011).

Figure 7: The four integral aspects to community recovery. Image: Community Recovery Handbook 2011

Qualitative data was gathered by asking 31 Hotspots workshop participants to complete an online survey in May 2018. Seven people responded, which is a 22% response rate[1]. Hotspots program activities and outcome indicators were mapped against the evaluation framework's high-level disaster recovery outcomes (see full details in Appendix B). The survey questions were written to allow measurement of those indicators (see Appendix C).

These survey responses were used in conjunction with a post-workshop evaluation survey that was completed by participants in October 2017.

[1] 10-15% is a standard survey response rate for external client surveys (Fryrear 2015)

The May 2018 online survey also measured how impacted by the fire participants were: and whether that impact was physical and/or emotional. The survey, alongside mapping and demographic data, helped assess if participants were representative of the wider Carwoola community, or if they were a specific subset.

Figure 8: Hotspots ecologist Kevin Taylor shows workshop participants how to calculate fire danger using the McArthur meter in the RFS Pocketbook app. Image: K. McShea, Hotspots Fire Project.

Key Findings and Discussion Points

Theme 1: Implementation

Key Evaluation Question 1: How has the community been involved in the process of determining their recovery needs?

The Hotspots Fire Project was requested by local RFS brigade members in response to a huge increase in demand for information and assistance from community members. This should not be taken to indicate that Carwoola residents had no bush fire plans in place prior to the fire. Instead, as a result of the bush fire, many people felt that their mitigation strategies and plans had not been adequate for the reality of a bush fire. The combination of activities provided by the Hotspots program and NSW RFS have been able to respond to this.

Interviews with local residents (A1, A2, A3, A4 2018 pers. comm. April, May) indicated that they had been fully aware of the risk that bush fire posed to the area, and had put mitigation strategies in place such as clearing areas near the house and having dams topped up with water to fight fires. Each of the people interviewed also had bush fire survival plans in place. However, during interviews a theme emerged of these plans not being able to be put into practice on the day. One of the key reasons for this

was that their plans had not factored in a police roadblock that was put in place to stop people driving into the fireground. This meant that people could not return to defend their house; or help family, friends or livestock evacuate (Whittaker and Taylor 2018; A1, A2, A3, A4, A5, A6 2018 pers. comm. April, May). There were other reasons given, too. For instance, people found that they did not have correct pump fittings to access water to fight the fire; or they did not know how to start their fire-fighting pumps (A5, A6 2018 pers. comm. April). The impact that these feelings of powerlessness in the face of the bush fire had on people should not be understated. The anger many people felt about the police roadblock, for instance, was still evident in interviews with Carwoola residents over a year later, even while they recognized that its intent had been to keep people safe.

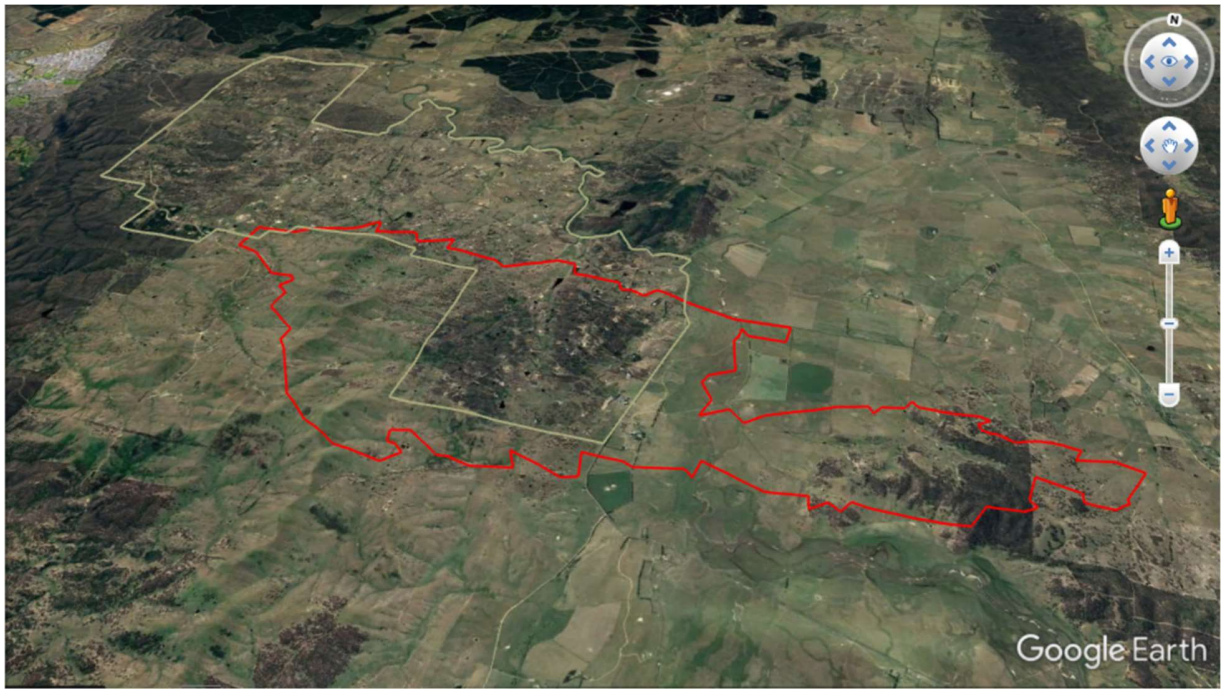

Figure 9: This map shows the footprint of the Carwoola-Taliesin fire (in red) overlaid with the most heavily populated part of Carwoola (in brown). Data source: NSW RFS.

The Carwoola area comprises just over 500 properties, which tend to be between 2 and 20 hectares in size. Fortunately, the Carwoola-Taliesin fire, which burnt out 3125 hectares, was kept clear of much of the heavily populated areas of Carwoola (see Figure 9). The fire intersected with an area that contains around 60 properties. Therefore, for most people living in Carwoola who felt impacted by the fire, their recovery needs were not dealing with property, pet and livestock loss. Instead, their immediate needs seem to have been to address those feelings of powerlessness and to revisit their bush fire mitigation and preparation strategies.

Figure 10 demonstrates that it was mostly people whose properties were outside the fireground who contacted the local RFS brigade for personal bush fire protection advice, or participated in the Hotspots workshops. Respondents to the online survey of Hotspots workshop participants indicated that they had

been emotionally, rather than physically, impacted by the fire. This would seem to indicate that people whose properties were physically impacted by the fire (see Figure 11) had different recovery needs.

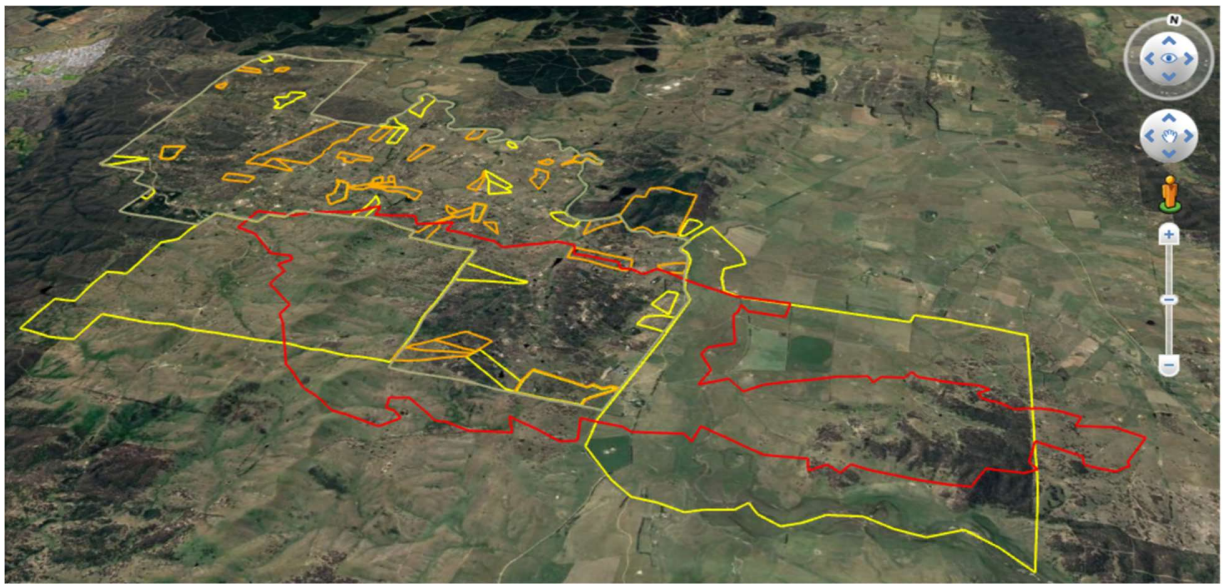

Figure 10: This map shows (in orange) the residents who have contacted the local brigade for bush fire protection advice since the Carwoola-Taliesin fire. Hotspots workshop participants are marked in yellow. Data sources: Stoney Creek Fire Brigade, NSW RFS.

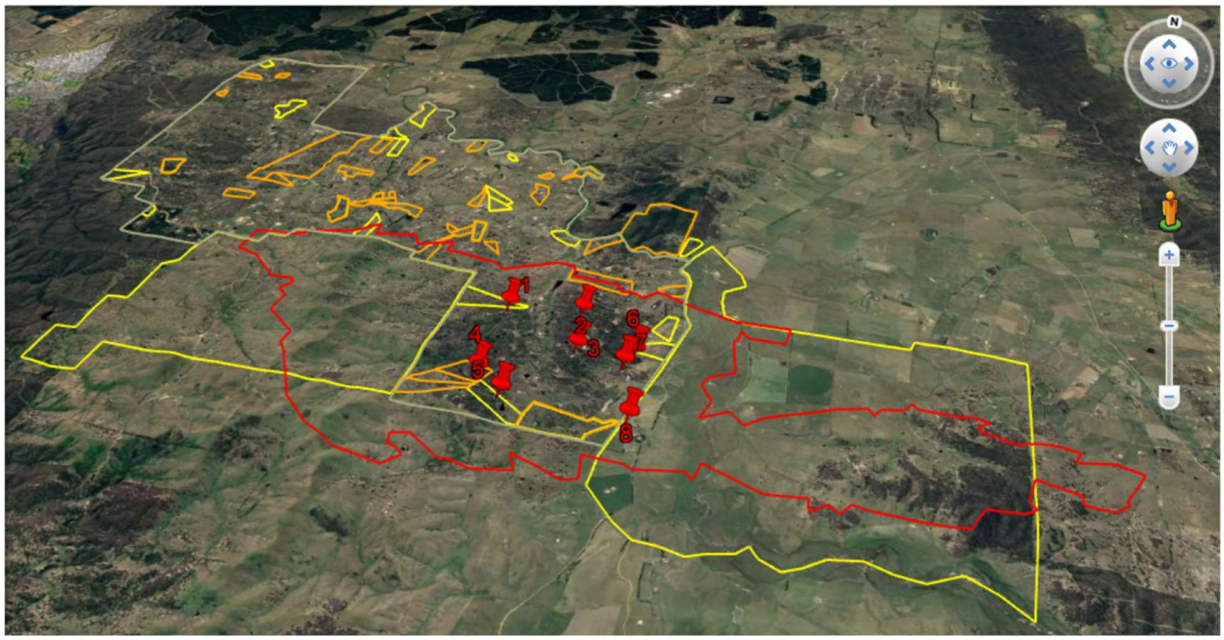

Figure 11: The red pins show the location of the 8 houses that were destroyed by the fire. People who lived in this area seem to have had different recovery needs to those outside the fireground. Data sources: Stoney Creek Fire Brigade, NSW RFS.

Discussion Points

- People not being able to put their bush fire survival plans into action is going to continue being a reality. Whittaker and Taylor (2018) found in their study of three NSW bush fires in 2017 that frustration at not being able to enter fire grounds to protect people, property and livestock was common to all three fires.
- While all Carwoola residents shared frustration about their inability to put their bush fire plans into place, the recovery needs of Carwoola residents differed depending on what impact the fire had on them. The demand, which Hotspots helped meet, for better information about fire preparedness, came primarily from residents who had not been directly burnt out by the fire, but still felt emotionally impacted by it.
- Residents who feel vulnerable to bush fire have come forward to the NSW RFS and taken part in the Hotspots program. Two key community groups did not get involved. These were: people whose properties had suffered major damage during the fire; and people who did not feel vulnerable as a result of the bush fire. For instance, residents of nearby Primrose Valley are vulnerable to bush fire (A6 2018 pers. comm. April), but they have not engaged with any aspect of the Hotspots program. Both these groups may be able to be addressed by targeted communications and/or sessions at future Hotspots café events.

Figure 12: Hotspots Environmental Officer Phil Paterson uses a fire triangle to demonstrate to workshop participants the ingredients of combustion, as well as how effective an asset protection zone can be around a house even considering slope and wind. Image: K. McShea, Hotspots Fire Project.

Key Evaluation Question 2: Is the Hotspots program adapting to the community's needs as they change over time?

The Hotspots Fire Project program was consciously adapted to meet the community needs that local NSW RFS volunteers and staff were seeing (Carwoola Hotspots After Action Review 2017). The program was also adapted in such a way that Carwoola residents could continue to benefit from it over time – not just by attending the initial two-day workshop. This was seen as critically important by local NSW RFS staff, as it could enable the program to adapt over time as necessary, and also help continue to build relationships between residents and with the local RFS brigade (Carroll, Paterson 2018 pers. comm. April).

The initial workshops were adapted to run as two series. This enabled Hotspots staff to meet demand from residents. It also gave Carwoola residents flexibility with choosing dates. Providing extra staff to run the workshops meant that people were able to maximise learning time with facilitators. This was especially important in being able to give participants the choice of completing their fire land management plans on physical or online maps.

Two key additions were made to the Hotspots program to directly help households with their bush fire mitigation strategies and survival plans. The first was a training day for the local RFS brigade to learn to use a Household Assessment Tool (currently in pilot) that can be used to generate a bush fire risk assessment report that can be used by house owners to reduce risk of bush fire (Carroll 2018 pers. comm. April). The local RFS brigade is also able to use the information if needed when responding to a fire. This tool is now being actively used by the local RFS brigade as residents continue to consult them on fire risk for existing houses as well as houses being rebuilt or extended (A6 2108 pers. comm. April). The Hotspots workshop participants and the residents who asked for household assessment to be done don't tend to overlap (see Figure 9). This could indicate that for Carwoola residents, those two parts of the program meet a very similar need.

Figure 13: The training day for NSW RFS volunteers to learn how to use a pilot House Assessment Tool.
Image: Stoney Creek Fire Brigade

Another adaption was a 'third' workshop day which was also a Hotspots café session. The theme was bush fire preparedness and covered: planning and design of homes and landscaping; property

preparation and maintenance; bush fire survival plans; contingency plans, decision-making, communications, and warnings; understanding the strengths and vulnerabilities within the community; and planning with neighbours (Carwoola Hotspots After Action Review 2017). All online survey respondents indicated that activities such as creating a Property Fire Management Plan, and learning about house and asset protection, were the most valuable parts of the workshops.

Hotspots staff also recognised that working with Carwoola residents meant that they were potentially working with people who were experiencing trauma and loss (Cramp & McShea 2018 pers. comm. April). For this reason, messages and activities were included that were designed to address the fear of fire and emphasize that fire could bring positive effects to the landscape (Carwoola Hotspots After Action Review 2017). Online survey participants agreed that the activities designed to do this: visiting the fireground; learning about the fire behaviour during the Carwoola-Taliesin fire; seeing the plant regeneration, and actively taking part in a prescribed burn were valuable components of the workshop. The Carwoola Hotspots After Action Review (2017) noted that an activity where people were asked to share their experiences of the bush fire brought up 'confrontational elements', and that staff needed to be prepared to provide support.

The monthly café, currently hosted by the local RFS brigade, was the main part of the Hotspots program that the local RFS brigade wanted to implement when they first contacted Hotspots staff. This was based on a similar community café run by the local brigade in nearby Burra (A7 2018 pers. comm. April). Its original intent was to provide a forum where community members could receive information on fire preparedness (Hanzl 2017). It also provided an opportunity to build community relationships with the local RFS brigade; build relationships between community members; and facilitate community planning (Paterson 2018 pers. comm. April).

Initial attendance numbers were high, but over the months have dropped, possibly because local residents are 'over disaster' (A5 2018 pers. comm. April). One online survey response said that it needed to work out its focus now that the fire was 15 months in the past. Other responses suggested changes to the café they felt would be more useful for the community. However, it was also noted that volunteer brigade members got a lot of value attending as an opportunity gather socially (A7 2018 pers. comm. April).

Discussion Points

- The adaptation to the Hotspots program that enable people to both assess and act on bush fire risks to their own properties are highly valued by Carwoola residents.
- The property assessment tool that is currently in use by the local brigade is a pilot. It is felt that it was developed primarily for urban contexts. NSW RFS should gather feedback from the local RFS brigade about its use in the peri-urban context, and how it can be further enhanced so that the information in each report can be utilized by local brigade members as well as the home owners.
- Hotspots staff identified that working with disaster-affected people would require them to be able to support (rather than counsel) people who were experiencing trauma and loss. The NSW RFS currently offers Critical Incident Support Service for staff and volunteers, which focusses on disaster response. Working with disaster-affected people in the future may mean that NSW RFS

and Hotspots should consider putting in place information, awareness training and policies to support staff to work effectively with communities in the longer-term recovery space.

- The Hotspots café should adapt further to keep itself relevant to the community – perhaps in consultation with local residents. Aspects that may be worth keeping in mind are that the local RFS brigade is perceived as a key community hub; that local brigade members enjoy the opportunity to socialize; that the community could value having the café's messages diversified; and that some population areas in the region ie Primose Valley continue to be vulnerable to bush fire but are not engaging with any of the brigade's programs.

Figure 14: Hotspots environment officer Phil Paterson gets workshop participants to calculate the fuel load in an unburnt section of forest. Image K. McShea, Hotspots Fire Project.

Key Evaluation Question 3: How well-timed was the Hotspots Fire Project in meeting community needs?

The Hotspots workshops were timed to start before the formal start of the 2017-18 fire season – around 7 months after the Carwoola-Taliesin fire. This gave staff a limited amount of time to communicate with Carwoola residents about the workshop and confirm registrations. There was limited promotion through channels such as social media, and the most effective means of enrolling residents was through promotion at the Carwoola car boot sale the week before the workshop was scheduled to start (Carwoola Hotspots After Action Review 2017).

One key point about this timing noted in the Carwoola Hotspots After Action Review (2017), was that it resulted in limited engagement with other community organisations that could have supported and helped promote the workshop. This cross-support was particularly challenging post-disaster, as local volunteer-run community organisations such as Landcare were stretched to deliver their own post-disaster activities (A3 2018 pers. comm. May).

Despite limited promotion, registration numbers were high enough that running two workshops was required – as was having extra staff to run parallel fire land management planning sessions. One interesting comment from an online survey participant hints that the workshops were run just before resident interest in bush fire ran out:

> *'Wording [to promote Hotspots workshops] possibly needs more strongly to advise content. Feedback to me was that people thought it another post-fire thing, had they known it comprised also environmental elements they would have been interested.'*

Fifteen months after the bush fire, the Hotspots café sessions are experiencing a drop in participation numbers (A5 2018 pers. comm. April). It may be that by the time the workshop was being promoted – 6 months after the fire – community interest was already dropping in 'post-fire things', and that the workshop was held just at the right moment for the workshop's audience.

The community interest in requesting the local RFS brigade come to do a property inspection to produce a Household Assessment continues, but not at the initial post-fire rate. This is a more sustainable rate for the volunteer brigade members, as the household assessment using the pilot tool developed by NSW RFS staff requires a property inspection and a written report. Each one completed so far has taken on average of 2.5-3 hours to complete (A6 2018 pers. comm. April). People now seem to ask for their home's fire risks to be assessed before they build or extend their house – and residents seem to be recommending the service to others. (A6 2018 pers. comm. April).

Discussion Points

- In this instance, 7 months after the fire seems to be the right amount of time to start the Hotspots program with the Carwoola community. Timeframes for future programs may have to be flexible to allow for local community circumstances.
- Engagement and support from community and state organisations other than the NSW RFS may be desirable to promote and support continuation of the Hotspots program. Hotspots has been very successful doing this with other areas of the NSW. In Carwoola, having the local RFS brigade continue the program in the form of the café sessions has meant that the focus has stayed on fire preparedness, and in the longer term this may disengage community members. However, it should be recognized that getting engagement with community groups in a post-bush fire area could well be challenging. Constructive relationships with other organisations take time to build, and if those organisations are stretched running their own post-fire programs and activities, then their active members will have even less time to put towards a 'new' program in the area.

Figure 15: Carwoola residents taking part in a prescribed burn as part of the Hotspots workshop. Image: K. McShea, Hotspots Fire Project.

Theme 2: Effectiveness

Key Evaluation Question 4: To what extent has the Hotspots Fire Project produced a resilient community?

The Hotspots program objectives map well against the high-level community recovery objectives outlined in the 'Monitoring and Evaluation Framework for Disaster Recovery Programs' developed by the Australia and New Zealand School of Government in 2016 (see Appendix B: Evaluation Framework). In this evaluation framework, community recovery is measured against social, environmental, and built environment recovery.

The objectives for the Carwoola Hotspots workshop series were to:

- Discuss and observe ecology, fire behavior and management options for reducing bush fire risk, maintaining biodiversity and cultural values and assisting post fire regeneration;
- Guide landholders through the process of developing a property fire management plan;
- Increase understanding of fire ecology, weather and fire behaviour in different landscapes;
- Discuss bush fire hazard reduction approval and notification requirements;
- Learn about the after effects of fire and discuss management options for post-fire recovery;
- Undertake fire management planning at the landscape scale, learning from other land managers such as the National Parks and Wildlife Service; and
- Develop or strengthen positive neighbourhood and community connections (Hotspots Fire Project 2018).

Hotspots Workshop participants were surveyed seven months after the workshops, to find out if the workshops had been successful in these meeting these objectives, and in the aim of making people more resilient to future bushfires (see Appendix C: Survey Questions). Post-workshop evaluation showed that people had been keen to put their learnings into action (Hotspots Fire Project 2018) and responses showed that people had indeed implemented practical steps to make themselves and their built environment more resilient to bush fire.

One of the key workshops activities was the creation of a Fire Management Plan each participants' property, which, if put in place, encompassed social, built and natural aspects of recovery. Survey responses (see Figure 16) indicated that majority of respondents completed their plan, and had implemented some of the high priority actions they had identified in the plan.

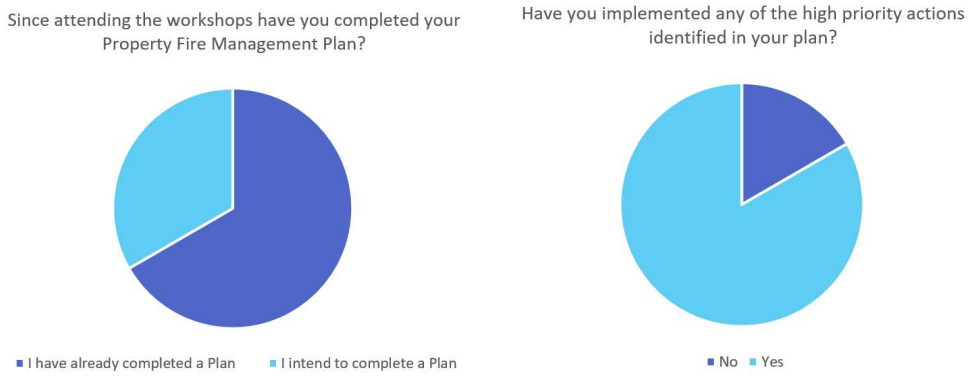

Figure 16: Online survey responses to questions about Fire Management Plans
Data source: May online survey of Hotspots workshop participants

Social Environment

All survey respondents indicated that they now felt more confident about their ability to deal with bush fires, and all respondents felt that the program would be valuable for other bush fire-affected communities.

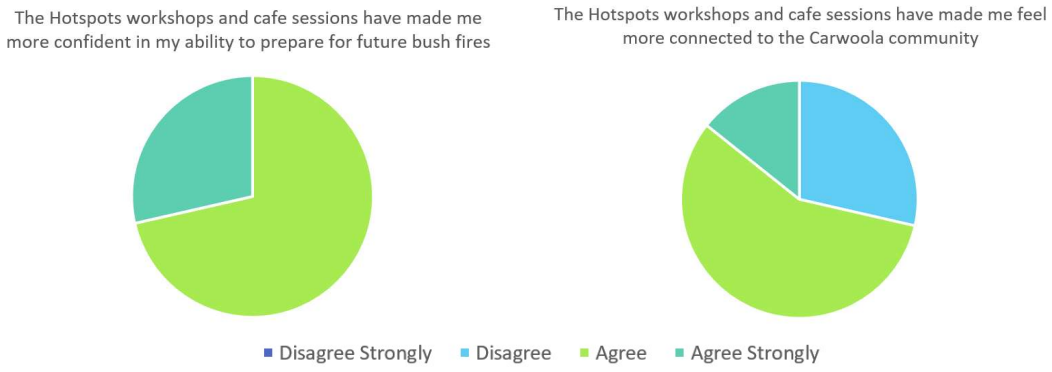

Figure 17: Social recovery of the Carwoola Hotspots workshop participants
Data source: May online survey of Hotspots workshop participants

Interestingly, survey respondents indicated that participating in the Hotspots workshop had made them feel more connected to the community than experiencing the bush fire itself. On a broader community scale, interviews indicated that existing community groups: the local RFS brigade; the Carwoola Community Association; and Carwoola Landcare all had a boost in membership after the fire. All community group leaders saw this as a short-term effect, that would need effort to keep up (A3, A5 2018 pers. comm. April, May).

Some survey responses suggested that the monthly café sessions would be a good place to encourage neighbours to work together to put land management projects into practice.

Built Environment

Responses on actions to make the built environment more resilient were strong. All survey respondents indicated that completing their Property Fire Management Plan and learning about house and asset protection was the most valuable part of the workshops.

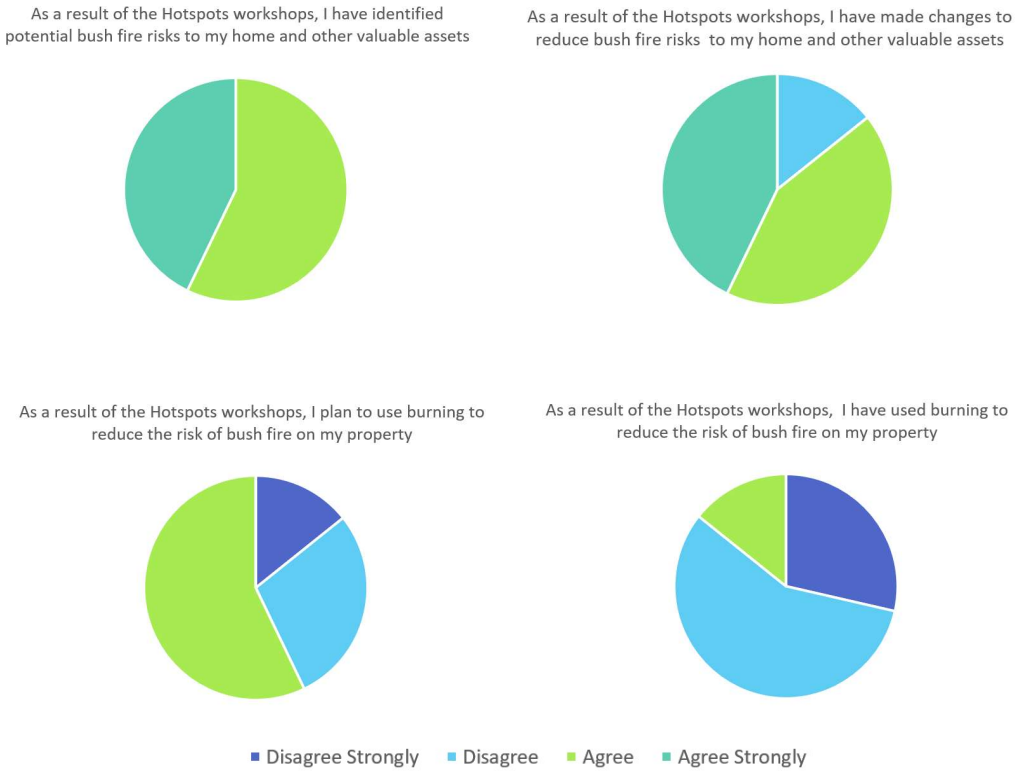

Figure 18: Built environment recovery of the Carwoola Hotspots workshop participants
Data source: May online survey of Hotspots workshop participants

All survey respondents indicated that they had identified bush fire risks around their houses, and taken action to mitigate those risks (see Figure 18). The actions included: 'Checking access for trucks, and being mindful of needs for width, slope turning space, and clearing obstacles to make for easier passage around my assets (house, shed, and chook run). Removing everything from under the house, and

clearing the verandahs a little'; 'changes to garden surrounding the house especially on west side to improve fire safety'; and 'cleared debris from around the house, cleared out gutters on house, removed fallen trees on property, discussed plan with children'. Only one person indicated that they had used fire to reduce bush fire risks, although more than half indicated that they planned to do so in the future (see Figure 18).

Natural Environment

The natural environment recovery of Carwoola is a more complex space. Carwoola residents live on a degraded landscape that was formerly farmland. It has lost much of its original biodiversity through this use. Hotspots staff, when seeing the state of this landscape after it had been burnt in the Carwoola-Taliesin fire, recognised the resulting fragility (McShea, Taylor 2018 pers. comm May). The Hotspots Carwoola After Action Review (2017) shows that messaging around fire ecology had been a key part of adapting the program for a fire-affected community. Post fire regeneration/recovery was part of this. So too was outlining management requirements for post-fire landscape – taking into account the severity of the fire, the season, types of vegetation, prior condition of the land and frequency of fire, as well as land use. It was felt that Carwoola residents would have to take action quickly to enable the burnt landscape to recover (McShea, Taylor 2018 pers. comm May).

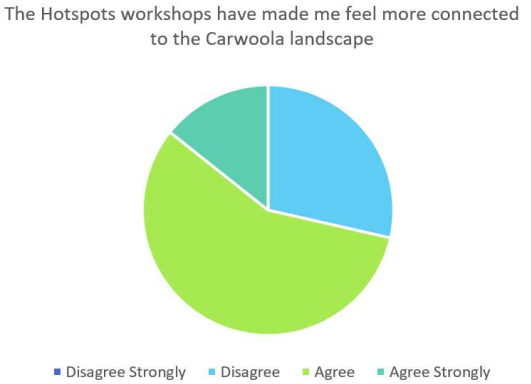

Figure 19: Natural environment recovery of the Carwoola Hotspots workshop participants
Data source: May online survey of Hotspots workshop participants

Ecological improvement is important to many Carwoola residents. An example of this is shown in Figure 20, which outlines the properties of residents who took part in a post-fire Landcare grant application to improve habitat for the scarlet robin. Once again, most owners of properties that suffered direct damage during the Carwoola-Taliesin fire elected not to take part - even though their landscape had been severely degraded by the fire and they had been repeatedly encouraged to do so. Some residents from the fireground (marked in light green) committed to regenerating their vegetation, but wanted to do so in their own timeframe rather than be part of the grant (A3 2018 pers. comm. May).

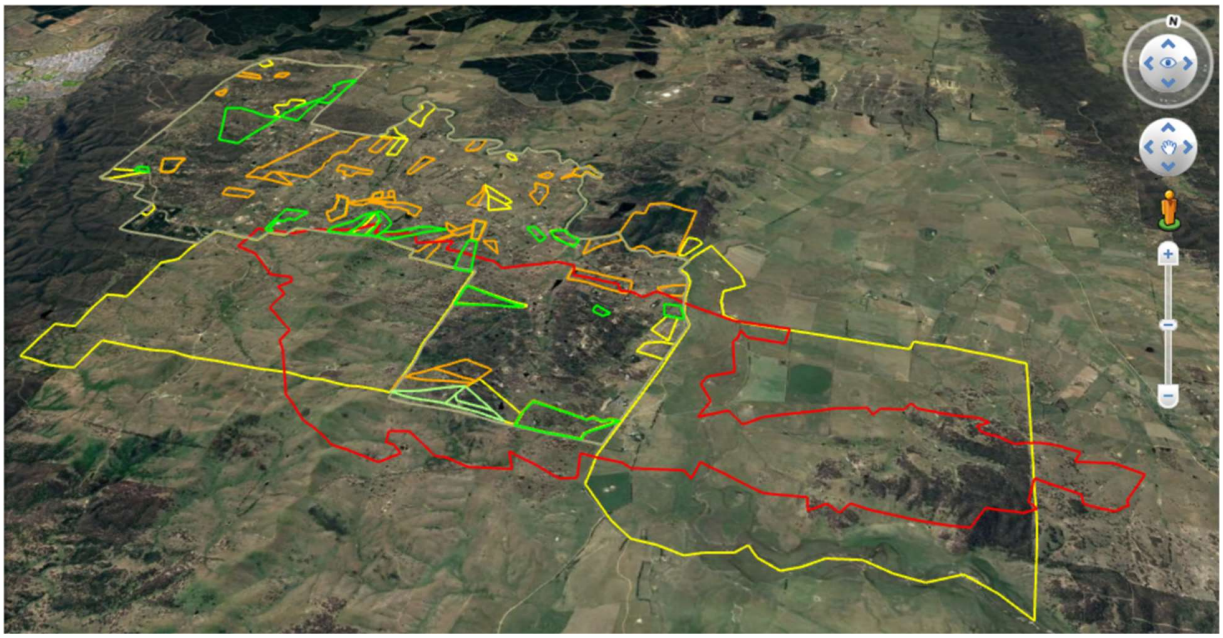

Figure 20: This map show (in green) the properties of residents who took part in a post-fire Landcare grant application. Data sources: Carwoola Landcare, Stoney Creek Fire Brigade, NSW RFS.

Post-workshop evaluation shows that the ecological information was highly valued. It has been noted, of course, that most participants did not live within the fire footprint, and were therefore not in a position to promote its recovery. However, given the degraded nature of the landscape on their properties, participants still valued information about fire land management practices. One survey respondent even noted that they 'have been to another coolfire burn and have implemented techniques demonstrated'. Just over half respondents planned to use burning to promote biodiversity, although only the one person had actually done so.

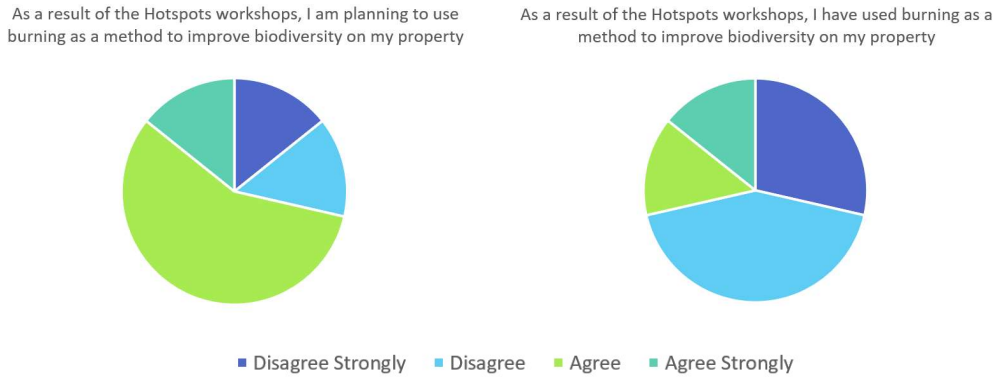

Figure 21: Natural environment recovery of the Carwoola Hotspots workshop participants
Data source: May online survey of Hotspots workshop participants

Apart from the odd exception, there seemed to be general reluctance amongst participants to put fire to ground for either asset protection measures or promoting biodiversity (see Figures 19 and 21). While it

would be tempting to conclude that this is because of the experience of the Carwoola-Taliesin bush fire, there is no information about whether this is the case.

And indeed, there are many barriers to implement effective ecological burning. Fear might be one of those things, as is lack of knowledge about how, why and what to burn; or uncertainty around the legal responsibilities of undertaking a prescribed burn.

Discussion Points

- Based on survey responses, Hotspots has achieved its aim to improve the resilience of Carwoola residents who participated in the program – especially with the two-day workshop. It has been particularly successful in building social and built environment resilience, and it has succeeded in making feel more connected to the Carwoola landscape.
- Hotspots would not normally be run in a landscape as degraded as the Carwoola landscape is, but workshop participants still found the ecological component of the course to be of value.
- Hotspots follow-up material for workshop participants suggested a range of activities that would continue to help Carwoola residents prepare for, and mitigate against, fire risk. There is more opportunity, given the interest of the participants, in identifying activities that would help to promote landscape biodiversity.
- Post-workshop evaluation indicated that the 80% of participants had learnt how to conduct a safe burn, but the online survey conducted 7 months later indicated some reluctance to put that learning into practice.
- There may be many reasons that many people choose to use fire. For instance, it may not appropriate for the landscape, or people might not feel that is it neccessary. Some of these barriers could be:
    - Lack of knowledge about when, what and how to burn;
    - Fear of fire (could be in response to a range of factors; their experience of the Carwoola-Taliesin fire; the court case against the person whose property the fire started on; or even contributed to by RFS fire protection language); or
    - Uncertainty about getting the correct permits and permissions.

Conclusion

The Australian Government Community Recovery Handbook (2011) recommends that communities recover from disaster best when they manage their own recovery process, and that government programs should be designed to facilitate this.

The Hotspots Fire Project is an example of a program that ‘empowers communities to continuously maintain preparedness behaviours and collaboratively manage their own risks to enhance collective resilience’ (NSW RFS 2017, p13). It is therefore well-placed for adaption to assist bush fire-affected communities who are seeking to become more resilient to future bush fires.

The adaptions made to the Hotspots program in Carwoola – two-day workshops for residents; training the local RFS brigade to conduct bush fire risk assessments for houses; and on ongoing monthly community café with information sessions – has worked well with the Carwoola community.

The initial workshops were demonstratively effective at building resilience. The knowledge gained by the workshop participants, in combination with the risk assessment tool and the monthly café, have given the Carwoola community the tools to continue to work together to recover in the social, built and natural environments.

The Hotspots team, in conjunction with the local NSW RFS, should be congratulated for the way in which they have helped Carwoola residents become more resilient to future bush fires. Listening to their needs; adapting the program to meet those; reducing their feelings of vulnerability; and empowering them to take actions that will mitigate bush fire risk, has been a key part of helping these residents recover from the 2017 Carwoola-Taliesin fire.

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Hotspots workshop participants learn how to operate a McArthur meter. Image: J. Cramp, Hotspots Fire Project

Appendices

Appendix A: Key dates and scope of the Hotspots Fire Project program

Table 2: Key dates and scope of the Hotspots Fire Project

17 February 2017: Carwoola-Taliesin fire

- Burned 3,134 hectares of land
- Destroyed 11 houses and 45 outbuildings
- Pet and stock losses of 34 animals
- Injured 2 firefighters
- Damaged a further 12 homes and 40 outbuildings
- Damaged and destroyed other assets including cars, fences, pasture, and gardens
- Displaced approximately 59 residents and 300 domestic animals

February 2017 - onwards

- Community starts approaching the local fire brigade for personalized advice on how to mitigate fire risk on their property

28 May 2017

- Local Brigade runs first fire preparedness workshop
- Presenters: Stoney Creek Fire Brigade, Landcare, Wildcare
- Estimated number of attendees: 20

23 July 2017

- Local Brigade runs second fire preparedness workshop
- Presenters: Stoney Creek Fire Brigade
- Estimated number of attendees: 20

18 September 2017

- Local Brigade Get Ready Day and Carwoola car boot sale

23 and 24 September 2017

- Hotspots Workshop 1 for Series 1 and Series 2 participants
- Presenters: NSW RFS, Nature Conservation Council NSW
    - Introduction to fire behaviour and fire ecology
    - Tour of Carwoola-Taliesin fireground
    - Introduction to calculating forest fuel load
    - Night bushland walk of Stony Creek Nature Reserve
- Combined number of attendees: 50

1 October 2017

- Formal start of fire season

7 and 8 October 2017

- Hotspots Workshop 2 for Series 1 and Series 2 participants
- Presenters: NSW RFS, Nature Conservation Council NSW
    - Completion of individual property fire management plan (online or on A0 maps)
    - Introduction to calculating Forest Fire Danger Index (FFDI)
    - Prescribed burn
    - Introduction to relevant phone apps ie Fires Near Me
- Combined number of attendees: 50

15 October 2017

- Hotspots café session: Firewise: Bush fire awareness and planning
    - House protection during bush fire

    - Lego community mapping exercise
- Presenter: NSW RFS
- Estimated number of attendees: 15

19 November 2017

- Hotspots café session: Scarlet Robin project
- Presenter: Landcare
- Estimated number of attendees: 12

3 December 2017

- NSW RFS training for local brigade members in RFS Household Assessment Tool
- Presenter: NSW RFS
    - local RFS brigade members trained to use the Home and Asset Protection Zone Assessment Mitigation Guide, to create reports that will assist property owners reduce the vulnerability of their house to bush fires.
- Estimated number of attendees: 20

17 December 2017

- Hotspots café session: general information on fire preparedness
- Presenter: NSW RFS
- Estimated number of attendees: unknown

21 January 2018

- Hotspots café session: Servicing and maintaining fire-fighting pumps
- Presenter: Stuart Morrison
- Estimated number of attendees: 10

18 February 2018

- Hotspots café session: Preparing and managing animals during an emergency
- Presenter: Misty Stebbings
- Estimated number of attendees: 19

18 March 2018

- Hotspots café session: Bush fire risk management
- Presenter: NSW RFS
- Estimated number of attendees: 12

Appendix B: Evaluation Framework

The Hotspots Fire Project has been evaluated using 'A Monitoring and Evaluation Framework for Disaster Recovery Programs' that was developed by the Australia and New Zealand School of Government in 2016.

Hotspots Fire Project community recovery and resilience outcomes

The Australian Government Attorney-General's Department published the Community Recovery Handbook 2 in 2011. According to this policy, community recovery should be coordinated across four integrated environments: social, economic, natural and built.

The Hotspots Fire Project can be assessed against three of these environments: social, natural and built. It has program outcomes that can be mapped specifically across these sectors. See Tables 3, 4 and 5 for full details.

The Evaluation Framework looks at disaster recovery program outcomes in terms of promoting community 'sustainability' and 'resilience'.

The NSW RFS Community Engagement Strategic Directions states that the Hotspots Fire Project is an example of a program that 'empowers communities to continuously maintain preparedness behaviours and collaboratively manage their own risks to enhance collective resilience' (2017, p13). Therefore the Hotspots will be evaluated against the resilience outcomes in the evaluation framework.

Community resilience is defined by the Evaluation Framework as a community that is better able to withstand future disaster.

Table 3: Social environment recovery – improved resilience				
High level outcomes	Mid-level outcomes	Program-specific outcomes	Program-specific outputs	Recovery Indicators
The community has improved capacity and capability to respond to future bush fires	• Community members are aware of each other's potential needs from future disasters through formal and informal networks and plans (i.e. social connectedness). • Community members are able to respond to their own needs and to support the other members of the community. • Mutual assistance systems, social networks and support mechanisms are capable of adapting to emergencies when these occur.	Workshop outcomes Participants to have: • Better understanding of what happened during the Carwoola/Taliesin Fire • Better understanding of how to develop an Individual Property Fire Management Plan • Better understanding of rules and regulations about fire management • Ability to be better prepared for bush fire – at individual and community level Café outcomes Participants have: • Improved relationship with local RFS • Improved relationships with other community members • Facility for community planning	Two workshops Carwoola Hotspots café sessions Individual Property Fire Management Plan Regional Fire Management Plan	• Participants feel more confident in their ability to respond to future bush fires • Participants have minimized risk of future bush fires by finalizing their own fire and land management plan • Participants feel empowered to put their fire and land management plans into practice • Community are aware of the Regional Fire Management Plan, and how it affects them • Residents are attending the Carwoola Hotspots café events to learn about resilience and fire management as well as feel like part of the community • Residents are acting on information provided at the Carwoola Hotspots café events

Table 4: Natural environment recovery outcomes – improved resilience				
High level outcomes	Mid-level outcomes	Program-specific outcomes	Program-specific outputs	Recovery Indicators
The risk of adverse impacts of future bush fires on the environment is reduced	• The community is aware of the risks of future disasters to natural and cultural heritage assets. • The community understands the characteristics and functioning of local natural environment and ecosystems.	Workshop outcomes Participants to have: • Better understanding of what happened to/because of the environment during the Carwoola/Taliesin Fire • Better understanding of post-fire environmental recovery • Better understanding of the relationship between the local landscape and fire • Better understanding of the environmental and risk considerations when conducting a prescribed burn or undertaking other bush fire mitigation activities on their property.	Two workshops Night bushland walk Individual Property Fire Management Plans Regional Fire Management Plan	• Participants feel that they have a better understanding of the local landscape and its relationship with fire • Participants have considered biodiversity issues in their own fire and land management plan • Participants feel empowered to put their fire and land management plans into practice

Table 5: Built environment recovery outcomes – improved resilience* **				
High level outcomes	Mid-level outcome	Program-specific outcomes	Program-specific outputs	Recovery Indicators
Infrastructure is rebuilt/adapted to reduce to a reasonable degree the impact of future disasters on communities. The risk of adverse impacts of future bush fires on built assets and infrastructure is reduced.	• Infrastructure is rebuilt/adapted with regard to local disaster risks. • Infrastructure is rebuilt/adapted in accordance with current knowledge and practices for mitigating disaster impact.	Participants to have: • Better understanding of fire risks that exist on and around properties during bush fires • Better understanding of how the RFS can help identify fire risks on their properties • Better understanding of how to mitigate those fire risks • Better understanding and confidence in attaining relevant approvals and conducting a safe and effective burn.	Two workshops Individual Property Fire Management Plans Property protection information Local RFS trained in use of RFS Household Assessment Tool	• Participants have identified potential fire risks to their infrastructure (by themselves or in partnership with the RFS) • Participants have identified achievable risk management actions in their fire management plans • Participants have rebuilt, or made adaptations, to their infrastructure to reduce the impact of future bush fires

*None of the Hotspots workshop participants lost their houses in the Carwoola/Taliesin fire – so these outcomes have been adapted from the original evaluation framework to include adapting existing infrastructure. Infrastructure should be understood to include gardens that surround dwellings.

** Rebuilding would need to consider bush fire protection measures, planning and building requirements that is outside the scope of Hotspots but may be a topic of consideration within the café events.

Appendix C: Survey Questions

1. The Carwoola-Taliesin fire

	No impact	Minor impact	Moderate impact	Major impact
The Carwoola-Taliesin fire had an impact on my property and/or livestock				
The Carwoola-Taliesin fire had an emotional impact on me and/or my household				

2. I decided to participate in the Hotspots Fire Project because:

3. I have attended (check all that apply)
    - Workshops
    - Spotlight tour of Stony Creek Nature Reserve
    - First Hotspots café session (Tim Carroll's presentation on house protection during bush fire)
    - Other Hotspots café sessions

4. Hotspots Fire Project – Workshop and Café Sessions (Social Environment)

	Disagree strongly	Disagree	Agree	Agree strongly
The Hotspots workshop and café sessions have made me more confident in my ability to prepare for future bush fires				
The Hotspots workshop and café sessions have made me feel more connected to the Carwoola community				
The Carwoola-Taliesin fire has made me feel more connected to the Carwoola community				
It was valuable learning how the fire behaved during the Carwoola/Taliesin bush fire				
It was valuable taking part in a prescribed burn				

5. Built Environment

	Disagree strongly	Disagree	Agree	Agree strongly
As a result of the Hotspots workshop, I have identified potential bush fire risks to my home and other valuable assets				
As a result of the Hotspots workshop, I have made changes to reduce bush fire risks to my home and other valuable assets				
Creating the Property Fire Management Plan, and learning about house and asset protection was the most valuable part of the workshop				

6. Natural Environment

	Disagree strongly	Disagree	Agree	Agree strongly
The Hotspots workshop has made me feel more connected to the Carwoola landscape				
As a result of the Hotspots workshop, I am planning to use burning as a method to improve biodiversity on my property				
As a result of the Hotspots workshop, I have used burning as a method to improve biodiversity on my property				
The information about improving biodiversity with fire was the most valuable part of the workshop				

7. Any other comments
