

# Understanding preparedness and recovery.

A survey of people's preparedness and  
recovery experience for emergencies





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## Acknowledgement

Australian Red Cross acknowledges the traditional owners of the lands and waters on which we work and live, and pay our respects to their elders past, present and emerging. We also pay our respect to a wisdom that has accumulated with 60,000 years of living with fire, flood, cyclone, earthquake, volcanic eruption, tsunami, disease and dispossession. There is much that we can learn.

Australian Red Cross thanks the 330 participants from around Australia who participated in this project. Their experiences help improve outcomes for others.

We would also like to thank our industry partners, particularly the Australian Institute for Disaster Resilience, for promoting the survey among people who have been affected by an emergency.

## Suggested citation

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## FOREWORD



### Disasters are a major source of disruption for both people and society.

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They can disrupt people's living circumstances as well as their hopes, goals and aspirations. The cumulative costs associated with the aftermath of disasters can severely impact communities and society. Taking action prior to disasters has long been recognised as a desired activity to reduce their impacts.

With the impacts of disasters increasing, caused by a changing climate, increasing disadvantage and urbanisation, preparedness has never been more pressing. Mitigating the impact of disasters on people's lives and society becomes all the more critical.

We know that the level of disaster preparedness within the Australian population is traditionally low, with around one in 10 taking some form of action.<sup>1</sup> The academic literature on preparedness has confirmed this reality. The challenge is for agencies working in the area to motivate people to take action. Over the years, this has changed from experts telling people what to do, to having conversations that help people understand that something can be done about reducing risk, and that they can do something about it. Demonstrating the benefits of preparedness is key to this conversation.

When Australian Red Cross launched RediPlan, our emergency preparedness guide, in 2008, we deliberately steered clear of providing hazard-specific advice tailored to the circumstances of different types of disaster. Based on our experience in recovery, our focus is to help people understand the longer term impacts of disaster, and help them take action to reduce them. This 'preparedness for recovery' approach is unique, as most preparedness programs in Australia focus on survival from the hazard.

Given the unique nature of Australian Red Cross preparedness activities, we determined that further evidence is required to demonstrate the impact of the actions we recommended. Hence, with this study, we set out to better understand people's preparedness actions.

**Noel Clement** | Director - Australian Programs  
Australian Red Cross

1. Australian Red Cross (2019) *Emergency Preparedness Survey*.

## EXECUTIVE SUMMARY

Over the last decade, Australia has witnessed an increase in disasters and emergencies<sup>2</sup> culminating with the 2019-2020 bushfires and the COVID-19 pandemic.

Emergency recovery goes beyond survival. It is a complex process with potentially long-lasting impacts on people's lives. Within research, policy and practice, there is a widespread assumption that preparing for a disaster has a positive impact on recovery. However, there is a limited amount of research proving this link between preparedness actions and recovery, and most preparedness actions are focused on hazard survival, and the first 72 hours after a disaster.

As part of the goal of Australian Red Cross to equip three million people to prepare for and recover from an emergency, we wanted to further our understanding of people's experiences of emergency and recovery. We undertook this research to better understand:

- the disruptive impacts of emergencies on people's lives
- people's experiences of the emergency and of the recovery process
- whether the type of preparedness actions taken influences recovery outcomes and is influenced by personal characteristics.

In particular, we wanted to better understand the link between preparedness actions and enhanced recovery.

This report examines the emergency experiences of 165 people who lived through a disaster between 2008 and 2019. The analysis of the survey responses relies on descriptive statistics, and factor and cluster analyses.

### We found that:

- The source of preparedness advice matters to people's feeling of being in control and confidence in the decisions they made during the disaster
- Feeling prepared reduces stress levels which improves self reported recovery outcomes
- As expected, the more people do to get prepared, the more they feel prepared
- Protecting important items and managing stress is at the top of what people want to do better
- Preparedness actions can be grouped in three categories: 'Protect my personal matters', 'Build my readiness' and 'Be pragmatic'
- Among those who got prepared, four groups of persona or profile emerge: the 'Ready', the 'Sentimental', the 'Planner' and the 'Unsure'
- Those who had reported they had not yet recovered were more likely to feel less prepared, more stressed, and not as confident and in control during the emergency. A greater proportion required government assistance, did not get any preparedness education and if they did it was more often through friends and not the Australian Red Cross, relative to those who had recovered at the time of the survey. In this group, there is an over-representation of people earning less than \$52,000 per year and they were more likely to live in NSW and Queensland.

### Based on our research, we recommend:

- an increased focus on preparing for the long-term impacts of a disaster in preparedness programs
- a differentiated approach in preparedness based on people's profile and what they specifically need support in
- ensuring that psychological preparedness focused on experiences during and after a disaster are included in all preparedness programs
- more research should be undertaken to further investigate which actions support enhanced recovery.

## LITERATURE REVIEW

Disaster preparedness falls within the pre-disaster actions of the PPRR (Prevention, Preparedness, Response and Recovery) emergency management continuum. However, this review of the literature does not follow the chronological approach of the emergency management continuum. By starting at the end, that is, the recovery stage, the review clarifies the consequences of disasters and therefore underscores actions to mitigate them. This review provides an understanding of the post-disaster situation and a snapshot of the framework that guides household emergency preparedness activities. The review concludes on the challenge of demonstrating the impact of preparedness activities in improving post-disaster outcomes.

The methodology to conduct the review involved two components. We first searched for peer-reviewed articles on preparedness in the period 2000–2019 by using University of Melbourne’s Discovery search engine. We also included research generated by the University of Melbourne’s Beyond Bushfires study (Gibbs et al. 2014) into the health and wellbeing trajectories following the Black Saturday bushfires in Victoria (Australia) in 2009. These papers provided a context around the impacts of disaster and the recovery process.

The initial search focused on the phrase ‘efficacy of household emergency preparedness’. This search yielded 157 results. The search was then expanded by dropping the term ‘efficacy’, and this returned 963 peer-reviewed papers. We discarded studies that were not taking place in a high-income/developed country context. Ninety-two papers were selected and most of them assume a positive link between preparedness and improved recovery outcomes. Only four papers pointed to a lack of empirical evidence for household preparedness. Two other papers identified positive impacts of preparedness activities, one neutral impacts and one paper identified a negative impact (i.e. not the desired outcome).

### Disaster impacts and recovery

The impacts of disasters can be complex and multidimensional (Alesch et al. 2009; Leadbeater 2013; Nicholls & Healy 2008; Eyre 2006). They extend for many people beyond the 72-hour survival period. These impacts can include long-term health and wellbeing impacts (Bryant 2009; Bryant et al. 2014, 2017; Hobfoll et al 2008, Petkova et al. 2018; Forbes & Creamer 2011; McFarlane et al. 1994; McNally et al. 2003; Bisson & Lewis 2009; Brackbill et al. 2006; Brewin et al. 2000; Calvo et al. 2015; Neira & Sullivan 2011; Priebe et al. 2011; Picou & Marshall, 2007; Rubin et al. 2005; Zahran et al. 2013; Leitch 2009; Escobar et al. 1992; McCurry 2012), impacts of relocation away from disaster areas (Gibbs 2016), grief and bereavement (Harms et al. 2015), separation during emergencies (Richardson et al. 2016; Gallagher et al. 2017), educational outcomes (Gibbs et al. 2019), impacts on relationships and families (Gallagher et al. 2017, Proudley 2008 ), impacts on employment (Ulubasoglu & Beaini 2019; Zissimopoulos & Karoly 2010) and broader long-term community impacts (Australian Business Roundtable 2016; Aldrich 2012; Chamlee-Wright & Storr 2009; Norris et al. 2008; Eyre 2006; Olshansky 2005), impacts on women (Enarson & Morrow 1998, Peek & Fothergill 2008, Whittaker et al 2016).

The recovery process is also complex and multidimensional; recovery should not be described in terms of a single outcome such as rebuilding houses (Abramson et al. 2010; Petkova et al. 2018). Evidence suggests that the recovery process, through the presence of a range of major life stressors, can also have an impact on survivors’ health and wellbeing post disaster (Bryant et al. 2014, 2017; Forbes et al. 2015).

It is difficult to define recovery in a timeframe; as noted above, recovery trajectories and outcomes are multidimensional (Abramson et al. 2010). Some authors have used self-reported recovery, in the same way as self-reported quality of life measures have been used, as a measure of recovery (Aldrich 2011, 2012).

## Preparedness, a definition

The papers reviewed overwhelmingly focus on household preparedness that encourages survival-related skills. Most focus on increasing levels of preparedness in households/individuals, as well as seeking behaviour change. These considerations are outside the scope of this paper, as we seek to demonstrate the link between preparedness and better recovery outcomes.

There are multiple definitions of household preparedness. These revolve around taking some form of action to reduce the impact of emergency and suggest preparedness is either a process:

*Disaster preparedness refers to the steps and activities that are planned and undertaken prior to the onset of a disaster aiming to enhance the capacity of individuals, households or communities to respond effectively to an emergency, crisis, or disaster.*

(Martins et al. 2018, p. 2)

Or a state:

*Preparedness is the state of being ready for some incident or situation as a result of having taken protective and precautionary measures, such as planning, training and stockpiling resources. It fundamentally depends on having access to and the ability to deploy necessary capabilities.*

(Donahue, 2014, p. 89)

The literature identifies that dominant features of household preparedness revolve around three survival-focused actions: acquiring information about risk; having an emergency plan that would guide action before, during and after an emergency; and having supplies available to be able to survive a number of days without electricity, water and food (Levac et al. 2012). These recommended actions appear to be informed by experts (e.g. US Department of Homeland Security 2011) or consensus driven (e.g. with wildfire preparedness actions in Australia) (Cao et al. 2016). Kirschenbaum's (2002) *Preparedness Component Scale* identifies four broad areas of preparedness based on reviewing:

*...31 consensual definitions acquired from alternative sources such as disaster experts, disaster management organizations, the research literature and a national representative sample. These are: (1) levels of provisions or supplies available in the home, (2) knowledge of and ability to utilise survival and first aid skills, (3) having evacuation and family plans at the ready, and (4) protective physical shelters or sealed room.*

(Kirschenbaum, 2006, p. 125)

More recently, there has been an emphasis on the role that social capital plays in disaster preparedness. Stronger social networks and stronger social capital contribute towards people being better prepared (Paton, Smith & Johnston 2005; Heidenstrom & Kvanloff 2018; Nukpezah & Soujaa 2018). The works of Aldrich (2012) and Nagakawa and Shaw (2004) have linked strong social capital with positive survival and early recovery outcomes.

These approaches focus on the individual preparing to survive the hazard. There is then an assumption that assistance will become available after a period (generally 72 hours) (Kohn et al. 2012) or that people will return to their normal lives. Gowan et al. (2015) critique this approach:

*Conventional disaster preparedness messaging focuses largely on promoting survival actions and communications planning for the immediate post-disaster period. While such preparedness is vital, we have long-observed a gap in preventive medicine and disaster planning for building personal resilience – preventatively – to persevere through prolonged recovery timeframes.*

(Gowans et al., 2015, p. 1)

This is the only paper this review found suggesting that preparedness addresses issues that may emerge in the recovery period.

## Linking preparedness and recovery

It appears that most papers exploring the link between preparedness and recovery implicitly assume that preparedness activities have a positive outcome during and after disasters. Some papers reviewed suggest that 'being prepared leads to a faster recovery'. This idea is generally unsupported by empirical evidence (e.g. Donahue et al. 2014; Nukpezah et al. 2018). Kohn et al. (2012, p. 229) specifically mention that 'to our knowledge, no literature exists to date that clearly links having a kit or plan to better response outcomes' and Kirschenbaum (2002, p. 114) notes that 'nor has there been a systematic examination of pre-disaster behaviors related to preparedness that are crucial for consequent behavior during and after disasters'. Heagale (2016, p. 979) goes further, to argue that there is no literature to support the notion that having an emergency kit results in 'self-sufficiency or contributes to disaster-related resilience'. As a result, she cautions against using emergency kits as an indicator of household preparedness.

Uscher-Pines and colleagues (2012, p. 172) make a similar criticism:

*...the biggest problem with the existing approach to citizen preparedness is that the entire effort relies on largely untested, and therefore unverified, assumptions. Despite extensive messaging about the importance of citizen preparedness and countless household surveys purporting to track the preparedness activities of individuals and households, the role individual Americans are being asked to play is largely based on conventional wisdom.*

A study of preparedness actions in Hong Kong taken ahead of Super Typhoon Mangkhut in 2018 found that short-term impacts were not reduced (Chan et al. 2019). Research undertaken into people's preparedness activities prior to the Black Saturday bushfires in Australia found that even though some people had undertaken comprehensive preparedness activities, these were not adequate or suited to the complexity of the bushfire hazard (Whittaker 2019).

Through this review, only two papers demonstrated a specific link between preparedness activities undertaken and improved self-reported recovery outcomes (Thieken et al. 2007; Kienzler et al. 2015). A study of people affected by flooding in Germany in 2002, 2005, 2006 and 2011 found that, over time, people reported that flood preparedness and mitigation measures taken were increasingly effective. The study also noted that respondents' self-reported recovery rates (using a limited indicator of household contents and damage to property) improved after each of these events (Kienzler et al. 2015). Thieken and her colleagues (2007) make a stronger link. Surveying flood-affected communities in Germany, they observe that self-reported recovery rates eight to nine months after floods varied from 31.5% in one group in one part of the country to 60% in another group. Thieken et al. go on to state that:

*...knowledge about self-protection and perceived efficiency of private precautions were also advantageous for fast recovery, e.g. slow recovery was connected to a lack of knowledge about self-protection in one group. This demonstrates that recovery is affected not only by the degree of flood impact, but also by people's preparedness and their knowledge about flood mitigation.*

(Thieken et al., 2007, p. 1033)

Therefore, there is limited empirical evidence on the impact of undertaking preparedness actions (both long-term and short-term) on disaster consequences and recovery beyond floods in Germany.

In order to contribute to the existing literature, this study aims to understand, during and after the disaster:

- 1. The link between preparedness, stress levels and recovery outcomes**
- 2. Identifying profiles of people based on their level of preparedness, in order to target programs and interventions**
- 3. For those experiencing a more difficult recovery process, what type of preparedness actions they took and how their preparedness strategy could be improved**

# PARTICIPANTS' CHARACTERISTICS

## Methods

Australian Red Cross developed a survey with questions that focused on preparedness actions people had undertaken before a disaster, their experience of a disaster event and their experiences of recovery. This survey was developed using key studies on preparedness (the Australian Bureau of Statistics Household Preparedness Survey, and the Queensland Community Preparedness Survey of 2013), as well as Red Cross preparedness monitoring surveys.

To be eligible to participate in the survey, participants needed to be 18 years or older and have experienced a disaster between January 2008 and January 2019, to allow enough time for the immediate impacts and needs to settle, and for people to experience the challenges and complexity of the recovery process.

The survey was administered online through SurveyMonkey between 22 March 2019 and 8 April 2019. It was promoted via social media, Australian Red Cross preparedness training events, the Australian Red Cross GetPrepared app and Australian Red Cross partners. As a result nearly 30% of the respondents had received training through Australian Red Cross, but not exclusively.

A total of 330 respondents were eager to participate in this study, 156 respondents were eligible (i.e. were over 18 years old and had been impacted by a disaster between 2008 and 2019), 122 completed the survey and 95 of those had taken preparedness actions. Participation was anonymous, and participants were only offered the opportunity to submit their contact information if they wanted to participate in the prize draw or receive follow-up information about the research.

## Demographics

The figures below represent the demographic characteristics of the sample collected. In comparison to the general population this sample has an over-representation of woman (68% vs 51%<sup>3</sup>), older people (83% of 40+ vs 48%<sup>4</sup>) and wealthier households (41% of \$104,000+ vs 32%<sup>5</sup>).

Figure 1: Gender breakdown of participants<sup>6</sup>



Figure 2: Age breakdown of participants

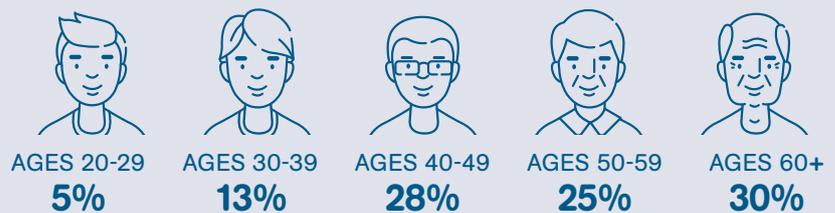


Figure 3: Average income per household of participants

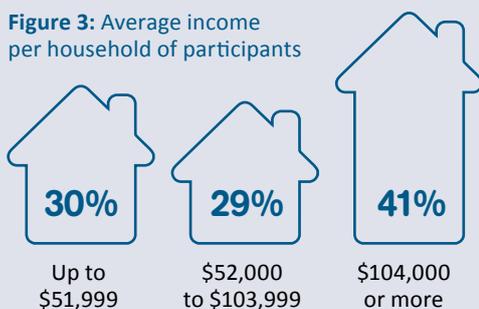
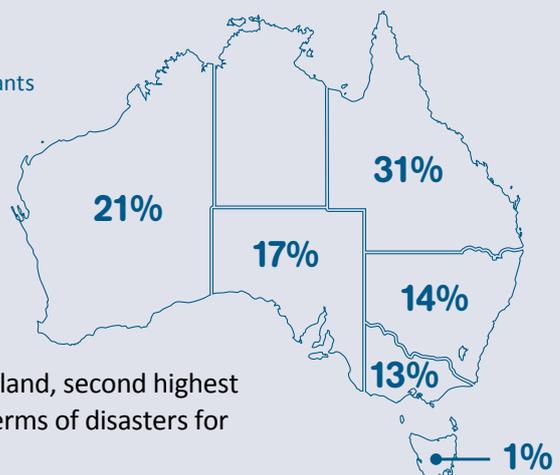


Figure 4: Geographical breakdown of participants



Respondents' postcodes<sup>7</sup> reflect different situations with Queensland, second highest most affected state, WA the fourth one and SA the sixth one in terms of disasters for the period 2008-2019 (Disaster Assist 2020).

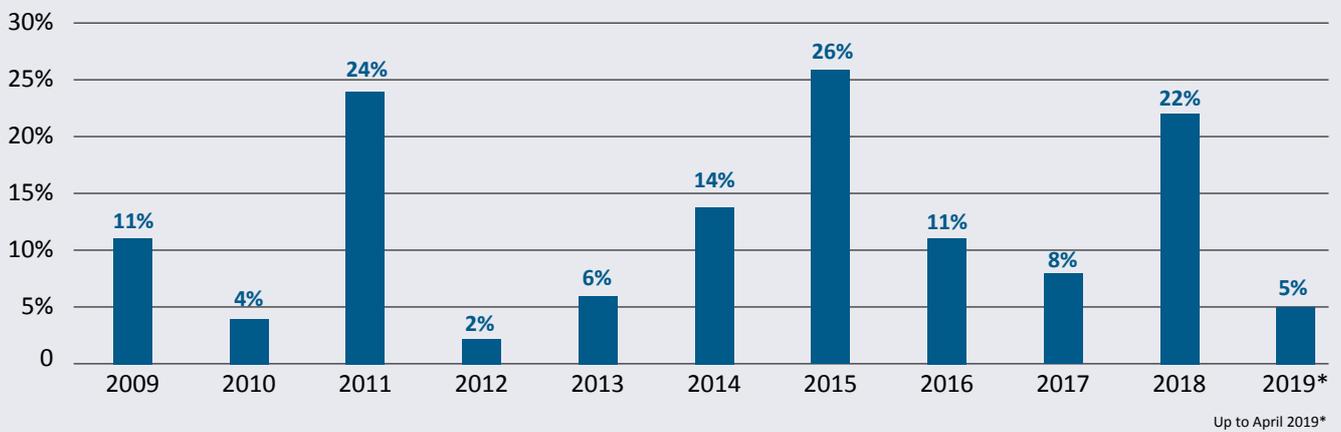
## Disaster impacts, recovery outcomes and preparedness actions

This section presents more information about respondents’ experiences during and after the disaster(s) they were impacted by and the preparedness actions they took. We are seeking to understand the nature of their experience, and how they fared after the disaster.

### During the disaster(s)

Most of the respondents were affected in either 2011, 2015 or 2018 as shown in Figure 5. Only 3% of the respondents were affected multiple times (2 to 4 times in the past 10 years).

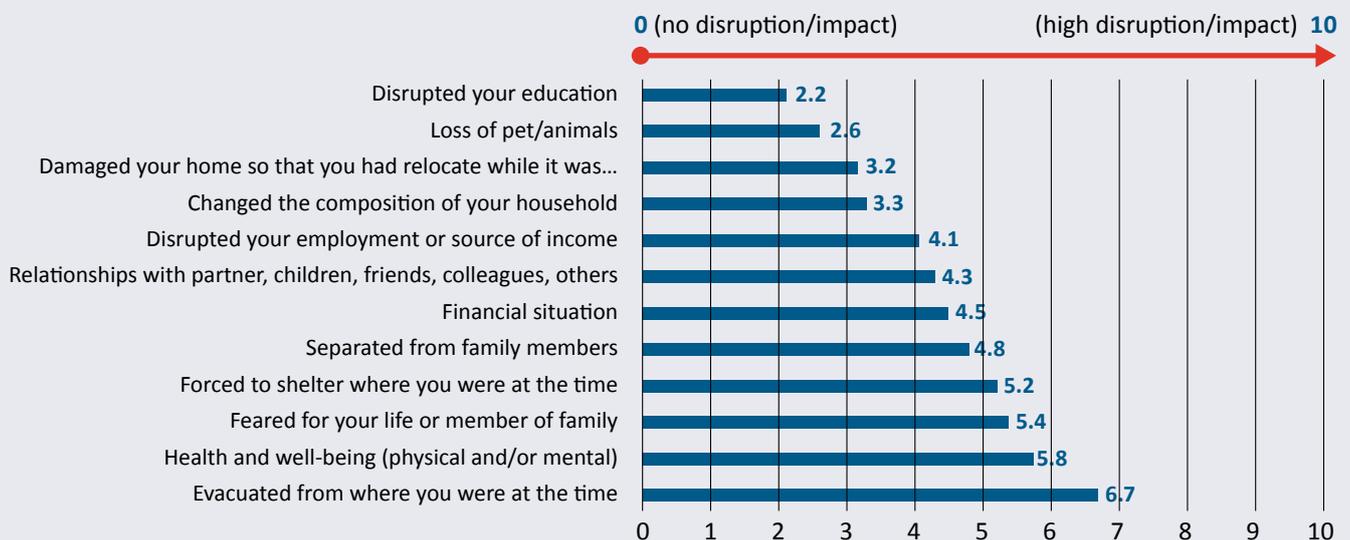
Figure 5: Date of disaster (includes multiple disasters)



Respondents were asked to assess the type of disruption during the disaster they personally experienced on a scale from 0 (no disruption/impact) to 10 (high disruption/impact). These impacts are drawn from Red Cross’ experience in disasters. The results are shown in Figure 6. The top three are:

1. Evacuation (6.7)
2. Health and wellbeing (5.8)
3. Fear for your life or member of family (5.4)

Figure 6: Level of immediate disruption (self-reported, mean)

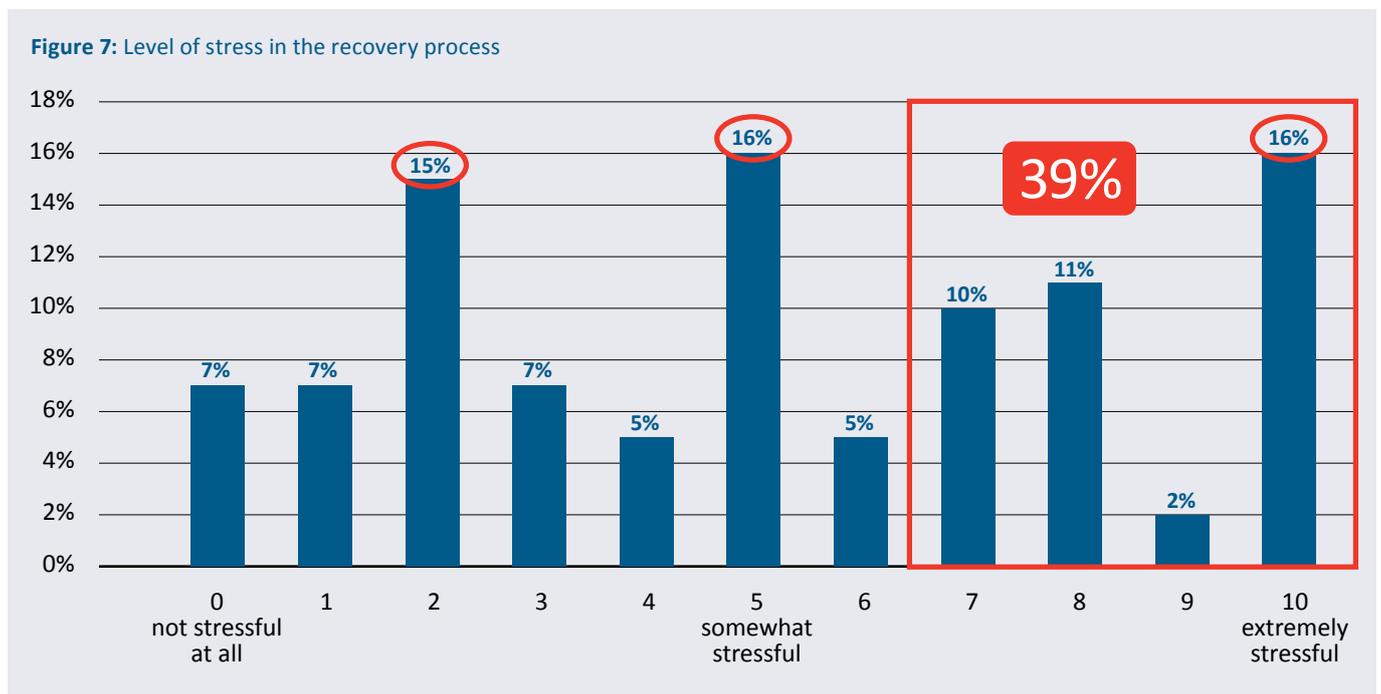


Furthermore, it is worth noting that among the respondents, **nearly 7 out of 10 felt in control** of their actions during the disaster and **nearly 9 out of 10 felt confident** with the decisions they made at the time. This is important because in our experience we understand that feeling in control during a disaster is a sign of people having some degree of preparedness to handle what is happening (Morrissey and Reser 2003, McLennan et al 2014, Paton, 2018). As for confidence, it reveals that people took certain actions that they felt confident were the best at the time and did not regret them. These concepts are central in disaster preparedness, as it speaks to remaining in control during stressful situations, and not having regrets about decisions made. The questions for this part of the survey were based on previous research done by the University of Melbourne's Beyond Bushfires team (Gibbs et al. 2014) based on a person's 'locus of control' influencing their 'comfort' outcomes, and degree of confidence.

### After the disaster(s)

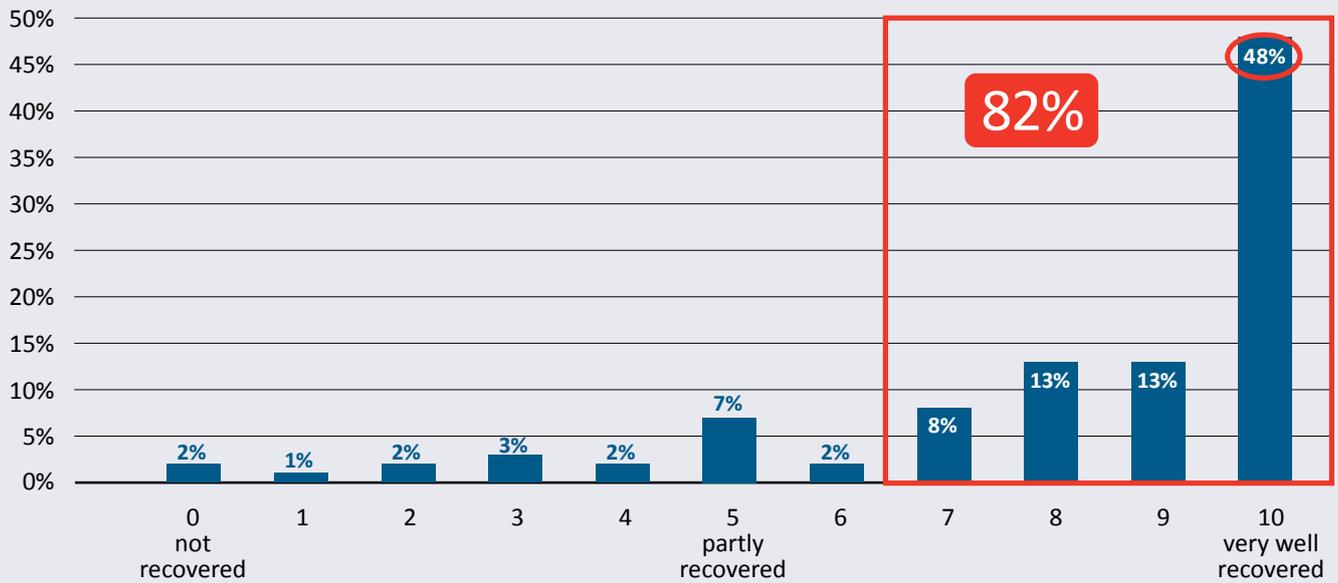
As noted on page 6, defining recovery and what it means to have recovered is not a straightforward process. In line with self-reported quality of life measures (Ye & Aldrich 2019), we have focused on whether people reported that they felt they had recovered.

Interestingly, the proportion of respondents who found the recovery process slightly stressful, somewhat stressful or extremely stressful are comparable (15%, 16% and 16% respectively). However, 4 respondents out of 10 reported high levels of stress (7 to 10).



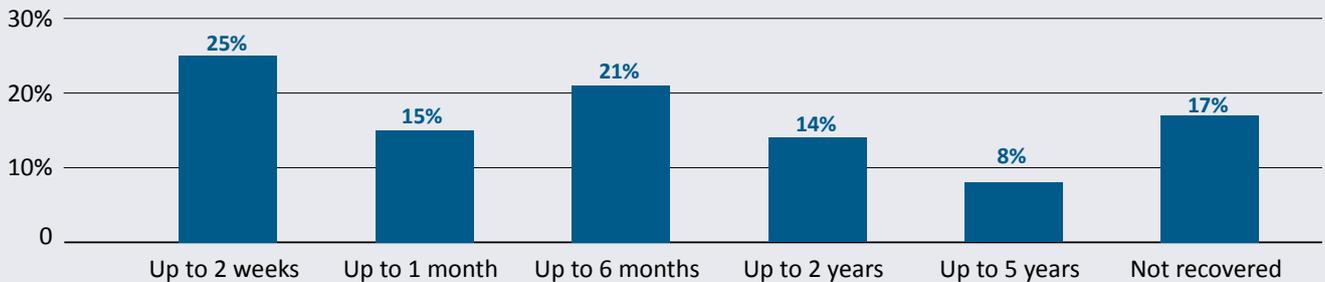
More than 8 out of 10 respondents reported having recovered well (7 to 10). Nearly 1 out of 2 reported having recovered very well.

**Figure 8: State of recovery**



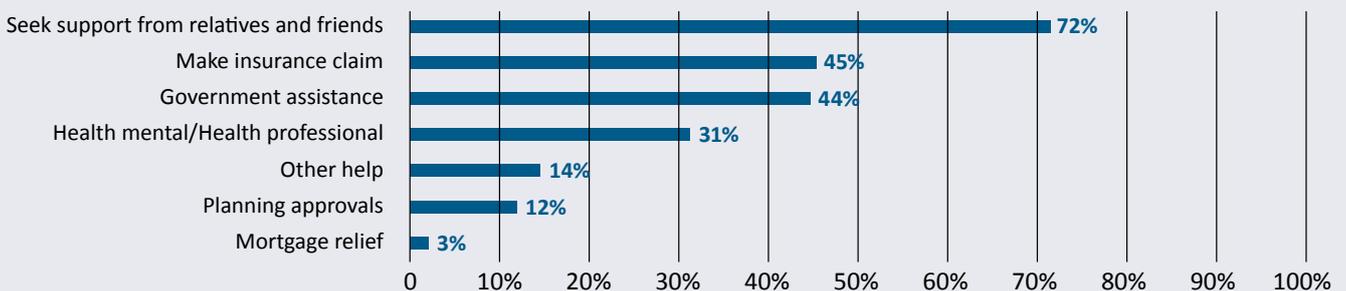
As shown in Figure 9, more than 3 out of 5 respondents reported feeling that they had recovered within six months.

**Figure 9: Duration to recover**



Post disaster(s), the actions most respondents reported doing were ‘seek support from relatives and friends’ (70%), ‘make an insurance claim’ (45%) and/or required ‘government assistance’ (44%) as shown in Figure 10. The ‘Other help’ category is made up of help sources such as personal savings, community recovery activities, mental health support, support through school, Red Cross preparedness sessions and dedicated online local forums.

**Figure 10: Source of help post disaster (per training, multiple response)**

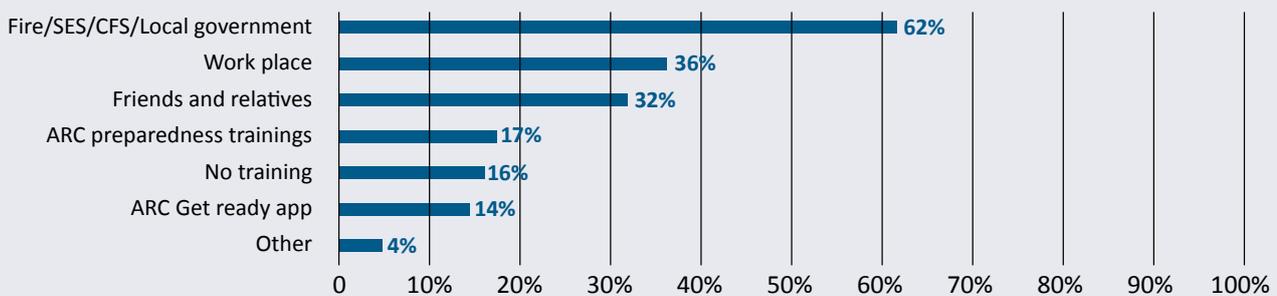


## Preparedness actions

Once we understood what people's experiences during and after the disaster were, we then turned to understanding people's perceptions and actual levels of preparedness.

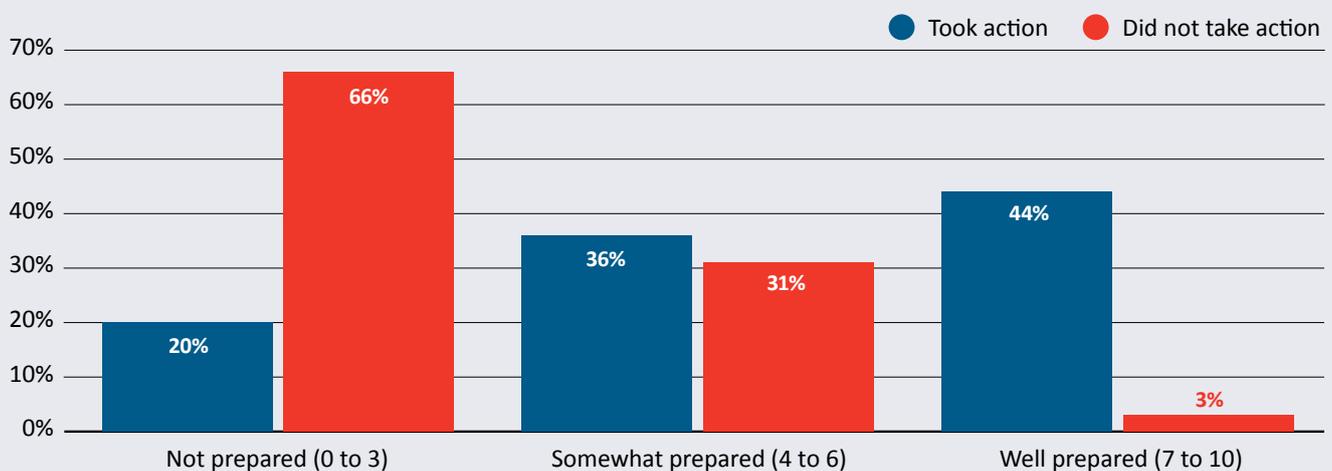
First, participants were asked whether they had done anything to get prepared. Nearly 8 out of 10 declared they did. It is worth highlighting that out of those who said they didn't do anything to get prepared, 15% had still received some form of preparedness training. This shows that 'being informed' is not necessarily associated with the thought of having undertaken a preparedness action. More than 60% of the training received was via local fire / SES / CFS / government services; 32% of the training taken was through Australian Red Cross preparedness sessions and/or through the Get Ready app. The 'Other' category of advice includes bushfire survival information, the Australian Red Cross Get Ready book and school material, people's own experiences, local fire chat groups and self-research.

**Figure 11: Origin of preparedness training**

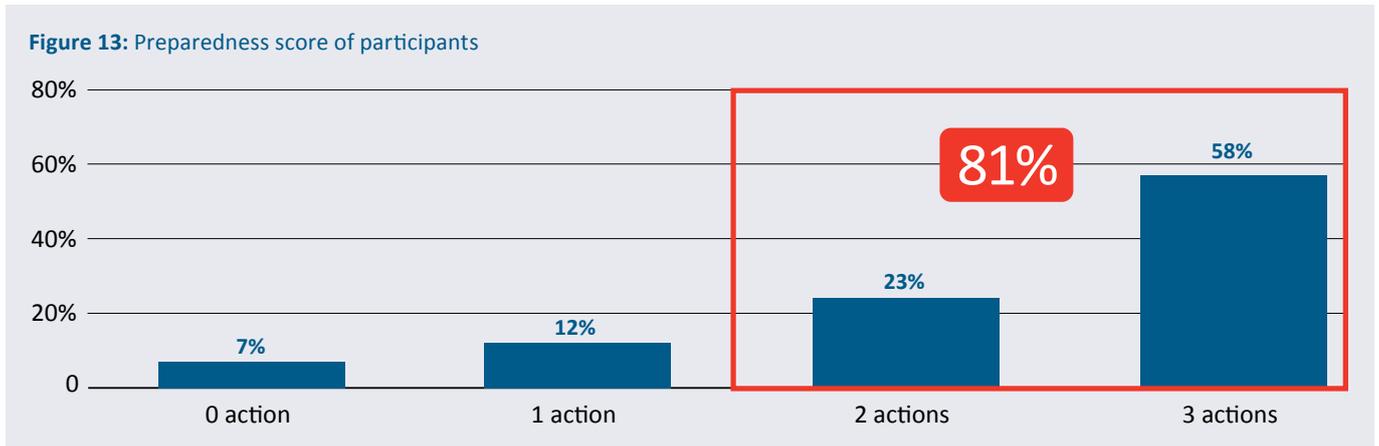


Then, participants were asked to self-identify to what extent they felt prepared on a scale of 0 (not prepared at all) to 10 (very well prepared). For the people who said they had taken action to prepare, 1 out of 5 didn't feel prepared (0 to 3), over 1 out of 3 felt somewhat prepared (4 to 6) and over 4 out of 10 felt well prepared (7 to 10). In contrast, for those who said they hadn't done anything to get prepared, 2 out of 3 didn't feel prepared (0 to 3), nearly 1 out of 3 felt somewhat prepared (4 to 6) and only 3 out of 10 felt well prepared (7 to 10), as shown in Figure 12.

**Figure 12: Comparison of levels of preparedness for those who took action and those who didn't**



To give a better idea of the number of preparedness actions taken, we calculated a preparedness score by adding the number of actions taken. Figure 13 represents the score spread for this sample. 8 out of 10 respondents took at least 2 of the 13 preparedness actions listed.



The list of preparedness actions tested with the respondents was developed based on existing literature and previous work undertaken by the emergency services team at Red Cross and relate to impacts observed over decades of experience and recommended actions, in RediPlan, to reduce these impacts. The 13 actions were:

- Identified how you respond to stress and developed strategies to manage your stress levels
- Made copies and protected important documents such as identification papers, wills, financial papers
- Identified and took measures to protect/back-up items of sentimental value
- Made plans for reunification of family if separated during an emergency
- Thought about what impact an emergency would have on your livelihood
- Spoke to friends/family/neighbours about preparing for an emergency
- Used preparedness materials (e.g. RediPlan, bushfire survival plans)
- Identified alternative accommodation for shelter if own home not accessible
- Made a plan for pets/livestock/animals
- Swapped phone numbers with neighbours
- Took out insurance to protect your property
- Found out what hazards might affect your area and made a plan for them
- Identified sources of information to help you prepare for and respond to an emergency (e.g. an official emergency services app)

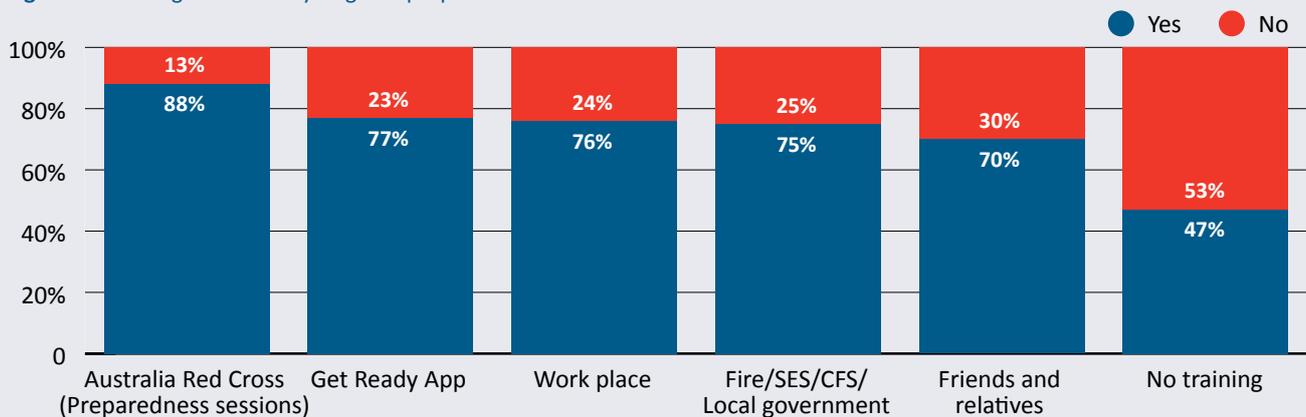
# FINDINGS

## ALL RESPONDENTS

### 1. The source of preparedness advice matters to people’s feeling of being in control and confidence in the decisions they made during the disaster

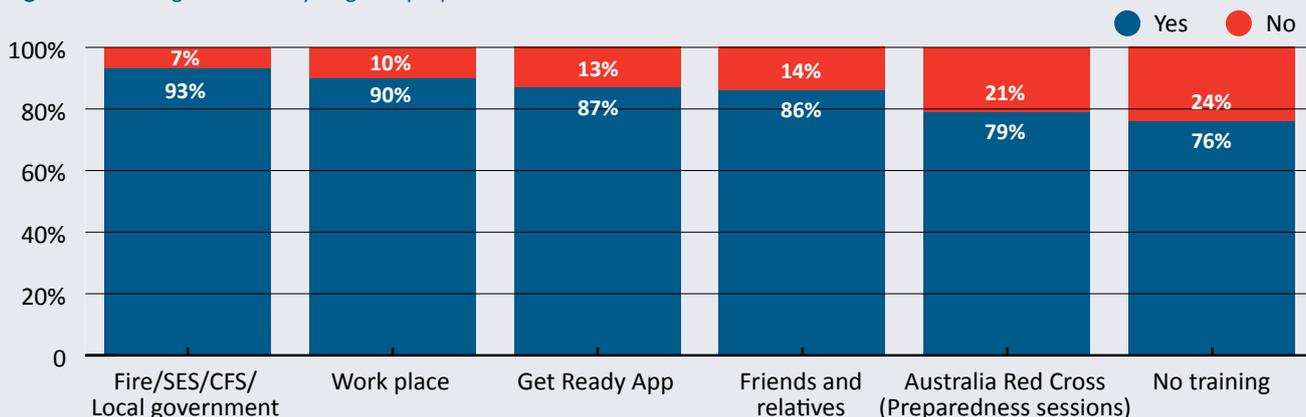
Those who received preparedness advice from Australian Red Cross either directly via preparedness sessions or the Get Ready app are more likely to report having felt in control of their actions during the emergency.

Figure 14: Feeling in control by origin of preparedness advice



Further, those who received preparedness advice from fire / SES / CFS / local government, their workplace and via the Get Ready app were the most likely to report feeling confident with the decisions they made during the disaster.

Figure 15: Feeling confident by origin of preparedness advice

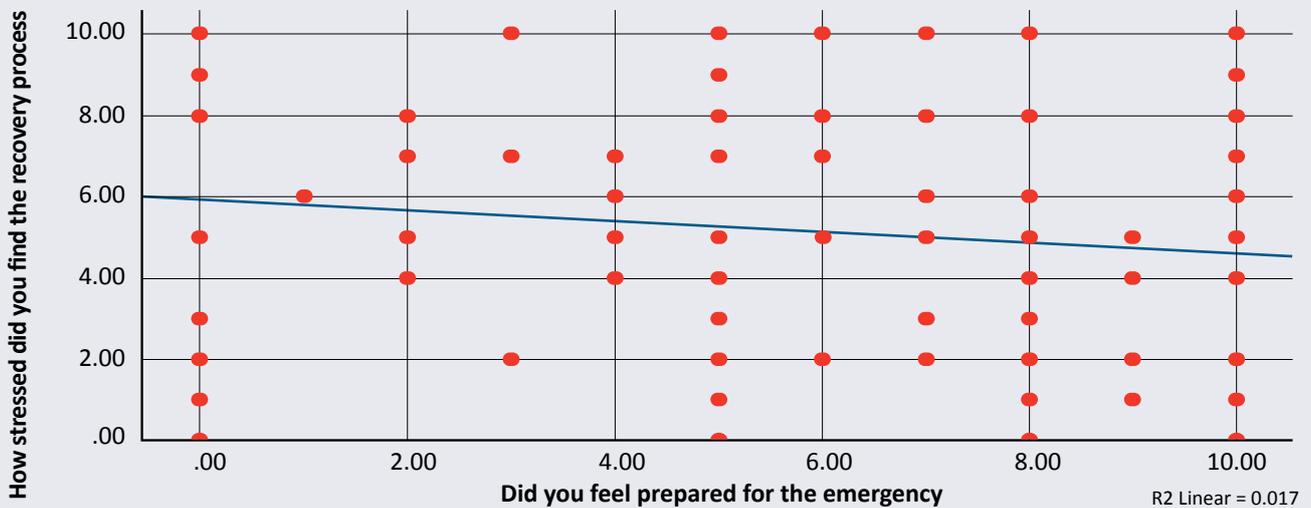


# FINDINGS

## 2. Feeling prepared reduces stress levels which improves self-reported recovery outcomes

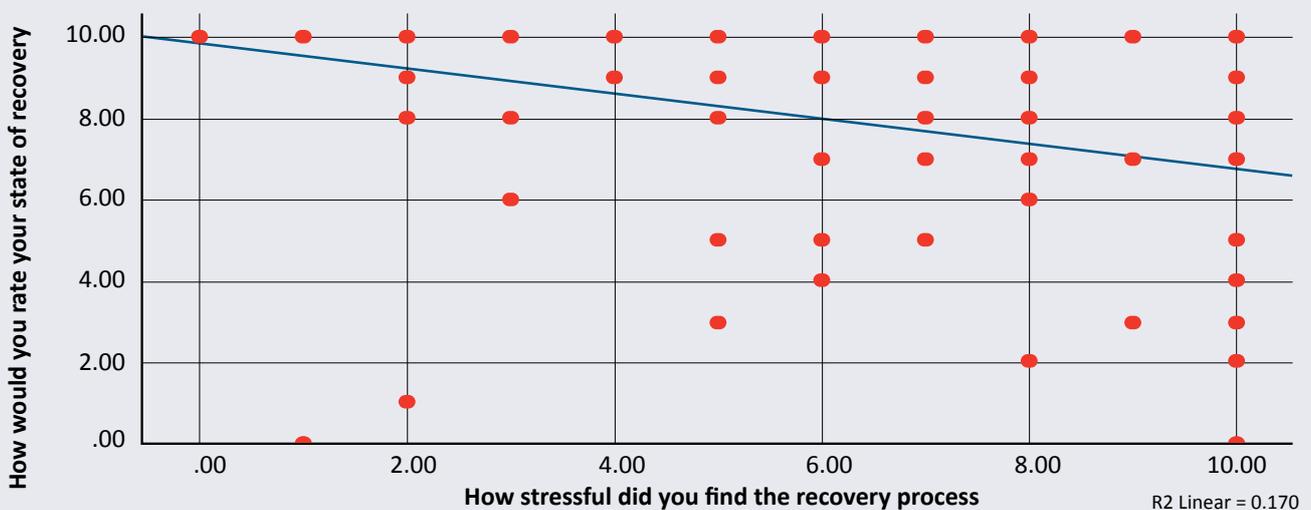
Respondents were asked to rate their level of preparedness on a scale of 0 (not prepared at all) to 10 (extremely well prepared), how stressful the recovery process was on a scale of 0 (not stressful at all) to 10 (extremely stressful), and their state of recovery from 0 (not recovered at all) to 10 (totally recovered). **The analysis of the data revealed that feeling prepared** leads to a reduction in stress level<sup>8</sup> in dealing with the recovery process as shown in Figure 16. In addition, **stress level** and **recovery** state are strongly negatively correlated<sup>9</sup> (see Figure 17). In other words, the more people are stressed, the worse is their state of recovery up to 10 years after a disaster. Therefore, there is an indirect – but positive – link between **feeling prepared** and **recovery state**.

Figure 16: Feeling prepared reduces stress levels during the recovery process (simple scatter with fit line)



Scales: level of preparedness from 0 (not prepared) to 10 (extremely well prepared); stressful recovery from 0 (not stressful at all) to 10 (extremely stressful).

Figure 17: Lower stress levels lead to higher state of recovery (simple scatter with fit line)



Scales: state of recovery from 0 (not recovered at all) to 10 (totally recovered); stressful recovery from 0 (not stressful at all) to 10 (extremely stressful).

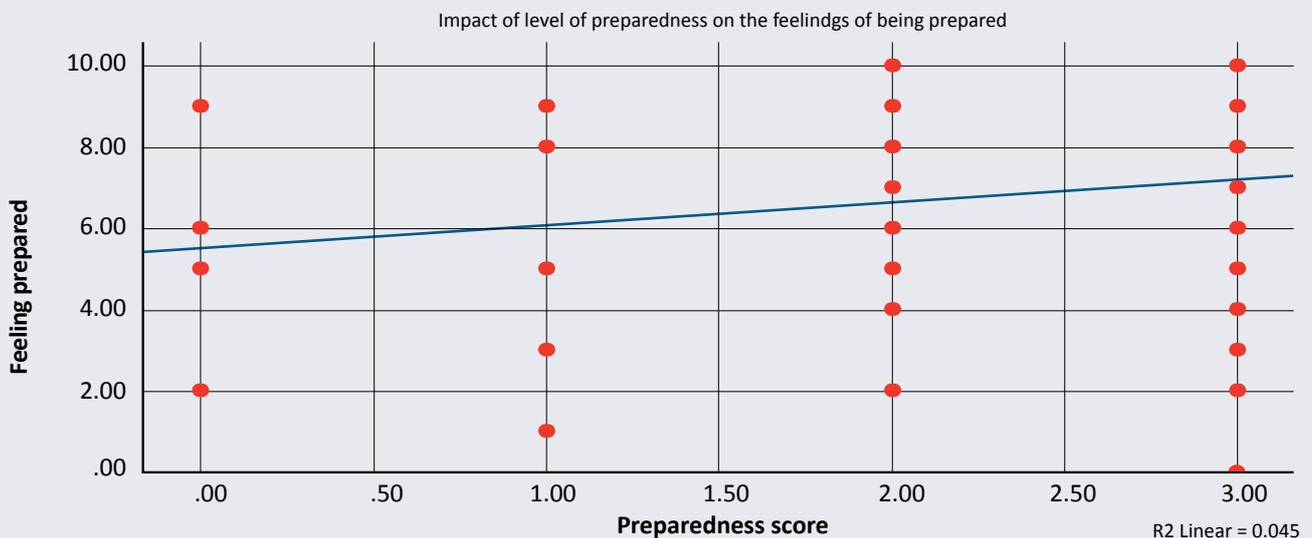
8. Significant at the 0.05 level. 9. Significant at the 0.01 level.

## THOSE WHO TOOK PREPAREDNESS ACTION

### 3. As expected, the more people do to get prepared, the more they feel prepared

As shown in Figure 13, the number of preparedness actions undertaken by each participant was added to form a score from 0 (no action taken) to 3 (3 action taken being the maximum in this sample). The analysis of the feeling of being prepared and the number of actions implemented reveals that the **more actions are taken, the higher the feeling of being prepared** as illustrated in Figure 18. However, as we saw in Figure 12, 1 out of 5 respondents said they were not feeling prepared but their answers (represented by the preparedness score in Figure 13) showed that they had undertaken a certain number of actions which should have made them feel prepared. Inversely, 3% said they were prepared when they hadn't undertaken any of the actions tested.

**Figure 18:** The feeling of being prepared increases with the number of actions taken (simple scatter with fit line)



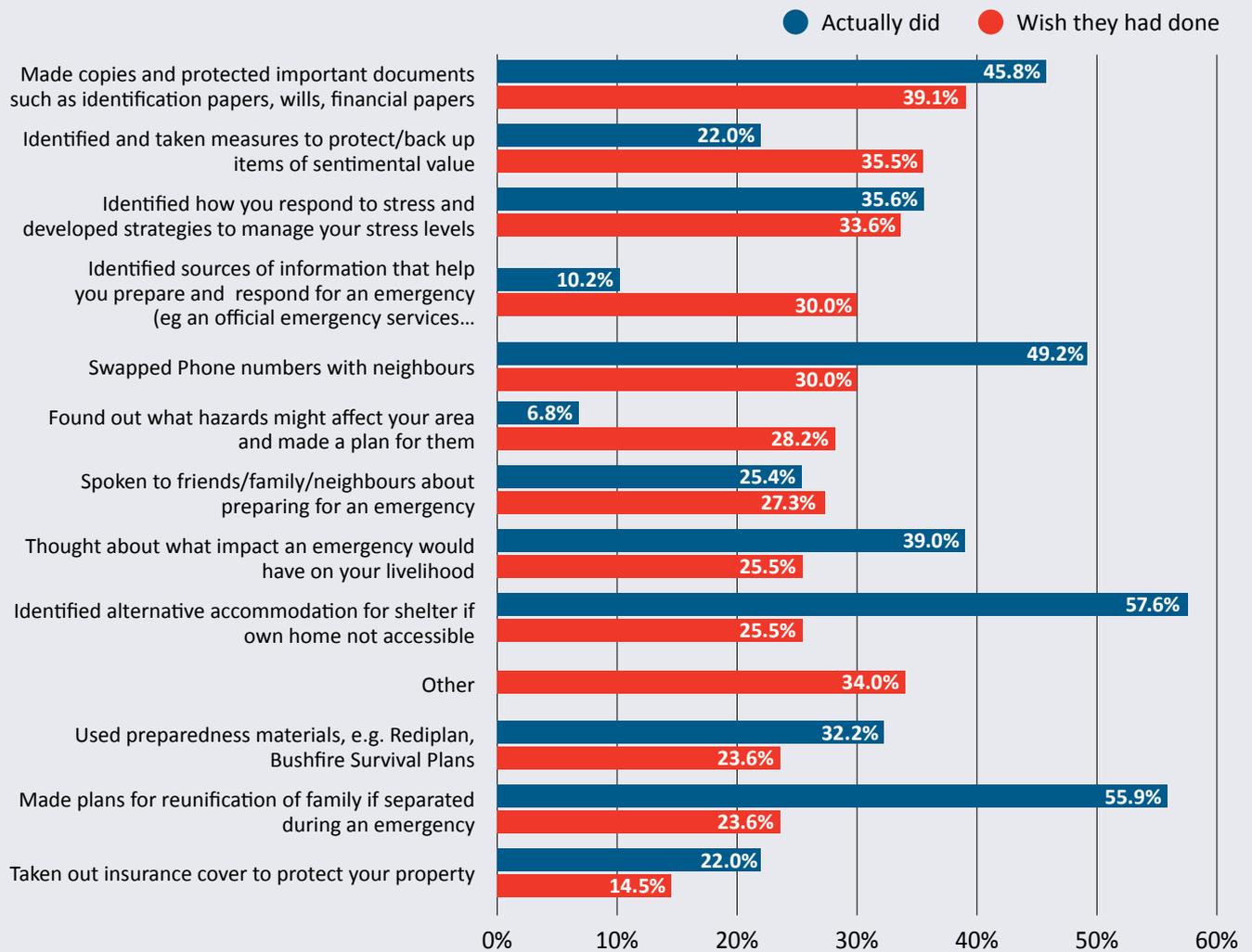
#### 4. Protecting important items and managing stress is at the top of what people want to do better

For those who had taken action, participants were asked which action(s) they had undertaken and which ones they wished they had taken.

As seen in Figure 19, the top three types of things participants wished they had done are preparedness actions related to:

- making copies of important documents that are potentially complicated to replicate and have a strong impact on how easy their recovery will be (e.g. identification, financial documents)
- protecting or backing up items of sentimental value
- having stress management strategies and techniques.

Figure 19: Actions people actually did to prepare and actions they wished they done



The category 'Other' groups actions such as not having a plan while not being at home, holidaying at a temporary rental accommodation or being at work, and not having planned for emergency light/generators.

## 5. Preparedness actions can be regrouped in three categories: 'Protect my personal matters', 'Build my readiness' and 'Be pragmatic'

A factor analysis performed on the actions we tested reveals that there are three distinct groups of actions people took to get prepared, which we have called **Protect my personal matters**, **Build my readiness** and **Be pragmatic**. These three groups and 10 actions are shown in Table 1. Details of the significant coefficients for this factor analysis are shown in Appendix 1.

**Table 1:** Three categories of preparedness actions

Protect my personal matters	Build my readiness	Be pragmatic
<ul style="list-style-type: none"> <li>Identified how to respond to stress and developed strategies to manage stress levels</li> <li>Identified and took measures to protect/back-up items of sentimental value</li> <li>Made copies and protected important documents such as identification papers, wills, financial papers</li> <li>Made plans for reunification of family if separated during an emergency</li> </ul>	<ul style="list-style-type: none"> <li>Identified sources of information to help prepare and respond for an emergency (e.g. an official emergency services app)</li> <li>Found out what hazards might affect living area and made a plan for them</li> <li>Used preparedness materials (e.g. RediPlan, bushfire survival plans)</li> </ul>	<ul style="list-style-type: none"> <li>Made a plan for pets/livestock/animals</li> <li>Swapped phone numbers with neighbours</li> <li>Took out property insurance</li> </ul>

## 6. Among those who got prepared, four groups of personas emerge: the 'Ready', the 'Sentimental', the 'Planner' and the 'Unsure'

A cluster analysis was then applied to the results of the factor analysis presented above. It showed that four groups of personas emerge in terms of behaviours towards getting prepared for a disaster:

- The **Ready** are those who do things well overall in terms of protecting what matters most, understanding their risks and capacities and taking pragmatic actions. During the disaster, they were impacted almost as much as other groups. Yet, they reported the lowest impact post disaster and also reported the fastest recovery. They represent the largest group of the sample (40%).
- The **Sentimental** are more emotionally driven. They exceed the score of any other group in terms of protecting what matters most. They do well in terms of understanding their risks and capacities but have the lowest score in 'Be pragmatic'. They reported the second fastest recovery of the respondents (45% after 1 month). They represent the smallest group of the sample (12%).
- The **Planner** is more concerned with developing a solid understanding of their risks and capacities rather than taking action. They take longer to recover (36% between 3 and 24 months) with over 18% who had not recovered yet. They represent 24% of the sample.
- The **Unsure** score poorly on all factors, especially understanding of their risks and capacities; 41% took between 1 and 5 years to recover. Similar to the Planner, over 18% had not recovered yet. The Unsure represent 24% of the sample.



## THE READY

- Fastest reported recovery (53% in less than 1 month)
- Do things well in terms of protecting personal matters and taking pragmatic actions; surprisingly, their readiness knowledge is lower than the Sentimental and the Planner
- Most confident with the decisions made (95%)

### Demographic characteristics

- Largest group (40% of the sample)
- Relatively balanced for gender
- More than 85% are 40+
- 51% earn \$78,000 or more annually



## THE PLANNER

- Take longer to recover (36% between 3 & 24 months)
- Over 18% have not recovered yet
- Highest level of knowledge and resilience building but no action undertaken to protect their personal items or apply more pragmatic actions
- Very confident in decisions made (95%)
- Highest proportion of medium impact during a disaster
- Lowest proportion of high and extreme impact after a disaster

### Demographic characteristics

- 24% of the sample
- 63% women
- 70% over 40+ (younger than the Ready and the Sentimental)
- 55% earn \$78,000 or more annually



## THE SENTIMENTAL

- Second fastest to recover (45% after 1 month)
- Do well in terms of building their resilience but have the lowest score in 'Be pragmatic'
- Most active group in protecting their personal matters
- Very confident in decisions made (90%)
- Highest proportion of people feeling in control of their actions (82%)
- Lowest % of those who have not recovered yet (9%)
- Highest proportion of low and high impact during the disaster

### Demographic characteristics

- 12% of the sample
- Mostly women (82%)
- More than 90% are 40+
- 64% earn \$78,000 or more



## THE UNSURE

- 41% took between 1 and 5 years to recover
- Over 18% have not recovered yet
- Score poorly on all factors, especially knowledge and resilience building
- Lowest proportion of people confident in their actions (76%) or who felt in control (61%)
- Highest proportion of medium impact after a disaster

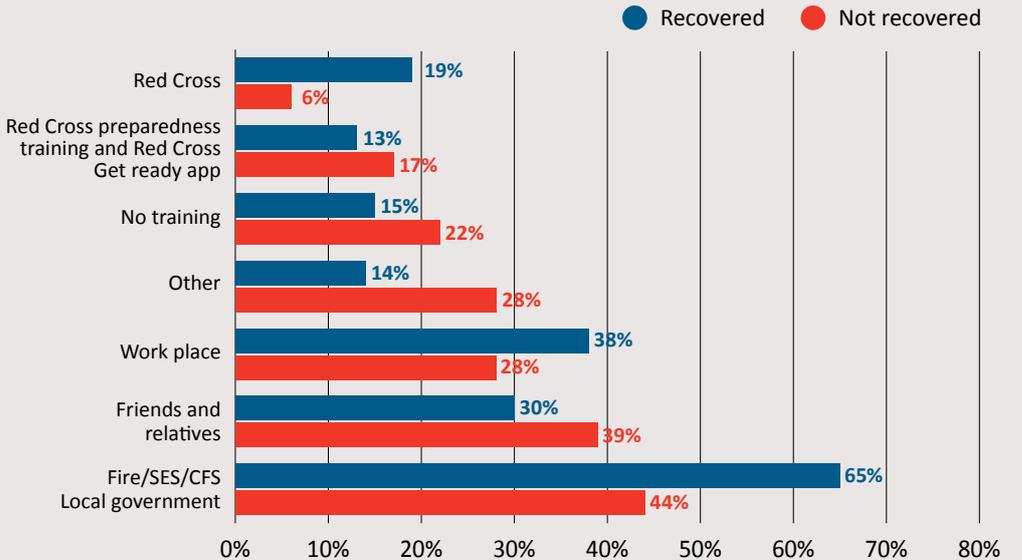
### Demographic characteristics

- 24% of the sample
- 73% women
- Largest proportion of 20–39 years old
- 41% of people are below the \$52,000-mark of annual income vs 28% for the other groups

These four personas describe different attitudes and behaviours towards preparedness. This finding will enable a 'custom' approach to preparedness training based on people's characteristics. Differences also exist between those who said they had recovered at the time of the survey and those who said they hadn't yet. The detail of the scores from the cluster analysis can be found in Appendix 2.

## PEOPLE REPORTING THEY HAD NOT RECOVERED YET

Nearly 2 out of 5 (18%) respondents said they had not recovered (0 to 6 in Figure 8) at the time of the survey. The section below offers a comparison between them and those who assessed that they had recovered (7 to 10 in Figure 8). The amount of action taken and the type of training received appears to be influential in the poorer outcomes.

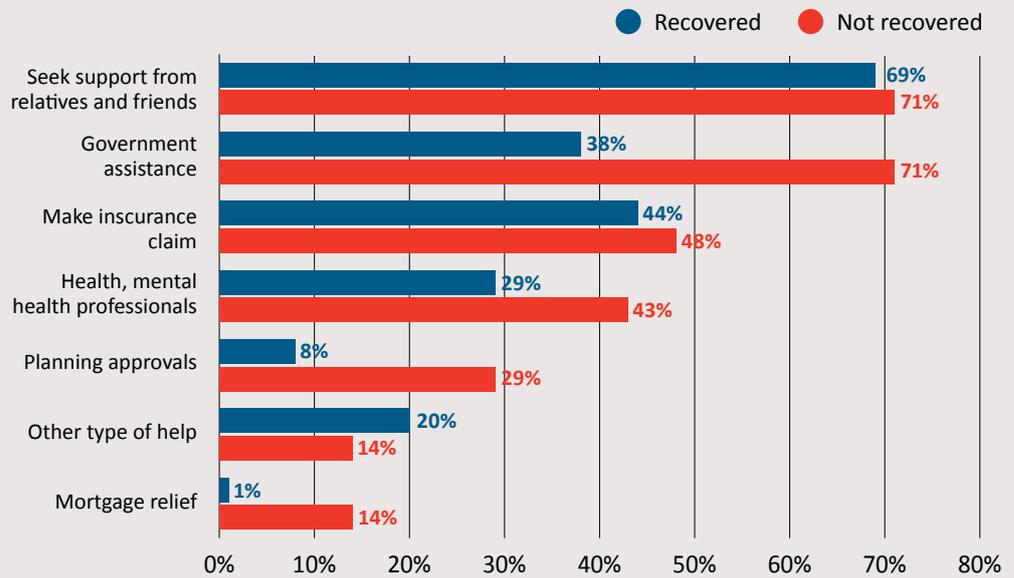
<p><b>Taking action, feeling prepared and stress levels</b></p>	<p>Out of those who had not recovered, most respondents (86%) said they took action to get prepared (vs 76% for those who had recovered), which is surprising. Yet, those who had not recovered felt that the actions they had taken were not enough (62% vs 56% for those who had recovered) and most importantly experienced high levels of stress (86% vs 60% for those who had recovered).</p>																								
<p><b>Training received</b></p>	<p>Those who had not recovered mostly received training from:</p> <ol style="list-style-type: none"> <li>1. Fire / SES / Local government (44%)</li> <li>2. Friends and relatives (39%)</li> <li>3. Workplace/Other (28%)</li> </ol> <p>The type of training appears to be important between those who had and those who had [reported they had] not recovered. Out of those who had not recovered, a larger proportion received training from fire, SES and local government. This is not a reflection on the quality of the training provided. It is more likely due to the fact that fire, SES and local government represent the largest origin of training (62% of our overall sample for those who had and had not recovered). In addition, this training is focused on survival of the hazard rather than recovery, as with Red Cross preparedness training.</p>  <table border="1"> <thead> <tr> <th>Training Source</th> <th>Recovered (%)</th> <th>Not recovered (%)</th> </tr> </thead> <tbody> <tr> <td>Red Cross</td> <td>19%</td> <td>6%</td> </tr> <tr> <td>Red Cross preparedness training and Red Cross Get ready app</td> <td>13%</td> <td>17%</td> </tr> <tr> <td>No training</td> <td>15%</td> <td>22%</td> </tr> <tr> <td>Other</td> <td>14%</td> <td>28%</td> </tr> <tr> <td>Work place</td> <td>38%</td> <td>28%</td> </tr> <tr> <td>Friends and relatives</td> <td>30%</td> <td>39%</td> </tr> <tr> <td>Fire/SES/CFS Local government</td> <td>65%</td> <td>44%</td> </tr> </tbody> </table>	Training Source	Recovered (%)	Not recovered (%)	Red Cross	19%	6%	Red Cross preparedness training and Red Cross Get ready app	13%	17%	No training	15%	22%	Other	14%	28%	Work place	38%	28%	Friends and relatives	30%	39%	Fire/SES/CFS Local government	65%	44%
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### Source of post-disaster assistance

Those who had not recovered mostly sought help from:

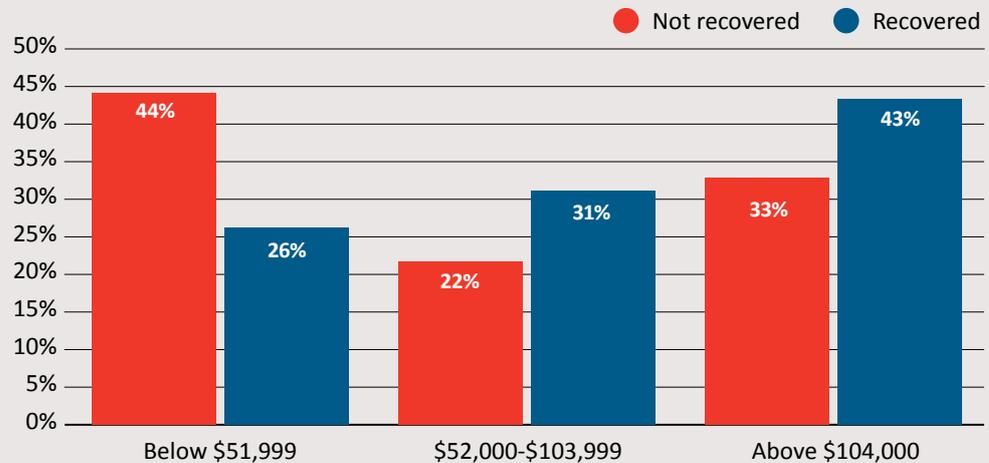
1. Relatives and friends / government assistance (71%)
3. Made an insurance claim (48%)
4. Health and mental health professionals (43%)

Whether people have or have not recovered, seeking support from relatives and friends is what they are most likely to do. For those who have not recovered, government assistance is equally important, outlining the importance of social capital and resilience building before disasters.



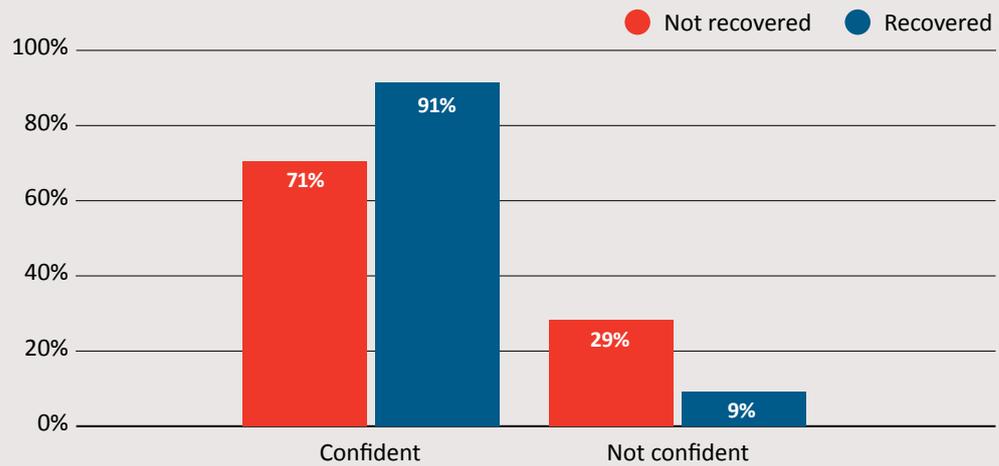
### Earnings

For people who had not recovered yet, there is an over-representation of those earning less than \$52,000 (low-income threshold) (66% vs 56%).



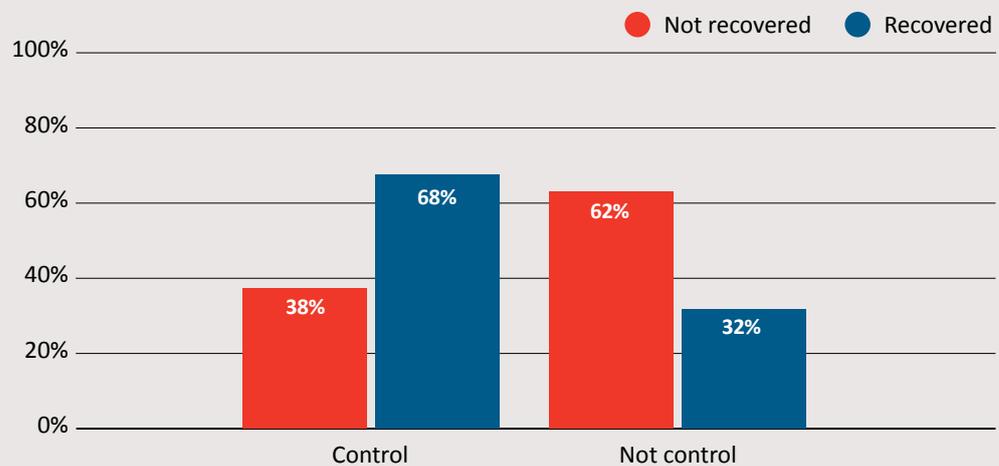
### Confidence level

Participants who had not yet recovered had a significantly lower level of confidence in the actions they took during the disaster than those who had recovered, meaning that they took certain actions they were not convinced were the best at the time.



### Control level

Those who had not recovered yet were nearly twice as likely to have not felt in control as they experienced the emergency, relative to those who had recovered; this is important because we know that feeling in control during a disaster is a sign of people having some degree of preparedness to handle what is happening.



## LIMITATIONS

There are limitations to this study:

- The sample was biased towards people who had taken preparedness actions as a result of the recruitment process.
- It is difficult to assess the representativity of the sample, since there is no data available at this stage on the key characteristics of people who have been affected by disasters.
- The sample was biased towards participants with high household incomes. People who have lower household incomes are less likely to take preparedness measures, affecting the generalisability of the findings (Boon 2013).

Future research may benefit from a larger sample size and a mixed-methods approach to better understand some of the nuance of the findings.

## RECOMMENDATIONS

Based on this research, we recommend:

- an increased focus on preparing for the long-term impacts of a disaster in preparedness programs.
- a differentiated approach in preparedness based on people's profile and what they specifically need support in.
- ensuring that psychological preparedness focused on the experiences during and after a disaster is included in all preparedness programs.
- more research be undertaken to further investigate which actions support enhanced recovery.

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## APPENDIX 1

**Table 1:** Factor analysis coefficients for three groups of preparedness actions

PREPAREDNESS ACTION	Protect my personal matters	Build my readiness	Be pragmatic
Identified how you respond to stress and developed strategies to manage your stress levels	0.8		
Identified and took measures to protect/back-up items of sentimental value	0.7	0.3	
Made copies and protected important documents such as identification papers, wills, financial papers	0.7		
Made plans for reunification of family if separated during an emergency	0.7		0.4
Identified sources of information to help you prepare and respond for an emergency (e.g. an official emergency services app)		0.8	
Found out what hazards might affect your area and made a plan for them		0.8	
Used preparedness materials (e.g. RediPlan, bushfire survival plans)		0.6	
Made a plan for pets/livestock/animals			0.9
Swapped phone numbers with neighbours			0.8
Took out insurance to protect your property			0.5

Actions tested for but not included in the factor analysis due to no significance of coefficients:

- Thought about what impact an emergency would have on your livelihood
- Spoken to friends/family/neighbours about preparing for an emergency
- Identified alternative accommodation for shelter if own home not accessible

## APPENDIX 2

**Table 1:** Scores of cluster segments for three groups of preparedness actions

	Protect what matters most	Understanding my risks and capacities	Be pragmatic	Size
The Ready	0.5	0.1	0.8	39%
The Sentimental	1.2	0.5	-1.3	12%
The Planner	-1.1	0.8	-0.1	24%
The Unsure	-0.3	-1.1	-0.5	24%

## APPENDIX 3

### 1. Have you personally experienced an emergency between March 2014 and March 2018?

YES>>2

NO>>EXIT

If yes, what/when was it?

### 2. During the emergency:

- Did you feel in control of what you could do/your actions? Y/N/Other
- Were you confident with the decisions that you made? Y/N/Other

### 3. Below is a list of potential impacts following an emergency. How would you rate the level of disruption/impact on you? From 0 no disruption/impact to 10 high disruption/impact.

DURING

- Evacuated from where you were at the time (0-10)
- Forced to shelter where you were at the time (0-10)
- Feared for your life or member of family (0-10)
- Separated from family members (0-10)

AFTER

- Damaged your home so that you had relocate while it was repaired or rebuilt (0-10)
- Changed the composition of your household (0-10)
- Impact on your relationships (0-10)
- Impacted your health and wellbeing (physical and mental) (0-10)
- Financial impact Scale (0-10)
- Disrupted your education Scale (0-10)
- Disrupted your employment or source of income? Scale (0-10)
- Others, please specify

### 4. As a result of this emergency, did you have to

- Apply for government or other assistance?
- Make an insurance claim?
- Seek assistance from your bank for mortgage relief?
- Undertake planning or building approvals?
- Seek assistance from a health/mental health professional?
- Seek support from relatives, friends and other social networks
- Other, please specify \_\_\_\_\_

### 5. Since the emergency:

- On a scale of 10, how stressful did you find the recovery process? 0 not stressful, 10 very stressful
- How long do you think it took to recover from this emergency 1-2weeks, 1 month, 3-6months? 1-5 years? Not recovered?

### 6. Did you feel prepared for the emergency?

Scale of 0 to 10

### 7. Did you do anything to get prepared in case of an emergency? (Y/N)

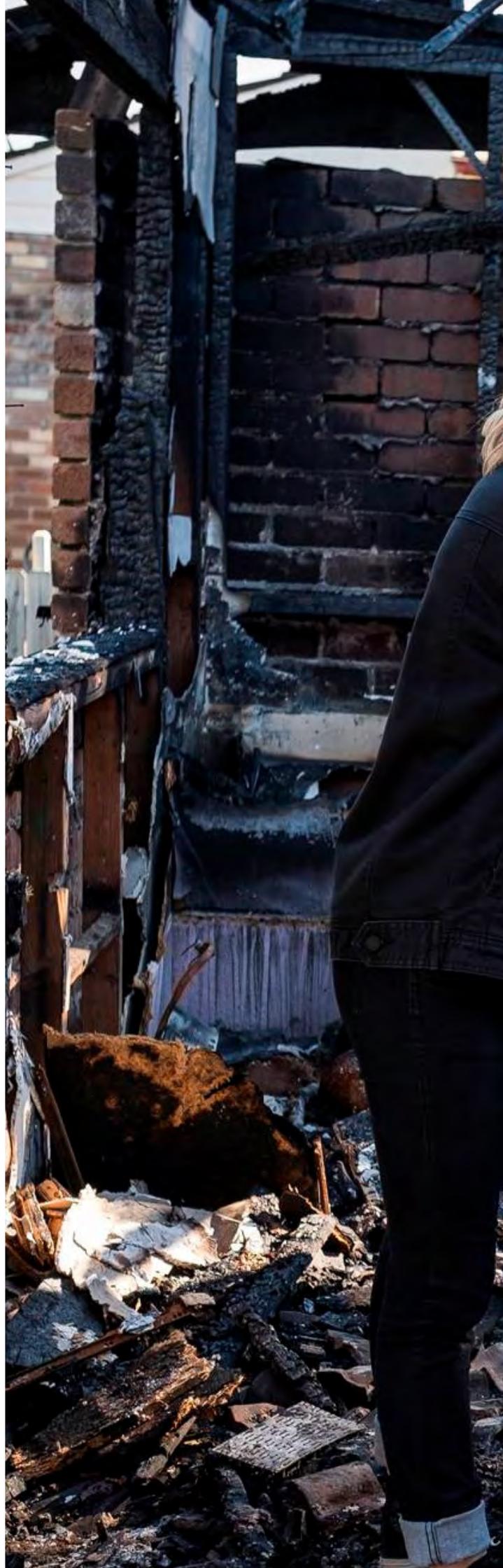
- a) Found out what hazards might affect your area and made a plan for them
- b) Identified sources of information that help you prepare and respond for an emergency? (eg an official emergency services app)
- c) Taken out insurance cover to protect your property
- d) Identified how you respond to stress and developed strategies to manage your stress levels
- e) Identified and taken measures to protect/back up items of sentimental value
- f) Made copies and protected important documents such as identification papers, wills, financial papers.
- g) Made plans for reunification of family if separated during an emergency
- h) Swapped Phone numbers with neighbours?
- i) Identified alternative accommodation for shelter if own home not accessible?
- j) Thought about what impact an emergency would have on your livelihood?
- k) Used preparedness materials, e.g. RediPlan, Bushfire Survival Plans,
- l) Spoken to friends/family/neighbours about preparing for an emergency?
- m) Other:

### 8. Thinking about the preparedness actions you have taken (from above), how helpful were they (on a scale of 1 to 10)

**9. A bit more about you**

- a. How old are you?
- b. What is your postcode?
- c. Are you? W/M/O
- d. What is your average annual household income? (ABS range)
- e. If you needed to, could you ask someone (who does not live with you) for any of these types of support in time of crisis?
  - advice on what to do
  - emotional support
  - help out when you have a serious illness or injury
  - help in maintaining family or work responsibilities
  - provide emergency money
  - provide emergency accommodation
  - provide emergency food
- f. Who could you ask for this support in a crisis? (Who would you go to first if you needed support (top 3))
  - friend
  - neighbour
  - family member
  - work colleague
  - community, charity or religious organisation
  - local council or other government service
  - health, legal or financial profession
  - other, please specify

**10. Is there anything you would like to add?**







**Get in touch  
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