



## The Climate Council Submission to 2022 NSW Flood Inquiry

### Introduction:

The Climate Council welcomes the opportunity to make a submission to this inquiry. Our submission mostly relates to terms of reference 1a, 1b and 2b, 2g, 2h. In line with terms of reference 2, we've also made some general recommendations with the aim of reducing the impact of disasters and protecting lives and livelihoods in the future.

### Climate Change Is Firmly Embedded In The Disaster

The following section relates to 1a, specifically, *“the causes of, and factors contributing to, the frequency, intensity, timing and location of floods in NSW in the 2022 catastrophic flood event, including consideration of any role of weather, climate change, and human activity;”*

The intense rainfall and floods that devastated communities in New South Wales took place in an atmosphere made warmer and wetter by climate change, which is driven by the burning of coal, oil, and gas.

For each 1°C rise in global average temperature, the atmosphere can hold approximately 7 percent more moisture<sup>1</sup>. A warmer atmosphere also means there is more energy to fuel storms that generate heavy rainfall. These factors increase the likelihood of extreme downpours. The average global temperature in 2021 was about 1.1°C above the pre-industrial (1850-1900) levels<sup>2</sup>.

The pattern of more intense rainfall events is well established in Australia. In recent decades, the intensity of short duration (hourly) extreme rainfall events has increased by 10 percent or more in some regions. Daily rainfall totals associated with thunderstorms have increased over the past 40 years.

The higher that global temperatures rise, the worse such events become. Globally, the frequency of intense rainfall events is likely to almost double with each degree of further warming.

While the occurrence of extreme events that unfolded in New South Wales is the result of several shorter-term meteorological factors, including the influence of La Niña and a particular combination of weather systems, the likelihood and intensity of extreme and highly destructive events such as these is increasing with climate change.

For more information, please refer to:

Climate Council (2022) A supercharged climate: Rain bombs, flash flooding and destruction.

Accessed at

<https://www.climatecouncil.org.au/resources/supercharged-climate-rain-bombs-flash-flooding-destruction/>.

## Multiple Warning Signs Were Ignored

The following relates to terms of reference 1b, specifically, “the preparation and planning by agencies, government, other entities and the community for floods in NSW, including the accuracy and timing of weather forecasts, current laws, emergency management plans, practices and mitigation strategies, their application and effect;”

The New South Wales and Federal Government have failed to act on previous inquiries, recommendations and warnings and Australians are paying in lost lives and livelihoods.

Freedom of information documents, obtained by Senator Rex Patrick, show National Cabinet was briefed by the Director-General Emergency Management Australia (EMA), Joe Buffone, on November 5, 2021, warning of widespread flooding and severe storms in “mid-late summer”. The briefing correctly predicted the location and timing of the floods (see figure 1 below). [A media statement](#) from Prime Minister Scott Morrison confirms the briefing took place<sup>3</sup>. An almost identical briefing was given by Dr Simon Heemstra Manager, Hazard Preparedness and Response – Bureau of Meteorology (BoM), to charities during the same period.

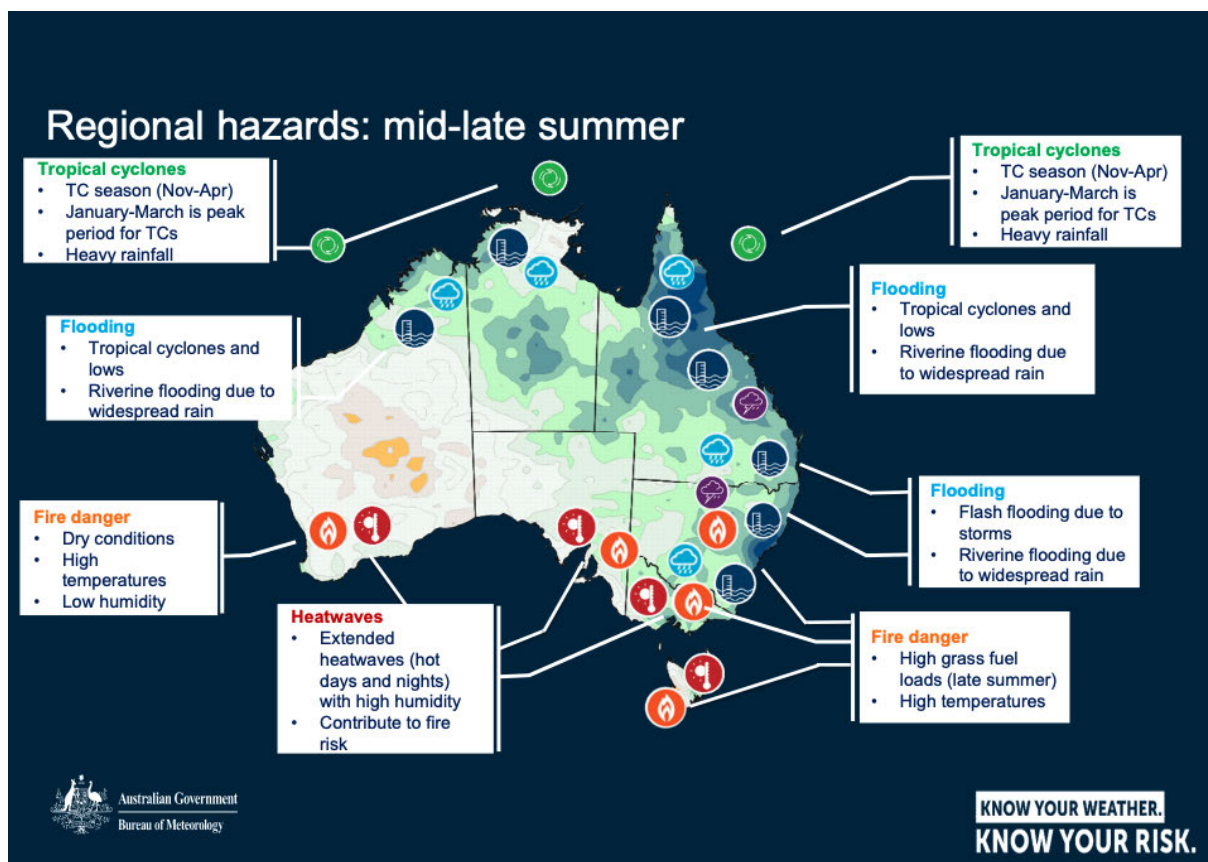


Figure 1: FOI request FA 21/11/004569, Senator Rex Patrick MP.

Despite clear warnings from the BoM and EMA, appropriate action was not taken by the New South Wales and Federal Governments to prepare communities for the immediate risk they were facing. While nothing could have stopped the rainfall that caused the floods, appropriate planning would have decreased the probability of lives lost and destruction of livelihoods, personal property and critical infrastructure.

Previous warnings of catastrophic events have also been ignored. In April 2019, The Emergency Leaders for Climate Action (ELCA) tried to warn federal and state governments of the approaching catastrophic fire season and the need to scale up resources to protect lives and livelihood. The fires that followed are now collectively known as Black Summer and the Royal Commission into National Natural Disaster Arrangements was established in the aftermath. The Commission's final report states *"Floods and bushfires are expected to become more frequent and more intense<sup>4</sup>."*

Ultimately, the Royal Commission made 80 recommendations, 14 solely to the federal government, 41 to state, territory and federal government, 23 to state and territory governments and 2 to industry. Overwhelmingly, the bulk of these recommendations remain unimplemented. Of the 10 recommendations that [ELCA are tracking](#), none are considered to be fully implemented or operating in the way or to the extent the Royal Commission intended.

An acute example of this is The Australian Climate Service (ACS), established in response to *"Recommendation 4.5 – National climate projections Australian, state and territory governments should produce downscaled climate projections: 1) to inform the assessment of future natural disaster risk by relevant decision-makers, including state and territory government agencies with planning and emergency management responsibilities"*.

Despite being established in response to the above recommendation, the ACS is not working with state governments to produce downscaled climate projections. The lack of downscaled climate projections being available to those who need them limits decision making capabilities. The result is that local governments and government agencies with planning and emergency management responsibilities are unprepared for disasters.

For example, in the absence of downscaled climate projections being available from the Australian Climate Service, the [Lismore Floodplain Risk Management Study 2020<sup>5</sup>](#) used [Climate Change in Australia<sup>6</sup>](#) to predict and model how climate change would impact floods. Climate Change in Australia, uses Coupled Model Intercomparison Project 5 (CMIP 5), this data is from 2014 and has been replaced with CMIP 6. Therefore, the source data that is being downscaled and used by local governments for floodplain risk management is out of date and leading to incorrect assessments and underestimating hazards and risks.

While the above provides an acute example of why implementing a specific recommendation is so important, there are many more such examples. If all 80 recommendations from the Royal Commission into National Natural Disaster Arrangements had been fully implemented, the response to the flooding disaster would have been very different and it's possible there would be no need for this inquiry. For example, critical infrastructure would have been identified and reinforced, telecommunications would have been strengthened and remained operational enabling people to get the help they needed when they needed it. Communities

would have been told to expect historic flood lines to be broken, and could have made informed decisions to keep themselves and their families safe. National multi-agency exercises would have been practised to ensure first responders were better prepared. Community evacuation centres would have been well signed, accessible and appropriately stocked with mattresses, food and fresh water. Community resilience hubs would have been established, had information on vulnerable residents, enabled the swift coordination of rescues and would have helped with recovery in the weeks and months to come. Plans would have been in place to ensure people still had access to primary and mental health care. Red tape for disaster payments would have been eliminated. Ultimately, the impact on people would have been less severe and the response would have been faster. More lives and livelihoods may have been saved.

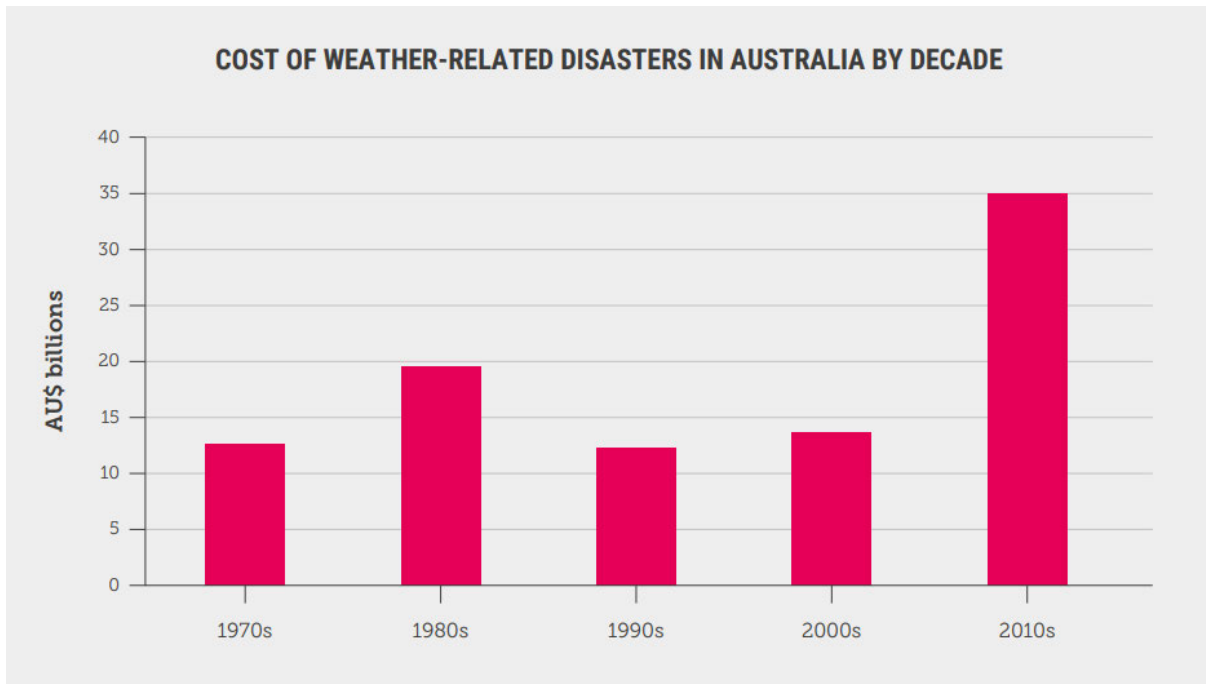
### **New South Wales is Grossly Underprepared For Future Disasters**

The following relates to terms of reference 2b *“preparation and planning for future flood threats and risks”*.

The New South Wales and Federal Government are unprepared for future disasters. Both governments are failing to invest in resilience and mitigation that matches the scale of the challenge we are facing.

In 2014, the Productivity Commission found that 97% of disaster funding went towards recovery and only 3% went towards resilience<sup>7</sup>. Recent comments by Shane Stone, head of the National Recovery and Resilience Agency, demonstrate that at the national level, this remains true today, seven years on<sup>8</sup>.

An analysis of data from the International Disaster Database maintained by the Centre for Research on the Epidemiology of Disasters (EM-DAT) shows a significant rise in the cost of weather-related disasters in Australia. After adjusting for inflation, the costs have more than doubled since the 1970s (See Figure 2 below). Floods are our nation’s most expensive extreme weather event, making up the greatest proportion (29%) of economic damages in Australia over the past decade. Between 2010 and 2019, floods caused more than \$10 billion in damages. Immediate impacts include loss of life and hospital admissions, property damage, destruction of crops and livestock, clean up costs, loss of productivity and emergency response.



*Figure 2. Based on data from EM-DAT, Climate Council calculated the cost of extreme weather disasters in Australia between 2010-2019 to be \$35bn. Floods accounted for 29% of this total, or over \$10bn.*

By 2060 it is estimated floods could cost our national economy \$40 billion each year<sup>10</sup>. It's estimated that extreme weather events in New South Wales, even in a low emissions scenario, will cost \$360 billion over the next 40 years. Across New South Wales and Queensland, the Insurance Council of Australia (ICA) has stated the recent floods to be the most costly disaster ever, using actual claims costs from 197,000 claims across both states, the event is estimated to have cost \$3.35 billion in insured losses<sup>11</sup>.

The ICA states that New South Wales could save \$5.6 billion with a \$232 million future investment in disaster resilience<sup>12</sup>.

The Climate Council acknowledges that the New South Wales Government is taking steps to scale up disaster resilience. Specifically, with the creation of Resilience NSW, with an annual budget of approximately \$775 million. However, we're concerned with media reports that state the agency is struggling to spend its budget and the bulk of money allocated going towards recovery instead of resilience<sup>13</sup>. This trend must be reversed immediately to protect Australians and their livelihoods. Doing so will also reduce future recovery expenses.

### **The cost of government inaction is being passed onto consumers**

The following relates to terms of reference 1f "any other matters that the inquiry deems appropriate in relation to floods."

Worsening extreme weather means increased costs of maintenance, repair and replacement to properties – homes, workplaces and commercial buildings. As the risk of being affected by extreme weather events increases, insurers are raising premiums to cover the increased cost of claims and reinsurance.

Due to the rising cost of insurance, 3.6% of properties (520,944) or one in every 25 properties in Australia will be effectively uninsurable by 2030 with annual average damage costs equalling 1% or more of the property replacement cost<sup>14</sup>.

In addition, across Australia, one in 10 (9%) of properties will be at risk of under insurance by 2030, with annual average damage costs equalling 0.2% or more of the property replacement cost.

In New South Wales specifically, roughly one in 30 or 3.3% of properties (148,546 ) will be effectively uninsurable by 2030.

For more information, please refer to:

Climate Council (2022) Uninsurable nation: Australia's most climate-vulnerable places

Accessed at

[https://www.climatecouncil.org.au/wp-content/uploads/2022/05/CC\\_Report-Uninsurable-Nation\\_V5-FA\\_Low\\_Res\\_Single.pdf](https://www.climatecouncil.org.au/wp-content/uploads/2022/05/CC_Report-Uninsurable-Nation_V5-FA_Low_Res_Single.pdf)

## **Recommendations**

### **1. Reduce the risk**

The Climate Council recommends that the New South Wales Government scale up its 2030 emissions reduction target from 50% to 75%, and commit to net zero by 2035.

The New South Wales Government should immediately implement all practical recommendations from the Royal Commission into National Natural Disaster Arrangements, and begin coordinating with the Federal Minister For Emergency Management (or relevant Minister post federal election) to implement the recommendations that require a coordinated response from both the New South Wales and federal government.

### **2. Prioritise Investment in Resilience**

Investing in risk reduction and resilience provides a 'triple dividend' of avoided loss and suffering, reduced disaster costs and potential economic and social benefits even in the absence of hazards occurring. There is a need to upscale public investments in resilience and develop innovative financing pathways. The process for allocating public funds towards resilience projects must be independent and data driven, focusing on the most vulnerable communities.

### **3. Account for climate risks in land use planning**

Too many Australians live in dangerous locations that put them at higher risk of being impacted by floods, bushfires, cyclones and actions from the sea. This is because not enough consideration was given to the risks from extreme weather – including worsening risks from climate change – at the time that planning approval was given. Improved policy settings are required across all levels of government to prevent new buildings and

infrastructure being constructed in areas that are, or will be, highly exposed to climate change hazards. The Climate Council is concerned that the recent Design and Place State Environmental Planning Policy, that included planning for climate change-induced impacts such as heat waves and floods, increasing tree canopy cover and prioritising active transport, such as walking and cycling has been scrapped. The Climate Council recommends this policy be re-introduced as a priority.

#### **4. Improve building standards and compliance**

Embedding resilience into building codes is a key tool for reducing the risks associated with worsening extreme weather. The National Construction Code should be amended to ensure that buildings are able to better withstand the risks posed by climate change and worsening extreme weather – whilst simultaneously improving the energy efficiency and thermal comfort of buildings. This should be accompanied by improved compliance and enforcement.

For more information, please refer to:

Climate Council (2022) Tents to castles: building energy efficient, cost-saving aussie homes

Accessed at:

<https://www.climatecouncil.org.au/wp-content/uploads/2022/04/Tents-to-castles-2022-final.pdf>

#### **5. Support communities to ‘build back better’**

Towns, cities and communities must be rebuilt – where appropriate to do so – in a way that takes into account the inevitable future changes in climate and makes them more resilient. In some very high-risk locations, this may mean not rebuilding at all – managed relocations must be discussed as an option for some of the most vulnerable and exposed communities.

#### **References**

1. Climate Council of Australia 2022: *A Supercharged Climate: Rain bombs, flash flooding and destruction.*

<https://www.climatecouncil.org.au/resources/supercharged-climate-rain-bombs-flash-flooding-destruction/>

2. World Meteorological Organization: *WMO update: 50:50 chance of global temperature temporarily reaching 1.5°C threshold in next five years*

[https://public.wmo.int/en/media/press-release/wmo-update-5050-chance-of-global-temperature-temporarily-reaching-15%C2%B0c-threshold](https://public.wmo.int/en/media/press-release/wmo-update-5050-chance-of-global-temperature-temporarily-reaching-15C2%B0c-threshold)

3. MEDIA STATEMENT 05 Nov 2021 Prime Minister:

<https://www.pm.gov.au/media/national-cabinet-statement-57>

4. Royal Commission into National Natural Disaster Arrangements Report. Page 22.

<https://naturaldisaster.royalcommission.gov.au/system/files/2020-11/Royal%20Commission%20into%20National%20Natural%20Disaster%20Arrangements%20-%20Report%20%20%5Baccessible%5D.pdf>

5. Lismore Flood Risk Management Study

<https://yoursay.lismore.nsw.gov.au/the-lismore-flood-risk-management-study>

6. *Climate Change In Australia - Methodology.*  
<https://www.climatechangeinaustralia.gov.au/en/overview/methodology/>
7. *Australian Productivity Commission. Natural Disaster Funding 2014.*  
<https://www.pc.gov.au/inquiries/completed/disaster-funding/report/disaster-funding-volume1.pdf>
8. *Recovery And Resilience Agency. 2021: 97% of disaster funding is spent on recovery and just 3% is spent getting communities prepared. National*  
<https://recovery.gov.au/stories/97-disaster-funding-spent-recovery-and-just-3-spent-getting-communities-prepared>
10. *Deloitte Access Economics 2021: Special report: Update to the economic costs of natural disasters in Australia.*  
<http://australianbusinessroundtable.com.au/assets/documents/Special%20report%3A%20Update%20to%20the%20economic%20costs%20of%20natural%20disasters%20in%20Australia/Special%20report%20 Update%20to%20the%20economic%20costs%20of%20natural%20disasters%20in%20Australia.pdf>
11. *Insurance Council of Australia 2022: Updated data shows 2022 flood was Australia's costliest.*  
<https://insurancecouncil.com.au/resource/updated-data-shows-2022-flood-was-australias-costliest/>
12. *Insurance Council of Australia 2022: Building a more resilient Australia.*  
<https://insurancecouncil.com.au/wp-content/uploads/2022/02/220222-ICA-Election-Platform-Report.pdf>
13. *Resilience NSW leaves almost \$400 million in grant money unspent. Daily Telegraph. March, 2022.*  
<https://www.dailytelegraph.com.au/news/nsw/resilience-nsw-leaves-almost-400-million-in-grant-money-unspent/news-story/08a5c4114b79e350cf03d4d4f6632f15>
14. *Climate Council of Australia 2022: Uninsurable Nation: Australia's Most Climate-Vulnerable Places*  
[https://www.climatecouncil.org.au/wp-content/uploads/2022/05/CC\\_Report-Uninsurable-Nation\\_V5-FA\\_Low\\_Res\\_Single.pdf](https://www.climatecouncil.org.au/wp-content/uploads/2022/05/CC_Report-Uninsurable-Nation_V5-FA_Low_Res_Single.pdf)