

Empowering Communities, Harnessing Local Knowledges: Self-Organising Systems for Disaster Risk Reduction

Findings Report (April 2024)



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National Partnership on Disaster Risk Reduction



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Acknowledgement of Country

The University of Sydney is built upon the lands of the Gadigal people of the Eora Nation and the University Centre for Rural Health is built upon the lands of the Widjabul Wia-bal people of the Bundjalung Nation. We acknowledge that the research activity conducted for this report also took place on the lands of the Dharug, Gundungurra and Arakwal people. Sovereignty was never ceded – these lands and waters always were and always will be Aboriginal – and we pay our respects to Elders past and present.

The research team expresses their gratitude to all the community organisations and individuals who participated in interviews and gatherings for this project. We acknowledge that your time is valuable and that in many respects the work in disaster recovery, preparation and adaptation in your communities remains ongoing. Special thanks go to Maddy Braddon, Rachel Hall, Mary Lyons, Serena Joyner and Jean Renouf for their guidance and contributions throughout the project.

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Contents

| | |
|---|-----------|
| Acknowledgement of Country | 1 |
| Executive Summary | 2 |
| 1. Introduction | 4 |
| 2. Fieldwork Summary | 6 |
| 2.1. Case Study Areas..... | 6 |
| 2.2. Interviews and Network Surveys..... | 9 |
| 2.3. Peer Learning Gatherings..... | 11 |
| 3. Findings | 13 |
| 4. How do self-organised community networks of resilience develop and function in response to disasters? | 14 |
| 4.1. Conditions of Emergence | 14 |
| 4.2. Local Knowledges | 15 |
| 4.3. Social Connection and Cohesion..... | 19 |
| 4.4. Strengths of Community-led Actions and Interventions..... | 30 |
| 5. How can self-organised community networks of resilience be better supported to minimise future disaster risk? | 31 |
| 5.1. Change at the Interface with Emergency Management and Government Agencies.. | 31 |
| 5.2. Investment in Key Infrastructure | 39 |
| 5.3. Building Stronger Social Cohesion..... | 41 |
| 5.4. The Need for Peer Learning Opportunities | 43 |
| 5.5. The Need for Recovery Support and Training in Mental Health First Aid | 44 |
| 5.6. Action on Climate Change | 45 |
| 6. Outputs | 46 |
| 6.1. Storytelling Series..... | 46 |
| 6.2. Regional Alliance..... | 47 |
| 7. Recommendations | 48 |
| 7.1. Recommendations for Emergency Management Agencies and Government | 48 |
| 7.2. Recommendations for Communities | 50 |
| 7.3. Recommendations for Researchers..... | 51 |
| References | 53 |
| Appendix | 54 |
| Appendix A – Case Study Area Maps..... | 54 |

Executive Summary

The Empowering Communities, Harnessing Local Knowledges: Self-Organising Systems for Disaster Risk Reduction Findings Report is a collaborative effort between the Sydney Environment Institute and the University Centre for Rural Health, both at the University of Sydney, and community partner organisations in Plan C, Resilient Blue Mountains and Street Connect. It provides a comprehensive analysis of the pivotal role of self-organising systems in disaster risk reduction. Through extensive research conducted in the Blue Mountains, Hawkesbury, and Northern Rivers regions, the report illuminates key findings that can significantly influence and enhance disaster management strategies for the future.

Key Findings

1. Emergence of Resilient Community Networks:

- Community-led disaster response, recovery and adaptation plays a specialised and indispensable role through harnessing local knowledges and social connections.
- The cultivation of local knowledges, social connections, and cohesive community relationships is paramount in fostering the development of self-organised community networks.
- Detailed network maps and interview data demonstrate the intricate web of interconnected community resources, which in many respects pre-exist the disasters and/or become more integrated through disasters, showcasing how 'spontaneous' is a misleading label for this organising.

2. Barriers and Challenges:

- The existing disparities between government decision-making processes and grassroots local knowledges poses significant obstacles to the efficacy of disaster management initiatives and increases risk.
- Investment in building cohesive community relationships and social infrastructure, guided by local community input, is required – generally, but especially in outlying communities.
- A pressing need for increased investment in other infrastructure that supports self-organising systems is identified as a critical step towards addressing vulnerabilities and bolstering community resilience in the face of disasters.

3. Recommendations for Action:

- Advocating for robust support mechanisms for self-organised community networks to enhance their disaster response capabilities and overall resilience.
- Renovating the interface between the emergency management sector and community organisations.
- Emphasising the promotion of social cohesion within communities to cultivate a culture of collaboration and mutual support during times of crisis.
- Providing essential recovery support and mental health training to facilitate effective post-disaster assistance and promote community well-being.
- Urgently addressing the challenges posed by climate change to mitigate future disaster risks and build sustainable, long-term resilience within communities.

The report underscores the imperative of integrating self-organising principles into comprehensive disaster risk reduction strategies. By fostering stronger partnerships between government entities and local communities, investing strategically in critical infrastructure, and implementing the recommended actions, communities can fortify their resilience and navigate the complexities of disasters with greater efficacy. Collaboration, proactive measures, and sustained support are essential components in building a more resilient and prepared future for all.

1. Introduction

In recent years, communities across New South Wales have faced catastrophic bushfires and floods. These have been described as “unprecedented” in their scales, and as “the new normal” due to climate change. In many respects, these disasters have had compounding impacts as people endure them one after another, and concurrently with an ongoing global pandemic, disruptions to supply chains, inflation, and a housing crisis.

During these disasters, as systems became repeatedly overwhelmed, communities organised their own response and recovery efforts. Their actions and interventions – some which are still ongoing to this day – have been crucial in saving lives, providing swift and targeted information, support and care to those in need as well as enacting long-term preparation and risk reduction through disaster readiness activities and systems, coordinated hazard removals and community building.

Often, these actions are informal and arise (seemingly) spontaneously between residents and local groups, regularly undertaken without official support from levels of government or emergency agencies. Sometimes, they are established community practices, honed over years of living in place together and learning from past disaster experiences.

This research project explores how community self-organising in the Blue Mountains, Hawkesbury, and Northern Rivers is coordinated and resourced, and how it can be recognised and encompassed as an essential element in building disaster preparedness, community resilience and statewide risk reduction.

It addresses two main concerns which can undermine community-led disaster response, recovery, and adaptation in the future:

- **The first concern is the loss, or lack of use, of community knowledge in the immediate aftermath of disasters or in preparation for future disaster events.** This community knowledge is expertise, often specific to a given community and its needs, which cannot be easily replicated by the more centralised and external formal emergency management sector. The aim is to record local knowledges and network processes in order to help sustain them for the communities involved, as well as to make these knowledges available for other communities elsewhere.
- **The second concern is the loss of community faith and support for local and state institutions.** The community anger following both the 2019-20 bushfire crisis and many flood events since 2020 shows the potential risk of that breakdown of trust in official responses. This project addresses a key question about how self-organised community actions can be recognised, understood, engaged with, and supported in coordination with the formal disaster management sector in order to reduce risk statewide and increase resilience.

This research was conducted by researchers at the Sydney Environment Institute and the University Centre for Rural Health in Lismore, both part of the University of Sydney, and undertaken in partnership with Resilient Blue Mountains, Street Connect, and Plan C. We extend our gratitude to these community partners and their representatives. This project was funded under the joint Australian Government – NSW Government National Partnership on Disaster Risk Reduction.

1.1. Project Objectives and Research Questions

Project goal: To contribute to recognition, understanding and engagement of self-organised and temporary community organisation to improve planning for future disasters, to reduce risk and to increase resilience to future shock events.

Key terms:

The distinction between **formal and informal disaster response** can be determined by whether the government/state was the principal driver of action and/or change, with non-state actors defined as inclusive of individuals, social groups, civil society, and private organisations.¹ In other words, informal disaster response refers to “the activities of people who work outside of formal emergency and disaster management arrangements.”²

This report also refers to **self-organised** volunteers, a term which describes the actions coordinated predominantly by local communities in response to disaster scenarios.³ It typically means those who carry out volunteer work in loose, informal networks which, in this context, explicitly emerges from within disaster impacted communities.

Research questions:

1. How do self-organised community networks of resilience develop and function in response to disasters?

- a. What are their conditions of emergence?
- b. How do self-organised groups develop?
- c. What types of organising occur?
- d. What roles do self-organised groups play?

¹ Birkmann, J, Buckle, P, Jaeger, J, Pelling, M, Setiadi, N, Garschagen, M, Fernando, N & Kropp, J 2010, 'Extreme events and disasters: a window of opportunity for change? Analysis of organisational, institutional and political changes, formal and informal responses after mega-disasters', *Natural Hazards*, vol. 55, pp. 637 - 655.

² Whittaker, J, McLennan, B & Handmer, J 2015, 'A review of informal volunteerism in emergencies and disasters: Definition, opportunities and challenges', *International Journal of Disaster Risk Reduction*, vol. 13, pp. 358 - 368

³ Cretney, R 2016, 'Local responses to disaster: the value of community led post disaster response action in a resilience framework', *Disaster Prevention and Management*, vol. 25, no. 1, pp. 27-40.

- e. What kinds of collaboration occur?
- f. What are the strengths and weaknesses of self-organised response?

2. How can self-organised community networks of resilience be better supported to minimise future disaster risk?

- a. What barriers do self-organised groups experience?
- b. What resources and support do they require?
- c. How can the lessons from the researched community organisations help reduce disaster risk statewide and beyond?

2. Fieldwork Summary

Fieldwork was conducted in two phases across three disaster-affected regions in New South Wales, Australia:

- semi-structured interviews and network map surveys conducted between November 2022 and March 2023
- peer-learning gatherings held between June 2023 and August 2023

Since 2019, different disaster events have significantly impacted the three regions engaged, and in different ways. Interviews and gatherings were conducted in numerous areas of New South Wales, Australia:

- the Blue Mountains (Local Government Area (LGA) and environs)
- the Hawkesbury (LGA and environs)
- the Northern Rivers region spanning the Lismore, Tweed, Richmond Valley, and Byron Local Government Areas

2.1. Case Study Areas

The following maps outline the scope of our fieldwork across each region. They use suburb boundaries to highlight the approximate reach of the community participants interviewed.

Blue Mountains and Hawkesbury

The Blue Mountains and Hawkesbury LGAs cover a wide range of suburban, semi-agricultural, and bushland communities. The social and ecological diversity of these research areas furnishes this report with a broad sample of disaster contexts and forms of self-organising. The Blue Mountains LGA, for example, includes a densely populated suburban spine along the Great Western Highway, remote valley communities, and farmland. Likewise, the Hawkesbury LGA encompasses isolated communities along the Putty Road, productive agricultural areas, and densely populated suburbs of Western Sydney.

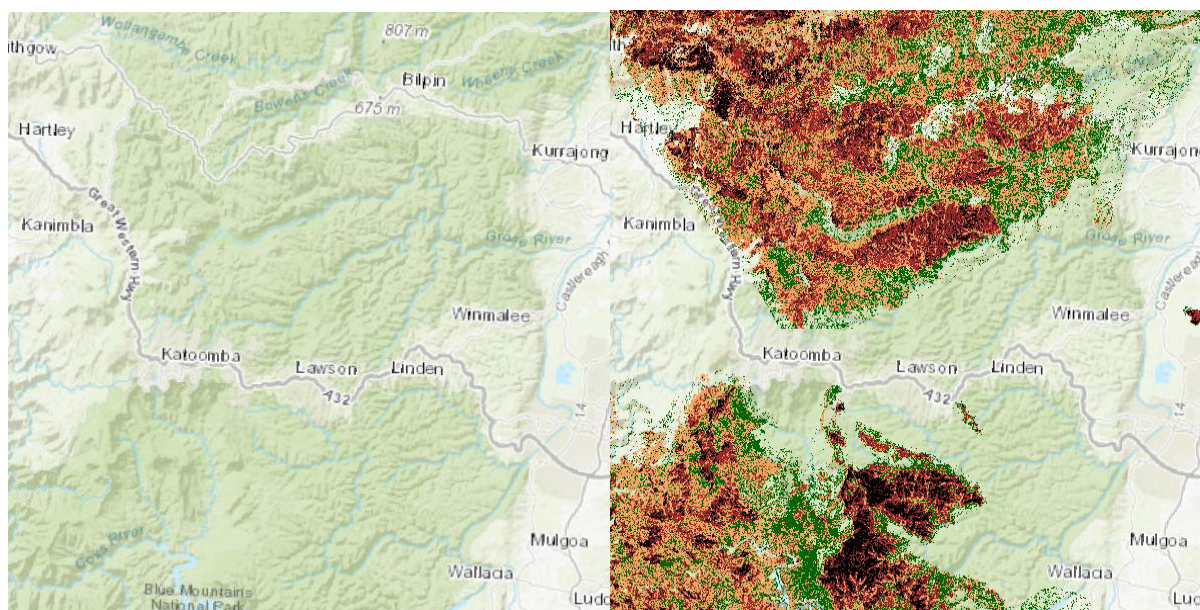


Figure 1: Fire severity map indicating how the 2019-20 bushfires overwhelmed small communities along Bells Line of Road, which straddle LGA boundaries, and threatened the Blue Mountains' suburban spine.

The vast extent and internal diversity of these two research areas makes them ideal candidates for this research project. Their social and ecological heterogeneity bring the general and locally specific challenges of disasters into sharp relief. Both LGAs were severely impacted during the 2019-20 bushfire season as part of the 1,286,126 hectares burned across Greater Sydney.⁴ Meanwhile, five major flooding events between 2020 and 2022 have also impacted communities in the Hawkesbury, isolating the western side of the river system and inundating those closest to the water multiple times.



Figure 2: Flood inundation map indicating the normal course of Hawkesbury River (thick blue line) and satellite imagery revealing the extent of water inundation (lighter blue areas) during one flood event.

⁴ Australian Institute for Disaster Resilience (2020) 'New South Wales, July 2019 – March 2020: Bushfires – Black Summer'. *Australian Disaster Resilience Knowledge Hub*
<https://knowledge.aidr.org.au/resources/black-summer-bushfires-nsw-2019-20/>

However, despite their differences, our research finds that communities faced persistent challenges in the face of fires and floods. It is from this starting point that our research identifies the common barriers to self-organising systems and their relationship with prevailing government policies. We then turn to the question of precisely how and why generalised challenges unfolded in locally specific ways. The non-uniformity of the Blue Mountains and Hawkesbury is what enables this methodological approach.

Northern Rivers

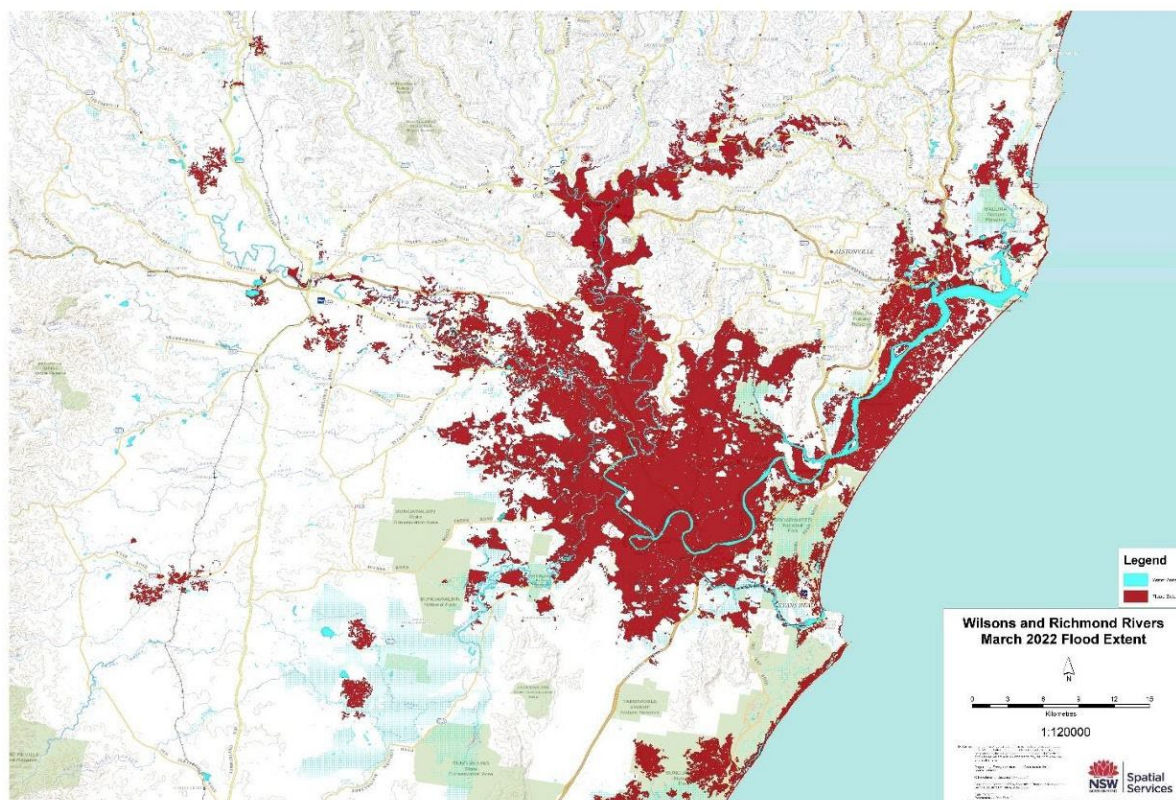


Figure 3: Flood extent map for Lismore, Coraki and Ballina indicating the normal course of the Wilsons and Richmond Rivers (light blue line) and the extent of water inundation (red areas) during the March 2022 flood. Source: NSW Department of Customer Services, Spatial Services (CC by 4.0).

The Northern Rivers is situated on the north coast of New South Wales about 100 kilometres south of Brisbane and is the largest of the sites geographically. The region was impacted by catastrophic flooding and landslides in February and March 2022 and has experienced compounding disasters in recent years, with a previous major flood occurring in 2017 and unprecedented rainforest fires threatening communities in 2019. In Lismore alone, the epicentre of the 2022 flood, over 3,000 properties were inundated with an estimated \$1 billion worth of damage.⁵ Thousands of people needed rescuing from their rooftops in Lismore, and thousands more were

⁵ Lismore City Council 2022. *Flood Response, June 2022*.
<https://www.lismore.nsw.gov.au/Community/Emergencies-disasters/Flood-Recovery-2023/Flood-reports-plans>

stranded for days and weeks in surrounding areas cut off by landslides and floodwaters.

The Northern Rivers interviews were concentrated on the Lismore flood epicentre and surrounding floodplains and hillside areas impacted by landslides. However, interviews were also conducted across four of the worst affected LGAs (Tweed, Byron, Lismore, and Richmond Valley) to ensure geographic variability in the sample. Due to the scale of the disaster and the community response in the Northern Rivers, it was not possible to cover all relevant geographic areas in the region.

2.2. Interviews and Network Surveys

The interview fieldwork was conducted between November 2022 and March 2023:

| Case Study Region | # of Participants |
|-------------------|-------------------|
| Hawkesbury | 21 |
| Blue Mountains | 18 |
| Northern Rivers | 29 |
| Total | 68 |

Figure 4: Table indicating number of interviewees per case study area.

Interviewees were involved in self-organised community disaster response and recovery across the three case study areas. Recruitment began with initial ‘seed’ sampling that drew upon the ‘warm’ networks of the project’s researchers and community partners before transitioning to ‘organic’ snowball recruitment, whereby interview participants nominated other community organisers in their networks as potential interviewees. A broad sample frame was used to maximise variability in the sample in terms of type and impact of disaster, geographic area, type of community, type of self-organising activities undertaken, participant role in the organising, and representation of marginalised groups.

Notably, these recruitment strategies shifted the research scope beyond immediate disaster response to include actions and interventions taken during other disaster phases. There exists a strong interest in support for long-term preparation (sometimes articulated as resilience building) among the disaster-affected communities engaged with. And this is also reflected in how snowball recruitment led researchers to community members actively involved in these efforts. Therefore, the interviews covered forms of community self-organising across four categories:

- rescue
- response
- recovery
- resilience, preparation, or adaptation

Importantly, these categories which align with different disaster phases are not necessarily distinct from each other and are further complicated by the compounding impacts of multiple shock events experienced across the three case study regions.

Interviews covered a significant scope of self-organised activities and interventions spanning those four categories listed above. These include but are not limited to:

- human evacuation, rescue, temporary shelter, accommodation, and care
- animal evacuation, rescue, temporary shelter, accommodation, and care
- temporary storage
- community check-ins and doorknocking
- hazard reduction and clearing
- preparing and distributing food and other supplies
- resource sharing
- debris and clean-up operations
- rebuilding
- coordination
- transportation
- online communication and coordination
- long-term preparation and readiness strategies and systems
- community building
- financial aid and donation facilitation
- emotional and mental health support
- environmental rehabilitation and recovery

Interview participants worked within and drew upon different types of community networks as part of their self-organised actions and interventions. These include:

- pre-existing informal groups and/or personal networks
- 'spontaneous' and/or temporary new group formations
- newly formalised or incorporated community groups and organisations
- formal entities underpinned by historic community self-organising such as neighbourhood centres, WIRES, and resilience community organisations
- 'extending' formal entities such as businesses or other formal entities going beyond their usual remit or operations
- individuals

Interviews were conducted for an average of 72.37 minutes with a semi-structured approach. The shortest interview was 36.07 minutes, and the longest was 1:55:52. They were held across a variety of formats to meet the needs of participants – over Zoom or Microsoft Teams, in-person, and over the phone. The resulting audio recordings were then transcribed and coded through NVIVO software. Thematic

code analysis was conducted to produce generalised findings across the three case study areas.

Each interview also included a 'network table survey' which listed a range of community groups and networks that were known to be involved in organising during or after the disaster events in each case study region. These lists were composed in consultation with the project's community partners and fellows. Each interview participant was asked to indicate any groups and networks listed that they worked with as part of their self-organised actions, whether these connections were pre-existing before the disasters or newly emergent during them, and to add any groups/networks that were missing. The data collected through these surveys inform the project's mapping of social networks and support systems.

Mindful of the sensitive and potentially traumatising nature of disaster research, the project adopted a trauma-informed approach to the data collection. Research interviewers undertook training in accidental counselling and mentoring in a trauma-informed approach prior to the commencement of interviews, and a trauma-informed psychologist was available to the research team for supervision throughout the fieldwork phase. A counsellor was recruited to take part in the peer-learning gatherings, assisting with the design of activities and set up of the space and attending the gatherings to support the wellbeing of participants and the research team.

2.3. Peer Learning Gatherings

Originally the project planned to run six community workshops with a view to producing a toolkit for use by communities to prepare for future disasters. However, interview subjects communicated to the research team that there was significant 'research fatigue' across the three study areas due to the sites being heavily researched. Being primarily volunteers or only partially funded, they expressed little capacity to attend workshops, especially those which require notable time commitments. Participants did express an interest in opportunities to network with and learn from other peers engaged in disaster-related organising. There was also a notable lack of enthusiasm for another 'toolkit' or 'academic model' as an output. The workshops were therefore reconceived as peer-learning gatherings and the toolkit output as a 'community resource' subject to the specific needs of each community.

Six peer-learning gatherings were held between June 2023 and August 2023:

| Location | # of Participants |
|--|-------------------|
| Windsor (Hawkesbury) | 10 |
| Kurrajong (Hawkesbury) | 11 |
| Blackheath (Blue Mountains) | 16 |
| Faulconbridge (Blue Mountains) | 8 |
| Lismore (Northern Rivers) | 8 |
| Brunswick Heads (Northern Rivers) | 7 |
| Total | 60 |

Figure 5: Table indicating number of gathering participants per event.

The peer-learning gatherings served two purposes:

- To provide an opportunity for participants to share and exchange experiences, knowledges, and learnings with each other.
- To acquire community input into the development of a resource with state-wide benefit for disaster risk mitigation.

These purposes were designed following feedback from the project’s community partners, fellows and interview participants.

Recruitment varied between the case study areas. The Northern Rivers gatherings recruited solely from the existing pool of local interview participants which was larger than the other case study areas. Northern Rivers-based interview participants were also comparatively more interested in peer-learning and networking opportunities than those in the Blue Mountains and Hawkesbury LGAs. Interview participants in the latter case study areas reported consultation fatigue since the disasters, which also impacted participation levels in the interview fieldwork phase itself, as well as concern over the lack of growth in existing networks (“it is always the same people in the room”). To mitigate this, as well as to help encourage an expansion of these networks, a ‘plus one’ was added to recruitment invitations so participants could bring someone else they felt should be part of these conversations.

The design of the gatherings was informed by the interview data, which highlighted the depth of knowledge and skills participants had gained in their community organising roles, and the importance they placed on networking and sharing stories. A skilled facilitator was recruited to design and run the gatherings, which were structured to maximise participants’ opportunities to learn from each other and contribute to the shaping of the research findings into a meaningful format for communities. A trauma-informed approach was used, and a counsellor was recruited to the role of ‘wellbeing space-holder’ during each gathering. Acknowledging the expressed need for self-care, thought was also given to providing a comfortable venue and well-catered meal.

Each gathering ran for three hours beginning with a brief report-back on the strengths of and challenges for community self-organising during disaster events as

identified through the project's interview data. These findings were used to prompt individual reflection on a particular strength or challenge each participant faced, or is facing, to guide the subsequent discussions.

Participants were then grouped together based around their similar concerns for a small group asset mapping exercise. The map visualised different stages of disaster events and participants were tasked with locating their experiences, strengths and/or challenges within one or more stages with post-it notes (see Index). At the end, the gathering re-convened to debrief, talk through specific discussion points and their next steps, and to reflect on what shape a community resource could take.

These gatherings resulted in exchanges between participants that may develop into partnerships and collaborations for disaster risk mitigation. Several of these potential collaborations identify the need for partnership with formal emergency management services (State Emergency Service (SES), Rural Fire Service (RFS) and the NSW Reconstruction Authority), local government and/or academic institutions (Sydney Environment Institute, the University Centre for Rural Health or other Faculties) as well. These have been integrated into this report's findings as recommendations.

3. Findings

3.1. Key Differences between Case Study Areas

In our research project, significant variations are evident across the three distinct study areas: the Blue Mountains, Hawkesbury, and Northern Rivers. These regions exhibit diverse characteristics in terms of geographic and demographic factors, degree of isolation, types and scales of disasters, and the nature of state-based responses.

The Blue Mountains, predominantly comprised of suburban communities along the Great Western Highway, is marked by middle to high-income demographics and relatively good access to emergency services. However, isolated communities in the Megalong Valley and along the 'Bells Line of Road' have limited access to emergency services and are particularly vulnerable to bushfires, with only the Megalong Valley facing significant flood risks.

The Hawkesbury is internally varied, ranging from suburban areas near Windsor to isolated communities resembling the Blue Mountains, with the additional challenge of flood-prone areas along the Hawkesbury River. This study area displays a mosaic of ecological, demographic, and disaster-risk profiles.

The Northern Rivers, the largest spatially, encompasses coastal communities, rural floodplain settlements, and large townships like Lismore, many vulnerable to flooding and landslides. These variations emphasise the need for tailored disaster

management strategies to address the unique challenges and vulnerabilities within each of these regions.

However, despite the significant variation between and within the three study areas, several common threads exist across them all. These common threads relate to the conditions through which self-organised community networks emerge, how their strengths and weaknesses are articulated, and the resources and support needed to maintain and improve their effectiveness to reduce risk in future disasters.

The thrust of this report is that different forms of self-organising emerge in relation to the specific qualities of each community, namely their distinct social and ecological contexts. Accordingly, self-organising networks varied between *and within* each research area. The exigencies of flood rescue in the Northern Rivers, for example, reflected the unique challenges facing rural communities in low-lying floodplains. Our research analyses how – in the face of unprecedented inundation and resource constraints – rural communities creatively ‘retooled’ and redirected the latent capacities of their respective networks. Improvised and informal responses of this kind typified rural and hinterland communities across the three research areas. Conversely, the more urbanised and formal social foundations of the Blue Mountains and Hawkesbury LGAs tended towards a focus on disaster preparation and adaptation.

What our research brings into focus is how and why self-organising unfolded along these distinct trajectories and offers reflections on the implications of these findings for future relationship-building between government agencies and communities before, during, and after disaster events. Tracing variations between and within each community bears out the need for disaster-response mechanisms attuned to the specific circumstances of local communities. Our analysis finds that state-wide and regional initiatives tend to overlook this scale.

4. How do self-organised community networks of resilience develop and function in response to disasters?

This section details the common threads in how community-led disaster response, recovery, and adaptation developed and functioned across the three case study areas. It explores their conditions of emergence and the roles of local knowledges and social cohesion in enabling disaster-affected communities to act.

4.1. Conditions of Emergence

Community-led disaster response, recovery and adaptation do not happen in a vacuum. These actions have strong foundations that were consistently identified by

interviewees across the three case study areas, and for which the language of ‘spontaneity’ or ‘spontaneous organising’ seems inadequate and potentially misleading. The organising that disaster-affected communities engaged in was enabled through pre-existing social, cultural, material and economic conditions as well as being shaped and delimited by existing levels of access to infrastructure, technology, skills, resources, and related networks. Such conditions are usually referred to as ‘social capital’, ‘social cohesion’, or ‘social infrastructure,’ but in each community those are manifest in a variety of ways.

Interviewees tended to exhibit one or more of the following attributes:

- They have lived within the disaster-affected community for a long period of time (i.e., over a decade) and, in some cases, have significant family histories and/or cultural ties (i.e., connection to Country) to the area.
- They have backgrounds of active community engagement (such as affiliation with community groups and/or organisations) and community-oriented values (such as strongly felt imperatives to contribute to their communities).
- They have established organising, planning, and coordinating experience and skillsets (such as through political and/or activist campaigns, various leadership and group-coordinating roles, or work experience in high-paced and pressured environments among others). Importantly, these can be both directly related to disaster and emergency management as well as indirectly related through transferable skills and experience.
- They had no choice but to act due to being in physical danger or physically cut-off from aid for long periods of time during and after the disaster event. Sometimes a ‘gap’ or ‘need’ was identified, on occasion guided by expertise, which was regularly tied to what interviewees saw as limitations in the response of emergency management agencies and governments.

These attributes reveal three distinct, though interrelated, conditions that prompt action: networks, expertise, and situation. The following sections illuminate in greater depth how these conditions – specifically local knowledges and social cohesion – enabled community-led response, recovery, and adaptation efforts.

4.2. Local Knowledges

The role of local knowledges and social cohesion were overwhelmingly emphasised by interviewees as enabling community-led disaster response, recovery, and adaptation. Moreover, these foundations reinforce such actions and interventions as effective and essential. Importantly, ‘local knowledges’ demonstrated significant breadth in what it meant to different people, which warrants its framing as a plural. However, many of these different meanings are interrelated, with what is emphasised being dependent on the person speaking.

Broadly, interviewees articulated ‘local knowledges’ as one or more of the following meanings:

The skills, training, and experience within the community. Interviewees emphasised local knowledge as “skilled people”. This meant directly applicable skillsets – such as first aid and training for licensed operators of heavy machinery and equipment –were drawn upon to achieve certain interventions especially during rescue, response, and recovery efforts. But it also meant transferable skills and experience – such as leadership and coordinating roles, interpersonal communication skills, and experience in high pressure environments –proved valuable while organising and acting.

The sophisticated systems of organising and risk management implemented by the community. This was regularly described as people who know “what needs to be done” and did not necessarily align with those that had professional experience with organising and/or risk management or a position of recognised authority. In some respects, knowing what needs to be done – to reduce risk, to prepare for disasters, to respond and recover – is informed as much by other aspects of local knowledge (i.e. familiarity with place itself and who inhabits it) as it is professional skillsets and training.

Interviewees revealed numerous systems being implemented which challenge assumptions that community-led actions and interventions were disorganised and risk-laden. These include:

- daily meetings and debriefings
- support frameworks
- established resource and supply priorities through inventorying and distinguishing “wants” versus “needs”
- food security measures
- specialised teams handling different aspects of response and recovery
- training street coordinators in how to sensitively approach neighbours and source relevant information
- “benchmarking” locally sourced information to ensure reliability
- databases such as volunteer job-matching systems, supply/resource tracking systems (i.e. “tool libraries”), and check-in/rescue coordination systems
- maps and mapping to guide and support rescue and aid efforts, avoid duplication and mitigate risk, and to develop a sense of the local situation
- systems of coordination and communication (phone trees, food rosters, volunteer sign-in/out registers)
- risk management measures and protocols (safety procedures around equipment use, physical and emotion readiness checks, PPE gear, safety checks through self-organised ID checks and verifications)

While these systems were variable across the disaster-affected regions, their recurring nature broadly contradicts perceptions – including those allegedly held by emergency management agencies – that community-led disaster response is disorganised or chaotic. Moreover, while some systems were admitted to being “crudely” designed in their initial forms, in several cases they were refined and/or replaced as skilled or experienced people arrived to contribute.

Knowing the situation on-the-ground as they emerge and unfold. This encompasses knowing the current situation in a local context including what resources and supplies are specifically needed. Examples include knowing which streets and roads are presently cut-off, which houses or areas have already been checked, and what people are already doing in the area. It also entails knowing urgent needs such as fuel reserves, medication, food supplies as well as knowing who is around and who has already evacuated. Interviewees expressed concern with avoiding duplicated and overlapping efforts, including as a form of risk reduction, as well as mitigating oversupply of unneeded resources.

Knowing who in the community has relevant skills and training, experience, access or reach to resources, networks, and connections. Local knowledge is not only expressed as the skills, training, and experience inherent within the community, but also knowing who has these. It also means knowing who has access or reach to resources and strategic connections (such as political connections at different levels of government, local businesses or with emergency management personnel). In other words, it is knowledge of what different community members bring to the table.

Knowing the needs, vulnerabilities and plans of specific community members. It is well known that disasters and climate change impact people differently and unevenly, with social marginalisation and discrimination alongside geography being significant contributing factors. Interviewees broadly recognised these diverse risk profiles across a range of groups perceived to be especially vulnerable during disasters and recovery, including:

- Aboriginal and Torres Strait Islander communities
- LGBTQIA+ or “queer” peoples
- people with disability and carers
- those with serious health conditions
- women, including pregnant women
- single parents
- children and youth
- seniors
- those living in low socio-economic circumstances and precarious housing
- culturally and linguistically diverse (CALD) peoples

- remote and isolated communities
- people with addiction
- those with histories of incarceration
- rough sleepers and those living off-grid

Interviewees also highlighted how assumptions that these individuals were passively vulnerable eschews how they meaningfully contributed and to certain extents self-organised to address their own needs. This highlights particular forms of local knowledges relevant to the experiences and needs of marginalised individuals and/or communities during disasters and beyond. In some respects, this remains internal to these groups especially as experiences with emergency management, law enforcement and government agencies may present barriers to trust and collaboration.

Knowing the physical geography, landscape and ecology of place. This ranges from knowing how to navigate local street layouts, how bushfires and water inundation levels have tended to unfold through past disaster experiences, how place has physically changed over the time (both environmentally and through human development) which necessarily means recognising the *limitations* of past disaster experiences as ‘guides’, how environmental and ecological factors can mitigate future disaster risk, to intimate familiarity with localised ecosystems and wildlife including their needs during and after disasters, anticipated behaviours and risks, and signs of recovery.

The cultural knowledges of local Indigenous communities. Local knowledge sometimes becomes conflated with Indigenous cultural knowledges which, as demonstrated through the above points, is reductive in terms of the scope of what it means for different interviewees. However, Indigenous cultural knowledges remain a significant strand with local knowledge that was reinforced by Indigenous and non-Indigenous interviewees alike. Importantly, this is not limited to cultural burns as an increasingly recognisable and respected form of land management, but also other practices such as soil regeneration that together comprise managing Country. As one interviewee noted:

I think it's important to connect with traditional landowners with anything disaster-wise. I think that knowledge is really important. Because they know the land, they know where they would want to build, not build. (NR P29)

Simply put, ‘local knowledges’ means *the knowledges that come from everyday immersion in place and community*; from close familiarity with the local physical landscape (both ‘artificial’ and ‘natural’) and its inhabitants (human and otherwise).

4.3. Social Connection and Cohesion

As indicated above, local knowledges are interrelated with the importance of social connections or social cohesion. Social cohesion can be understood as facilitating the capacity for a community to work collectively through social ties, shared identity, a sense of belonging and care for one another.⁶ This section begins with the social network maps produced through the surveys as a foundation which the interview data illuminates further.

4.3.1. Network Maps

The maps below visualise the connections between community groups and networks (as well as businesses, emergency services, etc.) that were identified through some of the interviews. The arrows denote which group/network identified a link – meaning that a link between two circles (or ‘nodes’) that has an arrow pointing both ways was verified by both groups/networks. Black lines indicate links that existed between groups and organisations before the disaster events. Red lines indicate links that are newly emergent through the disaster events. Importantly, we were not able to interview a member or representative from every group/network listed which means that a connection or link that is not verified by both groups does not necessarily mean that link did not take place. The size of each node reflects the number of links identified with that group/network. Larger sizes denote more links identified than smaller sizes.

The visible concentration of links with some groups and networks highlights how several community-led actions were significant in collaborative (and sometimes geographic) scale and scope. However, each map tracks the connections that enabled both large- and small-scale actions that were both important and valuable in what they achieved. For example, it tracks the connections interviewees reported that enabled singular instances of human and animal rescues via boat alongside those reported by others that sustained longer-term and wider spread efforts in coordinating disaster response and recovery. This means that the size of each node, and its related concentration of links, should *not* be taken to represent the ‘value’ of the interventions being made. What each map does illustrate is **how social cohesion across different scales underpinned community-led actions**, which interviewees emphasised provided essential information and support in New South Wales’ disaster-affected communities.

⁶ Ludin, S Rohaizat, M & Arbon, P (2017) ‘The association between social cohesion and community disaster resilience: A cross-sectional study’, *Health & Social Care in the Community*, vol. 27, no. 3, pp. 517 – 796.

Blue Mountains

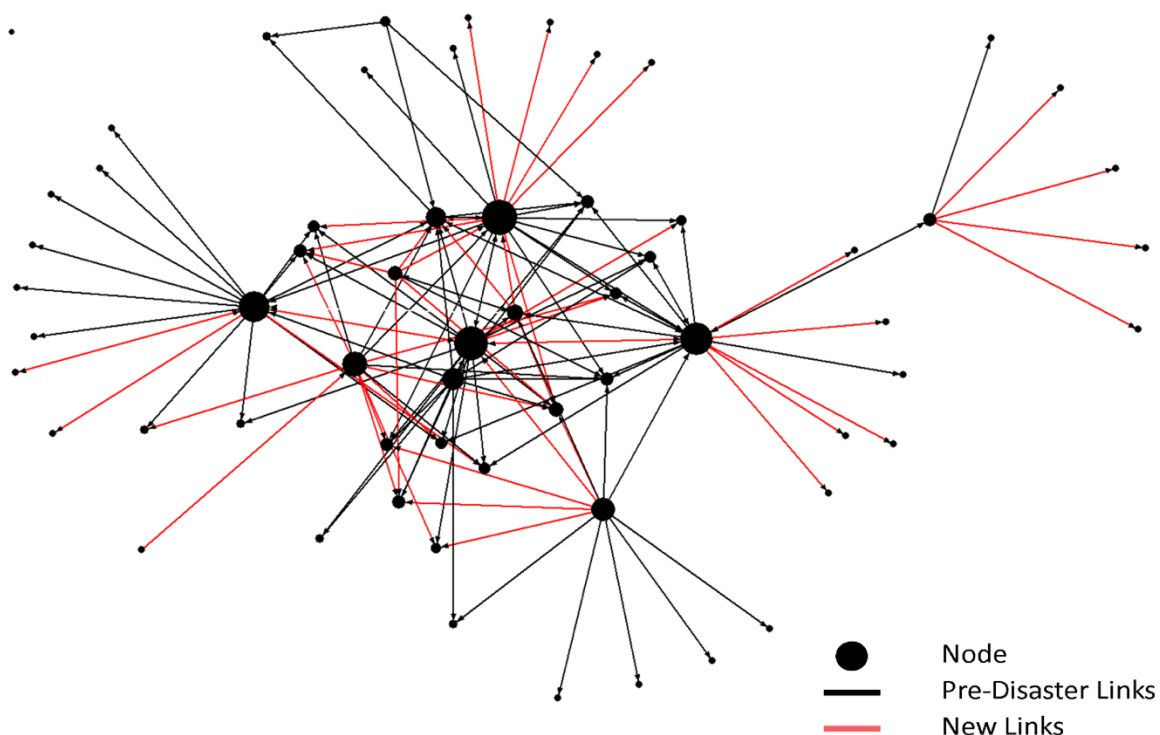


Figure 6: Blue Mountains network map.

Largely in relation to bushfires, community-led actions in the Blue Mountains displayed the highest proportion of pre-existing links being activated of the three study areas. It also revealed the highest proportion of ‘formal’ groups and organisations involved in these actions. Here, ‘formal’ means groups and/or organisations that are registered or incorporated but are not emergency management agencies. While some were formed with explicit disaster-related purposes, many of these formal organisations were established for other purposes but activated their networks and resources in relation to bushfires. In terms of their centrality within the broader network map, and the higher proportion of interviewees who reported affiliations with certain groups and organisations, unaffiliated individuals did not figure significantly in community-led actions in the Blue Mountains. Based on abundant pre-existing relationships, an informal online-platform-based network was most central. However, a registered charity engaged significantly in community-led actions and was most central in the network of new relationships.

Hawkesbury

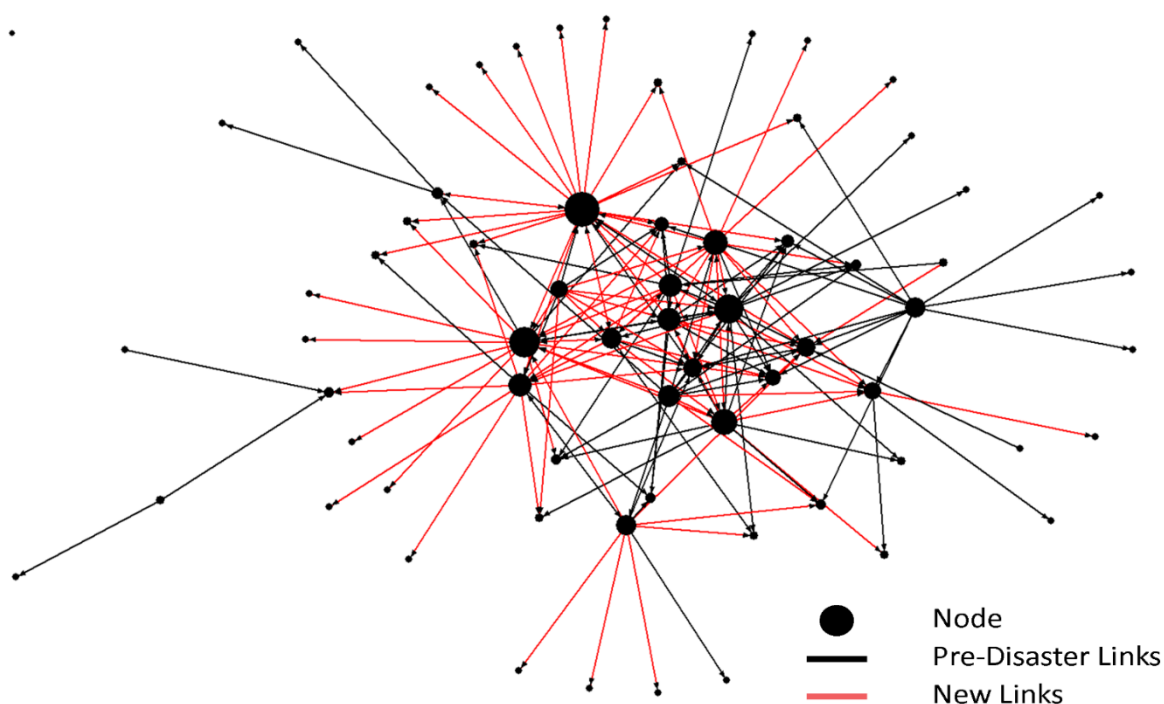


Figure 7: Hawkesbury network map.

The Hawkesbury study area indicated the highest diversity of disasters faced with interviewees involved in actions related to bushfires and floods. While some interviewees acted in relation to one disaster type only (1 for bushfires; 8 for floods), more acted in relation to both (11 for bushfires *and* floods), illuminating how links forged during one disaster can provide foundations for generalised support across disaster types. This study area revealed greater evenness between pre-existing and newly emergent links as well as between formal and informal actors. In this study area, an unregistered charity was the most central organisation overall, but a registered community organisation created the most new and reciprocal collaborative relationships.

Northern Rivers

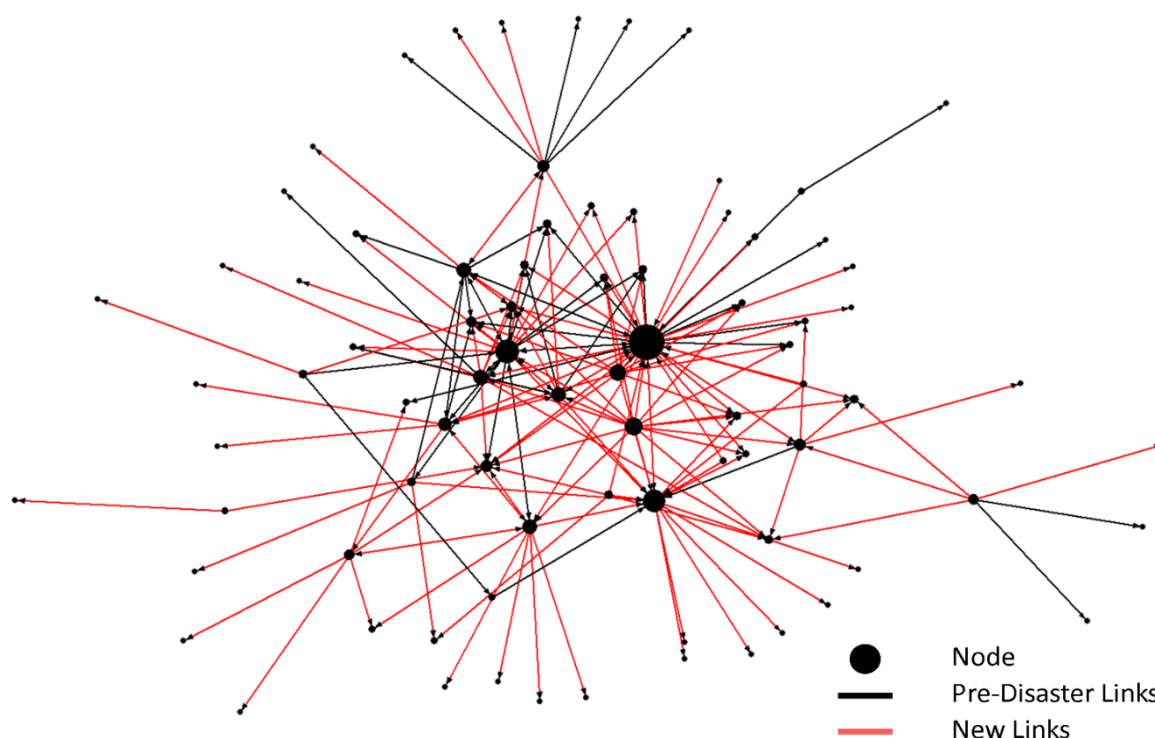


Figure 8: Northern Rivers network map.

The overwhelming majority of Northern Rivers-based interviewees acted in relation to floods. While this study area had the largest number of interviews conducted of the three study areas, it proportionally featured the highest amount of newly emergent links relative to pre-existing links. It also bears the highest proportion of informal and unaffiliated individuals involved in community-led actions. Notably, despite taking vital action, unaffiliated individuals were significantly less central than organisational actors. This network map reveals that the Northern Rivers interviewees had sparser networks prior to the disaster event but an informal community organisation became significantly central in the newly formed networks immediately after the floods.

Collaborations across groups and organisations can spontaneously emerge out of need when a disaster overwhelms communities. However, the ‘network nodes’ and the internal relationships that sustain them, do not come out of nowhere. In the Northern Rivers, most of the spontaneous response relationships did not exist before. However, pre-existing informal groups of individuals and formal organisations that were not set up for the purpose of disaster response or recovery stepped to the core of the newly emerging temporary network structure. Other previous unconnected organisations became connected through this new informal local centre. Relatively higher levels of reciprocity prevailed in these networks, distinguishing them from purely hierarchical centralised arrangements, such as that envisioned by interviewees when describing the organising structures of emergency management and government agencies.

Comparative differences between the three maps align with disaster types and histories as well as social and geographic characteristics. While the Northern Rivers witnessed the most new relationships form, the Blue Mountains saw the least, which indicates that people were fairly interconnected already prior to the 2019-20 bushfires. This includes pre-existing links that were involved with disaster-related activities, highlighting how the region's history with bushfires was a factor in the social foundations for community-led actions. As mentioned above, actions related to bushfires (broadly, though primarily in the Blue Mountains) tended to mainly involve 'formal' organisations. Conversely, community-led actions related to floods tended to be made by 'informal' groups and networks. However, some of these groups in the Hawkesbury and Northern Rivers have since formalised after the floods, becoming incorporated as community associations or as resilience-focused organisations.

Unaffiliated individuals were relatively less central within these networks overall and tended to be made in response to floods. No significant unaffiliated individual responses were reported in relation to bushfires. Group affiliation was complex and hardly straightforward in several interviewees' accounts where multiple roles and personal networks were complicating factors (see below for elaboration). Even considering this point, the relative lack of centrality for largely unaffiliated individual responses compared to organisational actors seemingly contrasts with narratives on community-led actions following the disasters. However, it is not surprising, given these interventions (such as boat rescues) can be quite localised and therefore not necessarily widespread in collaborative scope. What these maps contribute to these narratives is to indicate a much broader picture that includes dimensions of community-led response, recovery and adaptation that receive comparatively less attention, including coordination and support efforts that directly enabled more storied actions.

The significant number of groups and networks added to the original survey demonstrates the scale of community-led response, recovery and adaptation across the three study areas. The original surveys listed 83 groups and networks which grew to 210 overall by the end of the fieldwork. It also demonstrates what connections were important for interviewees to note. However, despite this visualised scale, it remains a partial picture of the true scope of community-led organising. When brought together with the data collected in interviews, many more collaborations emerge for each interviewee than those listed in their surveys, which typically aligned with 'everyday' informal and/or personal networks which lack clear group identities (see below for further information).

The interview data illuminates geographic, temporal, and online dimensions to how collaborations played out between community-based organisers that are not captured in the network maps. The displayed maps – which omit the names of groups for privacy purposes – disguises the notable geographic spread of

connections between place-based actors. In several instances, these actors (such as neighbourhood centres and pre-existing resilience groups) did not limit their interventions to their immediate communities and geographic surrounds. They also assisted (and continue to assist) other communities well beyond those they are normally based within and service. This includes, in some cases, working across the boundaries of the study areas themselves (between the Hawkesbury and Blue Mountains). Meanwhile, time complicates what is mapped insofar as it collects network data across different points (response, recovery, adaptation) of disaster events into a single map per study area. This necessarily means each map is subject to degrees of conflation, such as links that were relevant only at specific points of disaster events or even specific disaster events (only during floods and not the bushfires, or only during specific floods in the Hawkesbury). The complexity of time also means the changing nature of some groups, such as those that are newly formalised during disaster recovery or preparation but were informal or even spontaneous during disaster response, are not captured.

Additionally, social media was especially emphasised as valuable (which will be unpacked further below), such as pre-existing as well as newly created Facebook community pages. In many cases, membership to these pages significantly grew to hundreds and even thousands of members, meaning the collaborations these pages facilitated did not necessarily involve those administering and/or moderating them. As a result, interviewed administrators could not verify links with other interviewees who used those pages for their own organising purposes. Therefore, these links would appear on the network maps as ‘not reciprocal’, which potentially distorts how some of those connections functioned.

These complexities reveal that a nuanced approach to understanding social networks is required. The maps shown above provide a foundation in identifying patterns of collaboration that underpinned community-led actions in disaster response, recovery, and adaptation. The interview data builds upon these findings by illuminating the meanings of the links between those involved as well as the quantified patterns collated from the surveys, including the specifics of ‘what’ happened and ‘how’.

4.3.2. Interview Data

Interviewees revealed several consistent characteristics in the “power of connection” drawn upon by disaster-affected communities:

The central importance of established ‘everyday’ networks. Interviewees often described scenes of “neighbours helping out neighbours” and drawing on personal networks for assistance. In many cases, these were networks that developed organically around what brings people together “just as part of daily life”:

- neighbours and residents living in relatively close proximity
- schools and early childhood centres (school friends and their families, networks between teachers, admin staff, students and their families, networks of active parent volunteers for school-related events and functions)
- places of worship and other faith-based groups
- local businesses including suppliers and clientele
- workplace-based networks and colleagues
- community groups and associations (including community hall and festival committees)
- sports clubs, gyms, and other physical exercise groups (junior soccer and cricket teams, personal training sessions and groups, yoga, dance classes, water-skiing communities among others)
- arts, crafts, music and performance-centred recreational groups (knitting and crochet groups, lead lighting and painting workshops, local choirs among others)
- conservation, environmental and agriculture groups (WIRES volunteers, urban gardening workshops, beekeeping workshops, citizen-science groups among others)
- political and community campaign groups and networks (networks around local political representatives, school crossing safety campaigns, climate change activist networks, campaigns against raising dam walls, and coal-seam gas exploration among others)
- local charities and volunteer groups (wildlife care, food relief, mental health support and wellbeing groups)
- other special interest and hobby groups (such as horse owner communities, boating communities and so forth)
- online networks (such as Facebook community pages as well as Instagram and TikTok follower networks)

The sites that tend to foster these connections – schools, places of worship, libraries, community halls and centres, commercial districts with sitting space, sporting grounds and parks among others – are labelled “social infrastructure” within academic literature.⁷ Their value in strengthening the social cohesion that proved crucial during and after disaster events was repeatedly underscored by interviewees. This includes in disaster-affected communities that identified a *lack* of such cohesion as a significant barrier largely due to being remote and isolated, relatively small in population, or resistance to building connection between members. Forms of social infrastructure were highlighted by interviewees situated in these communities as

⁷ Aldrich, D 2021, ‘The benefits of Japan’s social infrastructure and civic ties in uncertain times’, *East Asia Forum*, 16 September, <https://www.eastasiaforum.org/2021/09/16/the-benefits-of-social-infrastructure-and-civic-ties-in-uncertain-times/>

possible solutions to reduce future disaster risk (such as building a community hall or appropriating an existing building as one, i.e. a local scout hall).

Moreover, in advice for other communities who may face future disasters, interviewees often emphasised how preparation and resilience are anchored in building networks through ordinary life:

Strengthening community connections, just as part of daily life, means that then when something does happen, there's just all these wonderful connections, means that there's trust, means there's communication, means that you know each other, means just all sorts of good things can flow from that. (NR P18)

Other interviewees advised “just know your neighbours” or “just be an active member of the community” (BM P11). This consistent advice significantly informed the purpose and content of the vignette series produced as the toolkit to reduce risk statewide through this project.

Personal networks were diffused which enabled spontaneous growth.

Interviewees often described a ripple effect when engaging local personal networks, such as turning to “people in the community that know someone that knows someone” (BM P10). Networks appear as diffused and decentralised, rather than necessarily being connections held predominantly by one person or a small core group. This may seem to contradict the network maps where certain nodes appear more centralised than others, which still indicate their reach within the broader disaster response and recovery context. Rather than undermine the maps, what the interview data presents here are nuanced and expansive accounts of how community members collaborated with each other, including in ways that exceeded what could be captured through the network surveys.

These networks, while drawing heavily on established connections as starting points, also demonstrated growth through spontaneous connections. These moments are described as “they just show up”, “just out of nowhere” or they “pop up out of the woodwork.” Here is an illustrative example:

So just out of nowhere, two young men with mullets and mo's and singlet top and footy shorts turned up. “We're here to like, take stuff.” I said, “Oh, you're awesome, thank you so much. Because I can't keep up. I need you to do this, because I can't do the journey.” ... But then I called, and I had a hashtag, right, I need a mullet and mo. I need a mullet and mo for 10 o'clock. I need a mullet and mo for three. And then it became a thing. (HB P7)

While initially spontaneous and unexpected, with no pre-existing relationship between the interviewee and these volunteers, these connections become more fully integrated over time and were drawn upon deliberately in subsequent disaster events. In this sense, it would be more accurate to label these connections as

‘generative’ rather than ‘spontaneous’, given how they became integrated and continued as the networks acted in relation to ongoing and subsequent disaster events.

Roles and networks were ambiguously tied to assumed group affiliations.

Interviewees would often seamlessly ‘slip on different hats’ as they accounted for their various roles within and across groups and networks. This also included across what might be categorised as formal and informal groups and roles (including as RFS and WIRES volunteers). Importantly, participants sometimes cast themselves as individuals and not necessarily as acting on behalf of an affiliated group. For example, this was reflected in how some interviewees filled out their affiliated group on the network map survey as though they ‘worked with’ the group as an individual and not as their group’s representative. In some cases, this was an important distinction in terms of liability and/or occupational risk, such as actions taken that were not compliant with organisational policies.

Meanwhile, collaborations with other community groups often had caveats and qualifiers that distinguished them as personal networks and not necessarily collaborations with the affiliated groups themselves. For example, “we’ve worked with people who are in those associations, but not directly with [the associations themselves]” (HB P14). The network mapping at a group affiliation level caused uncertainty among interviewees for this reason. This also relates to collaboration with emergency management and government agencies insofar as those collaborations were also framed as personal networks – especially with the RFS (“they are our neighbours”). In this sense, what is clear is the primary significance of personal connections and networks which underpinned collaborations across community groups as well as with the emergency management sector.

A collective approach to disaster-and emergency management. Several interviewees highlighted how there was a shift away from individualised focuses (i.e., on the self, on individual properties etc.) in disaster response and recovery to more community-minded approaches. A few noted that they had to work at this shift with community members to achieve a consensus, while others gave a strong sense that it emerged organically in their time of need. For example, one interviewee argued that there is a presumption – particularly with formal command-and-control structures of disaster response – that communities will disintegrate into chaotic self-centred behaviours during any lapse of order in times of crisis. But the reality is the opposite: “people rise to the challenge. We come together, we share, we do all this amazing stuff.”

Strong senses of ‘togetherness’ and building stronger connection through disaster experiences. It is a common refrain among interviewees that their community had never felt closer than during and immediately after disaster events. This tends to be coupled with a belief or hope that the connections forged with each

other will last and result in greater preparedness next time. As some communities impacted by multiple disasters attested, this was indeed the case leading to general confidence in their readiness for future disasters:

And if we have a disaster, we've already got it. And I think we will fall into place. We know now what to do. We're a lot more prepared because we've done it. (HB P14)

And I said, "Between you and some of the other ones I know," I said, "I can get everything I need for a family all in one day." And she goes, "You're getting good at this, aren't you?" And I went, "Yeah, we get good at this stuff." (NR P17)

This reveals an important social aspect to past disaster experiences as local knowledge. It is not just knowing how catastrophic elements and conditions tend to unfold within specific local contexts, but also what to do and who can be turned to for help. However, this does not diminish the anxiety felt by interviewees concerning future disasters or their requests for support needed.

Trust as a key element including in navigating division and prejudice.

Everything has to be grassroots because people know their own community and they trust people in their community. And I think trust is the key word, because if I went and told somebody something, they'd probably believe me more than if somebody from outside came and said, 'this is what you've got to do', because they know me. (BM P5)

A recurring element is "trust" and how it enables effective community cooperation. Some interviewees explicitly spoke to building and establishing trust, while others were more implicit through language such as "reassurance" and "comfort". Trust is raised as a key to breaking down social barriers to connection such as gender norms (especially among men), existing sociocultural characters of some remote and isolated communities, as well as "cultural sensitivity" required in engaging Aboriginal communities. For example, one interviewee mentioned how simply dropping off food with local Aboriginal communities was not the right approach, and subsequent efforts included bringing along an Aunty to help with the distribution and to reassure the community.

Trust is also underscored in coordination that involved transporting people, large supplies of fuel and other resources. An interviewee spoke to informal "safety checks" conducted within communities prior to allowing women with and without children to be transported by any unfamiliar volunteers. This entailed asking around both online and in-person until someone who knew the volunteer could verify their trustworthiness and reliability. Elsewhere, pre-existing relationships were also drawn upon when large quantities of valuable supplies (fuel and food) were entrusted to drivers to be delivered to where it is needed most.

The significant role of social media and networking platforms. Interviewees stressed how social media platforms – especially Facebook – were essential conduits that enabled self-organised community actions. Facebook’s utility was emphasised across three different community page forms:

- community pages created for general use by residents of specific suburbs and surrounding areas
- community pages for specific local groups, businesses, organisations, charities, and services
- community pages created for disaster-related purposes tied to certain local or regional contexts

Examples across these three types of Facebook page tended to already exist prior to the disaster events. This means they had established membership pools that could be immediately leveraged for communication, sourcing of supplies and resources in addition to coordination purposes. For some disaster-related pages, this also means protocols and standards (such as posting guidelines) were already implemented to ensure their ongoing effectiveness, having been tested through past disaster events. Newly emergent pages were also created to address needs during and after the disasters, some which required ‘learning as they go’ in how to manage the resource, while still being significant for the broader response and recovery efforts. Notably, both existing and newly formed pages experienced immense (albeit at times overwhelming) membership growth – suggesting larger networks that can potentially be tapped into during future disasters.

The utility of social media networks (predominantly Facebook; to lesser extents Instagram and TikTok as well) was commonly identified in the following ways:

- more immediate communication between and coordination of community members
- more specifically relevant information for communities within a broader disaster-affected region to be spread
- both the spread of misinformation (intentional and otherwise) but also self-organised efforts to mitigate this problem
- deducing who needed to be checked-in on through levels of online activity
- effective, organic, and de-centralised self-organising which enabled community members to help one another directly despite having no existing connections
- a way to leverage enormous external support within very short timeframes – donations, cash, volunteers, supplies, resources and specialist labour – in some cases from overseas

The final point was especially crucial for remote and isolated communities which needed to turn to external support due to the lack of access to required resources and supplies internally within these communities.

The perceived relationship between social cohesion and mental health wellbeing. Interviewees perceived significant mental health benefits in stronger social connections in disaster-affected communities. This was especially pronounced in the Blue Mountains and the Hawkesbury, where communities had their responses and recovery severely disrupted by the COVID-19 pandemic and its amplified experiences of loneliness and isolation. Many participants spoke to ad hoc “checking in” on people they knew – including different approaches tailored to various types of individuals (men, “furiously independent” community members etc.). These efforts are recognised as informal and organically arise through being connected with others. As one interviewee noted, “often people just need someone to sit and be with them, and you don’t even need to have the right words to say or the right things to say, but just to be present.”

Interviewees also highlighted how forms of community building, shared interest groups and recreational activities helped improve mental health wellbeing, while concurrently building social connection and networks, as part of disaster recovery and resilience. These are held as complementary alongside other conventional forms of providing mental health support and first aid – such as counselling sessions and aiding in accessing services and working through insurance claims. Interviewees also spoke about the value of and need for mental health first aid, cultural awareness and accidental counselling training to further strengthen how social connection can improve mental health wellbeing.

4.4. Strengths of Community-led Actions and Interventions

Interviewees identified how local knowledges and social cohesion reinforced the strengths of community-led disaster response, recovery and adaptation. This includes:

- providing swift and tailored responses
- interventions that were agile and flexible
- being committed in the long term and not temporary
- handling responsibilities across disaster response, recovery, and preparation that are much larger in scope than those of the emergency management and government sectors
- providing safe and accessible spaces for marginalised communities and individuals

Importantly, these strengths were routinely articulated through critiques of the approaches, practices and performances of emergency management and government agencies. These ‘official responses’ were viewed as:

- critically inefficient and cumbersome
- understandably overstretched and beyond capacity
- too risk-averse including in ways that obstructed crucial collaboration with community responses
- overly dependent on external and generalised decision-making divorced from the realities and conditions on the ground in specific local contexts

Apart from locally based RFS and SES volunteers, who nevertheless are beholden to decisions made higher in their command structures, there is acknowledgement that emergency management agencies simply cannot replicate the local knowledges necessary to mitigate these issues and supplant the need for community-led actions. In other words, interviewees hold the view that **community-led disaster response, recovery and adaptation plays a specialised and indispensable role.**

5. How can self-organised community networks of resilience be better supported to minimise future disaster risk?

This section details what were consistently described as the challenges and barriers that impede effective community-led action on disasters. Interviewees focused significantly on challenges at the interface with emergency management and government agencies. They also highlighted issues with deteriorated or insufficient infrastructure, the lack of social cohesion and complex dynamics within some disaster-affected communities, having to “learn as you go”, the psychosocial and material burden and toll of being involved and the impacts of climate change. This section also outlines the support that interviewees identified as needed to address these challenges and barriers to minimise future disaster risk through community-led action.

5.1. Change at the Interface with Emergency Management and Government Agencies

Several key challenges were identified by participants, which they felt undermined their effectiveness or placed additional strain on their roles. The biggest difficulty reported was in the relationship with the formal emergency management sector, and in particular the lack of recognition by the formal sector of local knowledges, resources, and the indispensable role played by the community-led response. These

findings relating to difficulties with the interface between the formal and community sectors are detailed below.

A lack of recognition of the role played by the communities including insufficient consultation and communication throughout the rescue, response, and recovery phases. Interviewees frequently reported feeling unseen or sidelined by emergency management personnel, and that the importance and sophistication of their community-led response was not acknowledged by the formal sector. This was reported throughout all phases of disaster response. During the disaster and in the immediate rescue and response phases, interviewees reported that their local knowledges and expertise were disregarded by emergency management personnel and government agencies. One interviewee living upstream of a flood-prone town told of their frustration that the Bureau of Meteorology (BoM) creek gauges were giving inaccurate data, and when they tried to ring the SES to warn them about the flood of water about to hit the town, being told that the SES could not take on board “citizen sourced information” because it was unreliable.

Similarly, several interviewees reported that they were told not to get involved in boat rescues even though thousands of people were stranded on their roofs by floodwaters, the SES headquarters had been inundated, and authorities were overwhelmed by the scale of the flooding and unable to respond to calls for help. One interviewee remarked:

I actually think potentially more lives could have been saved if the responders had been more willing to maybe listen to the community response on day one.
(NR P25)

There were similar frustrations in areas that experienced bushfires, concerning the disregard shown towards local community knowledge of fire behaviour:

[W]hen we did have the fire in the National Park and they made that decision to do the backburn... you heard in the community a lot of people saying, "Why are they doing that? Whenever that happens, it gets out of control and it burns [our area]." So, there was all this local knowledge where people just knew that was going to happen, but the decision was still made for that to be done.
(HB P2)

In the aftermath of the disasters, community groups reported their frustration that emergency management personnel arriving on the scene for the first time often did not acknowledge what the community was doing and the systems they had already established. In some cases, while emergency management personnel did engage with the community-organised response and recovery hubs to learn what was happening, this was not reciprocated in the sharing of contact details or information. These extractive interactions had negative impacts on cross-sector relationships and achieving little in supporting ongoing community-led organising. As such, emergency

management agencies were said to not communicate well with community-based organisers or find ways to support them:

Helicopters and things started to come over and police on trail bikes started to roll in. None of them – we didn't know what any of that was happening, none of them stopped at the hub to talk to us or anything like that. (NR P2)

In some instances, formal agencies set up parallel systems, duplicating the efforts of the community response without taking into consideration vital local knowledge held by community members. In other cases, emergency management personnel offered inappropriate support to the community response, either assuming they knew what the community needed without bothering to ask, or asking but then not delivering assistance or resources:

And... this army helicopter [landed]. And a lot of staff jumped out, men and women in uniform, and it started delivering boxes of food and putting it under the shade of a tree. I tried to speak to them saying what was really needed because we had sort of covered everybody. They wouldn't even talk to me... they wouldn't listen to me. (NR P11)

As recovery began and extended into months and years, or merged with the response to subsequent disasters, the frustration of community organisers shifted to their lack of recognition because they were not formal organisations, and their lack of “a seat at the table”:

It's the grassroots community sector organisations in particular who bear the burden of response and recovery and they're not recognised for it. They're not part of the formal system. They don't have a voice to feedback from the local community up into the formal system. They're not even on local emergency management committees. (BM P2)

I wasn't asked and again, I think it could be because of the fact that I'm not registered... in all of the disaster recovery phases, I haven't been involved or invited to a forum, even though... all the councillors at one point have come directly to my home... and I think it could be maybe because I'm not a registered charity or not big enough (HB P7)

It was feeling of not being included and given a seat at the table. This sense of not being viewed as legitimate in what we were doing, even though we'd been consistently there from day dot, and doing it well with very little. So, at the time I was struggling with being recognised by our local council, being included on those service networks and network meetings and forums and committees. (NR P16)

It should be noted, however, that when participants felt acknowledged and supported by emergency management personnel, this was identified as a key strength and

enabler, suggesting the importance of recognition by the emergency management sector of the specialised and indispensable role played by the community-led response.

Oh, we had really good police liaison... She should be the blueprint for police community interaction. We've had other experience with police going, "We're just going to blast past you and do what we want."... But she came, just went, "I can see you've got this under control... How can we work together? You know your area, you know your people, we're not just going to barge in." She was awesome. So, she let us keep some agency while fitting within the legal parameters she had to do. (NR P9)

What is expressed here is a desire for genuine reciprocity and collaboration between the community-led and formal emergency management sectors, rather than a one-way flow of information from agencies to communities (or extracted *from* communities), or an attempt to 'manage' or co-opt the community organising.

Top-down and overly bureaucratic management structures leading to ineffective response and communication. These structures within formal emergency management and government agencies were identified as another source of frustration and challenge for community organisers. A frequently reported concern was centralised decision-making, which results in decisions being made by people geographically removed from the disaster without understanding actual conditions on the ground:

[We] would like to see somebody that was actually boots on the ground in the... area, that understood the area. And my understanding going way back before I lived [here] was that that's how the SES used to work. There were several people within the community who were SES volunteers, so obviously they had that good local knowledge. That doesn't seem to happen now. (HB P16)

Now, a lot of the personnel that get sent to events like this have no local knowledge. They don't even know where [local places are], and that is a massive, massive mistake. (NR P12)

The problem is if you're not here and you're not part of what's going on, it's very hard to just come on in and say, here's what you need, and dump it with us. Well, they did say, what do you need? And we told them what we needed, and they didn't comprehend that at all. (HB P20)

This decision-making was also noted as hierarchical in the sense that local personnel lacked the authority for necessary action.

I've spoken to everyone... all the guys that were on the ground and they said, "Oh, we'll send it up the line"... I'm like, 'Well, what's the point? What's the point of having these bodies on the ground if they've got no power

whatsoever?"... The left hand doesn't know what the right hand's doing. (NR P16)

Interviewees also reported their frustrations with overly bureaucratic processes which led to inefficiency and a lack of timeliness. One interviewee reported having to phone the SES while pretending to be members of the public who were stuck on their roofs waiting to be rescued from floodwaters, because the SES would not take a list of pleas for help that had come in via Facebook. This is despite Facebook being necessary, as people were stranded so long their phones had since run out of batteries. Others discussed the difficulty of supporting community members who were waiting for decisions and actions by agencies that stalled their recovery and left them in 'limbo':

The problem with their response was typical bureaucratic processes... the way they respond to it is just not good enough. You can't have typical processes and red tape when people are suffering. Our life's on hold, people's lives are on hold. It took them a year to get a contractor. I mean, that's already a year out of our life (HB P4)

[The flood survivors] don't even know whether they're eligible for [the government home buy back scheme], most of them. Some know, but many don't, and so they're in this limbo thing. It's just this limbo land we're in, waiting for some decisions to happen. (NR P10)

This was also a challenge for grassroots community groups as they struggled to put systems and structures in place to maintain their recovery work over the long term. Accessing funding was particularly fraught, because of the burden grant-seeking and reporting requirements put on small and newly established volunteer-run organisations. Many interviewees had to scramble to access funds because they were not incorporated associations and spoke of the difficulties faced with the administrative task of having to formalise their organisations while simultaneously meeting the urgent recovery needs of their communities with volunteer labour. Others noted that they missed out on funds because they were overlooked or simply not able to formalise or put grant proposals together in time.

So, the deadline is sometime in the end of next week, I think in February. You've got to be kidding. We're small local grassroots community organisation, we don't have writers of applications to grant things. So that's one. Ludicrously short timeframes. Two, it requires a 50% co-contribution. With what? We'd have to go and get another grant to get the co-contribution... So actually, coming out and talking to the community sector might have been a good idea. Consulting with us. Not telling us what they're about to do to us, but consulting with us about how might this actually work. (BM P2)

Another challenge was the lack of relationship-building undertaken by emergency management personnel, who were perceived to “drop in and drop out” and to “clock off at 5pm”. Interviewees reported frustration at not having a single point of contact within agencies and having to repeatedly tell their stories and rebuild relationships. They were also disappointed by the lack in longevity of agency support, sometimes feeling that their communities had been abandoned by the formal sector, leaving them to pick up the pieces. This not only added to the burden placed on community organisers, but re-traumatised disaster-affected communities.

And this washing machine effect was utterly – initially it would raise your hopes every time that you're talking to somebody who's actually going to have some continuity of relationship to you. So, eventually we got a point person... and he stayed in that position for a while. And that improved things... that worked until he was put somewhere else. (NR P5)

And that's what I found the biggest problem with the big [agencies]. They rock up for three or four days and they're gone again. They didn't get to know anyone. They didn't get to know anybody's problems. They didn't get to know really what they wanted. It was just there to do a job. (NR P28)

The impact of “too much red tape” on the community-led response was threefold. Firstly, it limited the effectiveness of grassroots groups, who are reliant on support to access resources they do not have within their communities to continue and expand their recovery work to meet community needs. Their difficulties accessing funding sources because of their informal nature and lack of administrative resources was especially noted as a serious impediment to their work. Secondly, it greatly increased the work burden and emotional toll on community organisers, who contributed many unpaid hours to their recovery work and reported a high incidence of burn out. Finally, it undermined their trust in the formal emergency management system, with some participants reporting a complete loss of faith in emergency management agencies and government:

The bureaucracy basically pushes away community members who, in the past, would've been active in participants in the RFS. But just not willing to participate in the excessive — the excessive bureaucracy... So, the people who have some of the best experience and knowledge about the [area] and about the local geography and local behaviour of fire, they've given up on the RFS. (BM P15)

Risk aversion of emergency management agencies transferred risk onto community members. Interviewees reported that due to overly restrictive policies governing what emergency management personnel could and could not do, they sometimes failed to fulfil their mandate of saving lives, assisting people and defending property:

It was crazy. I mean, it was day eight I think the ADF turned up, and people got quite upset about that because I know that they ended up saying to people, we can't lift anything and we can't go into people's homes [laughs]. And so, people were like, what the hell? (NR P1)

Too dangerous. But that was their thing through the whole thing. It was work, health and safety. Too dangerous. I said, "well, what do you think? It's a rescue. What do you think we're rescuing people for? Because it's dangerous." I said, "If it was nice and flat and a nice sunny day," I said, "Why do we got to rescue them?"... I understand you're not going to put yourself in a position where you're going to die, but you're meant to be trained to be in a dangerous situation. That's what rescuing is about. (NR P17)

Interviewees also reported that the unwillingness of emergency management personnel to undertake actions deemed too risky transferred that risk onto members of the public. It put them in situations where they felt compelled to step in to perform rescues or to take actions that they might be potentially liable for later.

Well, I mean that was it, there were times when we definitely breached our instructions. Just getting back onto the RFS during those fires, we were told not to do things, we did it anyway, because you're protecting your community. You're on the ground, you're on the fireground, you're on the front, you know the right decision to make (BM P16)

And we feel like we are fighting the police... Because they're getting an order, no one can get in or out, and we've got like these kids are about to lose their mum. We have to get them there. And then it becomes how can I do it? (HB P14)

This perception by emergency management stakeholders that the community response was itself a risk that had to be managed underscores the lack of recognition amongst the sector of the specialised and indispensable role played by community groups and the levels of knowledge, skill and sophistication that underpinned their efforts.

And if we were to go... to talk with [the] RFS, what we'd hear is "duty of care, duty of care, duty of care... a community response could be dangerous in this situation" ... [But] we are all highly skilled people, and we do it. And if we were being paid to do it, we'd be paid very well. (BM P4)

Formal decision-making processes in funding allocation do not adequately recognise or utilise local knowledges. Interviewees were consistently critical of how this dissonance between local communities and government-sanctioned responses manifests in the government management and allocation of grant funding and other social services. Across the three case study areas, community organisers contended that the government frequently misallocated funding to unpopular and

unhelpful projects. Interviewees were particularly concerned that centralised grant assessment schemes privileged applicants who were not engaged in frontline labour or who otherwise had superior access to and knowledge of formal government processes.

In short, the existing policy framework cannot ascertain whether a funding decision has a mandate from the community. Rather, the state tends to prioritise the timely allocation of funding to projects that can meet its own metrics. While it is reasonable for the government agencies to maintain a commitment to due diligence and the probity of grant recipients, in its present form the regulation of relief spending skews funding towards institutions with staff, resources, and familiarity with government processes. These conditions often sideline self-organising networks, grassroots volunteers, and residents with low socioeconomic status.

Another direct consequence is intracommunity discord between organisations and groups as well as, in many instances, a general distrust of government agencies including emergency service agencies. While it is beyond this project's remit to assess the merits of each funding decision, this report finds that these perceptions are, in and of themselves, a fundamental barrier to effective disaster management and risk reduction. So long as communities perceive that the state accords their knowledges and aspirations low value, intracommunity discord will compound the adverse financial, environmental, and psychosocial risks and impacts of bushfires and floods.

Policy makers, agency heads, and program managers should consider how improving the interface between communities and formal agencies may alleviate this challenge. Interviewees commonly asserted, for example, that the state should foster local decision-making processes and community input on an ongoing and systematic basis. Their contention was that a clear and democratic structure with wide community participation would ensure that formal decision makers can reasonably rely on the special knowledge and expertise of local knowledge holders without abrogating their duties of care and due diligence.

In conclusion, difficulties at the interface between the community-led organising and the emergency management sector were the greatest and most frequently reported challenges faced by community organisers across the three sites. Central to the issues raised was the lack of recognition by the emergency management sector of the specialised, sophisticated and indispensable role played by community groups. Interviewees expressed the need for recognition in a variety of ways, including:

- recognition by frontline emergency management workers on the ground during times of disaster
- recognition of the value of local knowledges, networks and skills
- inclusion of community-led groups in information networks and decision-making processes

To address overly bureaucratic and centralised systems and decision-making processes and perceived excessive risk-aversion, interviewees spoke of the need for change to systems, structures, and engagement practices within emergency management agencies.

5.2. Investment in Key Infrastructure

Infrastructural constraints were a consistent barrier to community self-organising. While the nature and effects of this barrier varied between and within different communities across the three study areas, interviewees identified that inadequate infrastructure manifests in two interrelated challenges:

- breakdowns in the circulation of information and local knowledges
- increases in the financial, psychosocial, and labour burdens that disasters place on community organisers

The former challenge reflects the fact that self-organising systems rest on infrastructural preconditions, namely telecommunications, electricity, roads, and measurement devices (among other things). Welfare checks, disaster updates, and resource coordination, for example, depend on reliable access to the internet, phonelines, and electricity. The movement of people and resources likewise depends on roads, storage facilities, and safer spaces. Therefore, the breakdown of infrastructural preconditions tends to manifest in a breakdown of the social systems they support.

The failure of enabling infrastructure tends to increase the adverse impacts of disasters. In the face of this barrier, communities attempted to ‘fill the gaps’ by taking on additional financial, labour, and psychosocial burdens. For example, consistent telecommunications and power network failures often required communities to self-organise off-grid generators including fuel, reallocate volunteers to direct welfare checks, and bear the psychological stress of not knowing whether a vulnerable person was safe. Aside from the additional burden on organisers themselves, community responses to infrastructural barriers necessarily drew resources away from other essential tasks, namely frontline fire and flood responses.

The management of infrastructure is too generalised to address barriers and needs within local contexts. Governments should invest in the reliability and scale of enabling infrastructure to mitigate these burdens. This finding is consistent with recent Federal government inquiries.⁸ Nonetheless, our research does not support the view that governments should simply increase funding through its existing policy framework. In its present form, the management of infrastructural preconditions for

⁸ House of Representatives – Standing Committee on Communications and the Arts (2023) *Connecting the country: Mission critical – Inquiry into co-investment in multi-carrier regional mobile infrastructure*, November 2023.
https://www.aph.gov.au/Parliamentary_Business/Committees/House/Communications/Mobileco-investment/Report

self-organising tends to generalise communities and overlook their ecological and social distinctions. These distinctions are *material* to the requirements of each community and, by extension, the functioning of self-organising systems. Our research finds that the purview of existing policy and funding decisions does not perceive or address the specific barriers that manifest in local contexts.

This report does not provide an exhaustive list of the infrastructural bottlenecks and vulnerabilities that manifest between and within the three study areas. Our research relates these barriers to an underlying dissonance between government decision-making processes and local knowledges. In this sense, the challenge for governments extends in two ways:

- governments should increase total spending on the infrastructures that sustain self-organising systems.
- governments must develop decision-making processes that address the gap between the granular scale of local knowledges and the general purview of existing infrastructure programs

A renovated interface between infrastructure management and local knowledges will augment the positive social and ecological impacts of infrastructure spending. Moreover, the ongoing collaboration between communities and government decision-makers is both socially beneficial and fiscally prudent.

Immediate investments in key infrastructure are needed alongside longer-term investments. The time required to hone the interface between local knowledges and infrastructure management is a worthwhile long-term investment; however, it does not preclude immediate investments in key infrastructure. Notwithstanding the need for locally specific programs, immediate steps should be taken to resolve the following general barriers to effective disaster management:

- **Measurement and notification services.** The State Government should work with its Federal and Local counterparts to improve flood warning and measurement services. Immediate investments in measurement devices along flood-prone river systems will alleviate burdens on formal and self-organised disaster responses. The present system is not sufficiently extensive or reliable. Government investment in this infrastructure will improve the quality and timeliness of information that informs formal and self-organised responses to disasters.
- **Off-grid power for telecommunications systems.** Automated backup generators with adequate fuel will mitigate the flow on effects of electricity system failures. The existing 'Cell on Wheels' system may be expanded; however, other investments in the integrity of permanent telecommunications systems should be considered.
- **Water storage and refill stations for fire trucks.** Journeys between water sources and the frontlines of bushfires undermine the efficiency of labour and

equipment. Distributed water storage facilities will optimise the utility of existing emergency resources. Disaster planning should consider and minimise the time spent moving between water sources and bushfire frontlines.

- **The distribution and capacities of safer spaces.** There is a general need for more physical places of shelter. The capacities of these facilities should also be more ambitious. Safer spaces should have ample food, water, air filtration, and backup electricity. In short, communities should have access to safer spaces that fulfil their essential needs. While community members generally appreciated donations, they stressed that the management, distribution, and disposal of donated goods was often burdensome. Moreover, they noted that it is difficult to plan around donations which are – at times – sporadic and inconsistent with the specific needs of each community. The Government should guarantee that safer spaces can sustain local communities irrespective of donations.

5.3. Building Stronger Social Cohesion

While interviewees overwhelmingly described scenes of strong teamwork and emphasised the value of social cohesion, there were also nuances within these accounts that highlighted the challenges of community cooperation. These collaborations were not always harmonious and, in some cases, interpersonal rifts and pre-existing conflicts had to be circumvented to varying degrees of success.

Social marginalisation and prejudice challenged instances of community cooperation. A few interviewees described uplifting moments where typical divisions between communities, such as between religious and LGBTQIA+ groups and individuals, bore no impact on joint efforts during and after the disaster events. Another interviewee indicated how validating it was to be open about their identity beyond the immediate safety and comfort of their peers:

What I'm saying is my queerness hasn't mattered because – day one, when you're rescuing people, no one, "I don't want you rescuing me, you've got nail polish on. Go on, bugger off." You know what I mean? Doesn't happen. It's been good to be able to manoeuvre in a way that people see as worthwhile as my true self and be respected for who I am, which is therapeutic. It's very therapeutic. (NR P6)

However, these experiences were not necessarily universal. Other interviewees highlighted how their identities, or the identities of other marginalised groups, did negatively shape interactions and collaborations. This was noted in relation to those living with addictions, histories of incarceration and homelessness. Moreover, a considerable proportion of interviewees were women, and several noted how their gendered identity created barriers to meaningfully contribute despite their established skills and expertise:

It is power of wisdom and experience. So, this world needs it, and we are a wasted resource. There's hills full of them. Women who've come and moved here, or older men, isolated, wasted, just wasted, and we are exactly what's useful at times like this. (BM P4)

Although highlighting how ignorance meant specific needs were not being met for marginalised peoples, interviewees also observed that this created gaps that were addressed typically by other members of those groups, such as sourcing gender-affirming medication. Furthermore, while frustrating and exhausting, interviewees expressed hope that challenged instances of ignorance during the community-led response would prove to be educative and strengthen future efforts:

And I grew up in this community and I understand those nuances, but that was also just really fascinating to watch people have to really reckon with their prejudices and for me to reckon with mine as well and try to hold all of that within, try to be present and bear witness to people's experiences of trauma. (NR P15)

New conflicts emerged through collaborations. For example, there were disagreements over organising approaches and in recovery priorities, some which have not been resolved. Moreover, as outlined above, the outcomes of competitive funding schemes have only exacerbated these issues and created discord within disaster-affected communities. This highlights a weakening of social cohesion that risks impeding the effectiveness of future community-led actions and resilience building.

The destabilising effects of rapid demographic change due to economic and environmental pressures. Interviewees identified how changing dynamics within their communities were an impediment to the reproduction of local knowledges and social cohesion needed to undergird future organising efforts. This included:

- cost-of-living pressures compounded by disaster impacts forcing long-term residents to leave (including several prominently involved in recent community-led disaster responses)
- aging populations
- housing affordability and the increasing amounts of temporary/weekend residences, short-stay holiday homes (such as Airbnbs) and absentee property owners curtailing new permanent residencies
- suburbanisation of disaster-prone areas driving growth of at-risk, inexperienced, and disconnected communities

Interviewees implicated these demographic shifts in both:

- an increase in the burdens associated with identifying, coordinating, and upskilling community members

- a decrease in the number of volunteers capable of maintaining social connections and/or contributing effectively to community-led efforts

Lack of support for preparation and adaptation compared to disaster response. This was often related to support needed for initiatives that build and strengthen the social foundations of community-led response, recovery, and adaptation. Importantly, while this support was sometimes explicitly ‘formal’ insofar as it entailed government funding and coordinating assistance, this was not necessarily embraced and occasionally critiqued for overlooking the needs and approaches determined through grassroots feedback. It is advised that, while investments in social infrastructure and community building programs are valuable and desired, the specific content and activities must come from communities themselves and not adhere to a ‘one size fits all’ approach across multiple different communities.

These barriers related to complex interpersonal and community dynamics reveal that the social cohesion and cooperation celebrated as a strength of community-led organising was not experienced evenly across disaster-affected communities. However, they also *reinforce* the importance of strong social connection and local knowledges, and therefore that community-led actions are vital in the context of disasters. Moreover, although much of these findings attest to what disaster-affected communities achieved, it remains important not to romanticise ‘community’ in ways that ignore these nuances and difficulties, especially as lessons learned are communicated to other peers and communities.

5.4. The Need for Peer Learning Opportunities

The lack of established systems and specific knowledge needed to operate efficiently. Interviewees found themselves having to create systems on the fly and respond reactively to risks and challenges. These included managing donations and volunteers, protecting people's health and safety in chaotic and dangerous situations, and managing complex community dynamics and decision-making amongst traumatised communities.

Just start[ing] to form some level of order amongst the chaos, I guess. It was very chaotic. We didn't really, as a community, have any kind of plan or any processes or protocols in place, or resources. (NR P2)

In the longer term, groups struggled to find and manage administrative systems to support their ongoing recovery work, such as databases, social media, governance structures, and grant-seeking.

A lot of the stuff I'm having to do manually, because it's not my area of expertise, building databases and systems. I need to pull on other people. And it's same with social media. I'm a total luddite. So, I'm having to teach myself all this stuff. And I'm just realising that I can't do it all ... (NR P16)

Ultimately, the frequently expressed desire of participants to connect with other community organisers to learn and share knowledge about useful resources and systems, and to reduce the need to have to ‘learn as you go’ in future disasters, was instrumental in the research team’s decision to pivot the focus of the community workshops towards peer learning events. The support provided by the research team to the establishment of a prototype regional alliance of community-organisers in the Northern Rivers, as well as the design of the storytelling resource, also reflect this desire for peer learning opportunities.

5.5. The Need for Recovery Support and Training in Mental Health First Aid

The burden placed on communities had a significant mental health and wellbeing toll on community organisers. This was most often expressed in terms of exhaustion and burnout as the recovery lengthened into months and years post-disaster. Interviewees also reported being unable to sleep immediately post-disaster and developing illnesses and fatigue. Moreover, they mentioned the impacts on their families due to not being available at home, particularly those that had children. Some interviewees experienced guilt that their own homes had not been destroyed, and a sense of being unable to step away from the recovery efforts when there was so much need and no one available to take their place.

And once you start down this road, how can you walk away? Oh my God, I was so exhausted by the end of last year. And I was just like, how can I keep doing this? And I thought, well, how can I not? I just have to somehow. (NR P16)

The tasks that were mentioned as taking the biggest emotional toll were taking on leadership roles without adequate support and resources in addition to managing volunteers and community members who were themselves traumatised by the disaster. In particular, the inability to access funding and onerous grant-seeking and reporting requirements were singled out as key contributors to burnout during the recovery phase:

And, you know, if you’re actually actively on the ground, doing that kind of frontline stuff, sitting at home at night time writing grants, you just end up burning the candle at both ends. (NR P27)

These responses reinforce the need for a trauma-informed approach in disaster contexts. Administrative and funding support is needed for community-led groups to alleviate the emotional and wellbeing burden on organisers and their families, as well as resources aimed specifically at supporting their mental health and wellbeing.

5.6. Action on Climate Change

Climate change and its impacts amplify existing barriers and require the need for urgent support. Climate change remains of palpable concern for many interviewees. Some made direct references to “climate change” in accounting for the scale of the disaster events they faced as well as in how legacies of insufficient action or policy at different levels of government failed to mitigate them:

I just remember walking through the streets just going, oh my God, yeah sorry [tearing up at this point] this is what climate change looks like. (NR P1)

In other interviews, concern for climate change manifested as the anticipation that their communities will endure more frequent and intense disasters in the future:

This is our future. Our future is like climate disasters. And we have to work out how to do this better or we're going to run out of resources. (NR P25)

I think as disasters continue to get worse and more widespread, communities are just going to have to be able to lead their own responses. (HB P1)

Climate change informed strong concern over preparation, including motivating community-led actions and campaigns to address these issues. It also informed significant concern over longer-term impacts on what enabled effective interventions to take place. As mentioned above, interviewees expressed concern for the sustainability of social cohesion and local knowledges as climate driven impacts enforce demographic change on affected communities, which resonates with narratives over climate migration and refugees. Interviewees also highlighted how climate change was subverting expectations grounded in an understanding of place, including local Indigenous knowledges:

It was strange in that last big fire here in the mountains, I've never dealt with a 'north-south'. I've never packed my bags. I've never moved my stuff down the mountains, and I've never seen something go so fast. I just think, yeah, we've created an environment now that's put fear into someone like me that was used to fire, where fire was a part of your environmental management. (BM P9)

Rectifying inadequate climate policy was explicitly noted as a way governments can support disaster-affected communities and community-led disaster response, recovery and adaptation.

It's climate change. Climate change is really real. The government are there to take big responses. The community here, we can take little responses. We can get antennas and save people, but we can't do policy. So, they could start policising against climate change, start taking it seriously, start acting really quickly. (NR P6)

6. Outputs

This project was intended to deliver a ‘toolkit’ for community-self-organising informed by the data collected through interviews and workshops. As noted, the feedback from interviewees and community partners was overwhelmingly against a conventional ‘toolkit’ document or academic model. This feedback was taken to the peer learning gatherings for further community input which resulted in the following outputs:

6.1. Storytelling Series

A key finding across the interviews and gatherings were the difficulties participants faced in ‘having to learn as you go’ and the need for peer learning opportunities to minimise future disaster risk. Additionally, the project encountered significant breadth in what actions were taken by disaster-affected communities. Participants at multiple gatherings advised that a storytelling resource would be beneficial in broadly communicating knowledge and lessons learned, while also indicating shared experiences across communities still recovering from recent disasters, including especially those that are remote and isolated. In this sense, the stories and lived experiences of how communities organised before, during and after the disasters is a ‘resource’ that should be shared widely to assist others in addressing and responding to disaster risk statewide.

A series of stories or vignettes, ‘Stories are the Toolkit,’ is being produced to address these needs. These vignettes amalgamate (and anonymise) what people shared to highlight what is common across them. Each story demonstrates how communities often drew upon ‘everyday’ social networks to coordinate support and to access skills, resources, and local knowledges necessary for different actions taken. They also highlight the difficulties people faced and how they worked around them to mitigate the need for others to ‘learn as they go’ as much in future disasters. Importantly, the series highlights how different contributions can be made through various skillsets, in many ways that enable more visible actions (like boat rescues) to be taken, across different ‘stages’ of disaster events. The stories illustrate how community knowledge is used to respond to, and mitigate, disaster risks in multiple settings.

This storytelling series will be a public-facing resource that preserves and passes on knowledge while aiming to seed ideas for community-led risk mitigation initiatives state-wide. As such, it directly addresses the objectives of the ‘Disaster Risk Reduction’ funding scheme as well as this project’s specific objectives in sustaining community knowledges. The series is ten episodes long, with each episode focusing on a different form of community-led action, within the context of either bushfires or floods. The series is currently under review, and is intended to launch in 2024, as both written texts and as audio recordings shared through podcasting and online

video platforms (YouTube). The Sydney Environment Institute’s communications will announce when the series will be launched once confirmed.

6.2. Regional Alliance

A key finding from the Northern Rivers participant gatherings was the need for a structure for regional collaboration and alliance. Eighteen months post-disaster, when workshops were held, community organisers were feeling overwhelmed and burnt out. They expressed that they were still fully occupied with meeting immediate community needs and had no time for either self-care or strategic thinking about future disaster preparedness, climate adaptation, and policy change. Spanning a large geographic distance across six local government areas, community-led groups had had little or no chance to meet and learn from each other.

Recognising the importance of this need and the potential value of piloting a model for community-led collaboration and alliance, the research project provided initial administrative support to help local community organisers establish a working group of 10 local, place-based organisations and community groups. Having secured seed funding for a project coordinator, the group is now working towards the establishment of a regional network or alliance for the purposes of sharing information and resources, supporting each other, advocacy, and grant-seeking. To begin this process, a one-day workshop took place on March 6, 2024, which brought together 65 community-based organisers from across the Northern Rivers.

This output provides a tangible benefit to our research participants, in accordance with the research team’s emphasis on reciprocity in the research relationship with disaster-affected communities. It also provides a structure for the sharing of knowledge and resources within and between communities that is more robust and far-reaching than a ‘toolkit’ designed by the research team, because a regional alliance is dynamic and evolving, and makes available the collective expertise of those with lived experience of disaster organising. In addition, it provides a promising model for community-led disaster organising and future region-wide disaster risk reduction in other NSW communities. The research team is exploring funding opportunities to continue to follow the regional alliance-building process.

7. Recommendations

7.1. Recommendations for Emergency Management Agencies and Government

A key finding of our research is that the present interface between formal decision makers and community members impedes the flow and timely application of local knowledges. This general challenge manifests in locally specific ways. Accordingly, we contend that government agencies responsible for disaster response, resilience, and adaptation planning should prioritise authentic acknowledgement that:

- **Community-led disaster response, recovery, and adaptation fulfills a specialised and indispensable role alongside the formal emergency management sector.**
 - that this role is ‘specialised’ insofar as it is grounded in local knowledges and social connections that cannot be effectively replicated by external actors
 - and that, for this reason, this role is ‘indispensable’ insofar as community-led actions make essential contributions to disaster response, recovery, and adaptation that cannot be effectively made by external actors
- **Disaster-affected communities bore the increased risks created by overwhelmed formal disaster management systems and existing risk management practices that shape cross-sector engagement.**
 - that change is required in how the formal emergency management sector engages with the community sector before, during and after disaster events
- **There is a need for genuine and equal collaboration between sectors through policy and/or procedural changes that integrate and apply local knowledges in concert with informal networks and affected residents .**

Our research also makes it clear that authentic acknowledgements of community members necessarily entail the practical application of their knowledges and aspirations. Disaster management strategies should facilitate clear, timely, and ongoing collaboration between disaster affected communities and formal decision makers. These collaborations should be strongly guided by principles of reciprocity, trust building and flexibility. Our research finds that the existing policies and practices do not satisfy these criteria.

Accordingly, we contend that the emergency management, resilience, and adaptation sectors should prioritise:

- **Staff education and training**
 - about the role of community-led disaster response, recovery, and adaptation
 - about how to effectively support community-led response, recovery, and adaptation
 - about trauma-informed approaches to engaging with disaster-affected communities
- **Shift principles from ‘community engagement’ and ‘risk management’ to ‘community collaboration’**
 - acknowledge the importance and independence of community-led organising and the value of reciprocal information flows
 - review understanding of ‘risk’ and related inflexible practices of engagement and collaboration with community-based organisers
- **Foster cross-sector relationships with community groups prior to disasters**
 - through longer term positions and contracts for recovery officers
 - through longer term research and other projects in disaster-affected and/or disaster-prone communities
- **Avenues for streamlined and reciprocal communication**
 - through establishing contact points between emergency management and existing community disaster response networks – such as street facilitator, warden networks, community resilience groups
 - through ensuring contact details are shared between community-based organisers and emergency management personnel on-the-ground amid disaster events
- **Review decision-making structures to foster more adaptable and flexible interaction with disaster-affected communities**
 - integrate community collaboration and input into decision-making structures around emergency planning and disaster response that are binding and accountable
 - integrate community input and oversight into decision-making on grant scheme priorities, themes, and approvals
 - integrate community input and oversight into decision-making on local infrastructure investment
- **Accessible funding opportunities**
 - through non-competitive grant schemes
 - through reduced administrative requirements for approved grants
 - through providing support and training for grant writing and project management in disaster-affected communities
 - through recognising specific volunteer work within community-led disaster management settings as eligible within income support schemes
- **Increased funding and investment**
 - for long term disaster recovery, future preparedness and climate adaptation

- for community networks, community building programs and social infrastructure specifically tailored to local needs and interests to anticipate disaster risk
- for key infrastructure that shapes the nature, need and effectiveness of self-organising systems, including:
 - measurement devices and improved flood warnings along river systems
 - off-grid energy and telecommunications infrastructure especially in remote and isolated areas
 - water storage in remote and isolated areas
 - increased amount and sufficiently supplied ‘safer space’ shelters
 - repaired and improved road networks in flood-affected regions
- **Support for further research**
 - into the processes of social networks, types of social cohesion, and forms of social practice and infrastructure that mitigate risk using local knowledges
 - into how the formal emergency management sector perceives, understands, and engages community-led disaster response, recovery, and adaptation
 - into the impacts of climate change on the social, demographic, economic and ecological communities of communities and develop strategies for mitigating them
 - into processes for long-term adaptation pathway planning for communities consistently hit with climate-change induced disasters

To address these challenges, we recommend a public inquiry be established into the merits of a renovated interface between formal decision-making processes and local communities. The NSW government may conduct this inquiry through the New South Wales Parliament Committee System. An inquiry along these lines would enable the government to draw on the expertise of academics, community members, and government stakeholders.

7.2. Recommendations for Communities

- **Community building to strengthen local connections as preparation for future disasters**
 - through being an active community member in whatever ways and capacities is most comfortable and personally interesting, including (but not limited to):
 - special interest and hobby groups
 - sports and recreational clubs
 - volunteer networks including those centred around schools and/or places of worship
 - local campaign groups and organisations
 - neighbourhood groups
 - community associations
 - disaster-related networks and initiatives

- through creating and/or joining community building Facebook pages, including:
 - general community pages for local suburbs and townships
 - community pages for local groups, networks and/or organisations
 - local disaster-related specific community pages
- through considering who and what you know in your local area as well as the location of resources and local knowledges that may be useful in an emergency
- **Early preparation and planning**
 - through learning the advice on early preparation and planning in your local area, including where emergency accommodation and shelter for humans and animals is in your area, as well as evacuation routes
 - through making plans with more than just your immediate household, such as with other community members, neighbours, family and friends
- **Community-led disaster preparation and adaptation**
 - through utilising existing community disaster/resilience networks, resources and knowledges, both in-area or from other disaster-affected communities
 - through establishing a network of community organisers and community-led groups
 - through integrating self-care and wellbeing strategies at the beginning of planning
- **Develop relationships with staff in disaster management agencies**

7.3. Recommendations for Researchers

- **Adopt a trauma-informed approach to research in disaster-affected communities**
 - through undertaking accidental counselling training
 - through consultation with trained professionals in designing interview and gathering protocols
 - through have trained ‘wellbeing officers’ present during group research methods
 - through hiring professional facilitation
- **Research guided by principles of reciprocity, adaptability, and mutual benefit for disaster-affected communities**
 - through ensuring community-based representatives are party to governance structures, have input in research design and participant recruitment
 - through having community-based research roles that are appropriately paid
 - through being adaptable to the expressed needs of community-based participants, including with whether conventional ‘toolkits’ and ‘workshops’ are desired

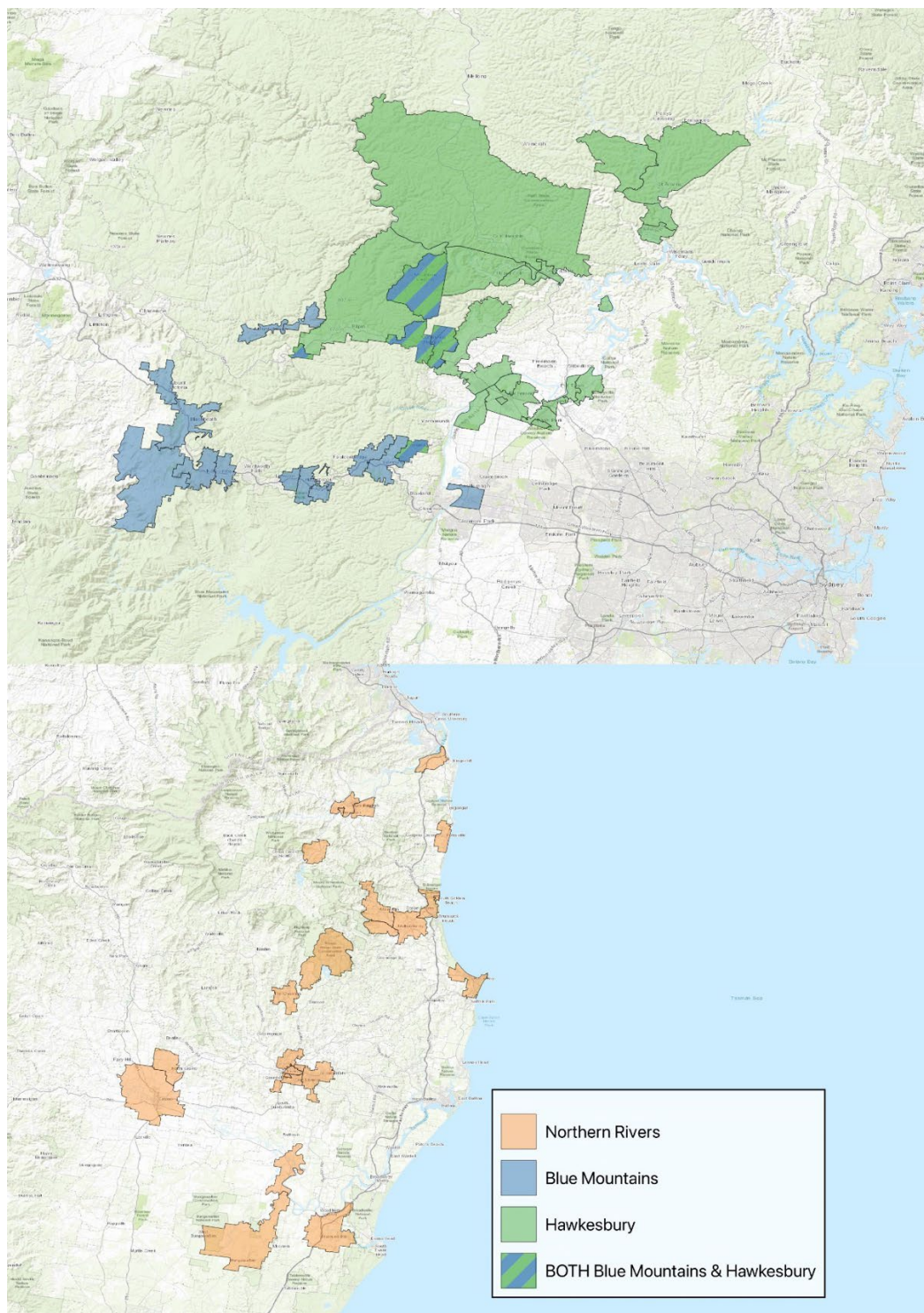
- **Better coordination and networking between research projects being conducted with disaster-affected communities to mitigate research burden**
- **Further research is needed**
 - into the processes of social networks, types of social cohesion, and forms of social practice and infrastructure that mitigate risk using local knowledges
 - into how the formal emergency management sector perceives, understands and engages community-led disaster response, recovery, and adaptation
 - into the impacts of climate change on the social, demographic, economic and ecological communities of communities and develop strategies for mitigating them
 - into processes for long-term adaptation pathway planning for communities consistently hit with climate-change induced disasters

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Appendix

Appendix A – Case Study Area Maps



Top map: Areas of residence for Blue Mountains and Hawkesbury-based interviewees. Striped areas denote interviewees who identified connections with groups across LGA boundaries (mainly in Winmalee and Kurrajong Heights).

Bottom map: Areas of residence for Northern Rivers-based interviewees.