

# Too Close to Home:

How we keep communities safer from escalating climate impacts



**Emergency Leaders for Climate Action (ELCA) fights for greater protection of communities from climate-fuelled disasters and to ensure effective responses when disasters occur.**

Drawing upon the expertise of its members, including 38 former state and territory heads of emergency management and fire services, ELCA works with civil society organisations, the private sector and governments to shape policies and investments that minimise disaster risks and support effective response and recovery.

ELCA plays a critical role communicating the seriousness of the climate threat, the need for further, faster cuts to climate pollution, and how we ready communities and fire and emergency services for increasingly frequent and damaging extreme weather events.

**Emergency Leaders for Climate Action and the Climate Council acknowledges the Traditional Owners of the lands on which we live, meet and work. We wish to pay our respects to Elders past and present and recognise the continuous connection of Aboriginal and Torres Strait Islander people to Country.**

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Authors: Sean O'Rourke, Greg Mullins, Simon Bradshaw and Dinah Arndt.



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# Key Findings

**1** Communities and first responders are struggling to cope with increasingly frequent climate-fuelled disasters, with assistance from the Australian Government sought by states and territories 226 times since 2019/20.

- a. Financial assistance has been called for and provided by the Australian Government in response to disasters 226 times over the past five years, with four out of five of local government areas across the country impacted.
- b. Some communities are being repeatedly pumelled by fires, floods and storms with little time to recover in between. The highest incidence of disasters were recorded in Baw Baw (47), Yarra Ranges (42) Wellington (37) and East Gippsland (39) in Victoria; Clarence Valley (34), Mid Coast (33) and Port Macquarie (30) in New South Wales; and Cook (28) and Carpentaria (25) in Queensland.
- c. Emergency services, local governments and communities have struggled to cope with the frequency, intensity and destruction of disasters like the Black Summer bushfires and flood emergencies during the back-to-back La Nina years of 2020-2022. Smaller communities already have too few emergency service volunteers to adequately respond to such disasters. Under-funded and under-resourced local governments struggle to cope with ongoing recovery from disasters long after emergency services and the media have left.
- d. Emergency Leaders for Climate Action recommends building community resilience through locally-based teams of volunteers, working with support and coordination provided by local emergency services and councils. These volunteers can then lead on-the-ground preparation and recovery from disasters.
- e. A new program of paid seasonal firefighters should be piloted during periods of heightened bushfire risk to bolster the ranks of urban fire services on the urban / bushland fringe and to provide back up and relief for volunteer rural fire services.

**2** Australians have been forced to move almost a quarter of a million times in recent years due to climate-fuelled disasters, with certain communities becoming calamity hotspots.

- a. National data shows that between 2008/09 and 2022/23 there were 240,828 displacements - or forced movements - across Australia due to extreme weather events. Two thirds of these occurred between 2018/19 - 2022/23.
- b. Of the 95,239 displacements resulting from fires, 68% were due to the unprecedented Black Summer bushfires. Two thirds (68%) of the 85,690 displacements from floods were due to 2020-22 flooding disasters in Queensland, New South Wales and Victoria. Tropical cyclones Debbie (2017), Yasi (2011) and Oswald (2013) accounted for 79% of 59,826 displacement due to storms.
- c. People are also experiencing long periods of homelessness following a climate-fuelled disaster. For example, following the October 2022 floods that engulfed Rochester, Victoria it was estimated 70% of residents still weren't able to return home seven months later.
- d. Wherever possible, people should be supported to remain where they live. When the safest choice is to move people out of harm's way (for example, relocating from flood plains), they should be supported to move safely, with dignity and fair compensation.

**3** We can limit the severity of future floods, fires and destructive storms if we phase out pollution from coal, oil and gas more swiftly in the 2020s.

- a. 2023 was the hottest year on record globally, with 2024 shaping up to match or exceed this: driven by climate pollution from the burning of coal, oil and gas.
- b. Scientists are clear that climate pollution is causing more chaotic and extreme weather events including longer, hotter and more frequent heat waves, longer and more ferocious fire seasons, and flooding rains.

- c. Emergency Leaders for Climate Action believe that all governments must accept climate change as an existential threat and mobilise urgently to tackle the root cause of worsening extreme weather: pollution from coal, oil and gas. Climate Council research spells out how Australia can cut climate pollution (Climate Council 2024c) further and faster across our economy in the 2020s.
- d. There is still considerable scope to limit the severity of future floods, fires, heatwaves and destructive storms if we seize the decade, build up clean energy infrastructure and industries and cut climate pollution deeply by 2030.
- e. While we rapidly decarbonise the economy, we must simultaneously invest urgently in climate adaptation and disaster resilience to protect communities from the effects of climate pollution already in the atmosphere.

#### **4 Australia is making inroads to better prepare for and respond to worsening extreme weather, but efforts remain underfunded and inadequate in the face of the climate challenge we now face.**

- a. The Australian Government should be commended for setting out to rebuild Australia's capacity to deal with climate-fuelled disasters after a decade of neglect, but much more remains to be done.
- b. The Australian Climate Service should be adequately resourced to become a "single point of truth"- providing communities, businesses and governments with accessible, consistent climate risk information and predictions downscaled to regional level, as a basis for informed decisions.
- c. We don't yet understand which communities are most vulnerable to climate-fuelled disasters — or less able to prepare or respond — due to existing inequalities and social demographics. This information is crucial to preparing communities for disasters and supporting them to respond and recover.
- d. Governments must go beyond rebuilding and repairing physical infrastructure after a disaster, with research showing that community connection and social capital strongly influence how people are able to prepare for and respond to a disaster.
- e. Communities can be empowered and resourced to comprehend their own level of risk using reliable data, and then develop their own resilience measures, assisted by emergency services, all levels of government, and the private sector.

#### **5 We can keep our communities safer from the climate impacts of today and tomorrow with better information, access to support and by heeding the lessons of past disasters.**

- a. Targeted support is required to make sure we prioritise the people and places most at risk from climate-fuelled disasters, and those least able to prepare and respond.
- b. Investing in social connection and capacity within communities, as well as resilience for individual households, will make them better equipped to prepare and respond. Dedicated funding is needed for community-led initiatives at local government level.
- c. Australian, state, territory and local governments should respond in full to each and every recommendation arising from the Royal Commission into National Natural Disaster Arrangements, as well as recommendations from state/territory flood and fire inquiries conducted since 2019.
- d. The Australian Government has committed additional funding to the Royal Commission recommendation to create a sovereign aerial firefighting capability to reduce reliance on large firefighting aircraft rented from overseas. Opportunities exist to trial different types of firefighting aircraft, to retain and repurpose retiring RAAF C130-J aircraft, and use local pilots and servicing capabilities, to establish a year-round local capability that could also move people and equipment during extreme weather events.

# Keeping communities safer

## FIVE PRIORITIES TO BETTER PROTECT COMMUNITIES FROM THE CLIMATE IMPACTS OF TODAY, AND TOMORROW.

We are now living through a rapid intensification of climate-fuelled disasters. Emergency services and governments worldwide are already being periodically overwhelmed by the increasing frequency, intensity and destructiveness of climate-fuelled disasters, and this will continue to worsen until we stabilise temperatures. If we are to have any hope of successfully coping, all adaptation and resilience efforts

must sit alongside urgent efforts to reduce climate pollution further and faster this decade. The following five priorities identified by Emergency Leaders for Climate Action (ELCA) are concrete steps Australian governments can take to help better protect communities from the impacts many are already experiencing due to climate pollution.

|                                                                                                                                                                                                                                     |                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                             |                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><b>Equipping everyone with the climate risk information they need</b></p>                                                                    |  <p><b>Prioritising the protection of people and places at greatest risk from climate-fuelled disasters</b></p>  |  <p><b>Supporting community-led climate change adaptation and disaster response</b></p>                                                                                                               |  <p><b>Building household resilience to the impacts of climate change</b></p>                                          |  <p><b>Learning lessons from past disasters</b></p>        |
| <p>Develop nationally consistent regional assessments and predictions of climate change risks so every decision maker, business and community understands how climate pollution is impacting them and will do so in the future.</p> | <p>Identify the people and places most at risk — due to relative exposure as well as existing social and economic disadvantage — to ensure that support is concentrated where it's needed most.</p> | <p>Help communities be more resilient through greater social connections, access to necessary knowledge and information about local hazards (for example fires, floods, coastal inundation), and leveraging resources, including existing emergency services and new support groups.</p> | <p>Ensure households can access the support they need to prepare for or cope with climate-fuelled disasters — whether that's retrofitting their homes or, in some cases, moving them out of harm's way.</p> | <p>Fully implement all recommendations from the Royal Commission into National Natural Disaster Arrangements, and other relevant inquiries.</p> |

# Introduction

A fundamental duty of governments is to keep people safe. Wherever we may live, having a basic level of physical security and the confidence that we are safe and protected at home is essential.

For too many of us worsening fires, floods, storms and droughts — driven by climate pollution from the burning of coal, oil and gas — are eroding our security. An overwhelming majority of Australians (84%) say they have been directly affected by at least one climate-fuelled disaster since 2019 (Climate Council 2024a). Around one in three of us fear that we may one day be forced to permanently relocate from our homes (Climate Council 2024a). This is significantly harming our mental health, especially among young people (Climate Council 2023a, 2024a).

**An overwhelming majority of Australians have experienced at least one climate-fuelled disaster since 2019 and around one in three of us worry we may one day be forced to relocate.**

Today we are living with the consequences of past inaction over the climate crisis and our failure to cut climate pollution as fast as necessary. As a result, we are dealing with longer and more dangerous fire seasons, and more extreme downpours (BoM and CSIRO 2022). Coastal and island communities now face accelerating sea-level rise. These impacts will continue to worsen in the short to medium term - underscoring the need to cut climate pollution further and faster this decade (IPCC 2022). While these changes impact us all, they are not felt evenly or equally. Our location, income, gender, age, health and other factors can affect our level of vulnerability. As the research underpinning this report shows, some communities are facing consecutive and compounding disasters with little chance to recover in between.

The task to better protect Australian communities from climate harm is threefold. First, we must drive down climate pollution from coal, oil and gas much further and faster in order to tackle the root cause of worsening extreme weather. Our choices today will define how safe or dangerous the world becomes as our children grow up. There is still considerable scope to limit the severity of future floods, fires and destructive storms if we truly seize the decade by building up clean energy and industries so we can cut climate pollution deeply by 2030 (Climate Council 2023b, 2024b, IPCC 2021<sup>1</sup>). Second, we must adapt as much as possible to the impacts confronting us, which will continue to escalate in the coming years. Third, when the least worst choice becomes moving out of harm's way of worsening extremes, people should have the support they need to move safely, with dignity and with fair compensation.

<sup>1</sup> The benefits of faster cuts to climate pollution, in terms of limiting the severity of future extreme weather events, will be realised well within most of our lifetimes. After around 20 years, rapid and sustained cuts to climate pollution are likely to mean fewer deadly heatwaves compared to a scenario in which the world fails to take stronger action. It will likely take a little longer to see a discernible effect on other risks, such as extreme rainfall and flooding. However, by the end of the century – well within the expected lifespan of a child born today – deeper cuts to climate pollution through the 2020s will have strongly limited the impacts that would otherwise occur. In other words, today's choices will have a major impact on the kind of world facing young people alive today, not to mention future generations. (IPCC 202, Section D.2.3 and D.2.5.)



When it comes to cutting climate pollution, Australia is making serious headway (Climate Council 2024c). While much more remains to be done, we are making progress - particularly in our energy sector. When it comes to protecting communities from climate harm — by preparing for and adapting to worsening extremes — our efforts remain nascent due to a decade of neglect and failed climate leadership by the former Australian Government. As this report outlines, there are some good initiatives in place within individual states and territories, plus national programs like the Disaster Ready Fund. However, overall our efforts remain piecemeal, underfunded, and inadequate in the face of the climate challenge we now face.

This year is pivotal in Australia’s efforts to better prepare communities for the climate impacts of today and tomorrow, as the Australian Government works towards our first National Adaptation Plan.

Emergency Leaders for Climate Action (ELCA) is a cohort of former senior Australian fire and emergency service leaders from every state and territory, with deep expertise in disaster planning, preparedness, response and recovery. The content of this report reflects this first-hand experience along with inputs from experts and practitioners in climate change adaptation. It seeks to build on the start that Australia has made and identifies five key priority areas for further action to better protect Australians from the impacts of extreme weather including bushfires, destructive storms and floods.

First, we must develop a better understanding of physical climate risks down to a regional level ([priority 1](#)). Just as importantly, we must identify the communities that — through greater exposure to these risks or existing economic and social disadvantages — are most vulnerable and in need of greater support ([priority 2](#)). We need to support communities to grow their resilience and ability to cope with climate extremes by building on their inherent strengths, providing access to the necessary knowledge, information and equipment, and harnessing their social capital in new ways ([priority 3](#)). At the household level, we must ensure that people can get the support they need to adapt and respond to the impacts of climate change – whether through grants to retrofit their homes or, in some cases, by being assisted to move out of harm’s way ([priority 4](#)). Finally, we need to take on board the lessons from recent disasters by fully implementing the recommendations of inquiries, including the Royal Commission into National Natural Disaster Arrangements, that followed the 2019-20 Black Summer fires and subsequent floods ([priority 5](#)).

We are already paying a heavy price for ongoing climate pollution. Focusing on these five priority areas, while at the same time accelerating efforts to cut climate pollution, will ensure that Australian communities are better protected and able to thrive for generations to come.



**Image 1:** NSW State Emergency Service (SES) out in rescue boats following flooding in July 2022. Image credit AAP.



## CHAPTER 1

# Equipping everyone with the climate risk information they need

## THE CHALLENGE

Climate pollution, caused by the burning of coal, oil, and gas, is rapidly heating the planet and endangering our homes, livelihoods, security and wellbeing. The increasing frequency and impact of extreme weather events including heatwaves, droughts, fires, floods and storms, comes with massive human, economic, and ecological impacts (Climate Council 2021, 2023b).

Since 2019/20, there have been 226 instances in which Disaster Recovery Funding Arrangements have been activated by the Australian Government to provide relief and recovery assistance to disaster-affected communities (National Emergency Management Agency, 2024a).<sup>2</sup> This is in addition to the support provided by states and territories (See Breakout Box). Such disasters have impacted four out of five local government areas in Australia. While not all disasters are equivalent in their scale and severity, this underscores the stark reality that most communities across Australia have to prepare for, and respond to, repeated and worsening extreme weather events. There were many other emergency situations over the same period where states and territories did not request Australian Government assistance.

Preparations for escalating disaster risks depend on a much clearer understanding of how climate change will harm different communities within Australia, now and into the future.

## PROGRESS TO DATE

In 2019-20, the Royal Commission into National Natural Disaster Arrangements highlighted that Australia lacked an authoritative understanding of climate impacts, and that downscaled (that is, more localised) climate projections should inform federal, state and territory assessments of future disaster risk (Commonwealth 2020).

The Australian Government is responding to this responsibly by funding the National Climate Risk Assessment, which for the first time will bring together climate risk, exposure, vulnerability and response information and include downscaled projections (DCCEEW, 2024). The Australian Climate Service was established in 2021 to provide information and advice on climate risks to inform decision-making, and must be properly resourced so that it can provide governments, the private sector and communities access to the detailed and consistent information they need to develop adaptation initiatives (Commonwealth of Australia 2023). This should include consulting with the Bureau of Meteorology, CSIRO and other partnership organisations on the model of client services it provides.

### DISASTER RECOVERY FUNDING ARRANGEMENTS

The Disaster Recovery Funding Arrangements (DRFA), are a cost-sharing agreement between the Australian and state and territory governments where up to 75% of the costs associated with disaster recovery can be reclaimed by state and territory governments from the Commonwealth (National Emergency Management Agency, 2024b).

DRFA provides emergency assistance to individuals, businesses and communities impacted by disasters. However this support does not cover all costs incurred as a result of such disasters and by itself cannot provide a return to the quality of life communities, businesses and people enjoyed prior to such a disaster. DRFA activations only occur once the likely costs of recovery pass a certain threshold. Historical data capturing DRFA activations only capture disasters where these cost-sharing arrangements were activated (State of Victoria, 2024b).

<sup>2</sup> Results from an ELCA/Climate Council analysis of the National Emergency Management Agency's DRFA activation history by location 2024 May 01 dataset. Data for 2023/24 is from 1/07/23 to 1/05/24. Activations for earthquakes were not included in the analysis.



**Image 2:** Counting the cost of climate pollution: A Murwillumbah resident begins the long and arduous task of cleanup and recovery following the extreme downpours and floods in New South Wales in March, 2022. Communities must be equipped with actionable information on climate risks, so they can be better prepared for the worsening extreme weather of today and tomorrow.

## PRIORITY ACTIONS

To enable effective adaptation planning and distribution of resources, nationally consistent assessments of climate change risks downscaled to regional level are urgently needed.

The Australian Government must resource the Australian Climate Service to:

- a. Be the main source of independent climate risk data used by Australian governments and departments, and provide comprehensive information on climate risks for businesses and communities.
- b. Provide downscaled, regional climate risk projections based on scientifically defensible worst-case scenarios, for each decade to the end of this century.
- c. Show the likelihood of hazards under a scenario of much deeper cuts to climate pollution, so that people have a better understanding of the benefits of cutting climate pollution further and faster this decade.
- d. Design its products and services in partnership with those most likely to require and use them, including local government, emergency services, the insurance industry, businesses and community organisations, including those engaged with First Nations and multilingual communities.
- e. Ensure that its products and services are developed to support initiatives and decision making that improve response, recovery, resilience and adaptation.
- f. Deliver suitable training on the use of its products and services to government agencies, the private sector and community organisations, as required.

**If communities don't know what risks exist, how can they prepare for them? We must have nationally consistent, regional-level assessments of climate risks so governments, the private sector and communities can act.**

## CHAPTER 2

# Protecting people and places at greatest risk from climate-fuelled disasters

## THE CHALLENGE

While we're all dealing with the impacts of climate change, some communities are being hit harder and more frequently than others.

From 2006/07 to 2023/24, 514 local government areas were impacted at least once by disasters significant enough to require activation of Disaster Recovery Funding Arrangements (National Emergency Management Agency, 2024a).<sup>3,4</sup> On average, each of those communities were impacted 10 times. Disasters can occur anywhere, but data analysis shows some communities are bearing the brunt of climate-fuelled disasters. Fifteen local government areas have sought and received Australian Government assistance for recovery from disasters at least 25 times since 2006/07.

This includes the local government areas of Baw Baw (which sought and received national assistance 47 times), Yarra Ranges (42 times) Wellington (37) and East Gippsland (39) in Victoria; Clarence Valley (34), Mid Coast (33) and Port Macquarie-Hastings (30) in New South Wales; and Cook (28) and Carpentaria (25) in Queensland.

**Fifteen local government areas have sought and received Australian Government assistance for recovery from disasters at least 25 times since 2006/07.**

<sup>3</sup> Results from an ELCA/Climate Council analysis of the National Emergency Management Agency's [DRFA activation history by location 2024 May 01](#) dataset. Data for 2023/24 is from 1/07/23 to 1/05/24. Activations for earthquakes were not included in the analysis.

<sup>4</sup> The Australian Capital Territory has been subject to 10 Disaster Recovery Funding Arrangement activations since 2006/07, but is not included in the analysis as it does not include a local government area.

## LOCAL GOVERNMENT AREAS MOST FREQUENTLY IMPACTED BY DISASTERS SINCE 2006/07 BY STATE AND TERRITORY

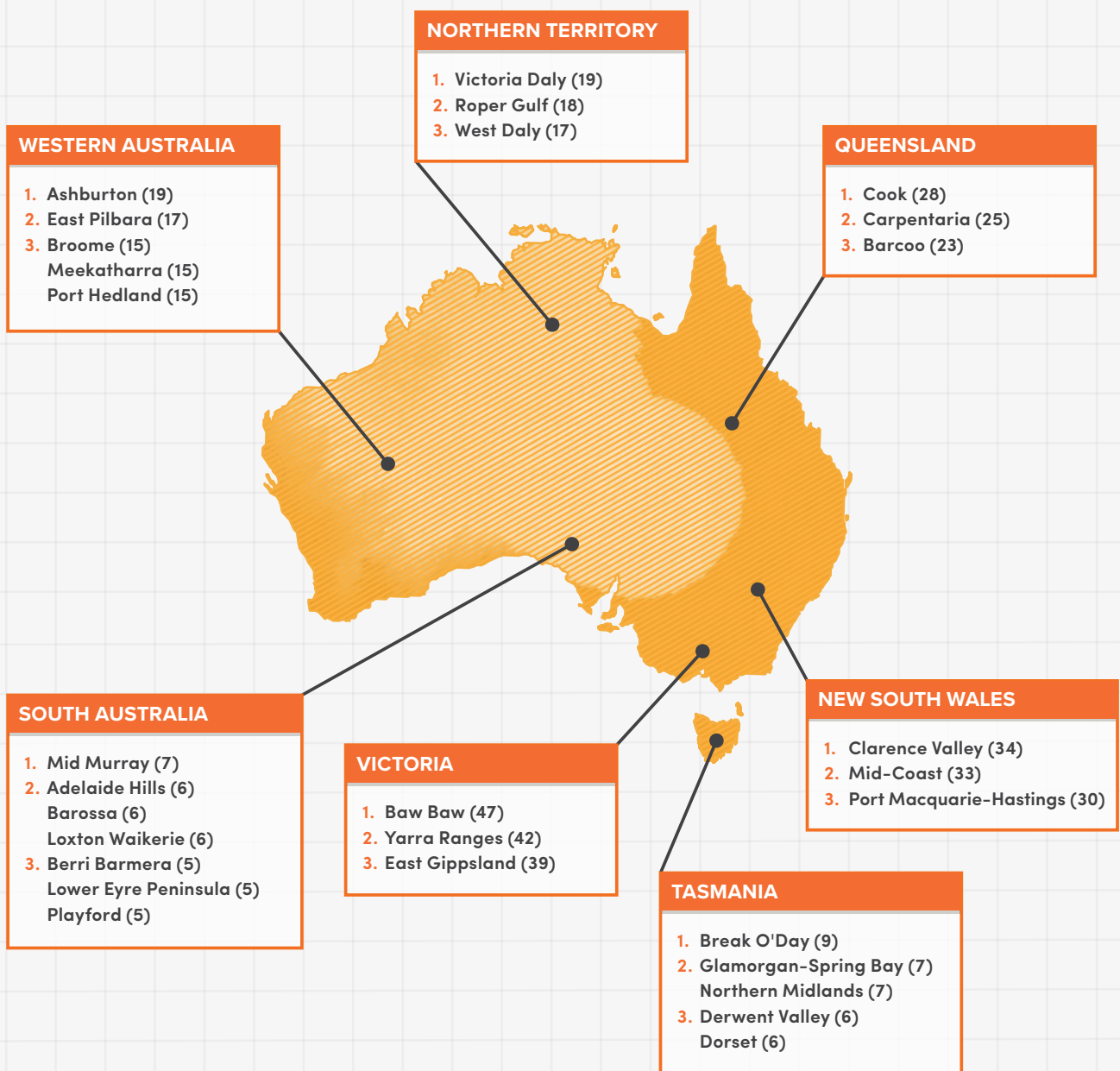


Figure 1: Escalating, more frequent disasters: A map showing the top three local government areas that have been most frequently impacted by significant disasters since 2006/07 by state and territory. (Source: National Emergency Management Agency - [Disaster Recovery Funding Arrangement activation history by location](#)).

While this is alarming enough, many of those communities are being slammed by compounding disasters that allow little time to recover in between. For example, Wellington Shire in Victoria suffered through five separate disasters spanning floods and fires between September 2023 and February 2024. Communities reeling from a disaster can be brought to their knees by subsequent events happening hot on the heels of the last one.

Commenting on the fires and floods affecting different communities within Wellington Shire in October 2023, Mayor Ian Bye stated that it was “the first time the

Victorian emergency map showed flood warnings and fire warnings for the same area on the same day” (Dumas 2023).

This is not unique to Victoria, with communities in NSW and Queensland also suffering through what’s been described as climate whiplash: wild swings between weather extremes occurring rapidly multiple times within a given year (Climate Council 2024d).

As each of these examples show, it is clear that some communities are facing more frequent and severe disasters.

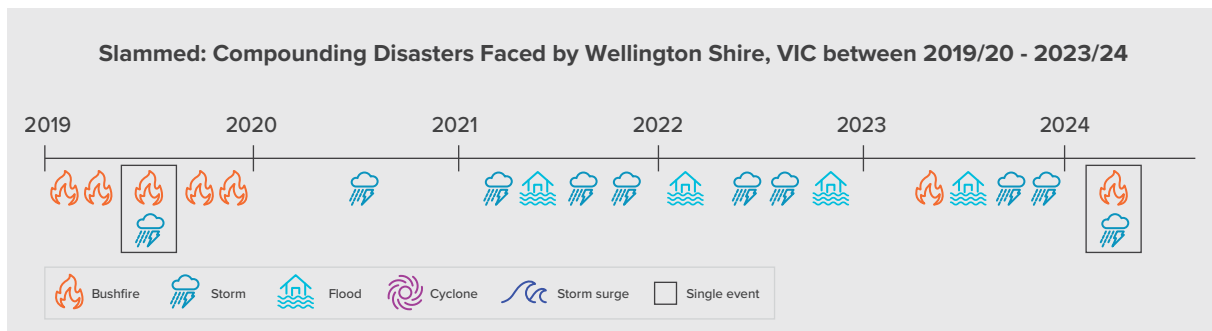


Figure 2: Slammed: Compounding Disasters Faced by Wellington Shire, VIC between 2019/20 - 2023/24 (n=19).

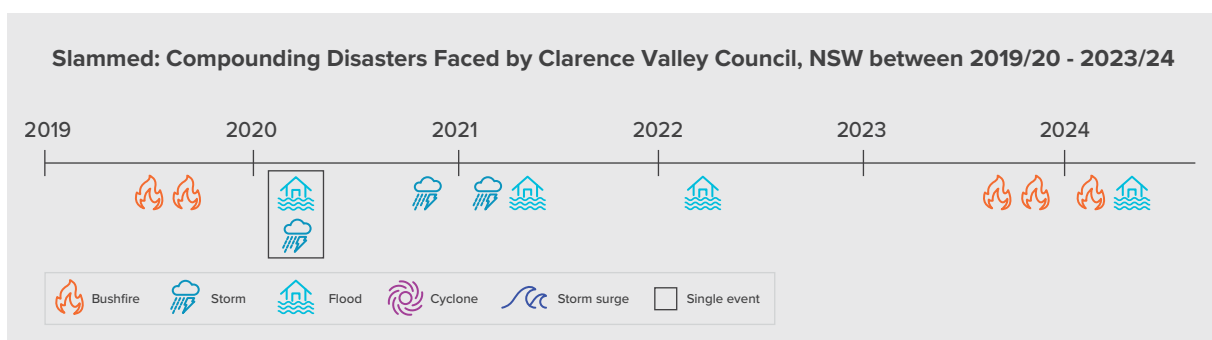


Figure 3: Slammed: Compounding Disasters Faced by Clarence Valley Council, NSW between 2019/20 - 2023/24 (n=11).

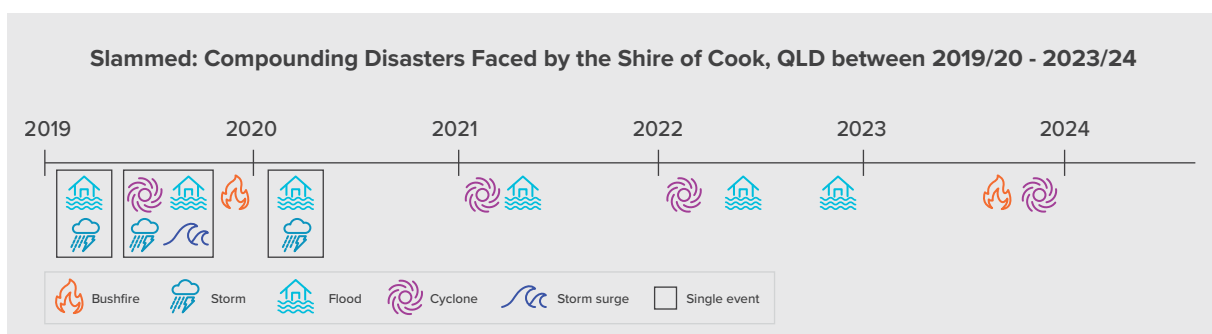


Figure 4: Slammed: Compounding Disasters Faced by the Shire of Cook, QLD between 2019/20 - 2023/24 (n=11).



“ In early December 2023, as I made my way back to Adelaide from Clare in South Australia’s mid-north, dust storms swept the horizon. That day, South Australian firefighters responded to multiple bushfires exacerbated by high winds and extreme heat.

This marked the early stages of an onslaught of extreme weather events in South Australia. Heatwaves occurred in multiple locations across the state, followed by catastrophic bushfire ratings, intense thunderstorms, tens of thousands of lightning strikes, and record-breaking rainfall.

In the weeks that followed, the east coast of Australia experienced a deluge of storms, only months after an early and savage start to the bushfire season. It is clear to me that the weather we have seen across Australia in recent years has been supercharged.

The escalation of global temperatures due to greenhouse gas emissions from the burning of coal, oil, and gas is causing more volatile weather patterns. This means we must better prepare, in the here and now, for climate impacts including more extreme weather events, like we have just experienced. ”



**Brenton Keen**

Former director of the Emergency Management Office in the South Australian Fire and Emergency Services Commission and ELCA member.

A disaster results from the combination of a community’s exposure to hazards such as bushfires and flooding rains, and their ability to cope with these hazards when they strike. While climate pollution has resulted in many communities experiencing repeated and compounding weather extremes, some may be more vulnerable to disasters due to a range of existing social factors including the number of residents who rely on others for care such as children or the elderly, the proportion who have a disability, and relative levels of socio-economic disadvantage (State of Victoria 2016, Boulter, Palutikof & Karoly 2013).

For example, the 2017 floods in Murwillumbah and Lismore impacted more residents in disadvantaged neighbourhoods than affluent areas. Sometimes residents in these neighbourhoods lacked fundamental resources like food, sanitation and emergency accommodation, or sufficient knowledge to access the help they needed (Rolfe et al. 2020).

This is recognised by community sector organisations supporting people impacted by climate-fuelled disasters. A series of recommendations developed by ELCA in collaboration with Australian Council of Social Service (ACOSS) in 2020 through the Australian Bushfire and Climate Plan recommended that an online tool be developed including a social risk index to identify which communities need more support to build resilience and prepare for and respond to disasters (Emergency Leaders for Climate Action & the Climate Council 2020).



## PROGRESS TO DATE

Australian governments have recognised that some communities will face more frequent and severe extreme weather events, and are taking steps to plan for this. The Victorian government partnered with Australia's national science agency the CSIRO, to produce locally-scaled climate risk projections to 2090 that have also informed the development of Regional Climate Change Adaptation Strategies (State Government of Victoria, 2021, 2024). The NSW Government has developed a State Disaster Mitigation Plan, which details which local government areas are most at risk from climate change related hazards now and into the future (NSW Government 2024).

However, what is still lacking in these and other approaches is an understanding of how the characteristics and composition of communities may impact their ability to prepare for escalating climate risks and recover from disasters. Without this essential information, adaptation and resilience resources may not be going to where they are needed most; further disadvantaging those communities with limited resources (Nelson, Kopic & Crimp et al. 2010).

## PRIORITY ACTIONS

To better prepare Australian communities for and respond to more frequent and severe extreme weather, climate risk projections need to be combined with information on community vulnerability. This will enable all tiers of government, not-for-profit organisations, the private sector (including businesses that are directly impacted by disasters and those that incorporate climate risk into decision-making, such as insurance companies) and communities to target climate adaptation and resilience initiatives.

The Australian Government must:

- a. Ensure that the National Climate Risk Assessment and ongoing work of the Australian Climate Service includes an assessment of which communities are most vulnerable to the impacts of climate change under worst-case scenario projections.
- b. Provide an assessment of the social vulnerabilities of Australian communities that can be combined with climate risk projections for governments, businesses and communities to better prepare for future climate impacts and disasters.
- c. Release climate and social risk assessments to the public and present them in a format that can be used by regional bodies such as local governments to ensure the safety and wellbeing of local residents.
- d. Work with state and territory governments to use the combined climate and social risk assessments to better target adaptation and resilience initiatives and funding to those communities which will face the greatest impacts of climate change but have the least resources to respond to them.

Support should be targeted to where it's needed most with some communities bearing the brunt of repeated disasters, and other communities poorly resourced to deal with disasters when they strike.

**Image 3:** *Hitting home: Susan Conroy, inside her home in Cathcart Street, East Lismore, nearly one year after the city's worst-ever flood struck in late February, 2022. Floodwaters reached 14.4 metres, two metres higher than the previous record set in 1974.*



## CHAPTER 3

# Supporting community-led climate change adaptation and disaster response

## THE CHALLENGE

Historically, more than 97% of disaster-related expenditure has gone to emergency response and recovery rather than spent on reducing risks before disasters strike (NSW Government 2024). This is despite the fact that investing in climate change adaptation and other resilience-building initiatives is known to substantially reduce disaster losses as well as bring other benefits to communities. This offers a significant return on investment to us all. The Insurance Council of Australia has estimated that for every dollar invested in disaster preparedness there is a \$9.60 return on investment (National Emergency Management Agency 2023).

Community connection and social capital strongly influence how well a community can prepare for escalating climate impacts and respond to disasters (Cuthbertson et al. 2023). Not surprisingly, community-led approaches to adaptation and resilience — that focus on giving communities access to the knowledge and information they need, building on their existing strengths, and co-developing solutions — are proven to be smart investments in helping communities continue to flourish in the face of escalating climate change and disaster risks.

Importantly, when communities are well connected and able to work together, they are also better equipped to seek funding for and build the physical infrastructure they need to remain safe from extreme weather and other climate impacts.

When rebuilding after a disaster, governments should always “build back better” in accordance with Australia’s commitment to the Sendai Disaster Risk Reduction Framework (Commonwealth of Australia 2022). However, this on its own still falls short. To realise the true potential of communities, governments must go beyond rebuilding and repairing physical infrastructure after a disaster and also be willing

to invest in the social capital of communities. This will support communities to adequately prepare for escalating climate impacts and respond to disasters, and could include practical initiatives such as funding for ‘community resilience hubs.’ The crucial role of local government must also be recognised as councils tend to be left with the aftermath, and costs, of disasters and their impacts long after assistance from other levels of government has ceased.

“ As we saw in the 2022 floods and the Black Summer bushfires, we are a nation of people who help our neighbours. Had we not been, many more lives would have been lost. But we could be doing more to help communities help one another. We must equip them with the necessary tools to protect themselves and enlist them in the fight for our future.

When someone enlists in our defence force, they are provided with the equipment, the training, and the resources they need to save lives and protect Australia. We need to do the same for our communities as they face climate change.”



**Major General Peter Dunn (ret)**

Former Commissioner for the Australian Capital Territory Emergency Services Authority and ELCA member.

We must recognise that many small communities have limited formal disaster response capability to draw upon when disaster strikes. Volunteers are estimated to make up 90% of the emergency management services and firefighting workforce across the nation, and this helps to build community resilience. However, this bedrock of support is diminishing over time, with volunteering in emergency services declining since 2015-16 (Forner 2023, McLennan, Chong &

Dunlop, 2022). In some communities the local SES membership is already too small to respond to disasters experienced today and expected in future (Australia Remade 2023). Compounding disasters have left many SES and firefighter volunteers exhausted and suffering from mental health issues (Commonwealth of Australia 2020). It can also impact on crucial risk reduction efforts including prescribed burning which is the only broad-scale tool available to mitigate bushfire threats.

## CASE STUDY

### HOW RESIDENTS IN UKI, NSW FAST-TRACKED DISASTER RESPONSE

Resilient Uki provides an example of a community resilience hub, which has been able to build social connections and expedite the building of the physical infrastructure required to make the community safer during extreme weather.

Resilient Uki's Neighbourhoods Project for Greater Uki is working in 12 neighbourhoods across Greater Uki to connect residents and better prepare the community for climate risks and future disasters by providing support for neighbourhood leaders and facilitators, equipment for neighbourhood events, and information sessions and resources on storms and floods. Importantly, the project supports

the mental health resilience of Uki residents by recognising that when disaster strikes, people firstly turn to their neighbours for the urgent support they need (Resilient Uki 2024a, Resilient Uki 2024b).

Resilient Uki has also greatly enhanced community capacity to respond to disasters by establishing a community-owned radio network that can be used when communications are down during a disaster, developing off-the-grid energy for a local emergency hub, and by making community-owned assets available for local fire and flood disaster response (such as emergency rescue, road clearing and house cleaning equipment) (Resilient Uki 2024c, Uki Village & District 2024).

During the Black Summer bushfires, there were instances where local communities were left unprotected because their local fire truck had been sent away to protect other areas. This has highlighted the need to create additional disaster resilience capabilities within communities, separate to formal emergency services structures, to support and facilitate 'self-help' in every community.

For example, the NSW Community Fire Unit program provides basic fire protection training and equipment for street-based volunteer groups so that they can protect their own homes during bushfires if fire services are delayed or unable to assist. In Los Angeles County California, Community Emergency Response Teams comprising local residents are trained by the Fire Department and Paramedics in basic earthquake rescue, first aid, and firefighting. Comprehensive volunteer programs for residents dealing with relevant disasters in local areas could be facilitated by emergency services and local government, provided sufficient additional funding and resources are provided.

**When communities have the information they need, are supported to play to their strengths and involved in designing what they need - they are as prepared as they can be, and recover faster from disasters.**

## PROGRESS TO DATE

Since the 2019-20 Black Summer bushfires, the Australian Government has made welcome commitments to increase disaster risk reduction and resilience initiatives, including the National Partnership Agreement on Disaster Risk Reduction, the Disaster Ready Fund and Protecting Our Communities (Disaster Resilience Program). These initiatives have funded important resilience building work, including climate and hazard risk assessments, business cases for community asset improvement, and infrastructure upgrades. However, funding for initiatives that build social connection, including through community engagement and education, is limited.



## PRIORITY ACTIONS

National disaster funding by Australian and state and territory governments needs to be recast to increase the amount spent on disaster risk reduction and resilience, and — in particular — expand support for community-led adaptation. This should be in addition to investment in prevention, including bushfire hazard reduction burning programs, response and recovery, which also needs to grow in line with the increased frequency and severity of climate-fuelled disasters.

### Dedicated funding for locally-led approaches

1. Australian, state and territory governments should:
  - a. Establish a dedicated co-funded approach specifically focussed on building locally-led disaster preparedness capacity and climate change adaptation. This should include funding for local governments to work directly with communities who are at risk of disasters and to develop community resilience networks and hubs.
  - b. Develop grant processes that better enable community groups and organisations to submit applications by:
    - > Co-designing grant programs with people and community groups who have experienced climate-fuelled disasters.
    - > Providing assistance to communities that lack expertise in dealing with government processes.
    - > Providing greater financial certainty through multi-year funding.
  - c. Ensure that funding has a primary focus on supporting communities to adapt to escalating climate risks, in addition to disaster recovery.
  - d. Ensure that funding can be used by local governments and/or community groups to build social capital in the context of adaptation and resilience, rather than focusing purely on physical infrastructure.
  - e. Embed a 'build back better' objective for existing disaster resilience and climate change adaptation initiatives where the focus is on physical infrastructure.



### Local community disaster preparedness and response capability

2. Australian, state and territory governments should build greater on-the-ground capacity for disaster prevention, preparedness, response and recovery by:
  - a. Establishing new non-operational emergency service volunteer units that includes people trained in community-led recovery to prepare communities and support their recovery after a disaster. Not everyone is prepared to crew a fire truck or pilot a boat, but there are many other crucial roles during the planning, preparation and recovery stages before and after a disaster.
  - b. Piloting a program of paid seasonal firefighters during predicted periods of heightened bushfire risk (which is common in other parts of the world) to crew bushfire tankers. These crews would be available to assist volunteer rural firefighters during extended firefighting operations when fatigue combined with low volunteer numbers starts to impact, and on a day to day basis work with urban fire services at the urban / bushland interface where properties are most at risk.
  - c. Maintaining and increasing support for existing flood and bushfire mitigation programs, particularly bushfire hazard reduction works.



**Image 4:** *Cut off, but connected:* The community of South Golden Beach in New South Wales had no power or phone connection following the February 2022 flood. Cut off from authorities, residents established an impromptu community hub to support each other and rapidly get assistance to where it was needed.

CHAPTER 4

# Getting households ready for climate impacts

## THE CHALLENGE

In addition to steps taken at the community level, it is vital that individual households are adequately prepared for growing disaster risks and other climate impacts — whether through improvements to their property, access to insurance or, when necessary, moving out of harm’s way.

Increasingly, people are experiencing significant disruption following climate-fuelled disasters. Many need to relocate and, at times, face prolonged periods of homelessness. For example, following the October 2022 flood that engulfed Rochester, Victoria it was

estimated that 70% of residents were unable to return to their homes seven months after the event (Parliament of Victoria 2024).

Data collected by the Internal Displacement Monitoring Centre captures the extraordinary number of relocations that have occurred due to climate-fuelled disasters in recent times (IDMC, 2024a). Between 2008/09 and 2022/23, there were 240,828 displacements across Australia due to extreme weather events. These are forced movements of people from their homes following disasters and include instances

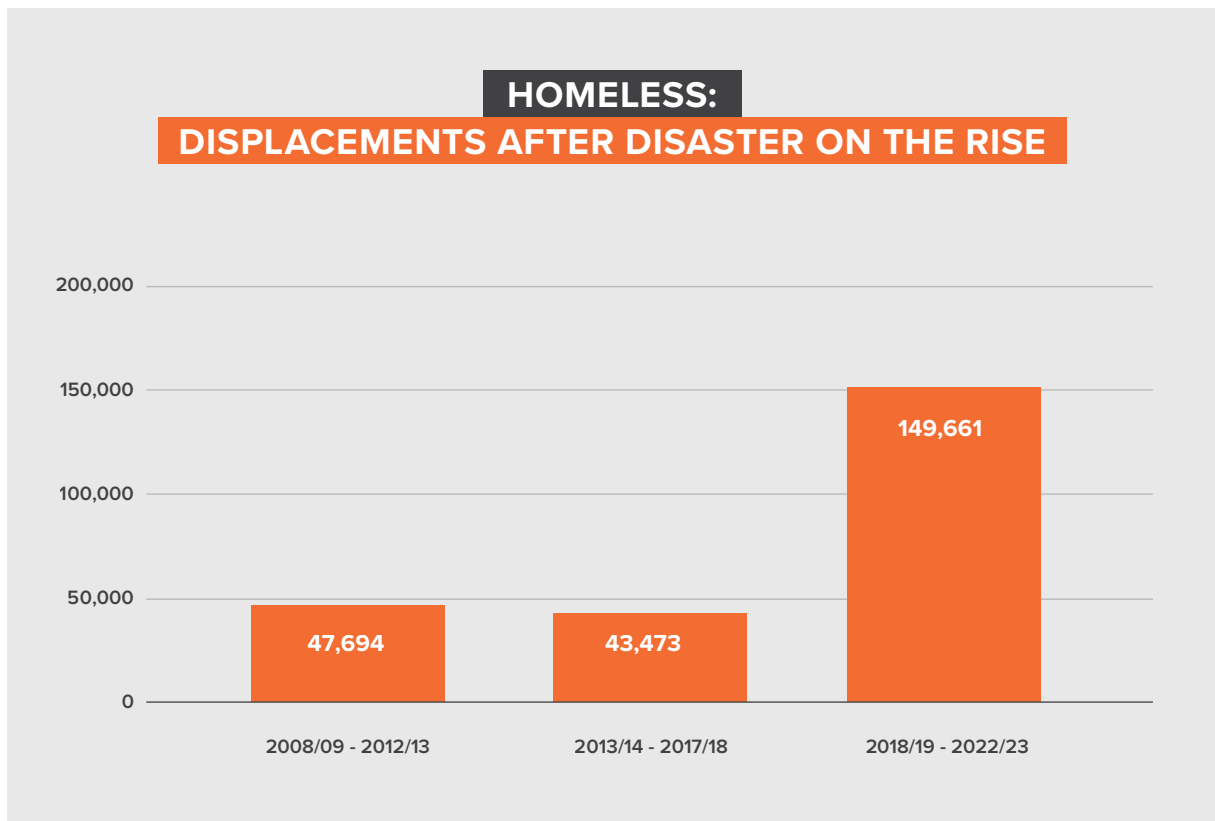


Figure 5: The number of times Australians have been forced to relocate following a disaster based on data from the Internal Displacement Monitoring Centre.

## MEASURING DISPLACEMENT DUE TO DISASTER

[Displacement](#) refers to each new forced movement of a person from their usual residence due to a disaster. The same person or people can be displaced several times over a given period before finding a solution to their displacement. The data for each year captures both new displacements as well as people who have had to move multiple times (IMDC, 2024b).

where people have moved multiple times. Almost two-thirds (62% n=149,661) of these occurred between 2018/19 and 2022/23 (figure 5 below), due largely to the Black Summer bushfires and subsequent 2021 and 2022 flooding events.<sup>5</sup>

The displacement data paints an alarming picture of the impact of recent climate-fuelled disasters. Of the 95,239 displacements due to bushfires since 2008/09, 68% occurred during the unprecedented climate-fuelled 2019/20 Black Summer bushfires. While there have been 85,680 displacements from floods since 2008/09, the majority (68%) are due to climate-fuelled events that occurred in 2021 or 2022 in Queensland, New South Wales and Victoria. Meanwhile, tropical cyclones Debbie (2017), Yasi (2011) and Oswald (2013) accounted for 82% of displacements due to storms since 2008/09.

These events and their aftermath are having a severe impact on the mental health of those affected. A recent Climate Council poll found that almost two-thirds (62%) of people who had relocated due to climate-fuelled disasters reported that it had a negative impact on their mental health (Climate Council 2024a). A separate study found that people displaced from their homes by floods for more than 6 months were twice as likely

to report continuing distress, and symptoms of post traumatic stress disorder, anxiety and depression, compared to those who were only briefly displaced (Matthews et al. 2019).

To make matters worse, more and more climate impacted Australians are finding it difficult to insure their homes due to rising premiums driven by worsening climate risks. Following the 2022 floods, insurance premiums for high risk properties, including those in flood-prone areas, increased by 50% (Cassidy 2023). Meanwhile, many households on low incomes are being priced out of the insurance market entirely (CHOICE et al. 2023). All of this is occurring during a housing crisis in which finding affordable and available rental accommodation is becoming increasingly difficult across Australia. Housing vacancy rates are close to record lows across Australia, while advertised rental prices have increased by 43% from March 2020 to April 2024 (Creagh, 2024). This means that there are practically no affordable rental properties in the country (Taylor, 2024).

Access to affordable insurance is a key factor in community resilience, as it enables communities to build back faster. Inadequate insurance coverage and delays in processing claims following disasters is leading to greater hardship for communities and hindering their recovery efforts (Parliament of Victoria, 2024).

**Australians have been forced to move nearly a quarter of a million times due to extreme weather.**  
**Helping households better prepare their properties can reduce this.**

People impacted by disaster face the prospect of leaving their communities, or relying on temporary accommodation provided by state governments or private providers such as motels or caravan parks. However, none of these options are suitable for prolonged stays, when people may be displaced from their homes for over a year (Parliament of Victoria, 2024).

<sup>5</sup> Internal displacement data was downloaded from the Internal Displacement Monitoring Centre Data Portal in May 2024. The criteria selected for the data were 'Australia', 'internal displacement' and 'disasters'. There were 132 disasters causing displacement. Once earthquakes were removed, there were 131 climate-fuelled disasters remaining, such as floods, hailstorms, landslides, destructive storms (including typhoons, hurricanes and cyclones) and bushfires. Disasters were sorted by financial year, and then collated into five-year periods.

## PROGRESS TO DATE

While some governments are responding to these challenges with household resilience initiatives, these are often limited in their focus, are available to a limited number of people, and are not coordinated or supported nationally. Tellingly, of the thousands of households impacted by the 2022 NSW Northern Rivers floods, only one has received funding to raise their home to avoid future floods - two years after the event (McLeod, C & Ittimani, L 2024).

### 🔍 CASE STUDY

#### EMPOWERING HOUSEHOLDS WITH BUSHFIRE RISK INSIGHTS

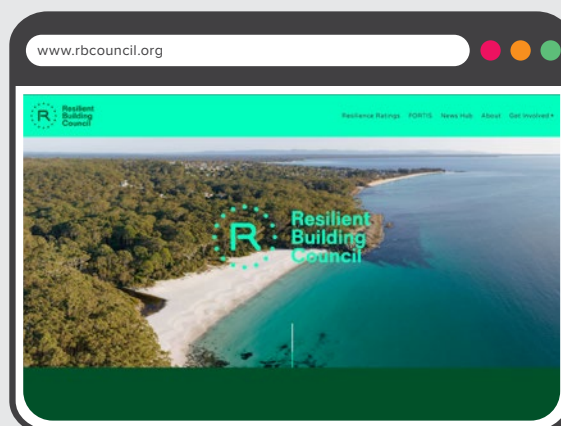
In October 2023 the Resilient Building Council, with support from the Albanese Government, launched a world-first app to help Australians better prepare their homes against bushfire risks.

The free Bushfire Resilience Rating app enables households to develop a detailed picture of their bushfire resilience through a guided self-assessment process and inbuilt risk mapping. Users then receive a report with tailored recommendations to improve the resilience of their home through measures such as removing combustible materials and sealing gaps to prevent flying embers from entering their home.

More than 1,200 households from bushfire impacted areas helped design and trial the app, which was developed in response to a recommendation from the Royal Commission into National Disaster Arrangements. It offers a promising example of how governments and civil society can help equip households with the practical knowledge needed to keep themselves as safe as possible in the face of escalating climate risks. Those who use the assessment and recommendations to make their homes more bushfire resilient may also be able to lower their insurance premiums.

Visit the Resilient Building Council to learn more and to access the app:

<https://www.rbcouncil.org>





## PRIORITY ACTIONS

There is an urgent need for a comprehensive national approach to building household resilience to worsening extreme weather and other climate risks in communities most likely to be harmed by them. This means using regionally relevant climate risk projections to guide investments in household preparedness, spanning retrofits, house-raising and - where necessary - buy-backs.

Permanent relocation can be highly complex and involve significant trade-offs, especially if it means breaking longstanding ties within a community and deep connections to a place. It is also an enormous logistical undertaking that involves moving not only homes but also all the infrastructure that supports them. Our main focus should therefore be in supporting households and communities to adapt to the impacts they face, remaining in place and keeping their community intact.

However, in some cases the only safe choice may be to relocate. Land buybacks are one tool that can support managed relocation. Most importantly, the community in question must be fully involved in relocation planning and receive the support necessary to move safely, with dignity, and with fair compensation.

The Australian, state and territory governments should:

- a. Develop a dedicated funding mechanism for building household resilience to climate-fuelled disasters across all states and territories.
- b. Use the Australian Climate Service and the National Climate Risk Assessment to prioritise household resilience initiatives to those communities at greater risk of and more vulnerable to climate disasters.
- c. Ensure that this housing resilience initiative is co-funded and scaled based on the likely exposure and vulnerability to climate risks for each state and territory.
- d. Ensure that funding is available for disaster preparedness rather than just recovery, and is tailored to the types of disaster risks that different regions are likely to experience, spanning bushfires, extreme heat, floods and destructive storms.
- e. Develop preparatory agreements and networks in communities that are at high-risk of future disasters to expedite household support when disaster inevitably strikes.

**Image 5:** *Damaged and vacant: A flood-damaged house for sale in Lismore, New South Wales, photo taken nearly one year after a record flood struck the town in late February, 2022. When the least worst choice becomes moving out of harm's way, people should be supported to move safely, with dignity and with fair compensation.*



CHAPTER 5

# Learning lessons from past disasters

## THE CHALLENGE

Climate-fuelled disasters, including the 2019-20 Black Summer bushfires and the flooding rains of 2021-22, have already delivered many important lessons. Scientists confirmed the Black Summer bushfires were part of a clear trend of more frequent and severe bushfires due to climate pollution, on a scale beyond anything recorded previously (Cook et al. 2021).

Australian governments and communities were unprepared for the scale and ferocity of the fires, as were state and territory emergency management services. With multiple catastrophic bushfires occurring simultaneously across the nation, state and territory governments had to compete for both equipment and specialised personnel to protect communities from disastrous fires.

The frequency and intensity of the bushfires and floods that communities have experienced since 2019 has led to a situation in which more and more national, state and territory and local resources are required to help communities respond to and recover from disasters. The Australian Defence Strategic Review 2023 found that the Australian Defence Force is increasingly being diverted from its core role to assist with disaster response and recovery, and that this is unsustainable (Commonwealth of Australia 2023b). In turn, emergency services do not have the capacity or capability to support communities to recover from disaster, leaving increasingly overwhelmed and financially constrained local governments to manage their ongoing recovery.

It is vital that the suite of recommendations from the Royal Commission into National Natural Disaster Arrangements, as well as various state and territory fire and flood inquiries, be fully implemented. This needs to occur so that future responses to climate-fuelled disasters are as effective and efficient as possible.

“ Five years ago, I faced the biggest bushfires of my more than 40-year career in emergency management. Over the previous decade I had increasingly focused my attention on the escalating risks Australia was facing because of climate change, but even then, the Black Summer bushfires blindsided me.

I distinctly remember January 3, 2020. Lightning had ignited a number of fires across Kangaroo Island in the week before Christmas, and these fires had raged uncontrollably in challenging, hard-to-reach terrain burning 200,000 hectares, nearly half of the island, in a single day. That relentless inferno claimed the lives of two Australians and destroyed the homes of 87 families and more than 600 other buildings and vehicles. Five years on, it is still hard to comprehend the scale of loss South Australia experienced in a single day. ”



**Brenton Keen**

Former director of the Emergency Management Office in the South Australian Fire and Emergency Services Commission and ELCA member.



## BLACK SUMMER BUSHFIRE INQUIRIES

It is almost five years since the first of the Black Summer bushfires threatened communities in Queensland and New South Wales in mid 2019, before raging across the Australian Capital Territory (ACT), Victoria, Tasmania, South Australia and Western Australia.

Due to the scale of these fires and subsequent losses, federal, state and territory governments held several inquiries into the responses to the Black Summer bushfires. These included:

- > The Royal Commission into National Natural Disaster Arrangements
- > The Inquiry into the 2019-20 Victorian fire season
- > The Independent Review into South Australia's 2019-2020 Bushfire Season ('the Keelty Review')
- > The ACT Bushfire Inquiry
- > Queensland Bushfires Review 2019-20
- > The NSW Bushfire Inquiry
- > NSW Bushfire Coronial Inquiry

It is only a matter of time before we again face conditions equal to or worse than this disaster. In fact, if we keep polluting the way we are, scientists say the record hot temperatures that fuelled the Black Summer bushfires in 2019 will become "average" by 2040, increasing the risk of even more catastrophic bushfires (Sanderson and Fisher 2020).

This underscores why it is so vital that we cut climate pollution further and faster, and heed the lessons and recommendations arising from these inquiries.

**We should heed the lessons of past disasters, including the Black Summer fires and 2022 floods, and do everything we can to cut climate pollution further and faster to avoid even worse catastrophes.**

## PROGRESS TO DATE

ELCA recognises that governments at all levels have acted to better protect Australians since the Black Summer bushfires and following the Royal Commission into National Natural Disasters and other inquiries. This has included: creating the Disaster Ready Fund (DRF), National Emergency Management Stockpile (NEMS), increased funding for the National Aerial Firefighting Centre (NAFC), and Australian Climate Service (ACS); and establishing a better fire danger rating system, among other measures. We note in particular the further development of the NEMS to enable private sector suppliers to supplement national, state and territory capabilities - a measure which ELCA has identified as important to enhancing disaster response capabilities.<sup>6</sup>

While acknowledging this important progress, there are still opportunities to ensure that when disasters strike in the future, Australian Governments, emergency services and communities are better equipped to respond to them. Here, we provide a non-exhaustive list of actions that — based on our extensive experience in disaster response and community recovery — will support effective disaster responses.

## PRIORITY ACTIONS

- a. Australian, state, territory and local governments implement all recommendations arising from the Royal Commission into National Natural Disaster Arrangements. State and territory governments also implement all recommendations from their respective fire and flood inquiries and reviews. This should include accountability mechanisms including the assessment and evaluation of recommendations once they have been implemented to support continuous improvement.
- b. The Australian Government should act on the Royal Commission recommendation to create a sovereign aerial firefighting capability rather than continuing to rely on large firefighting aircraft rented from overseas. For example, an opportunity exists to retain and repurpose retiring RAAF C130-J aircraft and to use local pilots and servicing capabilities, thereby creating a year-round local capability that could also move people and equipment during floods, cyclones and other disasters. This could be done in consultation with the Department of Defence, drawing on the experiences of other countries who have repurposed aircraft for aerial firefighting.
- c. The Australian Government needs to ensure that the withdrawal of the Australian Defence Force from domestic disaster response occurs gradually. In turn, when this occurs it should happen alongside a major effort to boost community-led disaster response and recovery capabilities, as recommended in previous sections of this report.
- d. Focus must be maintained and increased on flood and fire mitigation programs that effectively reduce exposure to these risks.

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<sup>6</sup> In our submission to the 2023 Inquiry into Alternative Commonwealth Capabilities for Crisis Response, ELCA recommended that the concept of the NEMS be expanded to include inventories of large plant and equipment held by the private sector, with standard contracts for rapid deployment pre-negotiated with suitable providers (ELCA 2023).

In a new development to the NEMS in May 2024, the Government established a mechanism known as a 'standing offer panel' for governments to quickly access additional resources from commercial providers, such as generators and shelters (NEMA 2024c).

## Conclusion

2023 was the hottest year on record. 2024 is shaping up to match or surpass it. Climate pollution from the continued use of coal, oil and gas is locking in more frequent and severe fires, floods and other climate risks on a scale beyond anything Australia has been forced to reckon with.

As former fire and emergency service leaders we have witnessed what this means for both communities and first responders first hand, and it is devastating. We feel a continuing duty to do everything we can to help keep Australians safe, and the best and most effective action any government can take is to prevent further escalation in climate-fuelled disasters by cutting climate pollution further and faster, and encouraging everyone else to do the same.

This isn't a faraway threat - climate pollution is already driving more extreme weather, which is harming communities across Australia and overwhelming our first responders. While the Australian Government must do everything it can today to cut climate pollution

further and faster, it also needs to simultaneously drive policy and investment that better prepares communities for climate impacts we are already facing and will face in future.

This means drawing upon climate risk projection and social risk data to understand which communities are most likely to be impacted by worsening climate impacts, and which are most likely to need additional support to prepare and adapt. In turn, the Australian Government must also work with its state and territory counterparts to ensure that we back in community-led solutions, including the development of community resilience hubs, where they are most needed. This should be complemented by dedicated funding for households in higher-risk areas to prepare for climate impacts - whether through retrofitting, home raising, or buy-backs and relocation.

As we approach the five-year anniversary of the Black Summer bushfires it is imperative that we respect the efforts of the first responders, community volunteers and the thousands of people and organisations

**The most effective action governments can take is preventing further escalation in climate-fuelled disasters by rapidly phasing out polluting coal, oil and gas.**

who provided input to the Royal Commission into National Natural Disaster Arrangements and other bushfire inquiries by heeding each and every recommendation that was made.

Emergency Leaders for Climate Action's five priority actions are concrete actions the Australian Government can take, alongside state and territory governments, to ensure emergency services and communities across Australia can better adapt to climate impacts while building disaster preparedness and response capacity. Putting these in place will help to ensure those communities which are most vulnerable to climate impacts will be better protected, and ultimately safer from climate-fuelled disasters.

“ We may not be able to control the climate-driven disasters we know are on their way, but we can control how we prepare communities, and what we do to limit the impact of future extreme weather events. Communities need to be given the equipment and facilities to be an integral part of our national response to climate-induced extreme weather events rather than be forced to be horrified, powerless spectators. ”



**Major General Peter Dunn (ret)**

Former Commissioner for the Australian Capital Territory Emergency Services Authority and ELCA member.

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**EMERGENCY LEADERS FOR CLIMATE ACTION**

**Andrew Lawson AFSM**

Former Deputy Chief Officer, SA Fire Service

**Bob Conroy**

Former Fire Manager, NSW National Parks and Wildlife Service

**Brenton Keen PSM**

Former Director of the Emergency Management Office in the South Australian Fire and Emergency Services Commission (SAFECOM).

**Campbell Darby DSC AM**

Former Director-General, Emergency Management Australia

**Chas Keys PhD ESM**

Former Deputy Director General, NSW State Emergency Service

**Chris ArnoI, AFSM**

Former Chief Officer and CEO of the Tasmania Fire Service

**Craig Hynes AFSM**

Former Chief Operations Officer, WA Fire and Emergency Services Authority

**Craig Lapsley PSM**

Former Emergency Management Commissioner and Fire Services Commissioner, VIC

**Darryl Pepper AFSM**

Former Director and Chief Fire Officer, NT Fire and Emergency Services

**David Prince AFSM**

Former Chief Officer, ACT Fire Brigade

**David Templeman**

Former Director-General, Emergency Management Australia

**Ewan Waller AFSM**

Former Chief Fire Officer, Forest Fire Management, VIC

**Frank Pagano AFSM, ESM**

Former Executive Director, Emergency Management QLD

**Grant Lupton AFSM**

Former Chief Fire Officer, SA Metropolitan Fire Service

**Greg Mullins AO, AFSM**

Former Commissioner Fire & Rescue NSW

**Greg Newton**

Former Deputy Commissioner, NSW State Emergency Services

**James Smith AFSM**

Former Deputy Commissioner Field Operations, Fire & Rescue NSW. Former Acting Commissioner, NSW State Emergency Service

**Dr Jeff Godfredson AFSM**

Former Chief Fire Officer, Melbourne Metropolitan Fire Brigade

**John Anderson AFSM**

Former Deputy Commissioner, NSW Fire Brigades

**John Gledhill AFSM**

Former Chief Fire Officer, Tasmania Fire Service

**Jim Hamilton AFSM**

Former Fire & Rescue NSW Deputy Commissioner

**Ken Thompson AFSM**

Former Deputy Commissioner, Fire & Rescue NSW

**Lee Johnson AFSM**

Former Commissioner, QLD Fire & Emergency Services

**Malcolm Connellan AFSM**

Former Deputy Commissioner, Fire & Rescue NSW

**Steve Sutton**

Former Chief Fire Control Officer, Bushfires NT

**Malcolm Cronstedt AFSM**

Former Deputy Commissioner of WA Department of Fire and Emergency Services

**Tony Blanks AFSM**

Former Fire Unit Manager, TAS National Parks

**Mike Brown AM, AFSM**

Former Chief Fire Officer, TAS Fire Service

**Dr Wayne Gregson APM**

Former Commissioner, WA Dept of Fire & Emergency Services

**Murray Kear AFSM**

Former Commissioner, NSW State Emergency Service

**Naomi Brown**

Former CEO, Australasian Fire & Emergency Service Authorities Council

**Neil Bibby AFSM**

Former Chief Executive Officer, Country Fire Authority VIC

**Peter Akers**

Former Chairman of the Victoria State Emergency Service Authority

**Major General Peter Dunn AO (Ret)**

Former Commissioner, ACT Emergency Services Authority

**Phil Koperberg AO AFSM BEM**

Former NSW Minister for the Environment

**Rosemary Milkins PSM**

Former Deputy Commissioner and Deputy Chief Executive, Fire & Rescue NSW

**Russell Rees AFSM**

Former Chief Officer, Country Fire Authority, Victoria

**Steve Rothwell AFSM**

Former Chief Officer, NT Fire & Rescue Service



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