COLLECTION:



MUTUAL AID IN TIME OF CRISIS

CASE STUDY: AUSTRALIA

How mutual aid strengthened Greater Uki's community resilience, 2019-2022 (also available in French).

Mars 2025

Authors:

Dr Claire McLisky et Emma Pittaway (lead authors)

Dr Jean Renouf, Dr Jo Longman et Dr Richard Hil (contributing authors)

Under the direction of Pablo Servigne and Véronique de Geoffroy



Founded in 1993, Groupe URD is an independent think tank that specialises in analysing practices and developing policies for the humanitarian sector. Our multi-disciplinary expertise, based on continual field visits to crisis and post-crisis contexts, provides us with insight into the functioning of the sector as a whole.

Groupe URD values the exchange of knowledge and information, and collective learning. It encourages aid actors to reinforce their solidarity and common purpose, thereby supporting local actors and strengthening the resilience of local people and their land or places where they live, as they face current and future crises.

Plan C ("Our plan is the community") is an Australian not-for-profit registered charity with a mission to build the resilience and regenerative capacities of Australian communities in the face of future disasters and crises. It is currently involved in projects including the establishment of a network of 500+ Community Carers and Responders, the delivery of youth disaster courses NextGen Navigators, as well as the organisation of community workshops on food security and conflict management.

Plan C acknowledges the Bundjalung people whose ancestral lands are the Northern Rivers of New South Wales, Australia. We pay our respect to the Elders both past and present, acknowledging them as the traditional custodians of knowledge for these lands.

This publication is part of a series of 6 case studies produced with the support of AFD (the French International Development Agency), the Fondation de France, the Principality of Monaco and the Auvergne-Rhône-Alpes region. The content of the study is the sole responsibility of its authors and does not necessarily reflect the opinions of these institutions.





With the support of:









Foreword

THE PROJECT 'MUTUAL AID IN TIMES OF CRISIS'

People who suffer disasters while unprepared and untrained to deal with them tend to cope by means of mutual aid and spontaneous, informal self-organisation. Aid and relief actors only rarely, however, avail themselves of this potential for working together. This contradiction underlies the project 'Mutual aid in times of crisis'.

This operational research project is based on a series of case studies, enabling better understanding of the mutual aid processes that spontaneously emerge in times of crisis, and how these intersect with official aid.

The case studies were selected to illustrate different types of crisis (natural disaster, major inflow of migrants, conflict), analysing mutual aid strategies according to the type of crisis and the sociopolitical context.

Three case studies consider sites in France: the Roya Valley, which was struck by Storm Alex in 2020; the Briançon region where a crisis caused by migrants arriving over the border has intensified over the past several years; and the island of Réunion, which is regularly struck by cyclones. A further three case studies consider N'Djamena in Chad where there was severe flooding in 2022; the Greater Uki area in Australia which suffered from catastrophic fires in 2019 followed by floods in 2020; and finally, Kharkiv in Ukraine where people have been surviving and mobilising to help each other since war began in 2022.

The case studies contribute to the development of a knowledge base and operational recommendations for people and individuals involved in mutual aid as well as organisations working in the sector of emergency aid and relief. The results are published in different ways, using various types of media (reports, webinars, full-scale exercises, documentaries, etc.), with the aim of reaching a broad range of audiences and helping to change perceptions of the role local people play in crisis situations.

A steering committee, made up of humanitarian aid practitioners and researchers, supported the project team throughout, from making decisions on methodology to publishing results. The steering committee members are Emilie Aberlen, Clémence Allirot, Antoine Back, Pierre Bastid, Guillaume Bouveyron, Norbert Cariou, Sandrine Caroly, Alice Corbet, Cécile Cornou, Christian Després, Simone Giovetti, Pierre Leroy, Karine Meaux, Yoann Moreau, Roland Nussbaum, Elodie Paillé, Guillaume Pégon, Virginie Troit, Ghislaine Verrhiest-Leblanc.

The project team included researchers from the Groupe URD team (Florence Chatot, François Grunewald, Aline Hubert, Valérie Léon), assisted by interns (Thomas Albertini, Aliénor Desclais, Pablo Metrot), and there were many external contributors (Nadine Bagué, Aline Guerton, all the incountry researchers, namely Dr Claire McLisky, Emma Pittaway, Dr Jean Renouf, Dr Jo Longman, Dr Richard Hil, Cécile Petitdemange, Iryna Pidkurkova, Daniil Bilous, Ilona Hetman, Valeriia Nahorna et Illia Storozh). The project was jointly supervised by Veronique de Geoffroy and Pablo Servigne.

Table of contents

EXI	ECUTIVE SUMMARY	25 25
REC	COMMENDATIONS	14
1	INTRODUCTION	17
1.1.	GENERAL INTRODUCTION	18
1.2.	RESEARCH CONTEXT	19
	1.2.1. Greater Uki: geographical, demographic, and community context	21
1.3.	METHODOLOGY	25
	1.3.1. Méthodology: implementation	25
	1.3.2. A QUALITATIVE APPROACH COMMON TO ALL SIX CASE STUDIES	26
	1.3.3. For the Greater Uki case study	26
1.4.	LIMITATIONS AND CONSTRAINTS	29
2	CHARACTERISATION OF THE CRISIS	30
2.1.	BUSHFIRES BURNING SUBTROPICAL RAINFOREST IN THE BLACK SUMMER FIRES, 2019-2020	31
	THE COVID-19 PANDEMIC	35
2.3.	THE 2022 FLOOD: A ONE-IN-500-YEAR WEATHER EVENT	36
	2.3.1. Two wet years, a week of minor flooding and a 'rain bomb'	36
	2.3.2. Impacts of the flooding2.3.3. 'Multiple levels of isolation' and hyperlocal activity	38 40
	2.3.4. Contact with the outside world: from crisis to crisis response	40
	2.3.5. reconstruction and the road to recovery: a long, slow process	45
3	MUTUAL AID IN THE GREATER UKI	46
3.1.	THE VARIOUS FORMS AND CHARACTERISTICS OF MUTUAL AID IN GREATER UKI	47
	3.1.1. Spontaneous mutual aid in Greater Uki	47
	3.1.2. Organised grassroots mutual aid	50
	3.1.3. Continued commitment and structuring mutual aid3.1.4. What motivations and values drive mutual aid, and what are its limits?	60 67
	3.1.5. Staying motivated: sustainability and volunteer management	63 65
	3.1.6. Leadership: skills, qualities, experience	66
	3.1.7. Funding for organised mutual aid	69
	3.1.8. Communication and outreach	72
	3.1.9. Coordination between mutual aid groups, and with other community associations	74
3.2.	THE DYNAMICS OF MUTUAL AID OVER TIME	77
	3.2.1. The dynamics of mutual aid before, during and after the 2019-20 fires	77
	3.2.2. The dynamics of mutual aid before, during and after the 2022 flood3.2.3. For the series of compounding crises	79 82

3.3. LINKS	BETWEEN AID AND SELF-HELP PROVIDERS	87
3.3.1.	EMS Adaptation to Mutual Aid in Greater Uki, 2014-2022	87
3.3.2.	When institutions encourage mutual aid	90
3.3.3.	The current limits of institutions' support for mutual aid	91
CONCLUS	94	
RECOMM	108	
ANNEXES	116	



Map of Australia created with Google Maps.

Acknowledgements

would like to acknowledge the people of Greater Uki, and in particular Melanie Bloor, Natascha Wernick and Karen Challand, for their commitment to creating and building a culture of mutual aid in their communities, and for entrusting us with their stories so that we can share them with a wider audience

I would also like to acknowledge the support I have received from my colleagues in the Plan C research team, whose members are Dr Jean Renouf, Dr Jo Longman, Dr Richard Hil, Emma Pittaway and Rebecca McNaught. Their assistance in orienting the research, conceptualising the approach, analysing the data and editing and proofreading successive drafts has been invaluable. Special thanks to Emma Pittaway who was involved in all phases of the study. Thanks also to Plan C's Director of Operations Carly Renouf for the assistance she gave me beautifying the figures in Section 3.2.

Finally, I am grateful for the support of my family, Paul, Frida and Casper, during the intense period of writing and research that went into producing this report. May we always remember the wisdom of the 'drying the dishes' metaphor and extend our familial culture of mutual aid out into the world to connect more deeply with the communities of people, animals, plants and geographies with whom we are honoured to share this beautiful Bundjalung country.

Dr. Claire McLisky

List of Acronyms and Definitions

Australian Red

Australian branch of the International Aid Organisation.

Cross BCCRT

The Byrrill Creek Community-led Resilience Team.

Compounding crises

Multiple crises or disasters occurring simultaneously or in close succession, which intensify the overall impact. Each crisis may be different (e.g., a pandemic and an economic collapse), but their combined effects amplify the challenges faced by the affected community or system.

CAT team

Community Action Team, under the auspices of the New South Wales State Emergency Services (NSW SES) and made up of local community members who are not official SES members but are trained by them to assist in storm and flooding emergencies. In their current incarnation, CAT teams are designed for smaller communities who may not have resident SES members, providing an opportunity for community members to 'help prepare their communities and keep people safe during severe weather events'. CAT team members are covered by SES insurance. The CAT system is currently under review by the NSW SES.

CCES

The Caldera Community Emergency Support Facebook page.

CCR

Community Carers and Responders, a network of trained members of the community established by Plan C to build resilience to disruptions. CCRs undertake 5 days of training in disaster resilience, community building, first aid and psychological first aid, and are then supported to build the resilience of their own community.

CCR

Community Carers and Responders, a network of trained members of the community established by Plan C to build resilience to disruptions. CCRs undertake 5 days of training in disaster resilience, community building, first aid and psychological first aid, and are then supported to build the resilience of their own community.

CRT team

Community-led Resilience Team, supported by the Australian Red Cross. These teams are designed to be all-hazards (i.e. to support their communities in any disaster situation) and are structured like a communication tree 'with a focus on providing emergency preparedness

NSW State Emergency Services, "Community Action Team Volunteers", https://www.ses.nsw.gov.au/get-involved/volunteer/community-action-team-volunteers/

information'.² CRTs are directly linked to all three Emergency Services Agencies and therefore have a unique position in the current community resilience landscape.

CVA Conservation Volunteers Australia, an independent not-for-profit that

engages volunteers to protect and enhance natural habitats.

Disaster management/ Emergency management It is useful to distinguish between disaster management and emergency management agencies in the context of this case study. **Disaster management** encompasses the four phases of prevention, preparation, response and recovery, while **emergency management** is the official

response during a declared emergency.

DMS Disaster Management Service, which includes all the agencies involved in

crisis response and recovery, e.g., the EMS agencies plus local government (Councils), state government agencies (e.g., the NSW Reconstruction

Authority) and federal government.

Emergency Management Service, an organisation that is responsible for

preparing for, responding to, and recovering from emergencies and disasters. This includes natural hazards like bushfires, floods, and cyclones, as well as man-made incidents. Examples of EMSs relevant to this case study are the NSW SES, RFS, Fire and Rescue NSW, Australian Red Cross,

Marine Rescue, Police, and the NSW Ambulance Service.

FRRR Foundation for Rural and Regional Renewal, an independent national

philanthropic organisation.

KCRT The Kunghur Community-led Resilience Team.

Local Government Area, the smallest administrative division of

government in Australia.

NRCF Northern Rivers Community Foundation, an independent local

philanthropic organisation.

NSW New South Wales, the Australian State in which Greater Uki is located.

RFS The NSW Rural Fire Service, funded by the NSW State Government is the

lead combat agencies for bushfires in NSW.

RUKI Resilient Uki, an independent grassroots mutual aid organisation based in

the Greater Uki area.

SES NSW State Emergency Services, a volunteer-based emergency and rescue

service funded by the NSW Government is the lead combat agency for

flood, storm and tsunami response.

UKIRA The Uki Residents' Association.

² Australian Red Cross, Community-led Resilience Teams, 2020, p.4.

Semantic framework

utual aid describes two or more people helping one another, giving each other mutual support, or taking action together. It belongs in the category of reciprocal action, whether real or potential, direct or indirect, and requires those involved to be empathetic, willing and proactive. For the purposes of this project, we define mutual aid as a converging horizontal force that unites people through the actions they take together, enabling them to support one another, to confront adversity and/or to construct something in common between them. We note the separate term 'aid', which also describes the action of helping, but where no reciprocity, real or potential, is expected. It is distinct from solidarity, a feeling that binds people together and motivates them to aid or to engage in mutual aid.

The word 'crisis' describes a difficult, decisive phase in the development of an illness, a group or a system. It is a broad enough term to cover either slower or more brutal changes, ranging from brutal disasters to the very slow deterioration of a situation. Crises can originate in the natural world (drought, hurricanes, forest fires, flooding, earthquakes, etc.) or with humankind (explosions, pollution, black-outs, economic collapse, armed conflict, population displacement, etc.), although every crisis inevitably has a human element to it (exposure to risk, vulnerability, anticipation, etc.).

Responders are professionals from civil society and actors from the formal aid system: the difference between them is sometimes less obvious than appears at first sight.

Civil society is a term describing the private, voluntary, autonomous (independent of the state, political parties, religions or confessions) sphere; it is citizen-led, does not seek profit (it is 'non-profit'), has specific objectives and forms a recognisable community whose legitimacy derives from charitable activity. The individuals or citizen groups involved may have been pre-organised, or they may have established themselves in their role, but their organisation tends to remain horizontal, in contrast to actors from the formal aid system, which are organised with varying degrees of verticality (depending on hierarchies). Formal aid sector actors are legal entities working within 'institutions', or structures established on the basis of laws, customs or conventions, with a defined mission and objectives, and they function according to rules or norms. It is possible to consider 'associations' as formal sector actors.

The term "institution" is, however, often used as though it has the opposite sense to 'civil society', or even to the 'associative sector'. To take account of the nuances in organisational or militant contexts, the term sometimes used is 'formalised organisations or charities': these 'have regular, continuous relations with public authorities', in contrast to 'citizen collectives or movements'. They are distinct from the latter in being recognised by public authorities as legitimate interlocutors, and in having professional capacities. In the present study, the term will be used as a way of signifying organisations that are quite distinct from the actors engaged in mutual aid.



s climate change-related crises
become more frequent,
communities are finding

themselves on the frontline of disaster response. When Disaster Management Services (DMSs), which include all the agencies involved in crisis response and recovery, lack the capacity to respond to multiple localities simultaneously, or are unable to access locations isolated by the disaster itself, community members act to protect and assist each other. Increasingly, in some localities, communities recognising the need for more organised and longer-term mutual aid (people acting together to help and support each other). This has led to the development of grassroots collectives that help community members prepare for, weather and recover from disasters, and better coordinate with DMSs. Mutual aid is thus a crucial element of communities' first and ongoing responses to crisis situations, and a key factor in their ability to recover.

However, despite the importance of this phenomenon to the disaster response, the specific mechanisms of how mutual aid works on the ground, in different cultural and geographic locations and in different types of crises, are not well understood. For this reason, the French humanitarian think tank Groupe URD has commissioned a series of case studies on mutual aid in different types of crisis situations and in different locations around the world. The aim of this larger project is twofold: to improve understanding of, and to strengthen, mutual aid and selfdisaster-affected organisation in communities; and to improve the interface communities and **DMSs** providing operational recommendations for individuals, mutual aid and groups, organisations. This report is the fifth case study in the series, and considers the forms, characteristics and dynamics of mutual aid, and the relationship between mutual aid and official responses, in Greater Uki, located in the Northern Rivers region of New South Wales, Australia.

Over the past five years, Greater Uki has experienced a series of compounding climate-related crises, including unprecedented events: large bushfires in 2019-20, and a major flood in 2022. These crises have had an enormous effect on the area, with the loss of life, houses, possessions and ongoing mental health impacts. In both disasters and especially the 2022 floods, a lack of access limited the amount of help that communities received from DMSs, whose assistance was in high demand all around the region. Community members responded to this situation by acting autonomously to help other. They did this through spontaneous individual acts of Mutual Aid, and by collective efforts, either strengthening existing community resilience groups, or creating new ones where no structures previously existed. In the gaps between crises such groups gathered resources, planned for future disasters and built strong relationships with DMS personnel, thus creating clear lines of communication which remained effective when subsequent crises hit. While at an institutional level DMSs have been slow to adapt to these community-led innovations, many individuals in these organisations have been open to and supportive of the development of organised mutual aid in Greater Uki. This combination of community action and DMS support has helped to position Greater Uki as a leader within the region (and possibly further afield) in its development of organised mutual aid mechanisms and support structures.

During the period under study, mutual aid took many forms in Greater Uki. Spontaneous acts of mutual aid emerged primarily, though exclusively, through pre-existing community bonds, with residents helping each other protect life and property and sharing resources especially when help from unavailable or insufficient. DMSs was Organised forms of mutual aid have also developed considerably during this period, with two primary models emerging - the Resilient Uki (RUKI) model, based on the (previously extant) Flood Uki

Neighbourhood System, and the Red Cross's Community-led Resilience Team (CRT) model, which is active in the localities of Kunghur and Byrrill Creek. While these two models of Neighbourhood Systems share some similarities (the most obvious being a network street leaders, pod leaders and neighbourhood leaders that funnel information between residents, community leaders and DMSs), they also have some differences in structure, vision and remit. Perhaps the most important of these is that whereas the CRTs are hierarchical, with builtin Team Leaders responsible for decisionmaking and prioritisation, the RUKI model is decentralised, allowing leaders to emerge during crises but providing resources and training opportunities for street, pod and neighbourhood leaders and other interested community members. Both models have proven effective in strengthening Greater Uki's culture of mutual aid, not just during crises but also times of 'normality' (otherwise known as the gaps between crises).

Central aspects of both models that have contributed to this success - and which may be useful for other communities to consider include strong (and possibly built-in) relationships with DMSs, clear lines of communication both within and outside the community, and an emphasis on a culture of kindness and collaboration. Other characteristics of mutual aid in Greater Uki include: strong, compassionate and experienced leadership; a sociable group culture that prioritises community connection; a respect for residents' privacy and an understanding that people will join the 'cause' of community-led resilience when they are ready; opportunities for upskilling in both 'soft' (social) and 'hard' (practical) skills; an ability to secure funding for training, equipment and community engagement where necessary; for, avenues and prioritisation of, communication and outreach; and having a culture and established networks which support and allow for coordination between mutual aid

groups, and with other community associations.

Our study considered the dynamics of mutual aid in Greater Uki during each crisis (the 2019-20 fires and the 2022 floods) and for the series of compounding crises, including the COVID-19 pandemic, as a whole. Both the 2019-20 fires and the 2022 floods came on suddenly, and residents engaged in spontaneous acts of mutual aid from the outset, with more organised forms of community action developing over time and growing with each crisis. While organised mutual aid did diminish in some localities in between crises, once grassroots resilience structures were put in place community engagement seems to have been more likely to continue. Factors that encouraged the growth of organised mutual aid in Greater Uki during this period include strong community ties, proactive leadership, and supportive relationships with DMSs. This suggests that communities with a well-developed culture of solidarity, and mutual aid mechanisms in place, might have a better chance of avoiding an 'erosion' of mutual aid during and after a crisis. However, the timing of disaster events also seems to be a factor. Our analysis suggests that the crises faced by Greater Uki were spaced close enough to mobilise community action, but far enough apart to give community leaders time to regenerate and recover from burnout. Local grassroots groups harnessed the energy generated by this 'favourable' timing of events by building community connections and out training and seeking recovery opportunities during the periods in between crises. Overall, our study of the dynamics of mutual aid in Greater Uki supports the notion that while crises can strain the mutual aid 'muscle', with the right conditions (coherent social fabric, well developed culture of mutual aid, strong leadership, material and human resources), they can also catalyse its growth.

Links with DMSs have been instrumental in the growth of mutual aid in Greater Uki, with strong relationships with some DMS personnel contributing greatly to the structures and culture of mutual aid in the

area. An early version of Uki's Neighbourhood System was co-created by the Uki Flood Group in conversation with the then Commander of the State Emergency Services (SES) in Murwillumbah (the nearest large town). This was the first incarnation of the SES Community Action Team (CAT) system. Subsequently, and inspired by the CAT model, the Red Cross developed the Community-led Resilience Team (CRT) model, which is currently in place in Byrrill Creek, Kunghur, Doon Doon and Mount Burrell (the latter two groups were not engaged with for this study). Later, RUKI drew on the Uki Flood Group / CAT model to create its own community resilience group structure. During this period, local Government Resilience Officers from the Tweed Council supported community groups and leaders to varying degrees. While it is highly likely that Greater Uki would have had some form of organised mutual aid group even without input from the DMSs, their support has unquestionably contributed to Greater Uki's resilience. While local DMSs acknowledge the importance of communityled action, however, institutional limitations and risk aversion have often restricted their support for grassroots initiatives, particularly in emergency response. particular, DMS policies still hesitate to formalise and protect civilian involvement,

leaving community leaders frustrated by the lack of legal security and formal recognition. This ambivalence highlights both the benefits and challenges of integrating mutual aid into official disaster response frameworks as it can risk undermining grassroots autonomy while providing critical structure and legal protection.

In conclusion, the compounding crises in Greater Uki from 2019 to 2022 were a pivotal moment for the community, highlighting the threats posed by climate change and transforming local approaches to disaster preparedness and resilience. These crises reinforced the importance of mutual aid, driven by both a perceived need during emergencies and a range of values such as community, self-sufficiency and civic duty. While mutual aid efforts benefited from a history of resilience-building in the area, the scale and nature of disasters during the study period also shaped the organisation of these initiatives. Relationships with DMSs were also important. This collaboration, fostered by mutual aid groups over the past decade, has not only enabled effective disaster response but also laid a foundation for attracting funding to support future resilience efforts.

On the basis of our research, this study has developed a number of recommendations for community resilience groups, DMSs and policy makers, in four main areas of mutual aid: relationships; communication; structures; and practical support. The key recommendations are as follows.

RECOMMENDATIONS

→ FOR COMMUNITY RESILIENCE GROUPS

1. Relationships

- Strengthen community connections through informal gatherings, storytelling, and mutual aid activities in non-crisis times.
- Build alliances with neighbouring communities and other mutual aid groups for resource sharing, joint funding applications, and regional collaboration.
- Develop relationships with DMSs by engaging regularly and participating in forums and training events.
- Engage with government representatives to advocate for support and maintain strong links with funders to ensure responsiveness to evolving community needs.

2. Communication

- Increase community awareness of local crises and mutual aid history through newspapers, social media, and forums to improve preparedness.
- Boost the profile of resilience groups through visible signage, outreach, and inclusive communications.
- Establish alternative communication systems (e.g., radios, satellite communicators) for use during crises and ensure communication plans account for potential breakdowns.

3. Structures

- Implement adaptable structures that reflect community capacity and preferences, defining roles and responsibilities for crisis scenarios, including rostering and psychological/emotional support systems to prevent burnout and fatigue.
- Develop leadership skills and delegate tasks within resilience groups, recognising volunteers and fostering inclusivity.
- Invest in ongoing research on mutual aid, applying evidence-based practices to improve resilience and gain support.

4. Practical support

- Plan for future crises by gathering essential resources, setting up community hubs, and creating registries for skills, equipment, and vulnerable individuals
- Leverage community expertise for tasks like event management, funding applications, and outreach, and pursue training for skills development.

• Seek funding from government and philanthropic sources to strengthen community resources and capacity.

→ FOR DISASTER MANAGAMENT SERVICES (DMSS)

1. Relationships

- Foster meaningful relationships with communities, prioritising human connections and local leaders of all backgrounds.
- Support community leaders with post-crisis debriefs, management training, and recognition events to strengthen mutual understanding.
- Ensure continuity by handing over key community information during personnel changes and following through on commitments.

2. Communication

- Establish reliable communication systems with isolated communities, enhancing connections with local leaders and ensuring transparency during crises.
- Engage communities regularly with preparedness briefings and promote disaster planning information through local media.
- Address gaps in the telecommunications network and safeguard electricity supplies to maintain effective communication in crises.

3. Structures

- Facilitate community-led resilience planning by encouraging structured mutual aid groups and resilience activities.
- Support existing mutual aid groups by providing on-going funding, training and resources and integrating them with DMS protocols.
- Develop protocols to accommodate spontaneous community responses while preserving flexibility for emergent aid forms.

4. Practical support

- Act promptly during crises, providing essential services like waste management and collaborating closely with other DMSs.
- In non-crisis times, provide training, climate adaptation information, and resource support to enhance community resilience.
- Assist communities in securing critical resources, such as radios, battery back-ups and generators, offering flexible support where it is needed most.

→ FOR POLICY MAKERS

1. Relationships

• Strengthen government engagement with grassroots resilience groups at all levels and prioritise community connections.

- Support community leaders and volunteers through training, succession planning, and access to mental health resources.
- Encourage collaboration between communities and funders, promoting transparency and supporting community-led resource allocation.

2. Communication

- Establish clear communication channels with resilience groups to maintain community engagement and preparedness.
- Fortify the telecommunications network for crisis resilience and ensure isolated communities have robust connectivity.
- Ensure funding for alternative communications networks in areas where national systems may fail, supporting community preparedness.

3. Structures

- Recognise and support the vital role of mutual aid in resilience, creating guidelines and protections for crisis volunteers.
- Provide training and funding to local mutual aid groups for both immediate crisis response and ongoing resilience.
- Fund long-term recovery support, recognising that recovery can extend well beyond two years, especially for communities facing multiple crises.

4. Practical support

- Increase government support for community resilience through funding, resources, and logistical aid.
- Simplify grant, insurance, and resource applications to ease access to critical resources.
- Consider creating a government umbrella body to insure mutual aid volunteers.
- Prioritise aid for isolated communities, using local knowledge and technology to enhance early warnings and local readiness.

INTRODUCTION

1.1. GENERAL INTRODUCTION

The frequency, intensity and nature of crises is changing. Current disruptions – to climate, in the political and geopolitical sphere, to health, etc. – are often interconnected and challenge the response capacities of the classic humanitarian sector. Countries that thought they were protected from crises, or adequately prepared to deal with them, are realising that their first responders and institutions are not ready for the major, systemic risks now emerging. First responders are becoming aware that they will not be able to manage crises on their own, and that from now on the people affected should be involved, too.

It has been clearly shown that people at risk, or those affected by crises, although unprepared and lacking training to survive the disruptions referred to above, tend spontaneously and informally to help each other and self-organise. It is rare for there to be panic or inappropriate behaviour. Local people mobilise spontaneously to deal with the immediate needs of those affected. Aid and relief actors only rarely, however, avail themselves of the potential this offers for working together. Groupe URD has shown in its evaluation reports on humanitarian interventions that formal aid actors (first responders and others) often fail to take into account the possibility of relying on the responses and the organisational capacity of the people directly affected by disasters and may even, through ignorance of their potential, weaken local mutual aid dynamics.

This research project includes six case studies covering a broad spectrum of crises and contexts enabling analysis of mutual aid strategies according to types of crisis and their socio-political contexts. Each of the six case studies aims to (1) identify people's perceptions of the crisis and question the concept of 'collective memory'; (2) analyse the dynamics of mutual aid and how these evolve in the timeframe of the crisis or disaster (before, during and after); and (3) understand how actors from the formal humanitarian aid sector adapt to informal mutual aid and self-help approaches.

1.2. RESEARCH CONTEXT

The Australian study site focuses on the village of Uki and surrounding area, in the Northern Rivers region of New South Wales on the east coast of Australia (see Figure 1 above). The Northern Rivers is a regional area with a population of 315,000 spread throughout towns, villages and rural areas across seven local government shires (ABS, 2024).³ It is subtropical and hilly, with three major river systems flowing through it, and is vulnerable to intense flooding.



Figure 1. Uki is situated in the Northern Rivers region of New South Wales on the east coast of Australia, an area prone to intense flooding (credit image: Regional Development Australia 2024).

In the past several years, the Northern Rivers has been impacted by a series of disasters, with a major flood in 2017 and unprecedented bushfires in 2019-2020, followed by the COVID pandemic. However, the impacts of these events were small compared to the catastrophic disaster that occurred in February and March of 2022, when the region experienced its biggest flood on record. In the town of Lismore, the epicentre of the flood, hundreds of people had to be rescued from the roofs of houses, and in the surrounding hills, hundreds of landslides destroyed roads and houses and stranded communities. Across the Northern Rivers region "at the peak of the floods nearly 350,000 people were impacted by either an evacuation order or a warning"⁴, and the disaster was the most expensive in Australia's history.⁵ Afterwards, two separate NSW government inquiries established that the official response was inadequate and Emergency Management Services (EMS) had been unprepared for the scale of the event.⁶ Communities in the Northern Rivers had no choice but to rely on fellow citizens for assistance in the days, weeks and even months following the disaster. During this period many organised mutual aid groups began to emerge across the wider region, motivated firstly by a need to respond to and recover from the

Informed Decisions 2024, 'Northern Rivers Region Community Profile', accessed September 27, 2024, https://profile.id.com.au/northern-rivers/population-estimate#:~:text=The%20population%20estimate%20for%20Northern,population%20has%20grown%20by%200.75%25

⁴ Mary O'Kane et Michael Fuller, '2022 NSW Flood Inquiry', Volume 3, appendices, accessed September 27, 2024, *nsw.gov.au*

⁵ Insurance Council of Australia, 'Insurance Catastrophe Resilience Report 2022-23', accessed September 27, *insurancecouncil.com*

⁶ O'Kane et Fuller, '2022 NSW Flood Inquiry'; 'NSW Legislative Council Inquiry into the 2022 Floods', accessed October 9, 2024, parliament.nsw.gov.au

flood disaster, and later to prepare for future crises. As of September 2024 – two and a half years after the flood – there are still thousands of people in temporary emergency accommodation across the Northern Rivers region.

Both disasters considered in this study (and indeed the COVID pandemic at a global level) have been linked to climate change. The 'Tinderbox Drought' of 2017-2019 resulted in the lowest ever annual rainfall for New South Wales in 2019, only 55% of its annual average, ahead of the 2019-2020 'Black Summer' fires.⁷ In the Northern Rivers this led to bushfires in rainforest areas that had never burned before. In February 2022, the region received up to 775mm rain in 24 hours⁸, in the wettest daily rainfall on record. The resulting flood was 4.67m above the major flood level in Lismore, well above the height of the modelling for a 1:100 year flood.⁹ These fluctuations accord with climate modelling for the Northern Rivers region, which predicts a greater frequency and intensity of severe fire weather and storms.¹⁰ However Australian Government action on climate change – especially at the Federal and State level – has for many years lagged behind global norms.¹¹

Greater Uki, the subject of this study, is but one of many communities across the region that has developed a strong culture of mutual aid in response to these compounding disasters. A rural community of approximately 3000 people, Greater Uki was greatly impacted by the 2019-20 fires, which threatened properties and destroyed some homes in Greater Uki, in a rainforest region unaccustomed to threat by fire. Only two and a half years later, and with the COVID-19 pandemic in the interim, flooding in February-March 2022 caused multiple landslides, bridge washouts and inundated homes, with some areas cut off for up to 14 days. During the fires and even more so after the floods, the community was forced to rely upon itself and draw upon local skills, knowledge and networks to support the wellbeing and recovery of community members.

Greater Uki was selected for the current project both because it has experienced multiple contrasting disasters over the past five years, and also because of the variety of forms of organised mutual aid in the area. While some aspects of the Greater Uki experience are common to the wider region, many factors including the timing of disasters, the base level of organised mutual aid pre-2019, and the close level of collaboration between community leaders and DMS personnel meant that the findings of this report are not generalisable to other regional mutual aid dynamics. However, it is our hope that this close study of the forms, characteristics and dynamics of mutual aid in one geographic context will be able to help shed light on some general principles around the development of mutual aid mechanisms, perhaps even showing a 'way forward' for other communities with less developed cultures of organised mutual aid.

⁷ Australian Bureau of Meteorology, "New South Wales in 2019: Record Warm and Record Dry", accessed September 27, 2024, bom.gov.au

⁸ Australian Bureau of Meteorology, "Weekly rainfall update for 7 days to 9am 1 March 2022", accessed September 27, 2024, bom.gov.au

⁹ National Emergency Management Agency, 'Characterisation of the 2022 Floods in Northern Rivers Region', consulté le 27 septembre 2024, *nema.gov.au*

¹⁰ NSW Department of Climate Change, Energy, the Environment and Water, "Projected changes: North Coast", accessed September 27, 2024, ccpi.org/country/aus/

¹¹ One recent ranking, the Climate Change Performance Index, put Australia in the bottom 20 countries assessed on climate action. See https://ccpi.org/country/aus/

¹² Melanie Bloor, Natascha Wernick and Mel Taylor, "Anarchy in the Uki! How a hybrid of structure and autonomy can exist in community self-organisation", Australian Journal of Emergency Management, (Australian Institution for Disaster Resilience, 2023), 40-46.

1.2.1. GREATER UKI: GEOGRAPHICAL, DEMOGRAPHIC, AND COMMUNITY CONTEXT

Geographical context

The village of Uki (see Image 1) is located on the banks of the Tweed River in northern New South Wales (NSW), Australia. Approximately 24km inland from the coast, Uki is 12km from the nearest town Murwillumbah (population 10,891). Positioned at the base of Wollumbin (Mount Warning), and in the centre of the caldera of the extinct Tweed Volcano (see Image 3), Uki is surrounded by a number of localities (Mount Warning, Terragon, Cedar Creek, Byrrill Creek, Kunghur, Mount Burrell, Kunghur Creek,



Image 1. Main street of Uki. Photo credit: Byron Events Calendar, www.byronevents.net/chillingham/index.html

Midginbil, Doon Doon, Commissioners Creek, Rowlands Creek, Chowan Creek, Smiths Creek, and Dum Dum) which have collectively become known as Greater Uki (see Image 4). The geography of this region features gently undulating alluvial plains and floodplains adjacent to waterways, interspersed with forested hills, narrow valleys and steep mountainous terrains.

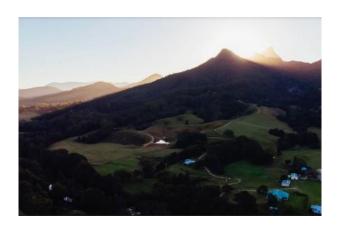


Image 2. Greater Uki's rural aspect.
Photo credit: Chris Putnam

Communities in Greater Uki are located in and around valleys that are adjacent to the Tweed River and its creeks (see Image 2). This situation has had both advantages (proximity to water and rich alluvial soil) and disadvantages, in particular, regular flooding caused by the region's high rainfall. All the main roads run alongside either the Tweed River or its tributaries, which means that when the waterways flood, the roads often flood too, cutting off access between hamlets. Steep embankments beside the roads mean that landslips are also an issue and while larger creek and river crossings often have bridges, roads often cross smaller creeks with paved causeways which are vulnerable to flooding

and flood damage. Because the area is high in the catchment, while the river and creeks can rise quickly, they usually also subside quickly, meaning that access is often not cut off for extended periods by flooding; landslips, however, are a different matter.

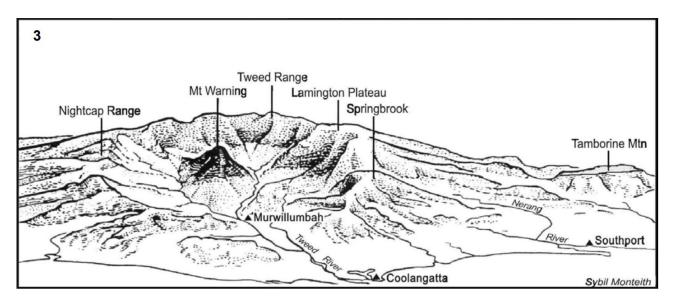


Image 3. The Tweed Volcano erosion caldera. Credit: Sybil Monteith, as reproduced in Willmott, 1992, with localities of Uki, Byrrill Creek and Kunghur added.

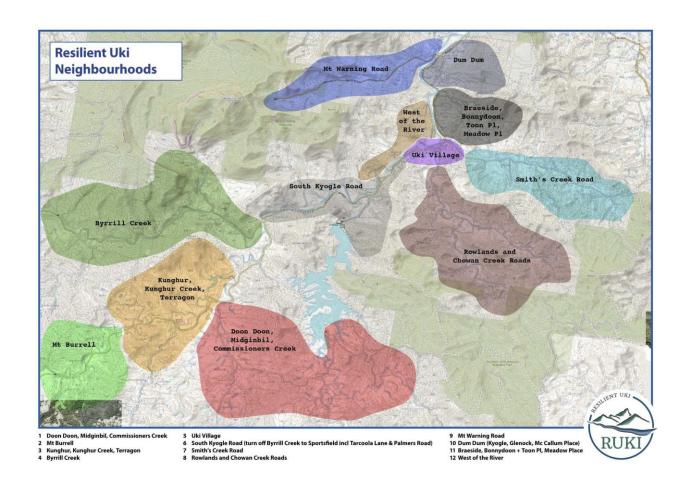


Image 4. Neighbourhoods in Greater Uki. Credit: Resilient Uki

Demographic context

The Greater Uki community (population approximation 3000) is comprised of a mix of demographics including First Nations who have lived in the area for thousands of years, farming families who have moved into the area in the early or mid-twentieth century; 'hippies', artists and alternative lifestylers who arrived from the 1970s onwards; and more recent arrivals of people moving from the city for lifestyle change (locally known as 'treechangers' and hobby farmers, a trend which intensified during the COVID lockdowns of 2020-2021).

This diversity is reflected in the census data on employment and household income in Greater Uki (see Table 1). Greater Uki residents in paid employment are more likely to work as labourers or technicians/ tradespeople than the state average, are less likely to work in sales or clerical/administrative positions.¹⁴

Greater Uki Demographics			
Population	3000 ¹³		
Median age	50		
People per household	2.6		
Employment rate	50.8%		
State avg. employment rate	61.1%		
Median income	\$1147/week		
State avg median income	\$1826/week		
Median mortgage	\$1539/month		
Median State avg mortgage	\$2167/month		
Median rent	\$298/week		

Table 1 .
Demographics of Greater Uki

They are just as likely as others in NSW to work in professional, management, and community services jobs. As is evident in Table 1, Greater Uki's average house rents and mortgage repayments are significantly lower than the state average, a fact that is possibly related to the number of Multiple Occupancy communities (a form of community title) which makes property ownership, and therefore potentially both mortgages and rentals, cheaper. Despite this, many households in the area pay more than 30% of their weekly income on rent or mortgages (generally considered to be a sign of financial stress).¹⁵

Community context

The culture of Greater Uki is described by many community members as being warm, generous and well-connected. In Uki itself, facilities such as the Uki Public Hall ¹⁶, the Buttery (another local hall which hosts a regular arts and crafts market) and the 'Square-tunda' (an outside rotunda with two pianos and room for people to hold meetings or just sit and talk), are located in the centre of the village, and regular markets, activities and events frequently bring people together. In other localities, venues such as the Kunghur and Doon Doon Halls play a similar, if more limited, role. Greater Uki also has several voluntary associations, including the Uki Residents'Association (UKIRA), the Community Gardens Committee, the Hall Committee, and the Community Technology Centre, as well as a number of School and Pre-school committees. Particularly

¹³ Bloor et al, 'Anarchy in the Uki!', 41. This is higher than the official census data, which local community leaders attribute to the fact that some parts of the population choose not to fill in the 4-yearly census due to mistrust of government. For comparison, see Australian Bureau of Statistics (ABS), 2021 data on 'Uki', abs.gov.au

¹⁴ As above.

¹⁵ As above.

¹⁶Local community halls play a vital role in rural Australia, acting as central hubs for social, cultural, and community activities. They are either community-owned and managed, or managed by local Government. The Uki Public Hall is managed by the volunteer-run Uki Hall Committee.

notable for the purposes of this study are the community-led resilience groups, Resilient Uki, and the Kunghur and Byrrill Creek Community-led Resilience Teams (CRTs) – more on these below. Such organisations are founded on community cohesion and social connection but also add to it, strengthening relationships within and between communities. Alongside the high level of community engagement and connection, Greater Uki is also a diverse community, with a wide range of socio-economic backgrounds, education levels, belief systems and lifestyles. The potential for disagreement and conflict along these lines does exist, but seems to come to a head only infrequently.

Community cohesion in Uki village and surrounding hamlets is to some extent the product of its geographical isolation and the frequency of floods in the region which see them regularly cut off from the wider region and each other. The need to be prepared for floods (and to a lesser extent fires) is taken for granted amongst older residents and farmers who have a culture of mobilising and helping each other during frequent floods. Many families in the area own earth-moving equipment, chainsaws and generators, and are fairly self-sufficient and accustomed to helping each other in times of crisis. However, newer arrivals, including the 'hippies' (who started arriving in the 1970s) and lifestylers/treechangers (from the 2000s onwards), are not always as well equipped or prepared, though many in these cohorts do have solar power and battery storage, enabling them to live 'off grid'.

This said, by the early 2010s the frequent floods in the area meant that some members of the community, as well as the Murwillumbah SES, had begun to recognise the need for the community to be able to respond to crises in a more organised manner. During this period, Greater Uki became a trailblazing community in the area of community-led resilience, with the Uki Flood Group forming in 2014. This group worked with the SES to develop the (now State-wide) CAT team model in the context of the challenges faced by both community and the SES on the frequent occasions when flooding cut Greater Uki off from Murwillumbah. Together, the Uki Flood Group and the SES pioneered the 'neighbourhood system', which divided up the area around Uki into smaller zones and created the roles of neighbourhood leaders who each had contact lists for residents in their streets. They also gathered and disseminated information about local flood levels, helping residents to prepare for and respond to extreme weather events. At that point in time, the neighbourhood system was a core feature of the CAT team model.

In 2017, after Byrrill Creek experienced major flooding caused by Cyclone Debbie, a local community member in that hamlet set up a Facebook messenger group to help residents connect with each other and share information (a group that later became formalised as a Community-led Resilience Team through the Red Cross system). These early groups grew out of the actions of individuals spontaneously helping each other, who over time (and multiple disasters) realised that they could make things easier for their communities by getting more organised. While they were undoubtedly grassroots initiatives, building on relationships and networks within the community, the creation of these groups was also informed by connections with Emergency Management Services, especially the SES and the Red Cross.

By late 2017, the Greater Uki area was well on the way to getting organised around community flood preparation and response. However, bushfires were experienced much less frequently than floods, and as of July 2019 the region had not experienced any serious fires in living memory. For this reason, the Greater Uki community was, by all accounts, much less prepared for fire than it was for flood.

1.3. METHODOLOGY

1.3.1. MÉTHODOLOGY: IMPLEMENTATION

This study is one element in a broader operational research project, which aims to produce practical information for people/individuals as well as organisations/actors from the crisis response sector, with the ultimate objective of greater preparedness in the face of risks and improved interventions, especially in interactions between external actors and communities affected by crises. Recommendations and suggestions for further reflection will be formulated at the conclusion of the study.

The project (2023-2026) attempts to improve understanding of the processes by which mutual aid emerges and is structured. The present case study forms part of the overall project which includes cross-cutting analysis of six case studies from the field.

The six case studies have in common four specific objectives, as follows:

Specific objectives 1: Identify people's perceptions of the crisis and question the concept of 'collective memory';

Specific objectives 2: Analyse mutual aid strategies according to types of crisis and the sociopolitical contexts in which these strategies are applied;

Specific objectives 3: Analyse the dynamics of mutual aid and how these evolve in the timeframe of the crisis or disaster (before, during and after);

Specific objectives 4: Understand how actors from the formal humanitarian aid sector adapt to informal mutual aid and self-help approaches.

1.3.2. A QUALITATIVE APPROACH COMMON TO ALL SIX CASE STUDIES

Ce This research project is **based on a methodology which is common to the series of six case studies**. It derives from social science, allowing for the triangulation of data from the field, which is the basis for several outputs including an overall study report.

Each case study was initially based on a review of available literature, enabling it to take into account existing knowledge of disasters and crises, and their social, cultural and historical characteristics.

Each case study team then visited the field to carry out a series of interviews with different interlocutors who had experienced the crisis and taken part in the response to it. Interlocutors were chosen as being representative of the diversity of actors involved, and including the following general categories: local people who had been affected, witnesses, those who provided help, members of collective groups and organisations (or 'associations'), representatives of institutions and first responders. The selection of interlocutors was adapted to the different context of each case study.

Our analysis took a qualitative approach, via semi-structured interviews, the aim of which aim was to elicit testimony and make observations. Interview guides were drafted and adapted according to different situations and the profiles of key interviewees. The benefit of this approach, which is typically used in social anthropology research, is that it relies on interviewees' testimony and leaves them to be guided by free association, so that unexpected points emerge as they talk. 'Private' discourse, which addresses what was actually done or what happened and the way the interviewee perceived this, was preferred to 'public' discourse, which relates to 'official' accounts of events.

Interviews were recorded (with the agreement of interviewees) and transcribed, fully protecting the anonymity of interviewees. Transcriptions were coded using MAXQDA software, using a common coding system, linked to the research questions.

Case study teams then analysed the information that had been collected, using it to frame answers to the research questions. Their analysis was presented to the steering committee. Different drafts of the report were then discussed within the team until the present version was agreed on.

The six case studies, and the coded material resulting from the interviews, constitute the primary material for an overall analysis, which will be presented and published in an overall report.

1.3.3. FOR THE GREATER UKI CASE STUDY

Following a review of the literature on community resilience and mutual aid in the Northern Rivers of Australia, we conducted semi-structured interviews with 27 participants, and received written responses to our questions from two participants. In both cases, the interview questions were devised in advance, based on a pre-established typology of stakeholders. Four of the interviews were conducted with couples (i.e. two interviewees per interview), but the other 19 were conducted with individuals. The study took place primarily in Greater Uki, from July to September 2024.

Plan C has strong existing relationships with Resilient Uki and the Byrrill Creek CRT. Preliminary meetings with community leaders from these groups helped to identify key contacts in the Greater Uki area, and further recruitment then proceeded by asking interviewees for other contacts they considered relevant (snowball sampling).

We met and talked with people from a wide range of localities, and with varying relationships to the crises considered.

LOCALITIES

Uki

Byrrill Creek

Dum Dum

Rowlands Creek

Chowan Creek

Kunghur

Terragon

Smiths Creek

External players

INVOLVEMENT IN CRISIS OR CRISES

(NB: MANY INTERVIEWEES BELONGED TO SEVERAL OF THESE CATEGORIES).

- Affected by the crisis
- Participated in spontaneous mutual aid
- Participated in organised mutual aid
- Members of local associations
- Representatives of Emergency Management Services
- Representatives of Disaster Management Services

All interviews were recorded and then transcribed using *Victor Voice* and *Happy Scribe* software. After being anonymised (with each interviewee being randomly assigned a number, and third parties being assigned pseudonyms), they were coded using MaxQDA qualitative data analysis software to facilitate analysis. Coding was undertaken both deductively, using the thematic coding matrix provided by Groupe URD, and inductively along thematic lines following Clarke and Braun's Six Step Data Analysis Process.¹⁷ While the interviews were the primary source of data for the study, it was also informed by academic and grey literature, including reading posts and articles on social media, in local newsletters and newspapers and through participation in specific events (e.g. informal meetings and site visits).

Operational research

The study falls within the scope of operational research and aims to produce practical knowledge for citizens/individuals and organisations/players in the response, with a view to preparing for risks and improving interventions, particularly in terms of interactions between external players and communities affected by crises. At the end of the study, recommendations and ideas will be put forward, and resources on mutual aid will be produced for the Greater Uki community.

Previous work on Greater Uki following the 2019-20 fires and the 2022 flood

Greater Uki comprises a very small area of the Northern Rivers region and as such has not been the focus of extensive previous research, although its community response to compounding

¹⁷ Clarke, Victoria, and Virginia Braun. 2013. Successful Qualitative Research. London, England: SAGE Publications.

disasters has been published as a case study in the *Australian Journal of Emergency Management* (Bloor et al. 2023). This study, which considered the different approaches taken in the localities of Uki and Byrrill Creek, found that pre-organised and decentralised structures, alongside good relationships with emergency services, were a key factor in fostering community agency during the 2022 floods. Noting the differences in the style of community organising in the two localities, the authors recommended that Disaster Management Services take 'flexible approaches to enable communities to plan and self-organise in ways that suit their contexts and compositions'.¹⁸

Aside from this Greater Uki-specific work, there is also a growing body of work on the 2019-2020 fires and the 2022 flood. As the 2019-20 Black Summer bushfires were a nationwide crisis, they have been the subject of extensive research, including several State-level post-fire inquiries and reviews, and a Royal Commission into National Natural Disaster Arrangements at the national level, which opened up discussions around the need for community preparation. A report by the Bushfire and Natural Hazards Cooperative Research Centre (CRC), provides a good summary of the findings to arise from this and other research. Here, they observe 'the complexities of community preparedness and responses to bushfire, and the need for integrated and holistic responses to risk reduction'. A key part of this is 'shared responsibility between governments, fire and emergency services, businesses and communities at risk.' The CRC report also notes that 'COVID-19 compounded the impacts of the fires on many people and has hindered recovery'.¹⁹

Due to the catastrophic scale of the 2022 flood across the Northern Rivers, a number of studies have investigated the experiences of residents and the dynamics of the community response. Webster et al. found the community-led disaster organisation that occurred throughout the region to be extensive and sophisticated, providing unique and essential services to communities alongside and sometimes in the absence of disaster management agencies²⁰. Foote et al. highlighted the gendered nature of the community response, predominantly organised by women². The study by McNaught et al. of collaborative governance between community groups and disaster management agencies identified the need for improved communication structures between the two, a greater value placed on community knowledge and contributions, and a shift from reactive to proactive response²². Renouf argued that a shift in mindset is needed within the emergency management sector to address climate change as an immediate threat. This involves increasing transparency about its effects. Transforming the sector to adopt a more integrated, community-wide approach is essential to ensure effective future emergency planning and response²³.

¹⁸ Bloor et al, 'Anarchy in the Uki !', p. 40.

¹⁹ Natural Hazards Research Australia, Understanding the Black Summer bushfires through research: a summary of key findings from the Bushfire and Natural Hazards CRC (2023), p.23, *naturalhazards.com.au/black-summer*

²⁰ Scott Webster, Emma Pittaway, Zac Gillies-Palmer, et al., "Empowering Communities, harnessing local knowledges: self-organising systems for disaster risk reduction (final report)" Sydney Environment Institute (2024), accessed on September 27, 2024, sydney.edu.au

²¹ Wendy L Foote, Margaret Alston, David Betts and McEwan T, "Women's leadership and a community 'saving itself': learning from disasters, health and well-being impacts of the Northern Rivers flood 2022 (Version 1.2)", University of Newcastle (2022), accessed September 27, 2024, *dx.doi.org/10.25817/0ekg-2e83*

²² Rebecca McNaught, Joanna Nalau, Robert Hales, Emma Pittaway, John Handmer and Jean Renouf, "Innovation and deadlock in governing disasters and climate change collaboratively-Lessons from the Northern Rivers region of New South Wales, Australia", International Journal of Disaster Risk Reduction, 105 (2024): 104366, accessed September 27, 2024, doi.org/10.1016/j.ijdrr.2024.104366

²³ Jean Renouf, "The implications of climate change for emergency management: The example of Australia", International Journal of Emergency Management, 2023 Vol.18 No.2, pp.144 – 171, inderscience.com/info/inarticle.php?artid=131933

1.4. LIMITATIONS AND CONSTRAINTS

This study is limited by a number of constraints, which we summarise here in order to put our findings in perspective and urge caution in generalizing findings beyond this study's context:

- Due to limited time and funding, this study was conducted with a small sample size, restricting its scope. While interviewees came from a variety of localities from around Greater Uki, they were not evenly distributed, limiting the perspectives that could be gathered.
- Participants were recruited through snowball sampling, which meant that almost all the
 people we interviewed had a positive opinion of mutual aid and the mutual aid groups in
 Greater Uki. This was also true of the Disaster Management Services representatives.
- Demographic information about participants was not collected, which meant that we were
 unable to identify particular perspectives within the data. For example, because we did not
 ask interviewees to identify themselves as being Indigenous or as having a disability, we are
 unable to canvass the perspectives of these groups, even though it is possible that these
 demographics are represented in our interviewee pool.
- In order to maintain the anonymity of interviewees, anecdotes have been chosen carefully and do not always include full details as they might identify people in such a small community.
- Data collection relied primarily on semi-structured interviews. Although this approach allowed for in-depth insights, it may also have introduced interviewer bias. While the primary researcher practiced reflexivity throughout the study, and consulted with co-authors in order to mitigate this, some influence is inevitable.
- Thematic analysis involved subjective coding and interpretation, which may have affected the study's reliability, as other researchers might have identified different themes.

CHARACTERISATION OF THE CRISIS

A series of compounding crises in Greater Uki, 2019-2022

2.1. BUSHFIRES BURNING SUBTROPICAL RAINFOREST IN THE BLACK SUMMER FIRES, 2019-2020

Australia's 2019-20 Black Summer fire season began in earnest in Greater Uki on 22 August 2019, with a major bushfire, known as the Mt Misery fire, sparked accidentally by a cigarette butt (see Images 5 and 6). High-fire conditions – unseasonably hot and dry temperatures and high winds during Australia's 'Tinderbox drought'²⁴ – were present, and the fire threatened properties and closed local roads. Local residents were told to enact their fire plans, i.e., either leave immediately or prepare to defend their homes should the wind change. The fire continued to burn for more than a month²⁵, burning hundreds of hectares of bushland, and destroying one shed and a house in a secondary fire.

The Rural Fire Service (RFS) was the responsible combat agency during the fires, with support from other Emergency Services officers. Once a state of emergency was called on 11 November, the operation was commanded from the Casino RFS Fire Control Centre (Casino is a rural town 60km south of Uki), with the local RFS brigade directly deployed to respond.

At times, the fire brigades worked alongside residents and their neighbours and friends to help them defend their properties; at other times, the RFS deemed conditions too dangerous to continue on the ground, but property owners successfully defended their homes nonetheless. This 'risk aversion' was a source of frustration for some. During the Mt Nardi fire, the RFS communicated to the community that it would focus on property protection to steer fires around properties and infrastructure, observing that there are never enough fire trucks, and only 10 aircraft, which 'depend on availability, which is based on risk/urgency, as well as smoke and wind conditions as to whether they can take off'²⁶.

²⁴ See ARC Centre for Excellence on Climate Extremes, "Tinderbox Drought", at *climateextremes.org.au*

²⁵ See Echo article from 30 September which reports it is still burning. The Echo, "More than 40 still fighting Tenterfield fire", The Echo, Sept 30, 2019 (website) *echo.net.au*

²⁶ Caldera Community Emergency Support Facebook page, November 20, 2019.

Only a month later, a lightning strike started another fire in the region, this time in the Nightcap National Park 16km to the south of Uki. By early November, hot gusty conditions caused the fire to flare up and spread into the adjacent Mt Jerusalem National Park, close to the hamlets of Commissioners Creek and Doon Doon. Homes at Commissioners Creek were threatened and several were lost. During this period there was a constant haze of smoke in the region and ash falling from the sky, which caused visibility issues and breathing problems for residents with underlying respiratory



Image 6. The Mt Misery fire. Photo credit: Uki RFS Facebook Page



Image 5. Screenshot of RFS Fires Near Me App. Photo credit: Luke Naismith

conditions (see Images 8 & 9). In the words of one interviewee, 'The air was hot. There was a lot of smoke. The sunsets were just... it just looked like the world was on fire.' (22)²⁷. Anxiety levels in Greater Uki were high during this period, a feeling that was heightened by the knowledge that the threat was not just local – the whole state of New South Wales was experiencing its worst ever fire season. People packed their cars and got ready to evacuate, and people with livestock moved them to safety. While humans and their property were threatened and some property lost, the impact it had on the natural environment was even greater. The Mt Nardi fire burned more than 2,000 hectares of World Heritage subtropical rainforest, including a significant proportion of the forest's Gondwana-era nightcap oaks.²⁸ Nationally, the Black Summer fires killed 33 people, with

smoke inhalation and other impacts affecting thousands more. As Natural Hazards Research Australia observes, 'By season's end, bushfires had burned a record 19 million hectares, destroyed more than 2,000 homes, displaced tens of thousands of people and was estimated to have killed billions of animals.'²⁹ For the residents of Greater Uki these fires, which had in many localities burned what had previously been considered 'unburnable' subtropical rainforest, were hard to process. This was a new, unexpected, threat, and the community experienced a sense of grief for what had been lost – not only houses and property but trees, animals, habitat and whole ecosystems.

At the height of the Mt Nardi fire (which in the Greater Uki area mostly affected Commissioners Creek), the Red Cross set up an evacuation centre at the Uki hall, which was used during the day but not at night, when people returned to their homes. As one interviewee recalled, 'There were

²⁷ The numbers in brackets added after a quotation refer to the interviews conducted for this study.

²⁸ Joanne Shoebridge and Catherine Marciniak, "Gondwana-era nightcap oak devastated by unprecedented bushfire", ABC News, 18 January 2020. *abc.net.au*

²⁹ Natural Hazards Research Australia (2023) Understanding the Black Summer bushfires, p.2.

people at the hall for any drop-ins, people who needed support and all that.' (7) The RFS stationed a Chaplain at the hall, who sat outside and chatted with people who were anxious about the situation. Interviewees recalled his demeanour being one of 'care for people' and reflected that his presence at the hall made people more comfortable. Many residents came to the evacuation centre wanting information on how the fires were developing, but the Red Cross was not able to give this as the RFS was not communicating that information with them. According to one interviewee, this was 'partly because they didn't have time (they were busy fighting fires), partly because they don't get trained in communication, and partly because there are no obvious pathways for them to communicate through'. (19) This issue of communication was identified by several interviewees as being a problem for the RFS across several localities, especially given the fact that, in today's world, community members are used to having information at their fingertips and being able to make their own decisions rather than relying on an authority to make decisions for them with the possibility that that system might fail. The lack of information available during the Mt Nardi fires was thus stressful and anxiety-provoking for some Greater Uki residents.

During this period the local government authorities, the Tweed and Byron Shire Councils, set up an Emergency Operations Centre at Tweed Heads. The purpose of this Centre was to assist the RFS response and disseminate information to local residents. At the invitation of local community leaders, they also held a community briefing, which was well attended, with 100 locals present. After the fires, a village forum was held but was not so well attended with only those who were directly impacted coming along. This led local government to conclude that earlier engagement would be beneficial for recovery planning as communities that are not impacted tend to disengage quickly and return to business as usual.

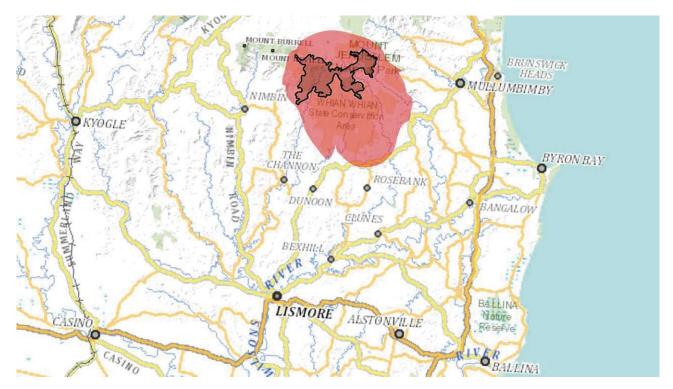


Image 7. Fire prediction map for the Mt Nardi fire, 12 November 2019. Credit: RFS, reproduced in Northern Star, 12 November 2019. See dailytelegraph.com.au



Image 8. Mt Nardi fire, seen from Commissioners Creek. Photo credit: Tweed Valley Weekly, tweedvalleyweekly.net.au

2.2. THE COVID-19 PANDEMIC

With the Greater Uki community only beginning to recover from the trauma of the fires, the COVID-19 pandemic hit. COVID had a particularly significant effect on community connection and organisation in Uki. Because the Australian government acted early to close international borders, there was for some time relatively little COVID-19 virus circulating in the country. However, as in other parts of Australia (and across the globe), the implementation of a series of lockdowns entailed a loss of income for many people and increased social isolation. Furthermore, Australian Federal government legislation requiring citizens who worked with vulnerable populations to get vaccinated meant that those who were not willing to be immunised lost their jobs, their colleagues, and their career pathways. Requirements that people 'check in' and show proof of immunisation to be allowed in public spaces reinforced this isolation. These laws were particularly divisive in the Greater Uki community, as a centre for alternative health and lifestyles, where many residents are vaccine-hesitant or anti-vaccination. While some locals supported the official approach, others were unsure or critical and refused to comply, leading to conflict in some public forums.

Another aspect of the COVID pandemic specific to the geography of the Greater Uki was that the State of Queensland closed its border to NSW citizens for much of the period between April 2020 and December 2021, which had an enormous impact on this border region. Being only 20km from the border, many Greater Uki residents were unable to access their workplaces or the critical medical services upon which they relied; nor could they visit friends and family. Both the virus and government legislation provoked by it, therefore, had the effect of isolating the community of Uki and causing rifts in its previously coherent social fabric. As one interviewee observed, this also affected the community's ability to respond to disasters.



And then during COVID as well, obviously, we live in an area where the large population of people who are either anti vaxx or vaccine-hesitant, you might say, didn't want to get vaccinated for COVID. That was a really, really big issue in our area. And, you know, people were like, kicked out of the fire and the SES voluntary positions because they wouldn't get the jab. They didn't want to get the jab. And that was crazy because it's like, well, so if we have a catastrophe now, you're just going to say, oh, no, these people aren't allowed to participate. We need everyone, you know? And so I think that actually left some of these services a little bit thin on the ground (16). "

2.3. THE 2022 FLOOD: A ONE-IN-500-YEAR WEATHER EVENT

2.3.1. TWO WET YEARS, A WEEK OF MINOR FLOODING AND A 'RAIN BOMB'

The period after the 2019-20 fires saw a swing from El Niño to La Nina weather patterns on the east coast of Australia, which brought with it above average rainfall. Nationally, the wettest month on record was recorded in November 2021.³⁰ In Greater Uki, the month of January was significantly wetter than usual, with only six days without rain, and then, from 23 to 28 February, a period of more intense rain began, with more than a metre of rain falling during this period.³¹ The 161mm that fell on 24 February caused minor flooding, on a scale that Greater Uki was used to, and it had only just begun to subside when on 27 February another 142mm fell, keeping the river high and causeways underwater. Up until this point, the flooding was on a scale with which locals were familiar, and neither they, nor the local or state SES anticipated that the crisis would get so much worse so quickly. On 25 February, for example, the state SES (on the basis of Bureau of Meteorology forecasts) turned down an offer of help from the Australian Defence Forces, which meant that the Army was not on the ground in the Northern Rivers when the flood reached its peak. This said, the SES supported Greater Uki communities in other ways during this period, providing forecasts, locality-specific warnings and information in the week leading up to 27 February³². The next 24 hours, however, took the flood into new territory.

On 28 February Greater Uki was hit with a 'rain bomb' of 547mm in a 24-hour period, a total that exceeded historical daily rainfall records dating back to 1911.³³ According to local sources, most of this rain fell between 12am and 2am. This record rainfall was deemed to be 0.2% of the Annual Exceedance Probability (AEP), meaning that contemporary climate modelling judged it as a one-in-500-year weather event. Because the catchment was so wet, the rain had nowhere to go, causing the river level to rise more than 12m to a peak of 13.45m. It was, in essence, a 'flood on top of a flood', and was well 'outside the lived experience of residents who were, in general, familiar with the risks and effects of flooding in the area.'³⁴

³⁰ Mel Taylor et al, 'Community experiences of the January-July 2022 floods in New South Wales and Queensland', Summary Report, National Hazards Research Australia, p. 2.

³¹ Bureau of Meteorology, 'Daily Rainfall : Uki (Tweed River)', bom.gov.au

³² The SES were able to do this because of the relationship-building work they had done prior to the flood, the contact details they had collected, and the trust they had built. Because of these efforts made by the Disaster Management Services (DMS), the communities of Greater Uki were better informed and prepared for the flood than they would otherwise have been. However, DMS community resilience building efforts were still at an early stage of development.

³³ Bloor et al, 'Anarchy in the Uki !', p.41.

³⁴ Bloor et al, 'Anarchy in the Uki !', p.41.

Ironically, some community members in Greater Uki were not prepared for the 2022 flood precisely because flooding in the area is so normal.



So every Christmas, we have a flood. When school goes back, we have a flood. And everybody just thought, Yeah, just having a flood (5).

Because of this, residents had watched the waters rise and fall over the five days up until February 29 but did not see the flooding as anything unusual.

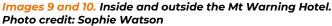


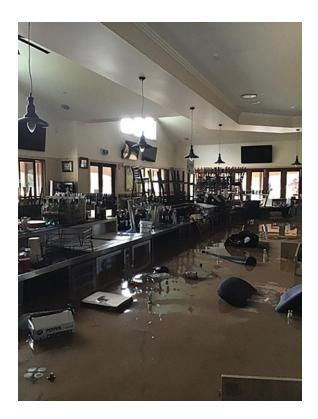
We had had this creek down here go up and down for five days. The bridge would go underwater, then it would clear, and I'd say, Okay, the paddock's underwater. Then we'd say, No, there's green grass. It just went like that for five days. Then we woke up on the day of the flood. We thought, Damn, it's guiet. There's no chainsaws (5).

Another reason was the unprecedented intensity of the rainfall events: according to one interviewee in Uki village, rain fell there on 28 February at a rate of a millimetre a minute for 90 minutes, which was almost four times longer than that rate of rainfall had ever fallen before. Even long-time residents with established systems for watching the river gauges upstream in order to anticipate surges were taken completely by surprise. At the height of the flooding, some Greater Uki residents reported being 'terrified' by the scale of the weather event, and its impacts. One resident described being awake in the middle of the night watching 'missiles hurtling down the river, including big gas bottles clanging together. It was full on, and I was here like Moses, praying.' (24)

Other residents had moved to the Greater Uki area more recently and for them the flood was an enormous shock. Without any local knowledge about how quickly water levels might rise based on the amount of rain, or how long they might take to fall, these people felt unprepared and unsupported by their communities.







2.3.2. IMPACTS OF THE FLOODING

The unprecedented flooding damaged around 15 houses and caused major damage to many more driveways and stormwater drains. Fences were down, animals were lost, animal feed was destroyed. Landslips were another serious effect of the flooding, with some landslips also coming down through houses, beside houses or across their driveways. Several Greater Uki residents narrowly escaped being buried by some of the larger land slips. Large chunks of road were washed away (see Image 11). On low-lying properties in the floodplain, houses were engulfed in water and residents had to retreat – if they could – to higher ground. If higher ground was not accessible, they waited in the second storey of buildings hoping to be rescued. This brought with it unanticipated dangers, such as cars and shipping containers being carried by floodwaters and threatening to knock down or undermine the structural integrity of dwellings if they made contact on their way past.

At an infrastructure level, the flooding took out power lines, and in Uki village the town water supply was also out. It destroyed bridges and causeways and caused a large number of land slips which blocked roads and cut off access to the outside world. The community gardens and the sports fields were completely inundated (see image 11). This isolation was exacerbated by the complete or partial loss of power and telecommunications for many Greater Uki residents.



Image 11. Cedar Creek Rd, Greater Uki. Photo credit: Alan Thompson, Uki and South Arm Historical Society.



Image 12. The Uki Sports fields. Photo credit: Uki CTC.

The loss of power was by some accounts not too challenging for many Greater Uki residents as they lose electricity regularly due to aging energy infrastructure, geographic isolation and limited grid redundancy, and have generators for this reason. Mobile phone reception is also usually quite unreliable in many parts of the area, but when it disappeared completely, and the landline telephone went out, it was 'quite a bit of a shock because we rely on it so much' (2). Residents' responses to the weather were diverse, but one tendency in the absence of any access to information was to want to go and 'see for themselves'. Some Greater Uki residents drove or walked down to the river to watch its level rise, which caused distress to people whose houses were flooded who were sitting in their cars cold and wet. Other residents panicked when it became apparent that the power-cut meant there was no way of getting fuel. The mud that receding floodwaters had left behind contained a toxic mix of chemicals from cars, batteries and machinery and rotting organic material from other flood debris, leading to infections in people with abrasions who were exposed to it. This, combined with the lack of fresh water, was experienced as 'really scary' (28). Not being able to get in touch with the emergency services or anyone in the outside world was particularly distressing, especially for people who were trapped in potentially dangerous situations.

After the flood had peaked, the SES couldn't get to Greater Uki for quite some time, partly because of blocked roads and flooded causeways, but also because they were tied up with responding to the flood in Murwillumbah, the Shire's largest city. The main role they played in the initial phases of the crisis was in transmitting information to community leaders in Uki and Byrrill Creek via satellite internet or intermittent mobile phone coverage. In Kunghur this was not possible as all phone lines, electricity and internet were out. In instances where communication was possible, the

SES also supported community leaders with decision making and conferred to organise food and medicine drops. Similarly, the Red Cross provided support to the leader of he Byrrill Creek Community-led Resilience Teams, giving them advice on what to expect in the disaster cycle and how to manage difficult situations.

After the flood had peaked, the SES couldn't get to Greater Uki for quite some time, partly because of blocked roads and flooded causeways, but also because they were tied up with responding to the flood in Murwillumbah, the Shire's largest city. The main role they played in the initial phases of the crisis was in transmitting information to community leaders in Uki and Byrrill Creek via satellite internet or intermittent mobile phone coverage. In Kunghur this was not possible as all phone lines, electricity and internet were out. In instances where communication was possible, the SES also supported community leaders with decision making and conferred to organise food and medicine drops. Similarly, the Red Cross provided support to the leader of he

Byrrill Creek Community-led Resilience Teams, giving them advice on what to expect in the disaster cycle and how to manage difficult situations.

While the SES and the Red Cross were not on the ground at the time of the flood, the Uki and Kunghur fire brigades were present. Once they had dealt with issues on their own properties, and were able to access other parts of their localities these community members used their fire trucks to drive around and assess damage, cleaning out flooded houses with firehoses, assisting with removing trees and debris from driveways, and conducting welfare checks. The RFS in Uki also had contact with the Murwillumbah SES via the fire trucks' Government Radio Network³⁵ radio, which enabled the SES to task RFS members with jobs they had coming through. This collaboration between the two emergency services was an adaptation that had not happened before in Greater Uki, enabling trained and officially sanctioned RFS personnel to be involved in the response even though it was not traditionally part of their remit (RFS being responsible for bushfires whereas the SES are responsible for storms and floods).

2.3.3. 'MULTIPLE LEVELS OF ISOLATION' AND HYPERLOCAL ACTIVITY

This isolation was at its most extreme in Byrrill Creek, where some community members spent fourteen days with no power, no phone, no internet and no road access. The only connection with the outside world, apart from very patchy mobile phone coverage, was through the satellite internet link at the house of the Byrrill Creek CRT leader, which became the headquarters for the community response. Some houses, belonging to residents who lived close to the river, became completely uninhabitable as the river rose above ground level and ran straight through them. Without generators, many residents had to cope with no electric lighting and no refrigeration, and without access to pharmacies and hospitals, residents with medical conditions found themselves without crucial medications and medical attention. After a few days the BCCRT leader set up a hub at a local property. The situation was similar in the other small hamlets and in Uki village, though none was cut off for as long. In Uki, the Public Hall became the hub; in Kunghur it was first at the Doon Doon Hall and then at a private property, however in Kunghur neither of these locations were known as hubs which meant that residents didn't know about their existence. Word of mouth and signs were the only way to get the information out.

Some residents were able to walk or drive to places with better mobile phone reception. In some cases, this entailed a half-hour walk to the top of a hill on their or their neighbour's property, in others a ten-minute drive down damaged roads. However, for the most part, if individuals did not have satellite internet during the floods, they had no reliable way of contacting the outside world. This situation of isolation was frightening, and made people feel vulnerable.

³⁵ Now known as the Public Safety Network.



Everyone was isolated from goods and services, every single person, and some of those had up to 20 impassable spots from where they were to a hospital, so to speak. So multiple levels of isolation. And that isolation was doubled when you then took out communications as well because people are so reliant on communications these days. That felt really challenging for a lot of people to not know, to not be able to check in with their sister down the road to see if they were okay or so on and so forth. (19) "

This said, not everyone found the isolation hard to deal with, with longer established residents well prepared for days cut off from the outside world. One interviewee, for example, observed: 'We've always got a good supply of food at home. We started baking cakes and cooking food and enjoying ourselves.' (25)

In this context, communities had to manage with what they had on hand, pooling resources, checking on elderly and vulnerable community members, and triaging community needs. Community leaders used their very limited connection with the outside world to organise helicopter drops of the most important resources, as well as gleaning information and advice from support contacts at Emergency Service agencies. These activities, undertaken on a hyperlocal scale, brought people together, with many community members finding that the differences between them (differences of class, culture, ideology) were insignificant in the face of the disaster.

However, in the first few days not all community members were able to access or take advantage of the collective effort within their village or hamlet, reinforcing some people's sense of isolation. Trapped in their houses, or on small islands of land, such residents expected help from Emergency Management Services or other community members and felt overlooked or even abandoned when no-one came to rescue them. Once the waters had receded and people were able to walk out and connect with the community efforts, they were grateful for assistance but also traumatised by the fact that no-one had thought to check on them.

2.3.4. CONTACT WITH THE OUTSIDE WORLD: FROM CRISIS TO CRISIS RESPONSE

The length of time it took for communities to regain road access to the outside world varied enormously depending on locality. The road between Uki and Murwillumbah for example, though damaged, was passable for four-wheel drive vehicles the day after the flood, although it was 'a bit like an off-road track' (7). This enabled the Rural Fire Service to evacuate one community member to the Murwillumbah Hospital, and other community members are reported to have driven their cars to Murwillumbah to go shopping. However, it was several days before the road was sufficiently cleared to be passable in two-wheel drive cars.

Once the road from Murwillumbah to Uki was open, spontaneous volunteers from outside the area began to arrive, mainly coming from the Gold Coast and further afield as most localities closer to Greater Uki had themselves been impacted by the flood. This 'mud army' were crucial for helping with clearing out flood-affected houses, but out-of-town volunteers often brought with them enormous quantities of unsolicited donations, which were at times incredibly useful but also became 'a second disaster', inundating the hub at the Uki Hall and requiring countless hours of volunteer time to sort and allocate. The help offered by spontaneous volunteers from outside the community was also a mixed blessing, with 'too many volunteers and not enough

TWO COMMUNITY PERSPECTIVES ON EXTERNAL AID:

"It became a very big thing, very quick. The people, crews of people coming from the Gold Coast with more nappies and second-hand clothes and bales of hay that you knew how to deal with. That became the crisis, as I'm sure other people have said (7)."

"But the out-of-town assistance was also really lovely as well, where people had gone to such great lengths to do something. So they were having that same feeling that was job on, you know, that something needed to be done, but they hadn't been even affected. So they were having raffles at work and going and buying fresh pillows and filling a car full of them and driving over horrendous washed out [roads], I don't know how they got here. Like, what were they thinking? [Driving on] horrendous roads to show up with a car full of pillows, which, you know, was really helpful because when all your pillows just got washed down the river it's just nice to lay your weary head on something that's clean and new. So that was really great (19)."

jobs' (19), and offers of help that could be 'a little misguided or uninformed' (20). External volunteers were entirely managed by the community (not the DMSs), which added an extra burden of coordination to an already colossal job. In some cases, groups of volunteers offered their help before coming, allowing communities to call on them when appropriate. Such targeted, solicited help proved invaluable, especially when supplies be walked into isolated needed to communities.

External mutual aid was, therefore, a mixed blessing, and some interviewees suggested that in future crises out-of-towners should be prevented from coming to help potentially adding to the pressure on communities. However, others recalled that such unexpected external mutual aid often arrived just at the time it was needed, referring to the serendipity of the recovery process. In this assessment, the advantages outweigh the disadvantages. Two weeks after the height of the flood the Army finally arrived in Greater Uki, and were involved with cleanup and repair work including clearing landslips, building temporary crossings for creeks and driveways, delivering fuel, and clearing fences. In their base Murwillumbah, the main Army contingent was able to coordinate with the SES and Police to avoid duplication of jobs, 'so the left hand knew what the right hand was doing.' (6) However once on the ground in Greater Uki, without any local knowledge of the area, they relied on volunteers at the Uki Hub to them with maps intelligence. While some interviewees were

critical of the Army for doing too little too late, and even instrumentalising their involvement, others perceived their contribution as 'fantastic' (5).

The other Federal government authority present in the region was Resilience NSW (now reconfigured as the NSW Reconstruction Authority), which set up a Recovery Centre in Murwillumbah. Whilst not on the ground in the

Greater Uki area, one of their personnel accepted regular check-in calls from community leaders, providing information and advice where possible. Building on the work that community leaders and the Tweed Council Resilience Officer had done prior to the floods, Resilience NSW provided funding for CB radios, using AU\$30,000 of funds raised in an online 'Givit' appeal. Despite this initial positive interaction, Greater Uki were not included in the flood map used for Resilience NSW's 'Resilient Homes Program', which offered post-flood home buybacks, relocations and retrofitting to homeowners considered most at risk.³⁶ This caused a great deal of frustration and anger amongst the Greater Uki community, who felt that floodaffected residents in their area should be given the same degree of help as people in other areas.

Four weeks after the first flood, there was another large rain event, and Greater Uki was flooded again. Though the water didn't come as high as it had the month before, this second flood was still one of the biggest floods they had ever had. Residents couldn't believe that it was happening; one community member remembered thinking 'Surely this is a joke. This is not really going to happen. And then it did happen. And then that put us back into that relief stage again in my community.' (19) It was three months or more before many Greater Uki residents were reconnected to phone and internet access.

TWO CONTRASTING PERSPECTIVES ON THE ARMY:

"There was certainly a strong negative reaction against the Army for the first time. And they were just doing this, driving around their trucks, and they actually came and helped. They actually did genuinely, you know, once they found their niche, took them a while. Obviously, they just come in raw, but they helped (26)."

"I think another thing that was talked about... was that when the, the boys in their... army costumes came in. They were like posing next to, you know, we dug this big hole or we saved this big. You know what I mean? Like posing next to progress. Things that they had apparently done that in fact they didn't do. So I think that there was a little bit of misrepresentation there where it was like, the army's come to save us all and the community are like, hey, we just dragged those logs over here. Can you get out of there? (19) "

During this period, residents experienced particular frustration with the tendency of DMSs to repair bridges and roads without community consultation and to insufficient standards, thus setting communities up for more problems down the track. For example, the March 2022 flood washed away many of the repairs that the Army had made to bridges, roads and driveways.

³⁶ nsw.gov.au

It's tragic, really, that each time those things get repaired or cleaned up, there is not very much that's done about doing the job properly once and for all, you know, it's always just a band aid, clean it up and scrape the hill, and so it all just happens again. (24) "

A HELICOPTER FULL OF 'POLLIES'

On Day 15 of the 2022 flood in Byrrill Creek (the day after access had been established), community leaders received notice that the Army, the Mayor and the Police would be arriving by helicopter. They were 'far apparently too important' to come in by road, so community leaders had to get permission from a local landowner for the helicopter to land. Once the landowner found out that the helicopter was bringing politicians and not muchneeded supplies, became angry, saying that they 'didn't think it was going to be the pollies!' (19).

During this period local perceptions of the DMSs, especially the Army and various levels of government, were mostly negative. Some interviewees commented on the eagerness of various DMSs to have their photographs taken next to work that communities had done, or to fly in weeks after the crisis event and be filmed giving aid to community members when they had in fact been absent (both physically and metaphorically) during the critical period (see adjacent box). Similarly, some interviewees referred to then Prime Minister Scott Morrison's decision to go on holiday during the 2019 fires, using the excuse that he didn't 'hold a hose', and then to his arrival in the Northern Rivers region during the floods, as evidence of the superficiality of political engagement with the impact of climate-related crises.



The response from Scott Morrison during the fires was to go on holiday, and then during the floods, he came to Lismore but he was... surrounded by bodyguards, and nobody was allowed to talk to him, and no-one's allowed in the room while he's talking. And it's just like, so short-sighted and distant. And really, it's a tokenistic approach to recovery... it's all talk and no action (16). "

2.3.5. RECONSTRUCTION AND THE ROAD TO RECOVERY: A LONG, SLOW PROCESS

As of September 2024, reconstruction from the 2022 flood in Greater Uki is still ongoing. While most landslips have been repaired and all communities now have some road access in and out, Kyogle Rd – the main road from Uki to Murwillumbah – is still under repair, meaning that what is usually a 14-minute drive can take 20-25 minutes when there is heavy traffic. There are also still people in Greater Uki who are living in flood-damaged houses, who can't afford to renovate them or move out, or don't have the skills or the energy to do so. This is demoralising for the whole community; as one interviewee observed.



I just can't believe we're two and a half years down the track and our road's still not repaired. It's in the process now, but it was just awful for so long. Every single road out of the village was cut after 2022. It did take a while before people could get in to us' (13).

'It was interesting to see the later-on effect of people when things finally hit them. We needed more help in that area too, I think. There were some desperate people out there for a little while. [The mental health resources] were non-existent in this area. I mean, they're non-existent in this area at the best of times (12)."

Mental health is an ongoing issue of the flood recovery in the region. Being a rural area far from NSW's State capital, Sydney, Greater Uki lacks the adequate mental health services to deal with the level of trauma in the community. A compounding factor here is that weather events such as heavy rains or storms can be re-triggering for people.



People are still dealing with it now. Two plus years on... you can tell the anxiety in the community sometimes, when all the warnings start going out because we had a pretty big rain event on New Year's Day this year (6).

5

MUTUAL AID IN THE GREATER UKI

3.1. THE VARIOUS FORMS AND CHARACTERISTICS OF MUTUAL AID IN GREATER UKI

In both the 2019 fires and the 2022 flood, mutual aid in Greater Uki took multiple forms. The most common two were completely spontaneous interactions (e.g. neighbours helping each other) and more organised grassroots efforts where residents coordinated their actions together in groups. Because these two different types of mutual aid entailed a different set of preconditions, and evolved differently, they are considered here separately, in sections 3.1.1. and 3.1.2. A third section, 3.1.3, explores how organised mutual aid has become more structured over time. Following this, sections 3.1.3.-3.1.9 explore various characteristics of both spontaneous and organised mutual aid in Greater Uki: its motivators, sustainability, leadership, funding, communication strategies and coordination between mutual aid groups.

3.1.1. SPONTANEOUS MUTUAL AID IN GREATER UKI

During the 2019 fires many Greater Uki residents engaged in acts of spontaneous mutual aid. These were generally prompted by threats to individual properties and made possible by pre-existing relationships that the owners of these properties had with community members. At its most spontaneous, this type of mutual aid entailed friends and neighbours turning up in the moment to assist each other in fighting fast-moving fires, either alongside DMSs or in situations where official services could not help. In some cases, help given in these spontaneous circumstances was later reciprocated when fire threatened the helper's property.

A more organised, but still largely spontaneous, version of mutual aid during the fires involved some property owners reaching out to friends and neighbours and creating a roster for shifts to protect properties and hold containment lines.



I had a friend whose property out here on Commissioners Creek Road borders onto Nightcap National Park... We knew the fire was coming up that hill from Wilson's Creek. My mate... and I and a few other people, we went out there to handle that fire. But the fellow that was on that property, he was very well-prepared. By the time we got there, he had plan A, B, and C. He'd cut in breaks that we could fall back to. [My mate] was on the Rural Fire Brigade... [and] the captain of the Fire Brigade [was there too]. We had some really good knowledge, and we had some great equipment... We had two IBCs on the back of Utes, and we had two petrol pumps, and we had a dam to fill them up, and we were shuttling backwards and forwards... As the fire came over, it just crept on down. We were able to deal with it, which was good. I spent, personally myself, probably three days out there, slept out there two nights just putting out spot fires. But all up, there was probably 10 people on and off over about seven, nine days. A lot of people sleeping out there, too, just trying to control that... (22). "

Once again, this type of mutual aid operated through friendship or community networks, and built on community members' knowledge of their own, and others', skills and capabilities. Groups of friends and neighbours used mostly privately-owned resources (utility trucks, intermediate bulk containers (IBCs), and petrol pumps to pump water from creeks) to fight fires and hold containment lines, often working alongside the Rural Fire Service.

Spontaneous acts of mutual aid were also an important feature of Greater Uki's response to the 2022 floods. As with the fires such acts often, but not always, built on personal relationships. At the height of the floods, individuals acted to rescue each other from floodwater, protect property and secure potentially dangerous assets such as gas bottles. They checked in on their neighbours and offered practical help and emotional support. Those less affected by the flood offered resources to others, sharing electricity from their generators or lending generators, cooking food, offering showers, doing washing, and opening their houses for accommodation.



We always end up with flood refugees in this house. The 2022 flood we had four people and two dogs I think... we've got lots of bedrooms so that was fine. We've got a big generator that powers the house. We've got big water tanks under the house. All our neighbours here know that we've got that so they bring their phones up to charge them up... they were coming here to get water. Our neighbour across just up the road here, they didn't have anything to cook on; we've got gas for that reason. So we gave them our little barbecue, gas barbecue, and they took that up to cook and heat water at their place. Some came and had showers here... And then as our food starts to defrost in the fridges we all get together and come here and cook up on the stove and then we set up the trestle tables on the veranda so all the neighbours come up and we have a big trestle table feast out there. We do that a couple of times depending on how long the flood goes for. So we're pretty self-sufficient that way here (13). "

People shared food with each other, including one resident in Byrrill Creek who shared his freezer full of high-quality meat with the rest of the community. After the floodwaters receded, Greater Uki residents helped friends and neighbours to clean out their houses and get rid of rubbish, repaired roads and bridges and moved landslips using their own earthmoving equipment, or worked in cooperation with local businesses to do this important repair work. As with spontaneous mutual aid during the fires, assistance to others was often delivered alongside self-help, with residents either alternating between helping others and helping themselves, or taking action that simultaneously helped both themselves and others.

Governance of spontaneous mutual aid

While some of the people who stepped up to help others in such circumstances had training and others did not, the time-sensitive nature of these situations meant that none of these people was authorised or tasked by an emergency agency or even necessarily mandated by other community members. From one point of view such action was necessary because the community was not adequately prepared, or Emergency Services were not present; in an ideal world no-one would get stranded in floodwaters or have to defend their house from fires. However, many interviewees expressed the opinion that even with the best preparation in the world such situations will occasionally arise. One interviewee who has rescued many people in the Greater Uki area during multiple disasters, emphasised the importance of training for community members so that those individuals who do initiate rescues are better equipped to complete them safely.



So my thoughts about all of that is really more about what's actually required when shit is going down, who's got the skills that we could call on, who's been trained to actually be able to help in moments like this. I guess first aid training too comes with that. And in each of the various pockets of isolation, there needs to be a handful of people, one or two people that can authoritatively take control (24)."

The 'authority' that this community member refers to does not seem to be an official authority, but rather an innate or situational authority born of skills and experience, that is also at some point recognised by community (whether formally or not). Such a 'system' of governance has both pros (it is flexible, adaptive, can respond quickly to crisis situations and builds on community members' skills and experience) and cons (it is potentially risky, assumes community support for mutual aid actions taken by individuals, and may also expose those individuals to criticism, censure or even legal action). In the loose groups such as the community members who fought fires on a rostered basis, the concept of governance was similarly loose. Clearly the property owners who contacted and enlisted friends, and wrote rosters, were the ones delegating and making decisions about what to prioritise, but they were doing this with the buy-in (and often on the basis of advice from) the other members of their teams. This 'system' thus has similar pros and cons to the completely spontaneous mutual aid (offered by individuals) that was considered above, although as decisions are often made more consultatively there is presumably less risk of censure. In spontaneous mutual aid situations like these whoever takes the initiative to act, or to organise others to act, is ultimately held responsible. In the longer term, however, the scope for that individual or group to continue giving mutual aid is dependent on community support. When leaders have buy-in (usually based on their leadership skills, especially local knowledge and communication), they then have the authority to make decisions and prioritise in the context of the bigger picture. This is the risk and the opportunity of spontaneous mutual aid – it all comes down to the people involved.

CASE STUDY: LOOSELY ORGANISED MUTUAL AID

One example comes from the Village of Uki during the floods, when a resident was able to secure a petrol supply from one of the (non-functioning) pumps at the local service station. This supply was crucial to power generators for the local supermarket and hub at the Uki hall, but once the petrol was flowing there was uncertainty around who should be allowed to take petrol from this limited supply, and who got to decide. At one point this was the only fuel supply for miles around, and it was being used by the police and the fire brigade, but private citizens also needed fuel for their chainsaws and generators. At one point, EMS representatives were concerned, and told the resident that the supply would have to be rationed so that it would remain available for the authorities. This was a difficult situation for all concerned, especially for the resident who had initially secured the supply. As one interviewee observed, 'What do you do? Is it open slather or you just start to control these things? If you are going to control them, who gives you the authority to say who gets this and then he doesn't? Then there's those conversations to be had as well. Who put you in charge? I did hear that spoken.' (21) Ultimately, the resident who had secured the supply conferred with the owner of the petrol station and they came up with a system to keep track of who had taken some, and the village did not run out of fuel. However, the community members involved were left a sense of the inherent contradictions of mutual aid governance.

3.1.2. ORGANISED GRASSROOTS MUTUAL AID

During the 2019-20 fires and the 2022 flood, Mutual Aid in Greater Uki also took more organised forms. Such initiatives built on the history of grassroots community organising by the Uki Flood Group/CAT team, and also on strong relationships within the Greater Uki community and with Emergency Management Services. Unlike the acts of spontaneous mutual aid considered above, which arose in times of crisis and then retreated when the crises had passed, organised mutual aid in Greater Uki has been a sustained effort over several years, impacted in different ways and to different degrees by the successive waves of crisis. During the 2019 fires, there was a coordinated effort across the Greater Uki area (considered below). However once the threat of the fires had passed, different localities organised themselves in different ways. For this reason, and in order to focus on the ways that community organisation has shifted and evolved over the period under investigation, we consider the post-fire and flood contexts in a locality-specific manner. The section then concludes with a summary of the key characteristics of organised mutual aid for the whole of the Greater Uki area.

During the 2019 fires

The more organised phase of mutual aid in Greater Uki began in November during the Mt Nardi fire. It was stimulated when one local Kunghur resident, motivated by a call to action on the Mount Burrell Facebook Group, used a range of local Facebook pages to call a public meeting. Held in Uki village, it was attended by 100 locals from around the Greater Uki area (see Image 13 adjacent).37 The resident who called the meeting had identified a list of areas of need in the community, and came prepared with notebooks, pens and paper for attendees to get involved in planning. At the end of the meeting, those present had set up six teams to work on the six identified areas of need, and had appointed leaders for



Update:

This morning's meeting in the park at Uki saw around 100 people.

We have set up six teams and are coordinating communication lines.

A group of nine people are coordinating overall and will be on a roster to run this FB page and share information on messenger groups with the 5 Team Leaders.

The pinned post above on this page has a good summary of the teams and the contact person for each team (contacts also listed below). If you need assistance in any of these areas, or would like to volunteer, please contact the Team Leader directly.

Any posts will be subject to approval from the administrators running this page. The reason is to be able to confirm any information and reduce misinformation and anxiety.

That saying, this is a community page, for the community and run by community members.

If you have a question, request, information or anything that can't be directed to the relevant Team Leader (listed below), please post for approval.

We hope to get up to date info. directly from the RFS and are trying to set this up.

We will be putting up notices for useful contacts, tips, information etc.

We are learning as we go here and are also busy with personal lives etc. So we ask for your patience and support.

If you have some useful information on: Preparing your home, contacts etc. Please Share.

Image 13. Screenshot of post in Caldera Community Emergency Support Facebook page

each team. The areas of need identified were communications and planning, property preparation, emergency accommodation (including for animals), food and drink, registering locals and checking in with animals, and a team to liaise with the Uki evacuation centre.³⁸ These teams then set to work helping the residents of Greater Uki to get better informed about, and prepared for, the fires, an initiative which gave many residents a sense of purpose in an anxious time. There were four main successes to come out of this work: the establishment of the food bank in Uki; assessments of vulnerable properties; the efforts made by a team of volunteers to clear and prepare properties where possible; the setting up of the fact-checked Caldera Community Emergency Services (CCES) Facebook group.







Image 9. Caldera Community Emergency Support Facebook Page.

The CCES Facebook group was formed in response to concerns about a lack of communication from official sources around what was happening with the fires, and a recognition that 'Facebook... is where everybody goes [for information] but you get this rumour and fearmongering going on' (11). The group, which aimed to provide the community with information either directly from, or fact-checked with, the relevant authorities, was run by a

core of community members from around the Greater Uki area. A local IT expert helped set up this group within 48 hours of the first meeting, in response to the perception that inaccurate posts about the fires on other community Facebook groups were spreading fear and

³⁷ Screenshot taken from the Caldera Community Emergency Support Facebook page, November 17 2019. Accessed Monday 28 October 2024.

³⁸ Caldera Community Emergency Support Facebook page, November 17 2019. Accessed Monday 14 October 2024.

misinformation. It quickly became a tool for communication between community leaders and members of the public, in particular for the dissemination of information from trusted sources.

KEY CHARACTERISTICS OF SPONTANEOUS MUTUAL AID IN GREATER UKI

- Initiated by the spontaneous actions of individuals
- Often but not always based on pre-existing relationships (not necessarily strong ones)
- Individuals acted according to their experience, skills, and knowledge of previous crises
- Individuals often worked outwards in concentric circles, helping themselves and their families first, then close neighbours and friends, then those further afield BUT mutual aid could also be delivered alongside self-help
- Often filled gaps when Disaster Management Services could not, or would not, assist (due to lack of access, limited capability or risk averseness), or addressed needs outside the official remit of Disaster Management Services (e.g. emotional support, lending equipment, domestic help, etc)

DIFFICULTIES ENCOUNTERED IN SPONTANEOUS MUTUAL AID

- Decision-making and prioritisation and the risk of facing censure or criticism from community
- Lack of skills, resources or training
- Burnout and survivor guilt

Since its formation the group has been managed by a team of local moderators who cross-check posts with official sources of information (for example the RFS, the SES, or the Bureau of Meteorology). If a post or comment is incorrect or inappropriate, it is removed from the site. Similarly, speculation in comments is discouraged and people are warned, or comments are removed if they are not based on evidence. Fact-checking with authorities is thus paramount to the function of the page, which can make things difficult when DMSs are not contactable or not sharing information consistently. Several interviewees mentioned that this was the case during the 2019-20 fires, with the local RFS brigades too busy, or not interested in communicating with local residents. In this context, community leaders took the initiative to track down fact-checked information wherever they could, with a search of posts on the Caldera Emergency Support Page during this period revealing a range of posts where moderators had cross-checked information with local RFS members, or re-posted alerts from the (regional) Far North Coast Team RFS Facebook page and other trusted sources.³⁹

The post-fire context and the 2022 flood – Uki village and surrounds

Once the fires had passed, however, the development of mutual aid in Uki village and immediate surrounds was limited both by the lack of immediate threat, and the advent of the COVID-19 pandemic, which hit soon after, so that a lot of the momentum that had built in 2019 and early 2020 was not harnessed. During this period mutual aid continued in other ways (see quote

³⁹ Caldera Community Emergency Support Facebook Page, searched for 'fire' in 2019-20, on 21 October 2024. See facebook.com/calderacommunityfiresupport

below), but there was not a lot of energy in Uki village and the surrounding area for organising around floods or fires.



And then what happened? Well, as a community, not a whole heap... because we went straight into Covid. I was personally really excited as a community resilience builder that this was the moment that was going to make the turning point from apathy into action at all levels, at the personal level, from that right up to the national, to the political priority level. And that wasn't to be. It was just put on the back burner from the pandemic. So then it went into food security, everyone started building their victory gardens, and there was a lot of swapping of sweet potato slips, lots of sharing and caring around that, and caring for people who are isolated and sick and those kind of things. But preparing for natural disasters went right to the bottom of the list (19). "

This situation changed with the advent of the 2022 floods, which once more brought organised mutual aid to the fore in Uki village and surrounds. During this period mutual aid built on the connections and structures established in previous years, especially the Uki Flood Group's Neighbourhood System, which had divided up the Greater Uki area into neighbourhoods and streets and appointed leaders for each of those 'pods'. The pre-existence of this system meant that there were already contacts in place to reach out to residents in different neighbourhoods, allowing community members in the village to direct activities around the area whilst allowing neighbourhood groups to 'manage themselves autonomously'.⁴⁰

Despite the previous existence of the Uki Flood Group, and the additional community resilience work done between 2019-2022, there had not been any pre-preparation for running a hub in Uki Village. However, once a village resident had opened the Uki Public Hall, things progressed quickly, with community members beginning to gather to share information and plan collective action. Over the coming days, the Hall became a community recovery Hub, a centre for information-sharing and the distribution of food and donations (see Image 15 below). This was possible on the back of strong leadership of individuals with skills and experience in community organising, most of whom were long-time Greater Uki residents with strong relationships in the community. Some, though not all, of these individuals had been involved with the Uki Flood Group's Neighbourhood System, and those who had not had a history of involvement in local community organisations which meant that they were trusted and known quantities. Local neighbourhood groups functioned independently but were linked in with the hub for support, resources, and information sharing. Having multiple people in de-facto leadership positions at the Hub was both an advantage, as the load did not all fall on one person - and a potential disadvantage, as it could have led to confusion or duplication. However, interviewees reported that the loose structure worked well, with issues being taken care of in a seemingly spontaneous yet coordinated manner.

⁴⁰ Bloor et al, 'Anarchy in the Uki !', p.45.



Everything [except long-term recovery] was catered for and kind of was facilitated by the community. Chinook [helicopter] drops, food, water, like individuals needing a bed or a, you know, donation of clothing or whatever. It was even just strange little situations. It would just be written up on the board and someone would deal with it, so that stuff was coordinated really well. Just that first response, very small local level, literally taking care of people's base needs was really well facilitated... (16). "

Overall, the Uki Hub team seems to have embraced the 'looseness' of their collective and did not presume to be leaders of their community. As Bloor et. al. have observed, 'those who were present in the hall, were the team. Decisions were made by those who were there at the time. The decision-making process was fast, fluid and on-the-fly'. At the same time, some Resilient Uki members interviewed for this study have observed that the Uki Hub was not quite the 'anarchistic alliance' that some have suggested, arguing that it was always 'better organised than that... it definitely was collaborative, a cooperative effort.' (21) Whether 'loose' or 'more organised', the interviews conducted for this case study found a high level of community support for the approach taken by the Hub, and this support, combined with the goodwill and generosity of volunteers, was vital to the Hub's functioning and the success of organised mutual aid in Uki Village and surrounds during the 2022 floods.



Image 15. The Uki Hub in action. Photo credit: Uki CTC.

⁴¹ Bloor et al, 'Anarchy in the Uki !', 45.

With no pre-planning or preparation for running a hub, volunteers in Uki village had to improvise. Volunteers taped sheets of butcher's paper to the outside walls of the Hall, allowing information to be shared as it came to hand: predictions from the SES around water levels, road closures, what food was available, where to find accommodation, etc. With the National Broadband Network (and therefore landline phone lines) down, the mobile network almost completely out, and at this stage no UHF or VHF radio, these sheets of butcher's paper were virtually the only form of communication in the village (see Image 16, adjacent). A loose roster system was implemented to ensure clarity of roles and spread the workload.

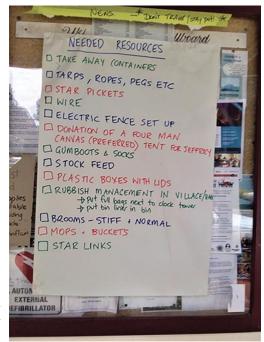


Image 16. Communication via butcher's paper outside the Uki hall. Photo credit:

Uki CTC...

In the hub itself there was an atmosphere of reunion and celebration.



And because we were so isolated and no one could come here, we're quite rebellious out here in the hills, and so we could do whatever we wanted. That was really good. If you wanted to drive around without a seatbelt, you could. Or if you wanted to fix the road that you didn't own, you know, that the State government owned, you could. Or if you wanted to make a little bodgy pump to get fuel out from the underground storage system that was highly dangerous, that could have blown up the whole village, you could, and so on and so forth. People's shackles had gone in all the different ways, it's called the heroic State in the study of emergency management, and it certainly felt like that. It was like a honeymoon period. Even though people were in a hell of a lot of strife, it made them feel really good that they had a purpose. They didn't have to go to school and they didn't have to go to work, and all the deadlines that they had on their shoulders just evaporated. And all the birthday parties and shitty anniversary gigs that they didn't even want to go to, they all of a sudden, they had a free ticket out and they had a job and it was job on and everyone actually really quite liked that (19). "

In the hub itself there was an atmosphere of reunion and celebration (see boxed quote adjacent). One interviewee commented: 'What turned up in that hall, the donations, the people in the kitchen making food [was just amazing]... and it was just after COVID, and what COVID split apart, the flood put back together, really, in the community.' (29) Another interviewee commented on how the collective experience of and effort for the flood healed community cleavages.

66

The interesting thing was, this was conspiracy theory city. There were relationships falling apart over vaccination. There was serious damage socially. That just – puff! – nobody cared. The next day everyone's just hugging and not worrying about COVID at all! (26).

For individuals who had access to the community hubs or operational centres, and took part in the collective effort, this period was energising, even exciting. Businesses worked with community leaders to provide and store food in their cold rooms (whether on retail premises or at their houses), a kitchen was set up where workers were fed, and 'you could stop in and get a hot meal or a cup of tea or a chat at any time'. (19)

The Uki Hub operated for around three weeks, with free meals being made available for another three weeks. A second, less intense, flood four weeks after the first complicated the recovery. By then, the Uki hub had organised UHF radios to be put in place in local communities, so people felt less isolated. While the impact of this second flood was less dramatic, it caused considerable damage to newly repaired driveways, roads and bridges and had a traumatic effect on community members still coming to terms with the first flood, pushing back the timeline for repair and recovery considerably.

The post-fire context and the 2022 floods: Byrrill Creek and Kunghur

After the immediate threat from the Black Summer fires had passed, there was impetus from community leaders in Kunghur and Byrrill Creek to further develop the organised mutual aid that had arisen during the crisis. In early 2020, the Red Cross approached community leaders in both these localities, and as a result, the Byrrill Creek and Kunghur Community-led Resilience Teams were established, bringing a structure to mutual aid activities in these hamlets (see boxed section below on the governance of these groups).

In 2020-21, the Byrrill Creek CRT (BCCRT) focused on recruiting neighbourhood leaders and building relationships with emergency services personnel from the Red Cross, SES and RFS, and started an alternative communications initiative. This involved doing research and testing to find out what sort of radio system (UHF, VHF, or short wave) would be the most effective in the local landscape. During this period the Kunghur CRT also worked to recruit street coordinators and held meetings to plan for future crises. The Kunghur CRT leader co-organised a community resilience day at Clarrie Hall Dam with representatives from the SES, the RFS, St John's Ambulance and the Red Cross. This event raised money for the Kunghur CRT, which was used to purchase a defibrillator, first aid and snake kits.

In the Byrrill Creek and Kunghur CRTs, the governance structure is based on the Red Cross Community-led Resilience Team model (See Figure 2 below). Team and neighbourhood leaders (who receive a half-day training from the Red Cross) have 'buddies' who take over if the leader is sick or away when disaster strikes. The team leader communicates with pod leaders, who then pass information on to their neighbourhood. In Byrrill Creek, information can also be directly disseminated to community members via the 'Byrrill Creek Area Peeps' Facebook messenger group, which one interviewee described as 'very informal and ungoverned'. (1)



Figure 2. The Community-led Resilience Team Network. Credit: Red Cross, 2020.

Throughout the COVID pandemic, leaders from both communities kept working to try to link disaster management services, and information on fire readiness, with the community. This was in some cases difficult, with the community divided and indoor gatherings not allowed. In Kunghur, for example, prior to the COVID pandemic, community leaders had identified that the local Kunghur Hall would be an ideal evacuation hub for the community as it occupies a prime position in this isolated community which can be cut off from the Uki hub by fire or flood. These leaders had formed a Kunghur Hall Action Group, and the Tweed Council had begun to facilitate negotiations with the pre-school, which at the time used the hall. However, when COVID hit they were put on hold. After the 2022 flood, another meeting was held with the council, which resulted in a public consultation. The community overwhelmingly voted for the hall to be a shared space again.

During the 2022 floods, the community at Byrrill Creek was one of the most isolated, spending fourteen days with no power, no landline telephone, no internet, no road access and only very limited mobile network coverage. Organised mutual aid was spearheaded by the Byrrill Creek CRT leader, who had a generator and was one of only three people in the Byrrill Creek Community with satellite internet at their house. This became the centre of communications and organisation hub. With little or limited experience or training in disaster recovery, community leaders had to problem-solve how to get medication for the largely elderly population, how to get food, how to begin clearing driveways and roads, etc. Although the BCCRT had been in place before the flood and many of the community had been surveyed and their needs assessed, there were still many who had not, and so a large part of this organisation relied on internal communications with community members to understand their needs and draw upon their skills and resources. The BCCRT leader was also in communication with Disaster Management Services and other grassroots groups in nearby local communities and received help from them as access was restored.

The Byrrill Creek Community had been impacted by many landslides, broken roads and broken bridges which had been destroyed at the height of the flood. Several of the community members had earth-moving equipment – tractors and bobcats – so were able to clear some of the landslides and do basic road repair allowing access out by 4WD through one end of the community. However, two important linking bridges were out action, the Byrrill Creek Bridge over the Tweed River (Image 17), linking Byrrill Creek to the road to Greater Uki and Kunghur and, an internal bridge over Byrrill Creek linking one part of the Byrrill Creek Community to another (see Image 18). In order for supplies to come in by motorbike, foot or 4WD, rustic repairs needed to be made to these bridges. Working together, residents laid planks of wood across the remaining parts of the internal bridge using ratchet ties to secure them. The resulting crossing was just wide enough for people to walk over in single file.

THE POWER OF NEGOTIATION

Community leaders in Byrrill Creek also had to facilitate a medical evacuation, which involved finding a way out of the community while it was still cut off. A potential route out was identified, but it meant cutting a fence between the properties of two landowners who were not talking to each other. Through negotiation, this problem was solved and the patient was evacuated to hospital. The route was used several more times before it became too muddy The and impassable. landowners were amenable to this; their response, according to one 'Yeah sure, go interviewee, was through them again. We'll work that out later. We'll go back to feuding when it's all over. Which they did!' (26).

Over time, the Byrrill Creek CRT set up a central

supplies hub at an easily accessible location on a property near to the internal bridge. This meant that food could be brought in by motorbike, on foot or by 4WD to the other side of the creek and then walked across the bridge to other 4WDs and be delivered to the hub which was staffed during the day by community members on a roster basis. The hub's location worked well because it could be accessed at any time of day or night without disturbing the property's owners, so that community members who didn't want to go near crowds could visit at night when no one was there, get what they needed and then quietly leave.

Nearby Kunghur, which was cut off from most of the rest of Greater Uki by land slips, also lost power, though for five days rather than fourteen. Mobile phone reception was also down. The local RFS notified the CRT leader that perishable food had been delivered to the hall at the neighbouring hamlet Doon Doon (which was accessible to some people) but there was no way to communicate this to community members. The CRT leader organised mutual aid in the form of community members door-knocking to check in with residents and inform them of the food drop, setting up a couple of people to do shifts at the Doon Doon Hall, which for a time became a proxy coordination hub. Coordination was later moved to a private property with a cold room. The owner lived out of the region but was organising a delivery of meat and vegetables and was happy for his facilities to be used to distribute them. The Kunghur CRT made signs to direct community members to the property, and people came to collect food. However, not having a well-known central meeting place in Kunghur (such as the Kunghur Hall, which was at that time not available to use as a hub) made it difficult for the CRT to coordinate as effectively as it might have.

As the 2022 flood was the first crisis after the formation of the BCCRT and KCRT, this crisis put the CRT structure to the test for the first time in Greater Uki. In both cases the CRT leaders became real figureheads, inspiring their communities, and were well supported by team members. In

Byrrill Creek, CRT leaders received support from EMS points of contact (Red Cross and SES) through existent though unreliable mobile phone coverage and satellite internet. In Kunghur there was no mobile phone coverage or satellite internet, and thus EMS support was not available until phone lines and internet were re-established. During the flood in Kunghur, it became obvious that radios were a crucial part of any emergency response in the area, and also that the area covered by the Kunghur CRT was too large, and it has since been divided into three areas: Kunghur, Mount Burrell and Doon Doon, each with different leaders. In other aspects, however, the CRT system worked well in ensuring continuity and consistency of governance during, and after, the flood. This success derived in part from the fact that both leaders were so well suited to the role – with connections, local knowledge, skills and high energy levels. However, being the sole point of contact, and the sole figurehead, for the group also placed a considerable burden on them, especially given how new they were to the roles.

66

I had no training and just sitting here on comms the whole time with the adrenaline, you know the adrenaline is up here and eating was something... I didn't eat. Somebody else had to cook and eat and put it in front of me because I was too tuned in to trying to service the community during that time (1). "

Burnout was one of the main challenges associated with mutual aid in Greater Uki more generally. In the words of one Greater Uki resident:



turning up every day for a few weeks until actually I couldn't keep coming, like I just... burnt out pretty quickly... I consider myself to be quite resilient to have a big capacity but I was amazed at how quickly it kind of that I needed to pull out or pull back, have some space (20). "

For some of these mutual aiders, burnout was compounded by a form of survivor guilt if they felt they had not been as badly affected by the crisis as others.

The difficulties that organised mutual aid involves for the groups that coordinate it are no less serious. Risk and risk management is similarly a thorny issue, with group leaders



Image 17. Byrrill Creek Bridge. Photo credit: Pam Verness.



Image 18. The makeshift footbridge over Byrrill Creek. Photo credit: Natascha Wernick

having to consider not just the safety of themselves and other volunteers but also the reputational damage that the group could sustain if something went wrong. Another pitfall of organised mutual aid (though only infrequently mentioned by Greater Uki interviewees) is that of managing differences of opinions within groups and negotiating to keep volunteers onside as much as possible. The avalanche of donations, which created extra waste and work in Greater Uki during the floods, were cited by interviewees as another difficulty that mutual aid groups had to manage. Independent groups such as Resilient Uki had the additional challenge of figuring out systems, including how to manage an organic, horizontal structure, and how to avoid duplication or reinventing the wheel in a context where there remains a lack of coordination between agencies and community groups in different geographical areas about how to engage communities. Another important difficulty for mutual aid groups involves funding: its paucity, the enormous amount of work required to secure it, the shortness of the funding cycle, and the fact that it is often not available for what people really need. Attracting and retaining volunteers from a small pool of willing community members is an additional problem. Difficulties such as these, and the stresses of being 'on' 24/7 during times of crisis have a significant impact on leaders.

3.1.3. CONTINUED COMMITMENT AND STRUCTURING MUTUAL AID

After the 2022 floods, community spirit in the Greater Uki area was 'heightened and nicely developed.' (2) Realising that this was an important opportunity, community leaders took advantage of this period to consolidate, evolve and expand their groups. increase their communities' capacity for communication (in particular through the acquisition of UHF and VHF radios) and outreach (through the production of 'Welcome Packs', regular posts on local chat groups and social media, holding regular meetings, etc). On the broader stage, community leaders presented at conferences, were interviewed for radio, television and online video content, and collaborated with academics studying their communities to produce academic and non-academic papers. In addition, they undertook training (and promoted it to other community members) and got involved with local and regional resilience groups and alliances, receiving mentoring from experts in community resilience and mentoring each other and other leaders from around the region.

With the CRT structure already in place, the Byrrill Creek and Kunghur groups in particular, have spent the two and a half years since the 2022 floods building on learnings from recent crises and harnessing the new awareness around climate-related disasters to attract new volunteer members. This is an ongoing project which still requires a considerable input of time (one community leader estimated they now spend an afternoon a fortnight doing community resilience-related work), but not nearly as much time it did previously. Since the floods, the Kunghur CRT has split into three more manageable CRTs: Kunghur, Mount Burrell and Doon Doon. The community is not yet permitted to use the Kunghur Hall as a disaster Hub but it is hoped that permission will be given soon. Both communities now have UHF and VHF radios to improve communication during events.

CASE STUDY: RUKI'S DECISION NOT TO BECOME A CRT

At the debrief meeting at the Uki Hall in March 2022, Uki Flood Group members' previous feeling that they did not want to become a Red Crosslinked CRT was reiterated by a mix of new and old players, for the following reasons:

- out of respect for the history and the work of the Uki Flood Group
- they already had their own neighbourhood system
- perception that some members of the community would be repelled by the Red Cross being a large 'organisation' with its own agenda
- they wanted to remain truly 'community-owned', with the sense of self-determinism that that fosters, and not be 'branded' as a CRT
- they wanted to retain complete independence so that they could act and advocate for whatever their community wanted, and not be limited by the rules and regulations of another organisation

For the 'loose collective' of community members involved with the Uki Hub during the 2022 floods, this has been a period of much more intense activity. The decision to form Resilient Uki (RUKI) was made soon after the Hub closed in March 2022 during a debrief between the remaining Hub volunteers. For a range of reasons (see adjacent case study box), the group chose not to link themselves to the Red Cross' CRT model. Rather, they decided to forge their own path, becoming an incorporated association with a leadership structure and constitution based on the Model Constitution for NSW Incorporated Organisations, with the roles of President, Vice-President, Treasurer and Secretary.

In the two and a half years since the 2022 floods, this structure has allowed RUKI to apply for funding and get grants, organise their money, and become more accountable to the community they serve. Most notably, with the help of a substantial grant from the not-for-profit organisation Healthy North RUKI has rolled out the Coast, 'Neighbourhoods Program', which provided training, developed resources and set up neighbourhood groups in zones around Uki (including Byrrill Creek and Kunghur). The group sees itself as a 'funnel' for outside grant money and financial support and connection for the community rather than a static structure, 'here to facilitate, not do it for people'.

(21) In other words, while it is likely that some members will be involved in responding to the next crisis to hit Greater Uki, the RUKI model is not predicated on this.

AN ORGANISATION TRYING NOT TO BE AN ORGANISATION?

'As a role, we are the enablers, essentially. So [we've] tried to set that organisation up, not to be a de facto agency or a fourth tier of government or any of these kind of things that often these social organisations can become, because that is against the actual principles of what we're about, which is for humans to look after humans rather than organisations to look after humans. So we're like an organisation that's trying not to be an organisation, really. We're all about just building the capacity and the propensity of humans to be connected and kind to other humans and to be able to support each other, to prepare for, roll through and recover from crises.' (19)

KEY CHARACTERISTICS OF ORGANISED MUTUAL AID IN GREATER UKI

- Built on existing community relationships and knowledge (important for practicalities, e.g. having contact details, knowing who lives where) but also for things to run smoothly
- Led by strong, capable community members with passion and experience for community organising
- Supported by a team of capable and compassionate volunteers
- Local associations and businesses were supportive, generous and involved
- Relationships with outside players helped facilitate the flow of information and resources
- Clear, open, communication and conflict resolution / mediation skills were useful
- Particular skills and resources also important but 'necessity is the mother of invention' and people make do
- Simple resources such as butchers paper, notebooks, pens and whiteboards play a big role in helping the community organise
- Pre-existing structures can be helpful but there has to be community buy-in
- Extent of capabilities and impacts of mutual aid was very much dependent upon access and communications, e.g., in the fires, it was possible to call and hold whole-community meetings, and draw on outsiders' experience and expertise, but during the floods local communities were almost entirely reliant on the skills, resources and experiences of those physically present, and relationships and structures already in place
- Having an identified venue from which to coordinate mutual aid was enormously helpful, though not crucial
- Isolation from rules and regulations of society energised mutual aid efforts

CHALLENGES ASSOCIATED WITH ORGANISED MUTUAL AID

- Risks to volunteers
- Risk of reputational damage
- Managing differences of opinion within the group
- Weathering criticism from outside the group
- Figuring out new systems
- Communicating with DMSs
- Duplication or 'reinventing the wheel'
- Difficulties securing funding
- Attracting and retaining skilled but unpaid volunteers
- Stresses on volunteer leaders

3.1.4. WHAT MOTIVATIONS AND VALUES DRIVE MUTUAL AID, AND WHAT ARE ITS LIMITS?

Our findings suggest that in Greater Uki, mutual aid is driven by a combination of a perception of need and a 'thick' understanding of reciprocity which goes beyond transactional exchange. It is limited to some extent by both relational and geographical distance (though this latter limit arises more from the practical difficulties of helping those further away than a lack of identification with distant strangers in need). Here we consider the drivers, and the limits, of mutual aid in both its spontaneous and more organised contexts.

CAUSES DEFENDED BY GREATER UKI'S COMMUNITY RESILIENCE LEADERS

'The cause I'm defending is the revolution... And the revolution is love!'(19)

'I'm defending the cause of kindness and care in a community and our ability to make a difference in our own lives and the lives of each other.' (20)

'My cause is that the recovery needs to be community-led. That's a big one that I've got my flag flying about.' (1)

'The cause that I'm for with everything I do is that we need to be more community minded. And that whatever you do for your community helps the world overall. You can't save everything on the planet, but you can make a bit of a difference. And that will make for more happiness for yourself and others.' (11)

When asked what motivates them to take part in spontaneous mutual aid, interviewees in this study cited the values of community, connection, kindness, relationships, sharing and generosity, alongside others such as selfsufficiency and practicality. Similarly, when asked what cause they were defending, most leaders of all three community resilience groups cited causes related to these values (see adjacent box). And, as we have seen, the link understanding of the community, relationships and mutual aid explicitly informs much of the outreach and engagement work that mutual aid groups in Greater Uki do.

Furthermore, while some Greater Uki residents interviewed for this study did help their family members and friends first, this was not always the case. Here, the idea that people help prioritise the aid that they give through ever expanding 'concentric circles' (representing both relational and geographical distance from the mutual aider) is a useful one, but prioritisation doesn't always proceed simply from the inside out. Rather, mutual aiders tend

to jump between 'circles' based on their own assessment of what is most important (for example in a flood they might take time to reassure their own children first, then secure their neighbours' potentially explosive gas bottles before the waters rise, then work on getting their own expensive work equipment to higher ground). They did this regardless of whether they expected that their neighbours would, or even might, one day be help them in kind.

This said, other community members were motivated by 'civic duty' or 'social service', and saw mutual aid as something they felt duty-bound to participate in. However, despite their use of the word 'duty', these and other interviewees also described their participation in mutual aid as deeply satisfying on a personal level. The most commonly cited reason for this satisfaction was the connection forged by helping others, especially if this involved working alongside other likeminded people. The desire to foster, or strengthen, personal relationships was another motivating factor, as was the drive to escape loneliness or boredom.

Interestingly, only a few interviewees mentioned fear or anxiety about future crises as a motivating factor, and those who did were no less likely to value community or connection. For these interviewees, mutual aid was seen as a 'furnace' which can transform 'negative' emotions such as fear or nihilism into positive action. Finally, a handful of other interviewees mentioned self-sufficiency, or even self-interest, as a driver for their participation in mutual aid, with some linking self-sufficiency to the good of the collective, with the reasoning that if they are well prepared, they won't be a drain on communal resources.

When asked about the values they support, interviewees' most common answer was once again community – a result which corresponds with the belief in community as a motivating factor. Along these lines, connection, kindness, relationships and love were also frequently mentioned. Other interviewees cited civic duty, education, awareness-raising and practicality as important to them, with others still referring to values such as justice, fairness, inclusion and equity/equality. Personal qualities such as integrity, commitment, honesty and responsibility were also invoked. The relationship of these values to reciprocity needs to be further explored, however it is our suspicion that they all do relate back to the 'thick' version of reciprocity outlined above. This 'thicker' understanding of reciprocity is what ensures that mutual aid is not just transactional, or something that happens in the moment and then disappears; it's part of the culture, it ripples out and links back to the community values and activities that happen during peace time. As to where this understanding of 'thick' reciprocity

A PRAGMATIC ARGUMENT FOR CONNECTION

'You need to do these things because this is the way we're going to survive. We're not going to survive on an individual basis. We're not going to survive like the Mad Max movies. It's not going to happen that way. It's just not. The picture is going to be completely different. It's going to be a slow and steady death of a thousand cuts, and it's going to be people coming together to rectify these emergent problems as they happen. That's what's going to happen. It's not going to be a fight for fuel and all the rest of it. I mean, we've seen it. It doesn't happen that way. You need to be connected and you need to be of service. I guess you need to model that and display that. I guess that's my motivation'. (22)

comes from, different interviewees gave different answers. Some mentioned that engaging in mutual aid activities was a deep-seated part of their identity, deriving from their family or childhood local culture. Others linked their commitment specifically to their experiences living in Greater Uki and being supported and nourished by the community there.

In order to foster mutual aid, then, it's not that community leaders or institutions need to instil the value of reciprocity in people because if they help their neighbours then they'll get help from them later. All that is necessary is to encourage people to connect. For this to come about, communities, institutions and government need to value and promote community connection –

a recommendation which is very much in line with the findings of recent research on the need for community connectedness in order to cope with and respond to future crises.⁴²

3.1.5. STAYING MOTIVATED: SUSTAINABILITY AND VOLUNTEER MANAGEMENT

Despite the many benefits of providing mutual aid to fellow community members, there are of course potential downsides. In this context the longstanding commitment of many of the interviewees is noteworthy.⁴³ When explicitly asked whether they had ever doubted their commitment many simply answered 'no'. Others, however, revealed that they had doubted their commitment: some occasionally, and others 'all the time'. Factors that played into this included the large effort and time commitment involved with being part of an ongoing resilience group, and the frustrating nature of interactions with disinterested community members or unhelpful outside institutions. Some interviewees also felt that they lacked capacity due to age or life circumstances. Other factors that de-motivated interviewees included guilt about not being able to do enough, and questions around the 'why' of their involvement.



If everything is really going to go to shit, what can we do anyway? Wouldn't I be better to learn to crochet, do some gardening, play music, be creative? Make the most of this time while we have it? (23). "

In order to counter these doubts many interviewees had well-developed strategies for maintaining their motivation (see table below). These included being inspired by others, getting feedback or thanks from others, taking breaks when needed, prioritising self-care, looking for new/fresh things to keep themselves interested, and building sociability, connection and relationships into the mutual aid work that they do: 'it's about the relationships with the individuals, rather than the organisation' (21). Others reported just 'getting on with things', such as one interviewee who, when asked how they sustain themselves, replied '[I] wouldn't have a clue! Just do it. Don't think about it.' (5).

⁴² Taylor et al, 'Community Experiences', 16.

⁴³ Although it should also be remembered that the snowball sampling used to recruit interviewees will most likely have given us a more committed cohort of interviewees – i.e., people who are still in touch with, or involved with, mutual aid in Greater Uki.

Strategies for sustaining mutual aid work

Planning for relief / Scheduling breaks	Mental / emotional strategies
Having a backup plan.	Prioritising self-care.
Having new/rested people ready to come in and take over from those who are burnt out.	Trying to be understanding of others' strengths and weaknesses.
'Pulsing' – 'softening when things start to get hard, pulling back for a while and then returning to your area of concern once you're able to do so with an energy of calm and detachment.' (23)	Saying no and 'not giving myself too much of a hard time. Knowing that I don't have to do it again.' (1)
	Offloading out of the area, to someone who's not experiencing a crisis
Focusing on emotional rewards	Seeing progress
Joy in getting to see 'the best of humanity'. (8)	Seeing progress Better relationships with Council and other institutions.
	Better relationships with Council and other
Joy in getting to see 'the best of humanity'. (8)	Better relationships with Council and other institutions. Networks and relationships with other people

3.1.6. LEADERSHIP: SKILLS, QUALITIES, EXPERIENCE

Many of the Greater Uki interviewees emphasised the importance of strong leadership in mutual aid. As one DMS representative put it, 'It's really important to have a couple of community champions that push this along because most people are like, I'll let somebody else do that.' (6) So what makes a strong community resilience leader? Interviewees in this study identified a wide range of skills and qualities in their leaders (see Table 2 for the full list).

Qualities	Skills
Confidence	Knowledgeability
Charisma	Organisation / prioritisation
Self-starter	Communication
Mental strength	People management
Inner resources	Delegation
Drive / energy / dynamism	Acknowledgement
Consistency	Negotiation / mediation
Patience and acceptance	Relationship-building
Inclusivity	Networking within and outside community
Commitment	Perceptiveness – seeing gaps and filling them
Good under pressure	Good judge of character
Consultative but directive where needed	Willingness to represent community in wider forums
A peacemaker	Being grounded ('groundedness')
Warmth, sociability and kindness	Analysis and creative thinking – seeing ways forward
Integrity	Self-reflexivity

Tableau 2. Qualities and skills of Greater Uki community resilience leaders

Leaders also need to be supported. As one interviewee reflected, in times of crisis 'there's opportunity for great positive growth. But that involves... leadership in that moment, and those leaders will naturally emerge. But if they're on their own with no assistance, even if that's not even a person, it might just be some words on a website that they can access easily, then that opportunity is missed and you can descend into chaos and community fissuring' (19). This support takes different forms in times of crisis than it does in between crises in periods of relative 'normality'. It also seems to vary depending on the leadership model of the relevant group, if the leader belongs to a group.

From the data gathered for this study, instances of completely spontaneous leadership tended to arise in high-risk situations, with individuals taking action to rescue others from life-threatening threats or prevent threats developing. The qualities common to these leaders were initiative, physical and mental bravery, confidence, the ability to prioritise, and the ability to think and work under pressure. While these individuals generally acted quickly and before community support could be offered, their willingness to continue to step up and provide mutual aid was certainly linked to their perceptions of whether they received support from community after the fact. Such individuals were able to withstand criticism as long as they had some support from other quarters. For example, one leader said 'I just make sure people know me, that I'm known. I'm a known quantity that is valued.' (24)

The support required by the leaders of more formalised mutual aid groups is both broader and deeper. Leaders of all three community resilience groups (the BCCRT, KCRT and RUKI) reported feeling nourished and supported by the care they received from friends, other volunteers and also DMS representatives, both during times of crisis and in times of relative 'normality'.

For the CRT groups, which have a more hierarchical structure, the responsibilities of leadership fell primarily upon the CRT Team Leaders, who were the single point of contact between community and emergency services, and took on a wide range of coordination tasks. During the 2022 flood, CRT leaders received both organisational support from the other members of their team (the Deputy Team leader, neighbourhood and street leaders), but also practical support in the form of domestic support (cooking meals, etc), care, and encouragement to take time off.

Despite the more horizontal organisation of the 'loose collective' at the Uki hub during the floods, much of the responsibility during and after the crisis period also fell on the person who went on to become Resilient Uki's President. This individual was (and continues to be) supported by the other leaders in the group, as well as neighbourhood leaders and other individuals. In fact, three different interviewees described themselves as this leader's 'right-hand person' during the flood. While this person did take on more responsibility than some others, the looser organisational structure of the Uki hub during the flood, and the subsequent formation of RUKI as an incorporated organisation with a President, Vice President, Secretary and Treasurer, seems to have spread the responsibilities of leadership a little more widely than in the case of the CRTs. The result of this is arguably a more even and sustainable support for leadership roles within the organisation. In their interviews, all four members of the RUKI leadership team described the support they offer each other, and the complementary nature of their skills and temperaments, variously praising each other's local knowledge, practicality, positivity, commitment, relationship-building, communication and peacekeeping skills. These relationships nurture and inspire RUKI's leaders, allowing them to sustain their contributions to their community.



Often community groups, or communities or individuals or households aren't interested in preparing for climate change... or it's hard for them to allocate resources... so they don't prioritise it. But that shifts once the crisis is upon them... and that is a really positive, potent and important time. And because I had already had an interest... I was well placed to capitalise on that shift in energy and the shift in focus and... put some things in place to be able to utilise that energy (19). "

In addition to being nurtured by their supporters, Greater Uki's leaders also work hard to support those with whom they work, and some leaders spoke quite openly of the strategies they use to

attract volunteers, and to keep them motivated. These included acknowledging and thanking volunteers, pairing volunteers with co-workers they are likely to connect with and giving volunteers the opportunity to contribute in ways that interest them. On the flip side, Greater Uki's leaders also reported the importance of being aware of people's energy levels, especially during crisis times when they found themselves monitoring volunteers' stress levels and stepping in before people 'lose it'. If volunteers do burn out, leaders work to support them to take time off and then, once they are ready and willing, to come back to the work in stages.

3.1.7. FUNDING FOR ORGANISED MUTUAL AID

Before the 2022 flood, the various community resilience groups of Greater Uki had not done much fundraising or applying for funds through formal grant applications for their own equipment or projects. The 2022 flood made obvious the gaps in skills, resources and community connections, prompting community leaders to reach out to funders (both government and independent) to fund not only their communities' recovery, but also to prepare their communities for future crises.

In the post-flood context, there was, for a time, a wide variety of grants available to community groups such as these. As one interviewee put it, 'All of a sudden there's just money everywhere. And not just for the SES, for all these community groups' (22). Over the past two and a half years, Greater Uki's community resilience groups have applied for and received money from a range of sources.

SOURCES FOR FUNDING

- Community fundraising efforts
- Help in kind from local organisations (e.g. UKIRA)
- Funding bodies associated with State or Federal government (e.g. Healthy North Coast, or the NSW Reconstruction Authority)
- Disaster Management Agencies such as the Red Cross, SES and RFS, who have their own sources of funding
- Independent funding bodies (CVA, NRCF, FRRR)

FUNDED PROJECTS SINCE 2022

- Resilient Uki's 'Neighbourhoods Project', which built community connection in neighbourhood precincts, identified and supported neighbourhood and street leaders and developed resources for them. It also included a major update to the RUKI website
- CB, UHF and VHF radios for communications networks around the Greater Uki area
- A resilience trailer

While government-linked sources have provided large grants for the groups, some interviewees observed that non-governmental authorities such as Healthy North Coast were more understanding of onthe-ground needs.

This said, interviewees expressed frustration that even though their volunteer work takes up a significant proportion of their time, and interferes with paid work, there are generally no funders ready to contribute to paying volunteers. Over time, these groups have built up a body of knowledge on what does and does not work in securing funding.

66

That's why I love NRCF and FRRR, because these non-government authorities, you know, the fact that Healthy North Coast got this funding from state, and then the state said, no, there's no more funding for your area, and they actually spend a million bucks of their own budget on supporting, I thought was really good (21). "

What works

1. Collaborative learning and knowledge sharing

- Communities learn from each other's funding successes, comparing notes, creating templates.
- Cooperating on grant applications strengthens collective knowledge.
- Evidence and research help communities make strong cases for funding when opportunities arise.

2. Resource mobilisation

- Leveraging community members with specific skills (e.g., grant writing) for formal applications.
- Informal requests for help at key moments, such as post-flood appeals.

3. Strategic and incremental goal achievement

 Achieving goals in a piecemeal fashion (e.g., securing different funders for specific needs like RUKI's radios).

4. Transparency and accountability

• Maintaining transparency in financial matters by keeping key stakeholders informed about spending.

5. Building strong relationships with funders

• Developing positive relationships with funders leads to greater flexibility in the use of money, especially when grantors understand the evolving needs of communities.

Interviewees also described a wide range of problems with the current funding landscape, and funding for community resilience groups more generally.

Problems with the current funding landscape

1. Funding challenges

- Not enough money in cash-strapped communities.
- Competition with other groups.
- Short timeframes to spend money, leading to inefficiencies.
- Uncertainty in new areas, leading to potential waste.
- Finite resources: concerns about long-term sustainability when funding stops.
- Ongoing funding difficult to secure for resources.

2. Administrative burdens

- Labour-intensive process to get loans, grants and insurance.
- Communities avoid follow-up funding due to effort required.
- Insurance difficulties.

HARD-TO-FUND PROJECTS

- Insurance for members of community-led resilience groups
- Commonly expressed opinion that the SES and the RFS 'need more funding' (16, 17, 14)
- Waste management in disaster recovery
- To install A/C to make the Uki Hall into a cool space as a refuge in heatwaves
- Financial support for volunteers who give up their paid work to contribute

3. Misalignment of funding and community needs

- Funding does not align with community priorities.
- Institutions receive large amounts of money without transparent distribution.
- Lack of targeted funding for key needs.

4. Limitations of recovery programs

- Recovery programs have limited two-year timeframes, while recovery often takes 5-10 years.
- Limited support from Reconstruction Authority for key areas (e.g., Greater Uki not included in map for new builds).

5. Need for broader support beyond money

- Communities need more than financial support.
- Belief that funding should not be the primary goal.

3.1.8. COMMUNICATION AND OUTREACH

Communication and outreach are crucial for the facilitation, and the development, of mutual aid in Greater Uki. This is true at the level of spontaneous mutual aid, where posts local Facebook groups prompted individuals to drop whatever they were doing at the time to go and help save lives or houses in the floods and the fires. It is also true of more loosely organised mutual aid, where homeowners whose houses were threatened by the fires sent out calls for help on existing neighbourhood WhatsApp chat groups. And it is also true of the organised mutual aid groups in the area, who regularly use social media channels to communicate within their teams and with the outside community.



Image 19. Byrrill Creek Bridge. Photo credit: Pam Verness.

DIGITAL MUTUAL AID COMMUNICATION CHANNELS IN GREATER UKI

- Internal resilience group WhatsApp and Facebook messenger groups.
- Local (closed) WhatsApp and Facebook messenger groups (e.g. street groups, neighbourhood groups like Byrrill Creek Peeps).
- Resilience group Facebook pages (e.g. Byrrill Creek Community-led Resilience Team page).
- Local community Facebook groups (e.g. The Original Uki Community & Social Group, Uki Community News and Social Group, Friends of Byrrill Creek).

These groups also provide information and updates to their communities (and beyond) through community Facebook pages, the Caldera Community Emergency Support Facebook page, and their own webpages and Facebook pages (see Images 19 and 20).



Image 20. Page Facebook du CRT de Byrrill Creek, facebook.com/BCCRT

Greater Uki also has a healthy range of traditional communication channels, including multiple well-used noticeboards in public places, the Uki News newsletter of the local Residents Association (UKIRA) (see Image 22). The Community Technology Centre also produces other publications which are important sources of information and community building for the community, including a range of flyers and a Community Resilience Calendar (see Image 21). Another important method of communication and outreach are the information stalls at Community Resilience events, like the Uki Stomp, or the Crams Farm Information Day. Coorganised by local resilience groups, these events featured stalls from the DMSs, information on mutual aid in the area, and opportunities to meet and chat with local community leaders.

In conclusion, both online and traditional communication channels play a role in promoting mutual aid and the emergence of a shared identity.



Image 22. The Uki News, produced by UKIRA.

- Community notice boards
- Information flyers available at the Uki CTC
- Uki CTC Community Resilience Calendar
- Regular community events (e.g. markets)
- Irregular community events (e.g. the Uki Stomp, Crams Farm Resilience Day)
- Community meetings in times of crisis
- Word of mouth

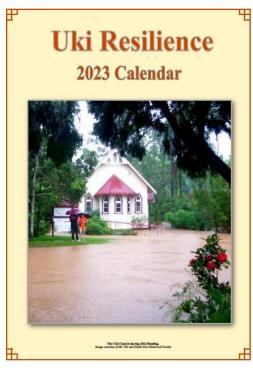


Image 21. 2023 Uki Resilience Calendar, produced by the Uki CTC.

3.1.9. COORDINATION BETWEEN MUTUAL AID GROUPS, AND WITH OTHER COMMUNITY ASSOCIATIONS

While the primary form of mutual aid considered in this study is that between individuals and individuals, or individuals and groups, another level of mutual aid – that of groups helping other groups – also exists in Greater Uki. This can take many different forms: direct responses by one group to calls for help from another; passing on requests for help to third parties who have communicated their ability to assist; or the establishment of networks, hubs or alliances between different resilience groups. Here we consider some of these forms as they emerged in Greater Uki, both in times of 'normality' and in times of crisis.

During the 2019 fires, and to an even greater extent during the 2022 floods, local resilience groups worked together to share information coordinate external aid. Leaders and communicated regularly and supported each other 'by shuffling donations and volunteers', and passing on requests for, or offers of, help. In one such instance during the 2022 flood, the Uki hub referred an offer of assistance from 'the Bentley Crew' - a group of volunteers from a town in the region – to the Byrrill Creek CRT. At the time, the help wasn't needed, so the BCCRT turned down the offer. However, only minutes later they were informed of a lorry drop of food at the broken Tweed Bridge that would need to be trekked into Byrrill Creek over the broken bridges and landslides. The BCCRT therefore contacted the Uki hub again, who passed on the message, and the food was ultimately

LOCAL AND REGIONAL NETWORKS/ALLIANCES

Tweed Community Resilience Network: Under the auspices of the Tweed Shire Council, this group includes local resilience groups within the Tweed LGA, DMS personnel, and representatives of local businesses.

T-hubs: A collective of community resilience groups within the Tweed Shire which focuses on mutual support and knowledge sharing 'so we're not doubling up'. (19)

The Northern Rivers Community Resilience Alliance: Under the auspices of Resilient Lismore, this group brings together community resilience groups from the seven LGAs of the Northern Rivers region to share knowledge, skills and training, advocate collectively, foster peer support and source funding.

The Community **Carers** and Responders (CCR) **Network:** Established in 2021 by Plan C for graduates of their 5-day CCR training. this group connects CCRs from across the region, enabling them to support each other, share information and collaboration on foster projects, funding applications and more via WhatsApp and Facebook groups.

delivered to Byrrill Creek by the Bentley Crew. During the recovery phase the BCCRT, KCRT and RUKI all also received support from the Murwillumbah Hub (run by the group later to incorporate as Murwillumbah CORE). These alliances with other communities fostered a sense of connection within the Greater Uki area and beyond. In the words of one community member, 'that sense of unitedness that we had with our neighbours then expanded and expanded and expanded as the days went past to include further and further away areas.' (19)

Support from local community organisations was also a feature of mutual aid in Greater Uki, especially in Uki Village, which is home to most of the formal associations in the area. During both the 2019 fires and the 2022 floods, the Uki Hall Committee made the Hall available to be used as an evacuation centre, or more informally allowed it to be opened up as a place for stranded travellers to sleep. When a local comedian raised money for a Starlink satellite internet

connection for Uki Village during the aftermath of the 2022 floods, the Uki Hall agreed that one could be located there. Connections with other regional organisations such as the resilience not-for-profit Plan C also supported mutual aid, with one community leader reflecting that Plan C's CEO was 'a big help back then to me, just even just giving me perspective because he's such a veteran, because you do lose the forest for the trees'. (3)

In the times of 'normality' that occurred after the fires, and even more significantly after the floods, collaboration between mutual aid groups, and with other local organisations, has flourished. One important way that mutual aid groups now help each other is through local networks and a regional alliance that have been established to provide peer-to-peer support and help with planning, information-sharing, advocacy and sourcing funding. Of course, different communities have different needs, so a 'one-size-fits-all' approach is never going to work. But many interviewees spoke favourably of the advantages of sharing experiences and information, pooling resources and being able to speak with a collective voice where necessary. The challenge, as one community resilience leader put it, is 'working out how we maintain that unity, but have enough flexibility for that diversity as well. But I do... think it's happening, which is really heartening' (3).

Other forms of collaboration between resilience groups in Greater Uki have been more at the practical level, building on the strong relationships between the leaders of Greater Uki's three local resilience groups, who catch up regularly. For example, Resilient Uki was able to use some of its funding for UHF radios to provide the BCCRT with a UHF base station to communicate with Uki in times of crisis. CRT leaders in Byrrill Creek and Kunghur meet regularly with RUKI's leaders, and have provided mentoring to each other and other local groups. In addition, both the Byrrill Creek and Kunghur CRTs were involved with the RUKI Neighbourhoods Project, which held local get-togethers, produced resources and offered training for Greater Uki residents.

In the village of Uki, strong relationships between Resilient Uki and local organisations have meant that the collaboration observed above in times of crisis has deepened and broadened in the aftermath of the 2022 flood. In addition to collaborating with the Uki Hall Committee and the Community Technology Centre (see adjacent box), Resilient Uki are looking to consolidate insurance cover with these and other local associations to save all parties a proportion of the substantial cost of insuring their activities. During this period, RUKI has also helped advocate for the local football club to get their facilities back online, helped a local caravan park with telecommunications, and are holding conversations with local schools on what role they might play in future crises.



Often government doesn't prioritise social capital in recovery. It's more 'let's fix the roads or whatever', but [the football club] is one of the main hubs of our community and the meeting places and to bring things back to normality meant getting the footy club back online. So that took a bit of advocacy. We got there in the end (19). "

This cooperation between resilience groups and local organisations is facilitated by strong relationships between the individuals involved. Many of these people are on multiple committees; as one interviewee observed, 'it's the same people in every bloody club'. (16) While this can place a burden on the individuals involved, it also helps people work together: 'we all... know each other as friends rather than as organisations'. (19) Some married couples in the Uki community spoke of joining different committees strategically so that they could 'spread themselves around' to further the cause of community resilience across a number of local organisations. Finally, mutual aid groups in Greater Uki have also continued to build links with regional organisations since the 2022 floods. This has included doing radio training with Citizens Radio Emergency Service Teams (CREST), who are organising radio systems in the Northern Rivers. Another important support for a number of interviewees from Greater Uki resilience groups has been the Community Carers and Responders (CCR) training, which has been offered in the Northern Rivers region since 2022 by Plan C. Six of the interviewees took part and in their interviews spoke of the strength of this training, especially its focus on response as well as the broader themes of self-care, community resilience and regeneration. Initiatives like the CCR network continue to offer opportunities for training and connection.

COLLABORATION BETWEEN RESILIENT UKI AND LOCAL ORGANISATIONS IN TIMES OF 'NORMALITY'

The **Uki Hall Committee** allows RUKI to meet there free of charge; allowed RUKI to take custodianship of the hall's generator so it could be maintained; and allowed them to organise getting Starlink internet and an emergency power supply at the hall. The hall has also appointed a new 'Community Resilience Officer' to help further this joint vision. In return, RUKI is advocating with the council to improve the resilience of the hall's infrastructure so that it can go completely 'off grid'. RUKI and the Hall Committee are also working together to get funding for air conditioning in the hall so that it can become a refuge in heatwaves.

The **Uki Community Technology Centre** provides printing to RUKI free of charge, and also produces an annual Uki Resilience Calendar which promotes RUKI activities. In return, RUKI is looking into ways of supporting the CTC to become more of a community hub so that they can better serve the community and attract more volunteers.

3.2. THE DYNAMICS OF MUTUAL AID OVER TIME

One of the assumptions of the mutual aid project is that the dynamics of mutual aid and the people involved vary according to the timeframe of the crisis. Its initial methodology hypothesised both that 'the aid provided in the first response is essentially the result of the dynamics of mutual aid', and that 'the longer a crisis lasts, the more the dynamics of mutual aid are eroded'.⁴⁴ As the Greater Uki case study is a study of compounding crises, we can test this hypothesis to some degree by comparing the dynamics of mutual aid for each of the crises in turn (see sections 3.2.1 and 3.2.2., and in particular Figures 3 and 4 below). Finally, we consider the dynamics of mutual aid throughout the compounding crisis period of 2019-2022 in order to explore the effects of multiple successive crises on the development and sustenance of a culture of mutual aid. We consider these results in conversation with insights from our interviewees around their opinions of the impact of multiple compounding crises on mutual aid in Greater Uki.

3.2.1. THE DYNAMICS OF MUTUAL AID BEFORE, DURING AND AFTER THE 2019-20 FIRES

Before the 2019-20 bushfires, Greater Uki had a strong history of spontaneous mutual aid, based on the area's culture, history and the frequent occurrence of floods and power outages. In Uki village and surrounds, there was also a history of organised mutual aid and disaster preparation through the Uki Flood Group, but it was not very active at the time and it was not envisaged to help community cope during fires. In addition, the residents of Greater Uki were generally not well prepared for fires, and especially not for fires of this scale and intensity. This lack of preparation, and the lack of organised mutual aid around firefighting and preparation, is represented in Figure 3 by the lack of an orange line pre-October 2019.

As previously established, the first fire of Greater Uki's fire season, the Mt Misery fire, came on quickly in August 2019 (thus we describe it as a 'sudden unanticipated crisis'). During the Mt Misery fire, local residents acted spontaneously to help each other (represented by dark blue crosses in Figure 3), and vertical aid was provided by the RFS (represented by the orange line). After the threat of the Mt Misery fire had passed, the area experienced a period of relative calm, but with the threat of fire all around. Thus, we refer to the crisis as only 'partially resolved' (represented by a green line). During this time the RFS were on call and consulting with community members to help them prepare their homes (the orange line continues to be active). When the Mt Nardi fire moved closer to Greater Uki and began to threaten homes in the area in mid-November, spontaneous mutual aid once again sprang into action (represented by more dark blue crosses). Vertical aid (the orange line) was also ramped up, with the RFS fighting fires,

⁴⁴ Groupe URD Mutual Aid Project Methodology, p.9.

the SES assisting with doorknocking and the Red Cross opening an evacuation centre in the Uki Public Hall. At this later point in the fire season, however, RFS resources were much more stretched, so the Mt Nardi fire front in Greater Uki did not receive as much attention as the Mt Misery fire had. The higher orange line for this second fire thus represents the greater collective efforts of all DMSs in Greater Uki at this time rather than a greater official firefighting effort. At this point mutual aid in Greater Uki (represented by the turquoise line) began to become more organised, with the owners of threatened homes organising friends and neighbours to help them fight fires on a rostered basis. In addition, community leaders began to instigate more formal types of mutual aid, calling a community meeting and briefings which led to the setting up of the Caldera Emergency Facebook group and the six other action teams, which helped people prepare their properties, provided food and shelter for evacuees, etc. This organised mutual aid continued at a similar level until the fires were extinguished by sustained rain on 18 January 2020.

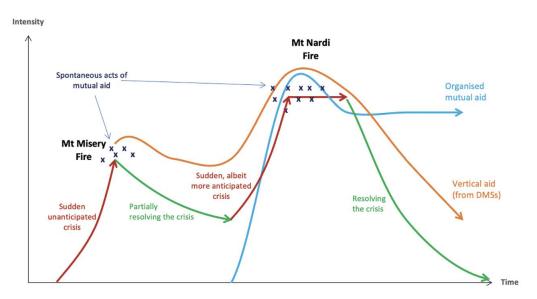


Figure 3. The dynamics of aid and mutual aid during the 2019-20 fires in Greater Uki 45

After the 2019-20 fires, organised mutual aid around fires and other hazards continued in the form of the Caldera Emergency Facebook Group, although the other subgroups formed in November 2019 dropped off as the KCRT and BCCRT formed, and the impact of COVID hampered resilience-building efforts in Uki. During this period community leaders throughout Greater Uki continued to encourage residents to prepare for potential future fires and other emergencies and get organised around collective action. Meanwhile (as already mentioned), community leaders in Kunghur and Byrrill Creek were approached by the Red Cross to form Community-led Resilience Teams. At this time community leaders in Uki were also in conversation with/working with the Red Cross but needed to figure out what form they wanted their community resilience group to take. As observed above, all communities struggled with the social isolation and regulations of COVID-19.

⁴⁵The scale of this chart (and similarly figures 4 and 5) is not based on a quantitative measure of the intensity of the crises or mutual aid but is rather a visual representation of the stories that interviewees told about their and others' experiences, and involvement over the period, to help show how these phenomena are interlinked.

Summary of findings on the dynamics of mutual aid during the fires:

- The aid provided in the first response was the result of a combination of mutual aid and vertical aid, not 'the dynamics of mutual aid' alone.
- In the relatively short-lived crisis of the Mt Misery fire spontaneous mutual aid continued unabated. After it was resolved, all except the most impacted went back to their 'normal' activities.
- Spontaneous mutual aid seems to have continued throughout the several months of the more extended crisis of the Mt Nardi fire.
- Similarly, organised mutual aid, which arose at the peak of the Mt Nardi fire crisis, also continued unabated until the threat from the fire was removed.
- This example does not therefore provide support for the hypothesis that the dynamics of mutual aid are eroded the longer a crisis lasts, which is neither proven nor disproven by this example. However, given that neither crisis lasted for a very extended period this may not be a significant result.

3.2.2. THE DYNAMICS OF MUTUAL AID BEFORE, DURING AND AFTER THE 2022 FLOOD

Before the 2022 floods residents were moderately well prepared (and much better prepared than they had been for the fires) due to the regularity of floods in the area. Initial flooding in the week up to February 2022 was at 'normal' levels for Greater Uki, and thus we call this a 'slow kinetic crisis'. Organised mutual aid at this time (represented by the turquoise line) was moderately well developed in Greater Uki, with the CRTs in Byrrill Creek and Kunghur having made good progress networking their neighbourhoods and preparing their communities for coming floods (though there was still a long way to go with training for leaders and members, gathering resources, etc). Similarly, the prior existence of the Uki Flood Group / CAT team in Uki meant that there were knowledgeable community leaders with experience and some training already present in the Uki community, plus the Neighbourhood system which, although it had fallen into disuse, could be reactivated. During this period the DMSs (represented by the orange line) provided Greater Uki community leaders with information on weather forecasts and leaders in turn communicated creek and river crossing heights.

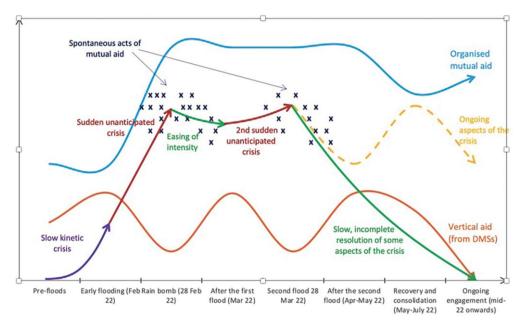


Figure 4. The dynamics of aid and mutual aid during the 2022 floods in Greater Uki

The intensification of flooding and landslips that followed the 'rain bomb' of 28 February 2022 exceeded all previous experiences. We have thus categorised this event as a 'sudden unanticipated crisis' (represented by the first red arrow). Even before 28 February, there was an enormous spike in acts of spontaneous mutual aid (represented by the first cluster of dark blue crosses) with residents all over Greater Uki helping each other to move cattle, horses, caravans and cars to higher ground, and offering accommodation. During and after the 28 February 'rain bomb' these acts continued, with residents helping each other to move dangerous items such as gas bottles, opening up the hall for refugees on an ad hoc basis and in some cases saving each other from flood waters. However, at this time many people were isolated from others and unable to communicate or receive information, and therefore focused on self-help. As the flood waters started to recede, and people were able to venture out of their houses, a second spike in spontaneous mutual aid actions took place (represented by the second cluster of dark blue crosses), with residents checking in on each other and providing food, shelter, refrigeration, washing machine facilities, and sharing resources such as fuel, internet access (for those who had a satellite internet connection) and generators.

At around this time more organised forms of mutual aid (represented by the turquoise line) began to arise and evolve, with the setting up of hubs, the identification of areas of need and the organisation of resources and volunteer labour. Despite the considerable communication challenges at this time, all three hubs found ways to get in contact with the DMSs to ensure a smooth two-way flow of information, organised check-ins with community members (especially those with vulnerabilities or who lived in low-lying areas) and started to coordinate the delivery of necessary items such as food, fuel, generators, etc. During this period, as observed above, the only DMSs which could provide on-the-ground help were the Kunghur and Uki RFS brigades; the SES and Red Cross assisted remotely by providing information, some coordination, and support for leaders.

As the DMSs gained access to the area their ability to assist increased, as represented by the uptick in the orange line at this time. Initial efforts were limited to the RFS, but later the SES and the Army also became involved. At the same time, more organised forms of mutual aid continued unabated in Greater Uki, with the hubs at the Uki Public Hall, and in Kunghur and Byrrill Creek

continuing to operate. Spontaneous mutual aid during this period also continued, but at a lesser rate of intensity as many residents had to go back to their jobs and other commitments. With the advent of the second flood on March 28 there was another uptick in both spontaneous and organised mutual aid (represented respectively by the dark blue crosses and the turquoise line). Once again, during this period the DMSs were cut off and thus less able to help, though for a shorter time as this second flood was less severe.

Approximately two weeks after the second flood, spontaneous mutual aid began to fall away as people once again returned to their normal lives. At this time organised mutual aid also entered a less intense phase (as represented by the turquoise line continuing at a lower level of intensity). In Uki village, the group of people who had been involved at the Uki Hub met and decided to form an incorporated group (which became Resilient Uki and built on the structure of the Uki Flood Group/CAT team). Similarly, the BCCRT and KCRT made use of this time to consolidate their place in their communities and take stock of what had worked and what had not. For all three groups, the following months were a time of planning for the future, identifying gaps in their resources and training and further building relationships with DMSs. Community leaders also took time out to rest so that they could continue their work in a more sustainable way. During this period fewer people were actively involved but there was still a critical mass in all three communities, and plenty of outreach to keep residents engaged and even draw in new volunteers.

Since the middle of 2022 some aspects of the crisis have been resolved during this period (represented by the green line), others continue (represented by the dashed yellow line). During this period organised mutual aid in Greater Uki has continued to consolidate, which is represented by the slight uptick in the continuing turquoise line. As covered in Section 3.1.8, mutual aid groups have applied for and received funding for resources and programs, including a large grant which allows the Neighbourhoods Project to be rolled out across the area. This Project has allowed all three groups to expand their reach in their communities – attracting new participants (including people who have moved to the area since the floods) – and consolidate relationships with existing volunteers. Throughout this time, some volunteers who had been very active during the flood and had experienced burnout afterwards were able to take time off to rest and rejuvenate, and many of these people have since returned to the work.

Summary of findings on mutual aid and the floods:

- Immediately after both floods, acts of spontaneous, and then more organised, mutual aid constituted the first response to the crisis, thus providing support for the hypothesis that the first response is one of mutual aid.
- In the acute phases of both the floods spontaneous acts of mutual aid continued unabated, but eroded once access had opened up and people went back to work and other responsibilities.
- Organised mutual aid, however, continued at a fairly consistent level throughout the crisis period, only abating at around two weeks after the second flood.
- After a period of rest for some community leaders, organised mutual aid groups channelled their energies into new projects and planning for future disasters.
- The relatively short period of crisis in the case of both the floods neither supports nor disproves the hypothesis that mutual aid is eroded the longer the crisis lasts.
- The data does, however, suggest that communities like Greater Uki which have a well-developed culture of mutual aid, and mutual aid mechanisms in place, might have a better chance of avoiding the proposed 'erosion' of energies during and after a crisis.

3.2.3. FOR THE SERIES OF COMPOUNDING CRISES

Looking at the events in Greater Uki during the period 2019-2022 as a series of compounding crises allows us to make some further observations around the dynamics of mutual aid. Taking the timeline back to 2014, as in Figure 5 below, makes this pattern even clearer. While Uki (orange line) and Byrrill Creek (dark blue line) each had their own trajectories in the development of grassroots organisation around floods and fires, the dotted turquoise trendline in the middle of the two shows how organised mutual aid in Greater Uki as a whole surged during and after each successive crisis: starting with the formation of the Uki Flood Group / CAT in 2014 shortly after the 2012 and 2013 floods; then again after the 2017 flood; during and after the 2019-20 fires; and during and after the 2022 flood.

While the COVID period (2020-21) was a period of growth in mutual aid around floods and fires for some communities, for others the development of grassroots action was stymied by government restrictions, social fragmentation and fears around the spread of the virus. 46 If we focus solely on climate-change related disasters, however, a clear pattern emerges: of mobilisation during a crisis event, consolidation after, and then perhaps a slight dropping off in engagement as we move further away from the event. With each successive crisis, the level of organisation and engagement around mutual aid has grown, with individuals and groups able to build upon the systems established, and connections made, after previous crises. In addition, we can observe for the case of Greater Uki, that over time the 'dropping off' in between crises seems to be becoming less as groups consolidate their structures and become more embedded in the community.

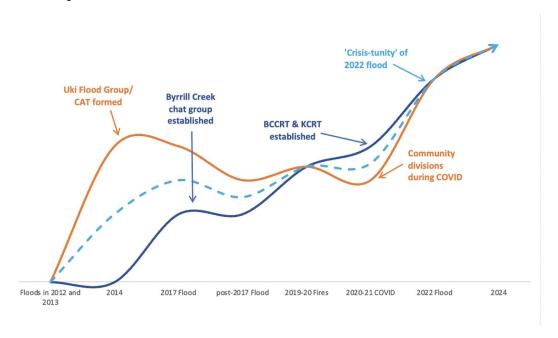


Figure 5. Key events in the development of Mutual Aid in Greater Uki

This analysis was supported by data from the interviews. When asked directly about the impact of the series of compounding crises on mutual aid in Greater Uki, a majority of interviewees gave

⁴⁶ It should be noted that this study has not considered the phenomenon of mutual aid directly related to the COVID pandemic during this period, rather it has focused on mutual aid around preparation for, and acting/organising during, climate-related disasters. From the interviews, there is evidence of considerable COVID-related mutual aid in the Greater Uki area during 2020-2021. However, as observed above both the restrictions around COVID and its social effects did make the context for community discussions and organisation around climate crises more difficult to navigate in some localities.

the opinion that it had led to a stronger culture of mutual aid in between and during crises. This was in part due to the fact that crises in Greater Uki often isolate small pockets of community together for extended periods, leading to increased social connectedness and mutual aid. As one interviewee noted, 'some streets have really become more cohesive' (17). Others observed that since the series of crises Greater Uki has had a 'friendlier' culture more generally, leading to better connections with the community for newcomers who have become involved. Building on this last point, several interviewees observed that the series of crises has not just helped to strengthen existing friendships and communications in Greater Uki, but also helped residents of the Greater Uki network to broaden their sense of community and to reach out to people they did not previously know. For people not in organised mutual aid groups, the series of crises led to opportunities to meet neighbours and form relationships that facilitated, or will in the future facilitate, acts of spontaneous mutual aid.



I think we're more likely to help each other [since the 2022 floods]. I think we're much more comfortable in checking in and just seeing if people are okay. I think it's brought us more together as a community.... It really showed everybody's strengths. And so now we know what [their] strengths are [and] who to ask for [this] and who to ask for that (1). "

Many interviewees commented on how the series of compounding crises had acted as an important "motivator" for the formation and continuation of organised mutual aid groups in the area.



The series of crises we've experienced] have just given opportunity for the latent mutual aid sitting in people's hearts, a place to be expressed, and I think it builds upon itself. So the response to the '22 floods was built upon the response to the fires, which was built upon their response to the '17 floods. And I think all things going according to plan, that as more and more disasters come our way, that... mutual aid muscle will be getting stronger as it gets used more. Just like going to the gym (19). "

Many interviewees commented on how the series of compounding crises had acted as an important "motivator" for the formation and continuation of organised mutual aid groups in the area. For example, the series of crises was seen to have 'stimulated... the development of the Resilient Uki Group' (7). In the words of one interviewee, the crises that Greater Uki has experienced over the past five years have "helped develop community. At times of crisis people who maybe don't normally even talk to each other or know each other come together and you get a coalescence of engaged people." (21) An important part of the development of organised mutual aid has been the creation of better links with the DMSs and hardware, systems and processes in place so that when a disaster hits, community can communicate and coordinate with DMSs effectively. The prioritisation of these links was also seen by several interviewees as a direct result of the compounding series of crises. While some community leaders were confident that they had already put sufficient mutual aid mechanisms in place to ensure its sustainability, others expressed the opinion that the next major crisis would be the 'tester'.



And once people have experienced, oh thank God we've got the hall, we're now better organised, we've got a central point, we've got communication, we've got coordination, that will be when you'll start to really see it happen (11). **

Another effect of the series of compounding crises is that Greater Uki residents have become more aware of the need to prepare for crises in 'times of normality', based on the understanding that crises are becoming increasingly severe, and that they can't rely on DMSs to help them. This observation was supported by two local government employees interviewed for the study, although it was pointed out that there are no metrics or data around those indicators.⁴⁷ Several interviewees expressed the opinion that the series of compounding crises had prompted better preparation as people finally acted on threats they had previously disregarded. In addition, the compounding crises have led to increased support for vertical aid, encouraging residents to join the RFS and the SES.

This said, a small minority of interviewees thought that the series of crises had not changed the culture of mutual aid in Greater Uki. One of these interviewees also mentioned the negative effects of the series of crises on mental health.⁴⁸



I don't think it's affected the culture. It might have connected a few groups of people, awareness has been raised. But it's sort of out of sight out of mind. When we get a weather event coming in people start freaking out, with PTSD, but generally it's business as usual (25). "

Another interviewee made the point that different people react differently to crises, and indeed to a series of crises. For example, while the series of compounding crises in Greater Uki has led to stronger relationships for many, this has not been the case for all residents.



Some people embrace those opportunities and other people will never... you've just got to know who those people are so you can... respect their space and reach out in crisis. (17) **

Interviewees also observed that the nature and the timing of crises experienced by Greater Uki were crucial in determining their impact on the community. One interviewee noted that while

⁴⁷ This is an important point. However, the qualitative data on which this study is based does show significant support for the notion that the series of crises have led to an increased community desire to better prepare for future disasters.

⁴⁸ The mental health crisis triggered by the series of compounding crises in Northern NSW is a prominent feature of scholarship on the crises. See, for example, McNaught et al, 'Innovation and Deadlock'.

there was more motivation in the community now than prior to 2019, they had "also found that as soon as this crisis is over the interest drops off and it's very hard to keep that interest going. Because you probably need a really core group of motivated, the right personalities to keep it going." (11)

Another important point around timing is the potential for complacency to set in if crises are spaced too far apart. One interviewee noted that it was only when they had experienced two major floods five years apart that they acted on a known potential issue with their house.



You can get complacent, between years of floods... Like I've been in my house 30 years, [and] the first 22 years [the water] never came under the house. In 2017 it came under the house, and this last flood even more... We've got concrete under our house now! 30 years and two floods, but... we've done it now! (29) "

On the other hand, if crises were spaced too closely together this could lead to overwhelm and burnout. For example, one government employee interviewed for the study who lives outside of the Northern Rivers region observed that when crises come too close together mutual aid is not sustainable.



This stuff is just happening faster, quicker, more severe and like the system is almost like... Have you had a baby? You know when you go into transition and [the contractions] start coming on top of... each other. It's like that now. Like it's just coming so fast. And I think like, I look at these councils down [in Southern NSW] and I look at my team, we've done 3 recoveries in eight months. People just aren't getting on top of what they need to get on top of before the next one kind of comes. And I think that's just not sustainable (8). "

So, what is it about the timing of crises in Greater Uki between 2019-2022 that has made them conducive to the growth of mutual aid in the area? Certainly the spacing of the crisis events during this period seems to have given residents enough time to rest in between crises whilst still being close enough to foster a sense of urgency amongst the population. In addition, the floods of 2022 were described by several interviewees as being a "solidifying event" (1, 22). The fact that the floods, during which mutual aid was experienced positively by the vast majority of interviewees, is also the most recent major crisis to have taken place in Greater Uki, is probably also an influencing factor on the current positive assessment of mutual aid in the area.



[The 2022 flood] was the solidifying event. But there's been 2017, 2019. I think when [a friend] and I talked about it one time, in a five-year period, we'd had three decent floods and a bushfire emergency. Not to count the normal stuff that happens that just totally freaks out people that have never been here before. (22). "

This said, some interviewees did note a lag in interest in organised mutual aid which has occurred since the floods. Yet several of these people also commented that despite this downturn, there was enough awareness and structures in place for people to step up again in the next crisis.



Even though people's kind of interest did fizzle out, or their time for it... did wane... quite quickly, I do think... people totally expect these things to happen again and again, and... are ready to get involved... as soon as those things are happening. And really, the more things that happen, the more that's going to be the case. You know, you're getting up, you're getting down. You're getting up, you're getting down (16). "

This pattern - of increasing interest in mutual aid during and after crises, followed by a decrease in engagement as time passes after each crisis - might seem to support the Mutual Aid Project's hypothesis that 'the longer the crisis lasts, the more the dynamics of mutual aid are eroded'.49 However when we consider the series of crises as one long compounding crisis, it is interesting to note that the overall trajectory of mutual aid in Greater Uki is thus far upwards.

What, then, are the factors that have allowed mutual aid to flourish in Greater Uki during this time of compounding crises? While the impacts of compounding crises on mutual aid are not yet well documented,50 the context of Greater Uki does seem to have some aspects that distinguish its experience from those of other communities in the Northern Rivers and further afield. One interviewee who is based in a larger (also flood-affected) regional town in the Northern Rivers region was of the opinion that "The smaller townships are often doing better because it's much easier to organise smaller communities... and the people that emerge out of that. Also those smaller communities... especially in this Northern Rivers area, tend to be better resourced... financially and [in terms of] connections. So they have more agency." (3) Similarly, another interviewee (see adjacent quote) based outside the Northern Rivers noted that the combination of isolation, community culture, and positive relationships with DMSs in Greater Uki had allowed community leaders to leverage the compounding crisis situation and use it to create structures to ensure the strength and sustainability of mutual aid in the area.



I think about [other local areas that]... have had 15 actual disaster declarations [in the past two years]. That is just wearing on resources, on communities... Whereas up at Uki, they feel more empowered because... they're masters of their own destiny. And [that is partly due to] the local Emergency Management Committee... having empowered them (8). **

⁴⁹ Groupe URD Mutual Aid Project Methodology, 10.

⁵⁰The only study that documents compounding crises in the Northern Rivers is McNaught et al.'s "Innovation and Deadlock" (though it does not address mutual aid specifically).

3.3. LINKS BETWEEN AID AND SELF-HELP PROVIDERS

When considering Disaster Management Services' relationship with mutual aid in Greater Uki, it must be emphasised that all of the community resilience groups currently in existence in the area grew out of conversations between community members and Disaster Management services in response to previous crises (notably the 2012 flood, the 2017 flood, and the 2019-20 fires). Therefore, all of the organised mutual aid groups that were active in the 2022 floods can be seen as either influences on, or the results of, local DMS's adaptation to grassroots mutual aid. In the same vein, those organised mutual aid groups were only able to take-off and be sustained thanks to members of the community taking an active role for years.

3.3.1. EMS ADAPTATION TO MUTUAL AID IN GREATER UKI, 2014-2022

Prior to the 2019 fires, both the SES and the Red Cross had begun the process of building capacity in the community by formalising the interface between community and the EMSs. The first model to be developed was the SES's CAT team system, which as mentioned above was cocreated with the Uki Flood Group. The creation of this system was facilitated by the SES's recognition that if community were going to be the first and possibly also the chief responders, it made sense to incorporate them into emergency management (EM) plans (through a clear chain of command/information) and empower them with knowledge, skills and training, and, if possible, protection from litigation in the form of insurance.

The structures for these teams were devised in consultation with communities during a period of outreach, which included public meetings and more informal engagement. In the words of one Disaster Management Services representative, "a lot of the work we did post-2017 was sitting on people's back porches, having a cup of tea and just talking about stuff." (6) Many of the meetings were jointly organised, with the Red Cross, SES and RFS in attendance, and it was during this period that the Red Cross began to develop their CRT system. This was based in part on the observation that in some localities community members found the idea of volunteering in a Red Cross-linked group less 'threatening' than joining an SES CAT team, which they perceived might involve them putting themselves in more physical danger.

The Red Cross CRT system was (and remains) very similar to the SES' original CAT team structure, with localities split up into streets, suburbs and areas, each of which has a coordinator who can feed information up or down on a need-to-know basis. For example, the job of street coordinators is to gather contact details and information from residents in their street, which they can then feed up to neighbourhood coordinators in times of crisis. At the highest level of the CRT, the Team Leader and Deputy Team Leader liaise with the three Emergency Management Services – the Red Cross, the SES and the NSW RFS. As the Red Cross' guide to Community-led Resilience Teams states, 'Local communities know their history, risks, people, resources, capacities and geographical location better than anyone from outside the community. With advice and support from emergency management agencies such as Red Cross, State Emergency Services (SES), and Rural Fire Services (RFS), as well as Local Emergency Management Officers at local councils, communities can improve their preparedness and resilience for disaster events. After the 2019-20 fire season, the Red Cross ramped up their community engagement, and both the Byrrill Creek and the Kunghur CRTs were formed in early 2020.

COMPARISON OF DIFFERENT MODELS OF INTERFACE BETWEEN GRASSROOTS MUTUAL AID GROUPS AND DISASTER MANAGEMENT SERVICES (DMSS) IN GREATER UKI

The SES CAT model

In its current incarnation, the CAT model enlists volunteer community members as team members who can be tasked by the SES to work in their communities when the SES or other DMSs don't have the capacity or ability to access them.

The Red Cross CRT model

The CRT structure similarly reserves disaster management for the DMSs, but envisages a stronger and more structured role for community as a conduit of information through its system of neighbourhood leaders, pod leaders and street leaders. A key part of the model is inbuilt support from the Red Cross, and links to DMSs, giving this model the advantage of being established and accessible (a potential plus for communities with less experience of resilience work).

The Resilient Uki model

This model sees community as equal players alongside DMSs. Through fostering strong links between community and the DMSs, it aims to support the ability of community members to be prepared, informed and, if necessary, to respond in situations of crisis, with, or without DMSs.

Emergency Management Services' motivations for creating these teams were grounded in the knowledge that they did not always have the ability, or the capacity, to access communities in times of crisis, and an understanding of the importance of community-led action.

⁵¹ Croix-Rouge australienne, Community-led Resilience Teams, p.3.



Some people think as a government emergency service organisation, we can go in and tell people what to do. That does not work. They will very quickly tell you to bugger off if you try and do that. There's really got to be a partnership and they have to lead it, because we don't know their community (6). "

EMS representatives also emphasised the importance for Emergency Management Services of having a single point of contact during crisis situations, whether or not this point of contact belongs to a CAT or a CRT.



Community groups have a much bigger reach, communication wise, in that community than I ever hope to have. But I don't want to talk to everybody. When the shit hits the fan, I only want to talk to one person. And then they can use their communication network, if they're the leader, to talk to their hub coordinators, and the hub coordinators will talk to their little area however they want to have it, and you get the word out (6)."

Over time, the SES CAT team model evolved away from the neighbourhood system and became more about training volunteers to "provide communities with early warning, assist with property protection and provide intelligence to SES Incident Management Teams'. ⁵² For volunteer members who could then use their skills to respond to crises as appropriate, the Red Cross' CRT system focused more on neighbourhood networks and the dissemination of information.

In Uki, meanwhile, community leaders (some of whom were members of the Uki Flood Group/CAT team) were busy networking with Disaster Management Services and trying to get their communities engaged around disaster preparation and resilience work. However, with COVID restrictions in place and the community somewhat fractured by the pandemic, this was difficult going. At the time that the flood hit, therefore, the Uki community had a high degree of engagement around disaster response, a lot of local knowledge and strong relationships, but did not have the same level of formality as the Byrrill Creek and Kunghur CRTs. In other hamlets with no history of community organising around crisis resilience things were even more free-flowing, a situation which, as Bloor et al. have observed, 'allowed for local leadership to emerge and for individuals to assess their capacity to help others'.⁵³

The differences between the ways in which various communities in the Greater Uki area organised themselves during the 2022 flood crisis provides an opportunity to compare not only how organised mutual aid worked within (or outside) these systems, but also to investigate Disaster Management Services' interactions with these different types of structures.

⁵² Andrew McCullough, 'Connecting communities through volunteering: lessons learnt at NSW SES', AJEM, April 2018. knowledge.aidr.org.au/resources/ajem-apr-2018-connecting-communities-through-volunteering-lessons-learnt-at-nsw-ses/

⁵³ Bloor et al, 'Anarchy in the Uki !', p.43.

3.3.2. WHEN INSTITUTIONS ENCOURAGE MUTUAL AID

Since the 2019-20 fires and the 2022 flood, DMSs in the Greater Uki area and beyond are beginning to appreciate the need for grassroots community organisation around resilience and disaster response. In this sense, in Greater Uki (and more broadly, New South Wales) the relationship between the institutions and mutual aid groups seems to be in somewhat of an in-between space. DMSs recognise the need for mutual aid, and have begun to encourage it in various ways, but have not yet landed on a completely smooth or workable approach. This is evidenced by the fact that the SES is currently conducting a review of its CAT system, which some interviewees predict will be expanded into a form that will 'fill the gaps that became apparent [during the floods]' (19).

Based on actions taken during the study period, our research found a wide variety of ways in which mutual aid in Greater Uki has been supported by the institutions. The evolution of this more progressive 'vertical' response has been spearheaded by passionate individuals and supported by their relationships with community. Such individuals were described by community members as "supportive", "very good at communicating", "really helpful", "brilliant", and "exceptional and comforting to the nth degree" (19). One community leader reported reaching out to their EMS contact when faced with a particularly difficult situation, asking 'What do I do? What do I say?', and was relieved and grateful when they received back a suggestion of wording that they could "just copy and paste and send out' (1).

Sometimes individuals in the DMSs went above and beyond the rules and regulations of their institutions in order to encourage mutual aid. They did this out of a commitment to community safety and preparedness, and also with the understanding that the institutions they serve are in a process of change. Indeed, if individuals in the EMSs had not taken the initiative to support the development of organised mutual aid in Greater Uki during the years prior to the compounding crises of 2019-2022, it is unlikely that the mutual aid situation in this area would be so well developed.

This said, the strong support of some individuals, and the qualified support of some institutions, for mutual aid organisation in Greater Uki does not mean that all the DMSs are equally involved. This applies in particular to the three levels of Australian government: Council, State and Federal.



I think government is all about now trying to get community to look after itself through mutual aid... But in order to do that, I think it would be really good if they [provided]... I mean, really just funding and information (23).

Institutional support for mutual aid in Greater Uki

In times of crisis

In times of 'normality'

Spontaneous mutual aid

- EMSs working alongside community volunteers.
- EMSs providing resources to community to allow them to fix their own infrastructure.
- DMSs establishing good relationships with community groups and leaders.
- DMSs participating in community education days.
- EMSs providing mentoring to community leaders and disseminating information to grassroots groups.

Organised mutual aid

- DMSs taking part in communityorganised meetings.
- DMSs providing community leaders with weather forecasts and information daily.
- DMSs coordinating delivery of food and resources.
- DMS personnel providing community leaders with advice and support.
- DMSs listening to the needs of community and creating groups such as the Tweed Shire Community Resilience Network.
- Keeping in touch with communities in between crises.
- EMS volunteers passing on contacts to replacement personnel when they move away or resign.
- DMSs training community members to run evacuation centres, use chainsaws, etc.

3.3.3. THE CURRENT LIMITS OF INSTITUTIONS' SUPPORT FOR MUTUAL AID

While Disaster Management Services in Greater Uki are making an increasing effort to create and nurture interfaces with mutual aiders, there are limits to their ability, or willingness, to do this. This is in large part due to resistance amongst some DMSs to the idea of community helping itself to respond to disasters, which even community leaders acknowledge can be "a very dangerous thing". (19) Current DMS policies draw a "hard line in the sand" that separates what is considered to be DMS business from community action, as illustrated by the boxed quote adjacent.



[The CAT and CRT models] are a really great start. But it doesn't go far enough. It stops just where it... gets important and necessary and difficult. It very clearly puts a hard line in the sand at that point. And the perfect example, if I can use a little microcosm version of that, is [the SES tagline] 'If it's flooded, forget it'. So the line is don't drive over a causeway or crossing or on a road if there's water across the road. Now, where I live, I wouldn't be able to leave my home for three months of the year if I was to follow that principle. My kids wouldn't go to school, I wouldn't go to work. There's some months I've got to cross six flooded causeways every day for six weeks to continue my life. And... the control and command structure say this is the line in the sand. Don't do it. But that's not nuanced enough.

So what we need where I live is some markers to show what the [causeway] height is. And we need a system that says after a big flood, someone's gone through and checked it and put up a green flag or something that says... we've checked it and it's okay, because the council isn't going to be coming and checking it anytime soon and if they do, they're probably not going to be repairing it for another couple of months anyway. But you do need to know that there's not actually a car-sized hole underneath the water there. And so that finessing it and that being pragmatic about it is where communities step in and do what actually needs to be done, where the command and control [system] won't ever do that kind of thing because it's too high risk (19). "

Some Emergency Services personnel interviewed for this study agree, observing the need to harness and provide legal security for civilian support in the response phase. However, this outlook is not currently reflected in DMS policy.



The hardest thing for a system to accept is the responsibility of dealing with civilians. We're deemed to be emergency workers. But without the aid of the civilian people... in [Greater Uki] and all the other areas that stepped up and came in with boats... jet skis... to provide civilian support... we would have lost a lot of life and a lot of property. But the system, the bureaucracy, does not want to harness those [people] because they don't want the responsibility for them and the legal requirements of support, and how do they control them? We're saying these people have come forward. Therefore, we should harness that energy and harness that support, but then provide them with some safety barriers and some legal security (4). "

For some community leaders, this situation is incredibly frustrating; "just because [community undertaking first response] is high risk doesn't mean that you can avoid it." (19) However for the time being, aside from the efforts of various individual DMS personnel who are willing to provide community members with training, this aversion to risk significantly inhibits community members' ability to help each other in times of crisis.



I am yet to see any assistance from [Government or EMSs] to help communities to respond to disasters, even though it is very clearly documented and accepted that community are always the first responders. (community leader) (19) **

Other ways that institutions' unwillingness to see community members as legitimate first responders has inhibited mutual aid in Greater Uki include: DMSs siloing their activities and failing to communicate with mutual aid groups, EMSs getting in the way of residents taking action to save their homes, and EMSs refusing to associate with community resilience groups that don't adopt their models for the EMS/community interface. While in some cases the unwillingness to share power with community seems to be conscious, in other cases it may also be due to a lack of interest in some parts of the DMSs in what is going on at the grassroots level. As one community leader commented, 'They don't really ask us what's going on. I don't think anyone's ever asked us what's going on out here in an official way from one of those... [They] haven't asked for a report back or anything like that.' (19) At the same time, community leaders acknowledge that they don't always have the resources to engage sufficiently with DMSs, or to invite them to participate in their actions.

This then begs the question of whether the CATs/CRTs are serving the purpose for which they were designed? Have the DMSs adapted enough? Institutional views on this question are varied, with some DMSs consolidating their models while others review and evolve them. Similarly, while grassroots resilience groups in the Greater Uki area all agree that Governments could do more to support organised mutual aid, they have a range of opinions on the effectiveness of the existing interface models.

To summarise, while it is in the interest of the DMSs for mutual aid to be organised, the risk averseness of many institutions has limited the extent to which they have been able to support grassroots action, especially during the response phase. The CAT and CRT models set up by two of the EMSs have incorporated this approach into their structures, with community envisaged as either responsible only for the 'soft' tasks of communication and support, or needing to be 'tasked' by EMSs before being covered for physical action. In this sense, official attempts to harness mutual aid can be seen as a way of 'taming' grassroots community action, and also run the risk of reproducing the pitfalls of vertical aid (e.g. its hierarchy). However, the benefits to community of having a well-established, clear interface with the DMSs, and legal protection for volunteers, are also clear.

→ SPECIFIC OBJECTIVE 1:

Characterise the crisis and its context

The 'crisis' considered by this study is actually a series of compounding crises which took place in Greater Uki during the period 2019-2022. The area of Greater Uki encompasses the village of Uki, along with a number of smaller settlements including Byrrill Creek and Kunghur, which (along with Uki itself) are the main foci of this study. The two major crises considered are the 2019-2020 bushfires and the 2022 floods.

During the bushfires, Greater Uki experienced extreme weather conditions and many residents were forced to either evacuate or prepare to defend their properties. The first bushfire of the season, the Mt Misery fire in August 2019, destroyed a house and a shed, with many more threatened. With The Rural Fire Service (RFS), supported by other agencies, led firefighting efforts but faced limitations in resources, which frustrated some residents. In the following months, fires continued across the region, with another large blaze starting in November from a lightning strike in the Nightcap National Park. Smoke blanketed the area, worsening air quality and increasing anxiety, and several dwellings were lost. The fires took a heavy emotional toll on the Greater Uki community, leaving many with a sense of grief over the loss of subtropical rainforests, homes, and natural habitats, and fear around future risks. By season's end, the Black Summer fires burned 19 million hectares nationwide, destroying over 2,000 homes and devastating wildlife.

Just as the Greater Uki area began to recover from the fires, the COVID-19 pandemic added further challenges. Lockdowns isolated residents, and vaccination mandates and restrictions sparked local conflicts and strained social cohesion. The Queensland border closure exacerbated this isolation, as many locals were cut off from essential services and family.

Then in early 2022 a one-in-500-year flood devastated the area. Record rainfall caused extreme flooding, with rivers rising well beyond anticipated levels. Many residents, accustomed to regular minor flooding, were unprepared for the unprecedented intensity, leading to widespread shock and damage. Major landslips and floodwaters damaged roads and properties, leaving residents isolated and without power, water, or communications for weeks. Community-led efforts were crucial in initial responses, with locals working together to clear debris and check on vulnerable residents. Limited communication made organising relief challenging, though helicopters delivered essential supplies. Spontaneous volunteers, while helpful, also presented logistical burdens. Despite temporary road repairs, lasting reconstruction has been slow, causing frustration, and persistent mental health issues due to trauma and fears of future floods linger. Federal responses, like delayed Army assistance and perceived superficial political engagement, further eroded trust in external support. As of 2024, significant infrastructure remains under repair, prolonging recovery and impacting the well-being of this rural community.

Together, these consecutive disasters—fire, pandemic, and flood—have deeply affected the Greater Uki community, highlighting the need for improved emergency communication and preparedness in facing future crises, and more support for the grassroots mutual aid groups that have emerged and consolidated during this period.

SPECIFIC OBJECTIVE 2:

Identify people's perceptions of the crisis and question the 'collective memory'

Greater Uki's series of coumpounding crises is remembered as at once devastating and lifechanging, opening up new ways for community to connect through disaster preparation and response. While perceptions around the effects of the 2019-22 period vary considerably, their tone overall is one of pride, positivity and hope. This tone is also present in community publications such as the CTC's annual Community Resilience Calendar. This said, these positive sentiments do not apply equally to all the three of the crisis events.

While the 2019-20 fires are remembered by some as a time when people came together in the face of fear, others (especially those who lost houses or property) associate them with hardship and frustration. The role of the EMSs during this crisis is perceived differently by different residents: some maintain that the RFS' risk aversion and lack of communication forced community members to protect their own homes, whereas others remember the RFS doing their best for the community, fighting fires alongside community members and supporting their efforts.

The COVID-19 pandemic, meanwhile, is remembered as a time of division, both within the community and outside, a period when it was hard to connect with others and some resilience-building efforts were sidelined.

The 2022 floods are remembered as being simultaneously frightening and life-affirming, bringing out the best in the community. A crisis that people were not adequately prepared for, despite many previous floods, but in which leaders emerged and residents came together to help each other and do their best for the community. While some remember the role of DMSs in supporting community efforts as crucial, others recall the floods as a moment when EMSs and Government more broadly failed the community.

Altogether, the compounding crises of 2019-22 are perceived collectively as both deeply challenging, and profoundly transformational: a four-year ordeal that involved danger, caused challenges and trauma, but also provided opportunities for collective action and has strengthened the community, forging an uncommon degree of resilience.⁵⁴

A key feature of interviewees' narratives is how well the Greater Uki community coped in situations of crisis (especially in the flood but also to some extent during the fires). Interviewees emphasise how lucky they were to have such strong leaders, and express admiration and gratitude towards those in the community who stood up and took action. Having this calibre of community leaders, and this degree of community connection, is seen as a point of difference between their communities and others in the region. Such perceptions are also reflected in various local forums, such as the Uki resilience calendar, articles in local press and newsletter, and Facebook posts.

In line with other recent research into community responses to disaster in Australia,⁵⁵ these overwhelmingly positive memories of community actions during the crises contrast markedly with perceptions of the actions taken by Emergency Management Services. Some interviewees, for example, express frustration at the risk aversion of the RFS, which is perceived as a limiting factor in the help they could offer residents to defend their homes during the 2019-20 fires. The institutional limits on how the RFS communicated (or did not communicate) with community and other EMSs is also criticised by some. This said, all community members interviewed for this study praise the efforts and commitments of the volunteer members of Greater Uki's two RFS brigades, and in particular their initiative during the 2022 flood in stepping into the role of first responders when SES members were unable to perform tasks locally.

The SES, whose commitment to the community during the 2022 floods is seen by many as 'going above and beyond', is overall perceived very positively, particularly by community members who worked closely with the SES before, during and afterwards. Such individuals express pride in relationship-building work done prior to the floods, which helped things go more smoothly than they otherwise would. The contributions of the Red Cross supporting the Byrrill Creek and Kunghur CRTs is similarly perceived very positively. However, some interviewees who felt abandoned by EMSs during the flood perceive that there was much more that the SES and other EMSs could have done to liaise with and prepare for such a crisis. In some cases, this observation seems also to be influenced by a wider narrative in the Northern Rivers region around the lack of preparedness of EMSs, especially the SES, and their decision to refuse help from the Army the week before the flood peaked. However, this view is less prevalent in Greater Uki. The role played by other Disaster Management Services such as the local Council, the State Government, the Reconstruction Authority, and the Army during the flood is perceived less positively, a trope which

⁵⁵ McNaught et al. "Innovation and deadlock"; Margot Rawsthorne, Amanda Howard et Pam Joseph (2022). "Normalising community-led, empowered, disaster planning: Reshaping norms of power and knowledge", *Oñati Socio-Legal Series* 12. 10.35295/osls.iisl/0000-0000-0000-1258; Webster et al. 'Harnessing local knowledges'.



⁵⁴The timing of this research project is important, in that the interviews on which this study is based took place two and a half years after the occurrence of the last crisis in the series of compounding crises experienced by Greater Uki. This time lag will undoubtedly have influenced the way that interviewees remember the challenges and triumphs of the period, which have in the intervening period been repeatedly rehearsed, re-formed and consolidated in the context of not only community but also wider media, social media and popular discourse.

is more in line with the general criticism of these institutions across the region.⁵⁶ The actions taken by these institutions during the flood, in particular, are seen by many as being out of touch with community needs, and there is a perception that they were more interested in looking good, or avoiding risks or criticism, than actually giving community the help that it needed.

This said, Greater Uki's perceptions of the DMSs (and especially of the core EMSs) is on the whole more positive than those of many other communities across the Northern Rivers region. One possible explanation for this is that, unlike some of the larger population centres in the region, the Greater Uki area is made up of small rural communities with strong social links. It also experiences regular floods and isolation, which may mean that its expectations of outside help are less than in bigger communities where people are used to having services on call. However, while Greater Uki residents mostly seem understanding of the fact that EMSs can't always respond to crises in the moment, they do have strong expectations that government should play a proactive role in recovery and reconstruction, expectations which most interviewees felt were not met in the aftermath of the 2022 floods. This, in tandem with the area's suspicion of government and institutions generally, may have contributed to many interviewees' poor perception of the actions of government agencies during and after the floods.

For the case of Greater Uki, positive perceptions around the role of community, and mixed opinions on the actions of DMSs during the crises appear to have acted as a motivating factor for the further development of mutual aid in the area in the post-flood context. The fact that Greater Uki remembers their experience with DMSs in the floods as less negative than many other communities in the Northern Rivers region is likely related to the close relationships that community leaders have developed with DMS personnel, and these more positive perceptions have in turn facilitated a closer working relationship post-flood between Greater Uki communities and the DMSs. This finding resonates with the recommendations of several recent research reports on community experiences of the 2022 floods in the region, which suggest that clear, open communication with DMSs, and finding ways 'to share control/power' before, during and after crises is integral to community wellbeing and resilience.⁵⁷ Having forums for community groups to tell their stories and remember their collective achievements appears to have been another important factor in the post-flood growth of mutual aid in Greater Uki.

⁵⁶ Voir O'Kane et Fuller, '2022 NSW Flood Inquiry'.

⁵⁷ Taylor et al, 'Community Experiences', 18. McNaught et al. 'Innovation and deadlock' ; Webster et al. 'Harnessing local knowledges'.

SPECIFIC OBJECTIVE 3:

Analyse mutual aid strategies according to the type of crisis and the socio-political contexts in which they are applied

Our findings suggest that mutual aid strategies depend on both the type of crisis and the community's socio-political context. These factors impact the breadth, depth and longevity of mutual aid, the extent to which it becomes organised, the ways in which it is organised, what activities are undertaken, and how it continues in between crises in times of relative 'normality'.

TYPE OF CRISIS

The hypothesis that the type of crisis influenced the dynamics of mutual aid in Greater Uki in this range of ways is supported by the very different impacts of the 2019-20 fires and the 2022 flood on community connection and organisation in the area. During the fires the high level of danger, and the limited number of people whose properties were directly threatened, meant that spontaneous mutual aid was limited. Collective action taken during this period (calling town meetings, setting up teams and a factchecked Facebook group), ground-breaking for the area, was also on a much smaller scale than actions taken during the flood, where the scale of need led residents to set up hubs, organise massive internal and external aid efforts, and coordinate with emergency services.

Looking at the two crises (or three if we include COVID) as one 'series of compounded crises' also supports this argument. The first element of the series to consider is the nature of the particular crises by which the series is constituted.

SOCIO-POLITICAL FACTORS THAT INFLUENCE MUTUAL AID IN GREATER UKI

- Roots in country and hippie culture, which both emphasise self-sufficiency and connection
- History of harmony between different cultural and demographic groups
- History of community organising and existence of multiple local associations (UKIRA, Hall Committee, CTC)
- History of community organising around disaster and flood resilience (e.g., the Uki Flood Group/CAT team)
- High proportion of labourers and tradespeople
- Some rental and mortgage stress
- Presence of community members with relevant skills and resources
- Community divisions caused by new waves of immigration to the area and resulting cultural clashes
- Some residents' desire for isolation
- Suspicion of government and/or organisations
- Prevalence of conspiracy theories around COVID and Smart Cities

For Greater Uki between 2019-2022, these were unprecedented: dangerous fires, followed by an unprecedented, divisive and challenging pandemic, followed by an unprecedented, catastrophic flood. The second element is the order in which they occurred (fires, pandemic, flood), and the third is the temporal gaps between the crises. All three of these elements have impacted the development of mutual aid in Greater Uki.

First, the fact that one of the crises that made up Greater Uki's 'series' was a crisis that is overwhelmingly understood to have brought people together has been a major factor in the development of mutual aid in the area, at both a practical and an emotional level. On a practical level, there has been significant community support for the continuation and evolution of the mutual aid mechanisms (groups, structures, etc) that proved effective during the floods. On an emotional level, the sense of common purpose emerging from positive experiences taking part in mutual aid during the floods has engendered support for the idea of organised mutual aid, and the belief that it really can make a difference during crises.

Second, the fact that the flood (when the community is generally understood to have responded 'better' than in the other crises) was the latest in the series has allowed for the development of teleological narratives which have supported the continuation and development of mutual aid in the community. In addition, the fact that it occurred after the lockdowns and social isolation of the COVID pandemic, thus allowing an opportunity to 'come back together', may be significant. If COVID hadn't happened, would the euphoria of the 'heroic state' experienced during the flood have been quite as strong? Or alternatively, if the most recent crisis had been COVID or another large bushfire, would the overall impact of the 'series of rolling crises' have been different? It is not, of course, possible, to answer these questions within the scope of the current study, but the issue of whether there are general principles around how the type of crisis affects the development of mutual aid is an interesting and important one.

Finally, the timing of the various crises experienced by Greater Uki seems to be significant for at least some of the localities in this study, with the two-year gap between the fire and the flood potentially giving the community more time for recovery, community connection and organisation than other communities in the region, which experienced multiple disasters in quicker succession. This finding applies in particular to the communities of Byrrill Creek and Kunghur, who used the gap between the fires and floods to set up their CRTs. What was different about these communities that caused them to pursue resilience work during the difficult COVID period when community leaders in other parts of Greater Uki struggled? One plausible explanation is that, unlike Uki Village, they did not yet have a structured community resilience group, and so the need was perceived to be more urgent. Being more rural areas without infrastructure such as shops, restaurants, a meeting place or a community-run hall offering activities, Kunghur and Byrrill Creek residents were less likely to know or 'bump into' each other. In the words of one interviewee, "there was no place to meet or even stick up a note about a meeting" (11). This may have made them more likely to embrace the Red Cross CRT model when it was offered.⁵⁸

It should be noted here that many other Australian communities have also faced a similar series of compounding crises, some of which are the subject of recent research. When comparing the impact of compounding crises in Uki with the impact in other localities, it can be observed that communities whose crises were more closely spaced had less opportunity for mutual aid to

⁵⁸ However, for the case of Byrrill Creek it is also possible that the type of crises experienced prior to the 2019-20 fires was also influential. During the 2017 flood (a 1-in-100-year flood which was also the area's most recent flood in the years before the study period) Byrrill Creek was cut off for a much longer period than other parts of Greater Uki. Having experienced a more severe crisis than the rest of the area, and one for which the local community did not yet have a resilience group, might well have impacted how mutual aid subsequently arose and developed in this locality.

evolve between crises, leaving them more vulnerable to subsequent disasters and more likely to experience despair or burnout.⁵⁹ These observations are, however, very preliminary, and further research is required to explore the impact of compounding crises on other communities and help to identify patterns and principles in the way that the type of crisis, as well as the type of compounding crisis (with variations in the type of constituent crises and timing) might impact the development and evolution of mutual aid.

SOCIO-POLITICAL CONTEXT

Similarly, the argument that Greater Uki's socio-political context affected the development and structure of mutual aid is supported both by data from the interviews and comparisons from within the area and with other regional examples, in line with community resilience literature. Greater Uki's history and its cultural roots, including the history of harmony between different groups in the area, seem to have predisposed communities in the area to embrace the values and practices of mutual aid. The local history of community organisation, and the recent history of organisation around flooding in particular, are also an important factor in how mutual aid has developed in the area, and especially in the village of Uki and the surrounding area. Demographically, the high proportion of residents with 'practical' backgrounds or professional, management and community services expertise, made for a good mix of skills and resources.

The demographics of Greater Uki also seem to have influenced the types of community-building activities undertaken by mutual aid groups. Pairing community meetings with meals, for example, is a common practice which helps attract and engage residents who might be struggling with their finances in the context of rental or mortgage stress and inflation. This approach, while seen as a no-brainer by long-time locals, was deemed 'offensive' by others who think community work should not be motivated by rewards. Some other community characteristics that influenced the development and structuring of mutual aid were the desire of some residents for isolation, and the prevalence of particular beliefs around the agenda of government and organisations. As a result, resilience groups in the area developed policies ensuring the privacy of residents' contact details, always approaching residents through trusted contacts, and being accepting of some residents' non-participation.

UKI VILLAGE AND RESILIENT UKI: A SPECIAL CASE?

While there are clearly important historical reasons that explain why Uki village and the surrounding area developed their Resilient Uki Neighbourhood model, and the neighbouring hamlets of Byrrill Creek and Kunghur embraced the Red Cross CRT model, it is important to also consider the potential influence of demography on the development of these two different types

⁵⁹ This comparison is based on personal communications with researchers from the University Centre for Rural Health in Lismore. See also Yvonne Hartman et Sandy Darab, "The Power of the Wave: Activism Rainbow Region-Style", M/C Journal, no. 17 vol. 6 (2014). doi.org/10.5204/mcj.865

⁶⁰ Carl Milofsky, 'Resilient Communities in Disasters and Emergencies : Exploring their Characteristics ', Societies, 13, no 8 (2023) : 188. doi.org/10.3390/soc13080188

⁶¹ Uki's status as a centre of alternative education (it is home to several alternative schools), with a moral/ideological predisposition to embrace the values of mutual aid (community, thick reciprocity/solidarity, etc.) and its history of harmony rather than conflict between different groups both seem to have influenced the development of mutual aid in the area.

⁶² As covered in the Demographics section above, Greater Uki residents are more likely to work as labourers or tradespeople than the state and national average.

of mutual aid. The first thing to note here is that Uki village and the surrounding area is larger, with a higher population than Byrrill Creek or Kunghur, and as such it had more capacity to conduct larger operations and 'think outside the box' when it came to setting up structures both during and after the flood. Having a larger pool of residents to draw from in Uki village and the surrounding area may have made possible a group leadership model: rather than just one leader, the group has a team of highly connected, diversely skilled leaders who work together and in tandem to sustain and develop the group. In addition, the fact that the village of Uki has more established associations and community facilities than the other localities in the area has meant that in the absence of direct support from an EMS like the Red Cross, Resilient Uki has direct access to support from established local players. Geography is possibly also a factor here; Uki village is closer, geographically, to the area's regional centre (Murwillumbah), and while Uki village and the surrounding area is regularly isolated by flood events, these tend not to last as long as they do for more remote communities like Byrrill Creek and Kunghur.

This said, the biggest factor that interviewees identified in Resilient Uki's decision to go with a home-grown model was the sense of ownership that the community felt for their system, and the fact that it pre-dated the Red Cross CRT groups. Conversely, the fact that Byrrill Creek and Kunghur community leaders chose to adopt the Red Cross model is likely a mix of timing (e.g. the fact that community leaders were approached by local Council resilience officers and the Red Cross soon after the 2017 floods and the 2019 fires), demographic factors, and the internal logic of leaders' decision-making (for example, at least one of the community leaders was not aware of any other models when it was decided to adopt the Red Cross CRT system).

Thus, although in this case culture cannot be said to be responsible for the differences between the types of mutual aid that different localities in Greater Uki have developed, demographics does seem to have played a role in enabling Uki village and the surrounding area` to embrace their own looser structure during the floods, and to develop a more radical and independent model of community resilience group in their aftermath.

Interestingly, the Red Cross CRT model (and to a lesser extent the SES CAT system) is to an extent premised on the idea that socio-political context should not affect the structure of mutual aid; that a simple one-size-fits-all model should work in any community regardless of socio-political context. The approach at the Uki Hub during the floods, on the other hand, was completely organic and loosely structured, and Resilient Uki's subsequent formalisation into an organisation that seeks to enable its community to engage in mutual aid rather than providing this aid itself has developed out of the very specific history and conditions of Uki and surrounds. Notably, when put to the test during and after the 2022 floods, these very different models were both to some degree successful, not only on the ground but also in their interface with DMSs. This suggests that there is no one 'right' way of doing or structuring mutual aid, and that the socio-cultural specificities which influence how mutual aid arises and evolves in communities can be a force in their favour.

This is an important area of investigation given the gaps in DMSs' ability to provide vertical aid, and the increasing frequency and severity of climate-related crises that is predicted not just for the Northern Rivers or Australia, but around the world. In this context it is important that there are transferrable models that can be used across widely different demographics and localities. Transferrable models do not have to be complicated or prescriptive; the Red Cross CRT systems, for example, can be tailored to the needs of different communities. As we have seen for the cases of Byrrill Creek and Kunghur CRTs, just because a community is using the same model as another community doesn't mean that mutual aid will look the same. However, given that different communities will have different ideas about independence, and different levels of comfort with risk taking and self-sufficiency, it is crucial that players in the sector also need to plan for the fact

that some communities will want to develop their own systems, and find ways of supporting them in this.

In their research on community resilience in Greater Uki, Bloor et al. do not find any evidence for any single factor shaping the form of mutual aid organising embraced by the area's different localities, observing that 'whether the differences in community self-organisation were driven by different community demographics, topography, existing social structures, individual capacity or leadership styles is open to debate.' Rather, they conclude that these case studies 'demonstrate the need to allow communities flexibility to self-organise as they choose', a finding echoed in other recent research and supported by this study. 4

OUR FINDINGS therefore support the hypothesis that the specific structures and mechanisms of mutual aid in Greater Uki are influenced both by the 'types' of crisis and the local socio-political context. The 'types' of crisis experienced, the order in which they occurred, and the 'breathing space' in between have stimulated mutual aid in the area, allowing it to evolve into diverse and robust forms. Similarly, the socio-cultural context in the Greater Uki area generally, and in the various localities more specifically has also influenced the mechanisms and structures of mutual aid. This observation, based as it is on the subjective experience of a limited number of participants in one case study, is yet to be fully tested, and more research is needed in this area to help understand which aspects of various mutual aid models are transferrable, and which are community specific.

SPECIFIC OBJECTIVE 4:

Analyse the dynamics of mutual aid and how they evolve according to the timeframe of the crisis or disaster (before, during, after)

The contrasting nature of the crises considered in this study allow us to test several hypotheses around mutual aid's temporality. These are i) that the dynamics of mutual aid and the people involved vary according to the timeframe of the disaster; ii) that the aid provided in the first

⁶³ Bloor et al, 'Anarchy in the Uki !', p.46.

⁶⁴ Sandy Darab, Yvonne Hartman, Yvonne & Emma Pittaway, 'Building Community Resilience: Lessons from Flood-affected Residents in a Regional Australian Town', The International Journal of Community and Social Development, 2 (2021), 10.1177/2516602620981553; Suzanne Phibbs, Christine Kenney, Christina Severinsen, Jon Mitchell, & Roger Hughes, 'Synergising Public Health Concepts with the Sendai Framework for Disaster Risk Reduction: A Conceptual Glossary', International Journal of Environmental Research and Public Health, 13 (2016): 1241. 10.3390/ijerph13121241.

response is the result of the dynamics of mutual aid; iii) that the longer the crisis lasts, the more the dynamics of mutual aid are eroded.

Before the 2019 fires, the culture of mutual aid around firefighting in Greater Uki was not well developed, or rather the community's enthusiasm, experience, and expertise were funnelled into the area's two RFS brigades – Kunghur and Uki. When the fires hit, the community was caught off guard. The first response was partly institutional (RFS), partly the result of spontaneous mutual aid. Initially those who provided mutual aid did so either through firefighting (and these people tended to have relevant skills and experience) or supporting those whose homes were threatened. However, as the timeline of the fires extended, the mutual aid response broadened from frontline response to preparation, organisation and relief. In this context, different skills and experience, such as community organisation and capacity building, were useful. During this period community leaders emerged and called meetings, organised teams and delegated duties. For the period of almost two months until heavy rains extinguished the fires, there was no abatement in the level of organised mutual aid activity. In the post-fire period this momentum for community action was harnessed by the Red Cross and community leaders in Byrrill Creek and Kunghur, resulting in the formation of CRTs in those two localities. However, in Uki village and the surrounding area, the advent of the COVID-19 pandemic slowed things down.

By the time the 2022 floods hit, the culture of mutual aid, especially with relation to flooding, was much better developed across Greater Uki. While the build-up to the 'rain bomb' of 28 February was slow, the final escalation of the crisis was unexpected and caught people off guard. In this situation residents helped themselves, and each other, as best they could, with those who had experienced prior floods drawing on their lived experience. As with the fires, those who were able to help physically at the height of the flood tended to be those who possessed particular skills, experience, or temperaments. As the flood waters receded and the immediate danger passed, people began to work together to create safe spaces, access resources, identify and help the vulnerable, and attempt to connect with the outside world. With limited or no access to the outside world, Greater Uki residents were freed from their usual commitments of work, school, sporting or social activities. In this instance, the aid provided in the first response was exclusively the result of the dynamics of mutual aid. Some of these residents who possessed relevant knowledge, skills or experience, became leaders amongst their peers. Mutual aid in this phase was still spontaneous, but becoming more organised.

As time went by, groups developed systems to manage the growing numbers of volunteers, and the arrival of out-of-town DMSs as access began to improve. During this phase, mutual aid activities shifted from crisis relief to volunteer management and response coordination, and local volunteers worked alongside out-of-towners and DMSs such as the Army. Though a second flood a month after the first set back the recovery, the community was much better placed to withstand and respond to this new crisis, drawing on structures and resources put in place in the interim. Several weeks after the second flood, and around six weeks after the first flood, the active phase of the mutual aid flood response in Greater Uki began to wind down. People went back to their jobs and life returned to a 'new normal' – with all the responsibilities of the time before but the added complications of ongoing roadworks, clean-ups and house renovations for those whose houses had flooded. Despite the shift experienced during this period, it would not be accurate to say that the dynamics of mutual aid were 'eroded' after the crisis. For all three mutual aid groups in Greater Uki, indeed, the post-flood period became a springboard into a more coordinated, more resilient community, that continues two and half years after the latest disaster.

SPECIFIC OBJECTIVE 5:

Understand how institutional players adapt to self-help approaches

The most important thing to say about institutional players' adaptation to mutual aid in Greater Uki over the past ten years (and in particular during the period of this study) is that it has been grounded in personal relationships. Close relationships between EMS representatives and community members led to the formation of the Uki Flood Group, which led to the CAT model, which led to the CRT model, which led to the creation of the Byrrill Creek and Kunghur CRTs and the emergence of Resilient Uki, which are now the main players at the interface between community and the DMSs in the Greater Uki area. In the development of institutional players' adaptation to mutual aid in Greater Uki, we can identify various stages:

- Stage 1: **Emergence** of personal bonds between community and EMS personnel based on shared interest and concern, leading to information-sharing and planning.
- Stage 2: **Formalisation** of relationships into models, whether these are designed by community (Uki Flood Group), the EMSs (CAT), or both.
- Stage 3: Evolution further discussion with other EMSs and communities lead to the creation of hybrid models (e.g., the CRT).
- Stage 4: **Challenge/Validation** community and EMS models are put to the test by a new crisis, with new ideas and models emerging in the moment (e.g. Uki's 'loose collective').
- Stage 5: **Consolidation** of approaches for some (CRTs). **Further evolution** for others (CAT teams, Resilient Uki).

It is anticipated that this process of challenge/validation, evolution and/or consolidation (Stages 4-5) will continue with the advent of future disasters.

As this summary would suggest, the attitudes and actions of institutional players towards community action in times of crisis (and beyond) have been enormously influential on mutual aid in Greater Uki – both the forms it has taken, and its potential for growth, consolidation and evolution. Before and during the study period, two EMSs in particular – the SES and the Red Cross – worked with the community to develop some of the area's mutual aid mechanisms. Other institutional players, notably the RFS, the local Council, and the NSW Reconstruction Authority, have contributed support at different times and to varying degrees. All these interventions (or lack thereof) have shaped the way that mutual aid has developed in Greater Uki. However, as the emergence of Resilient Uki underscores, it is likely that community members would have organised themselves in some way even without the role of such DMSs.

One of the strengths of this case study is that it considers several different models for what the interface between Disaster Management agencies and mutual aid can look like. Given that much of the literature on mutual aid in times of crisis calls for better coordination and clearer channels of communication between communities and DMSs⁶⁵, and that Greater Uki are pioneers of

⁶⁵ McNaught et al, 'Innovation and Deadlock' ; O'Kane et Fuller, '2022 NSW Flood Inquiry' ; Taylor et al, 'Community Experiences'.

various systems that aim to do this $^{66}\!$, our findings have the potential to yield valuable information

about the strengths and weaknesses of different models.

A VIEW FROM ONE OF THE DMSS

'I don't care what groups call themselves, I don't care whether they're a CAT. I don't care whether they're a CRT. There's other groups called CARTs, Community Action Resilient teams. I don't care whether they're RUKI, Resilient Byron, groups in the back of Main Arm [out] at the back of Mullum. I don't care. They're just people that live in a community and they just want to make their community safer and more resilient. If that's what their goal is, I'll work with them. I don't care whether SES doesn't get top billing or anything like that. I'm not interested in that. Some people turn some of this into a contest. Not interested in that at all. And I personally think these groups are what saved our arse in 2022' (22).

Based on the data gathered for this study it seems that the 'right mix' of horizontal and vertical aid, autonomy and structure, is key to fostering and maintaining community resilience and disaster preparedness. This 'right mix' might be different for different communities – as we have seen, the CRT and CAT models envisage the community's relationship to DMSs quite differently, and Resilient Uki's conceptualisation of the 'right mix' is different again (see box).

Each of these models for the interface between mutual aid groups and EMSs has strengths and potential weaknesses for supporting mutual aid. The strength of the CAT model (currently in place in Uki) is that it recognises that there will be times when community members are the only people with any chance of responding to crises, and it provides them with training to do so. Here, disaster response is still governed by the DMSs, who allocate tasks to their CAT members based on a conservative assessment of the risks involved. However, at the same time as community members receive training and information that allows them to help their communities when no one else can, insurance is provided to CAT team members for sanctioned activities. In Greater Uki,

this system has worked well because the CAT exists alongside, or as part of, a broader mutual aid group (as is the case in the village of Uki) which uses the Neighbourhood System to link CAT members back into their communities.

The Red Cross CRT model (currently in place in Kunghur and Byrrill Creek) is clear that disaster management and response is not a matter for the community, specifying that CRT members should not under any circumstances take the place of official first responders. The strength of this model lies in its built-in connections between DMSs and CRT leaders, and the clear mechanism for communication between the two parties. The limited remit of the CRTs, however, which are envisaged as communication structures only, means that the opportunity for community training and capacity building is missed. In Greater Uki this system has worked well for the smaller communities of Byrrill Creek and Kunghur, but was not considered such a good fit for the community of Uki, (partly because of its limited remit, partly for other historical and cultural reasons discussed above).

Finally, the Resilient Uki model (currently in place in Uki) relies on personal relationships between the DMSs and community leaders more broadly to ensure that community is prepared, informed and able to respond safely and effectively in times of crisis. It pursues this goal by supporting its neighbourhood and street leaders to develop links with the DMSs, holding events where the

⁶⁶ Bloor et al, 'Anarchy in the Uki !'.

community can access information and advice, and providing extensive resources and links on its website and Facebook page. While not coordinating or organising individual disaster response actions, the Resilient Uki model recognises the need to build community members' capacity to respond to crises, a recognition which is sometimes at odds with the priorities of the DMSs who tend to be risk averse. The Resilient Uki system has the advantages of being organic, flexible and completely independent, meaning that community leaders are free to define the remit of their activities and advocate for change based on community priorities; it also, however, has the potential weaknesses that come with not being officially under the auspices of a DMS.

Irrespective of which model they use, the communities of Greater Uki have all at different times benefitted from good relationships and open communication with various of the DMSs. These relationships and interactions have been a defining factor in the way mutual aid systems have evolved in the area. Challenges with these relationships have been equally influential. Institutional players have therefore not only had an enormous impact on the success, or otherwise, of mutual aid in Greater Uki; their actions (or lack thereof) have quite literally been defining factors in how mutual aid mechanisms and structures have evolved. In this sense, the interface between institutional players and mutual aid has been one of the keys to organised mutual aid and community resilience in Greater Uki.

CONCLUSIONS ON THE GREATER UKI CASE

The compounding crises that occurred in Greater Uki between 2019-2022 were complex and multilayered. While the crises had devastating impacts, they have also been transformational for the local community. Two and a half years after the latest crisis, the residents of Greater Uki see the challenges and the opportunities of these years as a rupture in 'business as usual' which brought home the threats of climate change and significantly changed the way their community discussed, and organised, around climate disasters. Mutual aid in Greater Uki is driven by a multiplicity of factors, but primary amongst these are the perception of unmet needs at the time of a crisis, and a belief in the value of community, or as we have put it, the value of 'thick reciprocity'. While the culture of mutual aid in Greater Uki has been supported by social connection, it has also contributed to it, leading to a 'virtuous circle' where residents are simultaneously more inclined to help other community members because they have connected with them, and more inclined to connect with other community members because they have helped or been helped by them.

The development of mutual aid in Greater Uki during the study period owed much to the area's specific history of community resilience building, but has been spurred on by the nature of the crises experienced and their compounding effects. These factors have not only stimulated the growth of mutual aid but have also influenced the particular ways in which it has become organised. Within this evolution, relationships with DMSs have been key. Thus, while the relationship between the DMSs and mutual aid groups in Greater Uki is continually evolving, there seems to be an understanding and willingness, at least amongst some DMS personnel, to adapt to the new normal and incorporate organised mutual aid into their modus operandi. This is in large part due to the efforts of community leaders and the relationships they have formed with DMSs. The well-developed understanding of the need for such relationships amongst Greater Uki's organised mutual aid groups, and the energy they have put into nurturing them over the past ten years, has allowed for effective mutual aid coordination during disasters and provided the groundwork for attracting the funding needed to develop further.

This said, support for organised mutual aid both within the community and from key institutional players is still (and perhaps will always be) a work in progress, with unresolved issues such as improving communication with EMSs in crisis situations, finding funding for critical hardware, insuring volunteers, and garnering consistent support and recognition from the DMSs. Finally, Uki is just one of many communities in the Northern Rivers region where mutual aid dynamics are worth learning from. Further research is needed to build a fuller understanding of mutual aid in times of crisis or disaster.

RECOMMENDATIONS

for community resilience groups

RELATIONSHIPS

1. Build connection within the community.

- Build connection in 'times of normality' through informal social gatherings and neighbourliness as well as resilience-building activities.
- Create a sense of connection within the community by telling the stories of crisis and mutual aid responses in a variety of forums.

2. Build connections with other communities and community groups.

- Share knowledge and resources with other communities and grassroots mutual aid groups.
- Join local and regional alliances to network with other community groups and leaders.
- Apply for funding together and work together on shared projects, consider taking out shared insurance, etc.

3. Build stronger relationships with DMSs.

- Reach out to DMS personnel and start conversations around how community and DMSs can better support each other.
- Attend and present at DMS forums, meetings and training wherever possible.

4. Build relationships with all levels of government and policy makers.

- Reach out to government employees and policy makers and start conversations about how they can better support mutual aid in the local community.
- Attend and present at government forums, meetings and conferences wherever possible.

5. Build stronger relationships with funders.

- Nurture relationships with funding bodies, ensuring that funders understand evolving and ongoing local needs.
- Foster trust by promoting transparency in funding allocation and outcomes, ensuring communities have a voice in deciding how resources are used.

COMMUNICATION

1. Build awareness of crisis and mutual aid.

- Publicise the history of crises in the Greater Uki area and the likelihood of such crises happening again in specific localities in a range of ways, including through existing forums such as community newspapers, calendars, social media posts and on websites, and by creating new forums such as local information signs, a stories toolkit, etc.
- Communicate Greater Uki's history of mutual aid during crises and provide information about local mutual aid groups through the above forums.

2. Disseminate information.

- Continue to provide information on how to prepare for crises.
- Build the profile of resilience groups through marketing/branding, information signs, articles in newspaper, social media posts, word of mouth. 'There needs to be a sign at the front of the hall.' (25)

3. Communicate sensitively and respectfully.

- Take people's fears about disasters seriously operate in a trauma-informed way.
- Respect people's wishes not to be involved but keep them informed and extend support to them during crises.

4. Implement alternative communications system for use during disasters.

- Seek funding for communications hardware (e.g. UHF and VHF radios).
- Seek pro bono assistance with setup and training for alternative communications.
- Account for the limitations of a 'communication tree' / Neighbourhood system to ensure all community members can be reached when conventional communications systems fail.

STRUCTURES

1. <u>Implement and strengthen mutual aid structures.</u>

- Learn from other resilience groups' structures and canvass community capacity and opinion in order to implement a model of grassroots organisation that suits the need of the local community.
- Build leadership and responsibility into grassroots community resilience groups by nominating positions and delegating tasks so that roles are clear in crisis situations.

- Account for burnout, fatigue and mental health challenges, and foster a culture of rest, selfcare and community care, for instance by rostering volunteers, or providing psychological and emotional support systems.
- Build in recognition of/thanks for volunteers.
- Consider paying volunteers who contribute so much that it interferes with their paid work: this would make resilience groups more inclusive and allow people from different parts of the community to get involved.

2. Engage with and invest in research on mutual aid where possible.

- Stay up to date with local, national and international research on mutual aid wherever possible.
- Engage with research projects that are sensitive to and respectful of community experiences, and are anticipated to be helpful to the cause of support for mutual aid.
- Apply for funding to conduct research into mutual aid in the local community to find out what is working well and what needs are not being met.
- Leverage research on the local community to garner funding and/or support for mutual aid projects.

PRACTICAL SUPPORT

1. Focus on planning for disasters during 'times of normality'.

- Focus on climate adaptation, preparedness and skill-building.
- Gather the necessary resources to have on hand in times of crisis e.g. generators, radios, fuel, torches. etc.
- Have a plan for where a hub will be established and how it will be run.
- Set up teams/systems and assign roles before the crisis hits.
- Create tools to assist in times of crisis, e.g. register of vulnerable citizens, equipment register, skills register, etc.

2. Seek practical support for disaster preparedness.

- Draw on community members with specific areas of expertise to assist in areas of need such as training, applying for funding, event management, outreach, setting up new systems, etc.
- Request training for community members from DMSs (whether through a programme such as the CAT or CRT system or on a more informal basis).
- Apply for funding from government and philanthropic bodies to build community capacity through resources and training.

RECOMMENDATIONS

for Disaster Management Services

RFI ATIONSHIPS

1. Strengthen relationships with communities.

- Start working with communities if not already doing so.
- Prioritise human contact and personal relationships.
- Support the leaders/drivers of resilience groups with post-crisis debriefs, training in business management, volunteer management, communication, etc.
- Respond promptly to community requests and take them seriously.
- Ensure information is handed over when people move on and keep commitments made by outgoing staff/volunteers.
- Create opportunities for communities and DMSs to bond and recognise each other's efforts.

COMMUNICATION

1. Improve communication with local communities.

- Establish robust communication systems, such as satellite or UHF radios, to ensure communities stay connected during crises, especially in isolated areas.
- Create better communication pathways between local leaders, emergency services, and the wider community to ensure timely and clear information flow.
- Regularly update residents on disaster preparedness through public briefings and local publications, increasing transparency and trust between institutions and communities.
- Safeguard communication networks and electricity supply during crises.
- Communicate better with community during crises.

STRUCTURES

1. Initiate conversations around structured mutual aid.

- Encourage communities who have not yet formalised mutual aid to begin to organise for future disasters.
- Facilitate access to information on a range of models for community resilience organising.
- Provide assistance in times of crisis for communities that do not yet have mutual aid structures in place.

• Make available plain-language information on how to respond in a crisis – how to set up a community response hub, what equipment needs to be on hand – in an easy-to-find place, so that emergent leaders can find it in times of crisis.

2. Strengthen existing mutual aid structures.

- Support community-based mutual aid groups to enhance resilience and preparedness for future crises.
- Provide ongoing training and resources to grassroots organisations to ensure they can prepare for and respond effectively in emergencies.

3. Develop protocols around interactions with grassroots resilience groups.

• Implement protocols for integrating formal aid institutions with grassroots mutual aid efforts whilst leaving space for spontaneous emergent forms of community responses.

4. Tailor support to local needs.

- Customise aid programs to meet the specific needs of individual communities, recognising that one-size-fits-all models may not work.
- Increase flexibility in funding structures, allowing communities to allocate resources to what they identify as the most critical needs.

5. Learn and adapt.

• Engage in collaborative, community-centred research on the relationship between mutual aid and official aid.

6. Ensure sustainability of mutual aid structures.

• Create administrative architecture or scaffolding to enable communities to look after themselves in the medium to long term, so that systems can continue to work even once funding has dried up.

PRACTICAL SUPPORT

1. In times of crisis.

- Step in and help sooner in crisis situations.
- Fine-tune collaboration with other DMSs (e.g. collaboration between the SES, RFS, Red Cross, Army, etc) so that all agencies are mobilised as soon as possible.
- Provide services that are too big for communities to do alone i.e. waste management/recycling/reclaiming after floods.
- Adopt a more collaborative and less risk-averse approach to engage with community-led initiatives.

2. In times of 'normality'.

- Provide information to communities to help them prepare for future crises and adapt to climate change.
- Provide assistance with training to increase community capacity.
- Wherever possible, assist communities to gather the necessary resources to respond themselves in times of crisis.

RECOMMENDATIONS

for Policy Makers

RELATIONSHIPS

1. Build and strengthen relationships with community resilience groups.

• Recognise and prioritise the importance of relationships with grassroots communities and encourage all levels of government to nurture such relationships.

2. Strengthen leadership and volunteer support.

- Support community leaders and volunteers through regular training, capacity-building workshops, and access to mental health resources to prevent burnout.
- Recognise the importance of leadership succession planning to ensure continuity in mutual aid and resilience efforts.
- Acknowledge the contributions of volunteers and create mechanisms for long-term volunteer engagement and retention.

3. Learn and adapt.

- Encourage more open dialogue between institutional players and communities to create mutually beneficial partnerships and refine approaches to disaster response and preparedness.
- Engage with First Nations communities and community members and learn from their approaches to crisis management, especially with respect to natural hazards.

4. Encourage stronger relationships between communities and funders.

 Nurture relationships between communities and funding bodies (whether governmental or philanthropic), ensuring that funders understand the evolving and on-going needs of communities affected by disasters.

- Promote transparency in funding allocation and outcomes, ensuring communities have a voice in deciding how resources are used.
- Recognise and fund varying types of grassroots leaders, not just those who are more polished and can 'talk the talk'.

5. Build trust.

• Show good faith in commitment to reduce the frequency of climate-change-created disasters by reducing carbon emissions.

COMMUNICATION

1. Improve communication during 'times of normality'.

 Create clear channels for communication with community resilience groups, leaders and community members.

2. Improve communication mechanisms in 'times of crisis'.

• Disaster-proof the national telecommunications network to the greatest possible extent.

3. Fund and support alternative communications.

• Provide isolated communities with funding to establish alternative communications networks where national networks fail.

STRUCTURES

1. Recognise the importance of mutual aid and community-led resilience groups.

- Acknowledge critical role that communities play in responding to disasters.
- Work collaboratively to develop guidelines to safeguard individuals who engage in mutual aid work, whether as individuals or as part of groups.

2. Support organised mutual aid.

Provide training, resources and funding to local mutual aid groups.

3. Plan and fund for the long-term.

- Shift recovery support programs to reflect the reality that community recovery from crises
 often takes 5-10 years, not just one or two years, and that communities may be recovering
 from multiple compounding crises.
- Ensure that funding continues beyond the immediate post-crisis period to support long-term recovery and resilience-building efforts.
- Provide communities with resources to develop their own ongoing resilience infrastructure, such as community hubs and resource libraries.

4. Learn and adapt.

- Institutions should regularly review and adapt their models of aid to incorporate lessons learned from previous crises, particularly those of community-driven response efforts.
- Fund and engage in collaborative, community-led research on mutual aid and community resilience.

PRACTICAL SUPPORT

1. Enhance institutional support.

- Strengthen the role of local and state governments in proactively supporting community-led resilience efforts, not just in disaster response but also in long-term recovery and resiliencebuilding.
- Provide practical support (funding, resources training, insurance, etc) for community resilience groups. Ensure that funding is available for necessary resources such as generators, earth-moving equipment, and food supplies, which communities may prioritise during disasters. Fund resources, not just training.
- Support communities to build their response capability as well as in preparation the risks are there but they can't be avoided.
- Improve institutional accountability, ensuring that aid and recovery funds are transparently distributed and used in line with community priorities.

2. Reduce administrative barriers.

- Simplify the processes for applying for grants, funding, and insurance, ensuring that communities can access necessary resources without excessive bureaucracy.
- Create a government umbrella body to insure mutual aid volunteers.
- Offer training in grant application procedures and resource management for community leaders to maximise their chances of securing funding.

3. Address vulnerabilities in isolated communities.

- Prioritise aid for geographically isolated communities that may be cut off for extended periods during crises. Ensure they have the resources and knowledge to manage disruptions without external assistance.
- Develop tailored resilience programs for these communities that reflect their unique challenges, such as communication blackouts and long-term isolation.
- Better use of technology (e.g. sensor technology or flood gauges) to anticipate crises and warn communities.
- Use local knowledge to create built-in triggers for sending out warnings (e.g. creek crossing heights during floods).

SHXEZ

BIBLIOGRAPHY

Australian Bureau of Meteorology, 'New South Wales in 2019: Record Warm and Record Dry', accessed September 27, 2024, bom.gov.au

Australian Bureau of Meteorology, 'Weekly rainfall update for 7 days to 9am 1 March 2022', accessed September 27, 2024, bom.gov.au

Australian Bureau of Meteorology, 'Daily Rainfall: Uki (Tweed River)', bom.gov.au

Australian Bureau of Statistics (ABS), 2021 data on 'Uki', abs.gov.au

Australian Red Cross, Community-led Resilience Teams,, 2020

Australian Research Council Centre for Excellence on Climate Extremes, 'Tinderbox Drought', climateextremes.org

Bloor, Melanie, Natascha Wernick et Mel Taylor, 'Anarchy in the Uki! How a hybrid of structure and autonomy can exist in community self-organisation', *Australian Journal of Emergency Management*, (Australian Institute for Disaster Resilience, 2023), 40-46.

Climate Change Performance Index, 'Australia', accessed 24 September 2024, ccpi.org/country/aus/

Darab, Sandy, Yvonne Hartman, Yvonne et Emma Pittaway, 'Building Community Resilience: Lessons from Flood-affected Residents in a Regional Australian Town', *The International Journal of Community and Social Development*, 2 (2021), 10.1177/2516602620981553

Foote, Wendy L., Margaret Alston, David Betts et McEwan T, 'Women's leadership and a community 'saving itself': learning from disasters, health and well-being impacts of the Northern Rivers flood 2022 (Version 1.2)', *University of Newcastle* (2022), accessed September 27, 2024, dx.doi.org/10.25817/0ekg-2e83

Hartman, Yvonne et Sandy Darab, 'The Power of the Wave : Activism Rainbow Region-Style', *M/C Journal*, no. 17 vol. 6 (2014). doi.org/10.5204/mcj.865

Informed Decisions 2024, 'Northern Rivers Region Community Profile', consulté le 27 septembre 2024, *profile.id.com*

Insurance Council of Australia, 'Insurance Catastrophe Resilience Report 2022-23', accessed September 27, 2024, insurancecouncil.com.au

McCullough, Andrew, 'Connecting communities through volunteering: lessons learnt at NSW SES', AJEM, April 2018, knowledge.aidr.org.au

McNaught, Rebecca, Joanna Nalau, Robert Hales, Emma Pittaway, John Handmer & Jean Renouf, 'Innovation and deadlock in governing disasters and climate change collaboratively-Lessons from the Northern Rivers region of New South Wales, Australia', *International Journal of Disaster Risk Reduction*, 105 (2024): 104366, accessed September 27 2024, *doi.org/10.1016/j.ijdrr.2024.1043*66

Milofsky, Carl, 'Resilient Communities in Disasters and Emergencies : Exploring their Characteristics' *Societies*, 13, no. 8 (2023) : 188. doi.org/10.3390/soc13080188

National Emergency Management Agency, 'Characterisation of the 2022 Floods in Northern Rivers Region', accessed September 27, 2024, nema.gov.au

Natural Hazards Research Australia (2023) *Understanding the Black Summer bushfires through* research: a summary of key findings from the Bushfire and Natural Hazards CRC, report, p.23, available at naturalhazards.com.au/black-summer

NSW Department of Climate Change, Energy, the Environment and Water, 'Projected changes: North Coast', accessed September 27, 2024, *climatechange.environment.nsw.gov.au*

NSW Legislative Council, 'NSW Legislative Council Inquiry into the 2022 Floods', accessed October 9, 2024, parliament.nsw.gov.au

NSW State Emergency Services, "Community Action Team Volunteers", 'Community Action Team Volunteers', ses.nsw.gov.au/get-involved/volunteer/community-action-team-volunteers/

O'Kane, Mary et Michael Fuller, '2022 NSW Flood Inquiry', accessed September 27, 2024, https://www.nsw.gov.au/nsw-government/engage-us/floodinquiry; 'NSW Legislative Council Inquiry into the 2022 Floods', accessed October 9, 2024, https://www.parliament.nsw.gov.au/lcdocs/submissions/78931/057%20NSW%20Government.pd f

Phibbs, Suzanne, Christine Kenney, Christina Severinsen, Jon Mitchell, & Roger Hughes, 'Synergising Public Health Concepts with the Sendai Framework for Disaster Risk Reduction: A Conceptual Glossary', *International Journal of Environmental Research and Public Health*, 13 (2016): 1241. 10.3390/ijerph13121241.

Rawsthorne, Margot, Amanda Howard et Pam Joseph. (2022). 'Normalising community-led, empowered, disaster planning: Reshaping norms of power and knowledge'. Oñati Socio-Legal Series. 12. 10.35295/osls.iisl/0000-0000-0000-1258.

Renouf, Jean, 'The implications of climate change for emergency management: The example of Australia', International Journal of Emergency Management, 2023 Vol.18 No.2, pp.144 – 171, inderscience.com/info/inarticle.php?artid=131933

Shoebridge, Joanne et Catherine Marciniak, 'Gondwana-era-era nightcap oak devastated by unprecedented bushfire', *ABC News*, 18 January 2020. *abc.net.au/news/2020-01-18/gondwana-era-nightcap-oak-devastated-by-bushfire/11877770*

Taylor, Mel et al, 'Community experiences of the January-July 2022 floods in New South Wales and Queensland', Summary Report, National Hazards Research Australia, p. 2.

The Echo, 'More than 40 still fighting Tenterfield fire', *The Echo*, September 30, 2019 (website) echo.net.au/2019/09/more-than-40-still-fighting-tenterfield-fire/

Willmott, W. 'Tamborine Mountain geology and groundwater origins. Presentation to the Tamborine Mountain Land Care Water Forum', as reproduced in Andrew Todd, 'Groundwater Investigation: Tamborine Mountain, SE Queensland', June 2011. See tamborinemtnlandcare.org.au/downloads/Tamborine_Mt_report.pdf

Webster, Scott, Emma Pittaway, Zac Gillies-Palmer, et al, 'Empowering Communities, harnessing local knowledges: self-organising systems for disaster risk reduction (final report)', Sydney Environment Institute (2024), accessed on September 27, 2024, sydney.edu.au





COLLECTION: MUTUAL AID IN TIME OF CRISIS

CASE STUDY FRANCE:

The solidarity movement in Briançon: emerging mechanisms of aid and mutual aid on the French-Italian border (in French only).

CASE STUDY FRANCE:

Citizen mobilisation in response to cyclones in Réunion (in French only).

CASE STUDY FRANCE:

Emerging and future dynamics of solidarity (aid and mutual aid) in the Roya valley, following storm Alex (in French only).

CASE STUDY AUSTRALIA:

How mutual aid strengthened Greater Uki's community resilience, 2019-2022 (also available in French).

CASE STUDY CHAD:

'We can't just sit back and do nothing': ambivalent attitudes towards (mutual) aid during the 2022 floods in N'Djamena (in French only).

CASE STUDY UKRAINE:

Survival in a war zone: mutual aid, local solidarity and beyond (also available in French & Ukrainian).



Groupe URD

La Fontaine des Marins 26170 Plaisians – France **Phone:** + 33 (0)4 75 28 29 35 www.urd.org

Contact: entraide@urd.org

For more information about the project:

www.urd.org/fr/projet/soutenir-lentraide-en-temps-de-crise-projet-entraide-2

Photo credits: all rights reserved.





