

The Impact of Disasters on Children and Young People - A Cost Benefit Analysis

Deloitte Australia and UNICEF Australia
Policy Brief, February 2024



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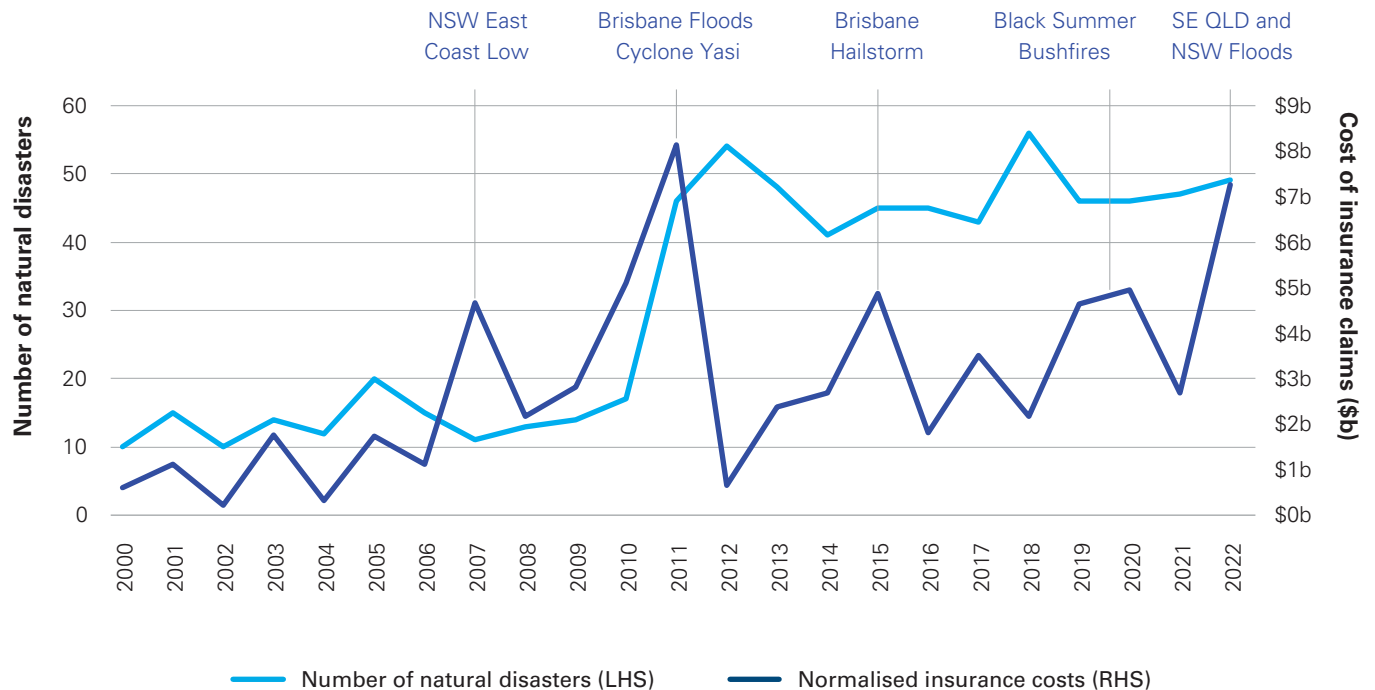
Climate disasters are changing childhood

Climate change is the defining challenge of our time. Levels of carbon dioxide (CO₂) in the atmosphere are higher now than at any other time in the last two million years. In recent decades, human-induced global warming (now described as 'global boiling') has taken place at a rate that is unprecedented, increasing the frequency and severity of extreme weather events, natural hazards, and disasters globally.

These natural hazards and disasters are also more likely to occur concurrently, creating a compounding set of impacts on human systems. This combined with pre-existing social, economic, and political vulnerabilities will generate more significant impacts, particularly in less developed and

more disadvantaged societies.ⁱ Australia's Annual Climate Statement 2023 shows that the country is increasingly affected by global warming.ⁱⁱ Australia's climate has warmed 1.50 ± 0.23 °C between the start of national temperature records in 1910, and 2023.ⁱⁱⁱ Australia has been hit by increasingly frequent and intense heatwaves, droughts, bushfires, extreme rainfall, floods, and cyclones in the last ten years. Today, climate disasters cost the Australian economy \$38 billion per year on average. Under even a low emissions scenario, the increase in frequency and intensity of these disasters is expected to cost the Australian economy \$73 billion per year annually in 2060.^{iv}

Chart 1: Disasters and extreme weather events and cost covered by insurance, 2000 to 2022



Source: Deloitte Access Economics; DisasterAssist; Insurance Council of Australia

Note: Number of disasters is based upon Insurance Council of Australia data from 2000 to 2009, then on DisasterAssist data from 2010 to 2022 in order to reflect the most complete data sources across given years. Insurance costs are normalised according to a wide array of factors including changes in prices and population.

Children and young people are increasingly exposed to climate disasters. A 2022 UNICEF research report has found that, under current emissions trajectories, every child in Australia could be subject to more than 4.5 heatwaves a year, and up to 2.2 million Australian children could be living in areas where heatwaves will last longer than 4.7 days.^{ix}

Children are more vulnerable to the impacts of climate disasters because they are at an earlier stage of physiological and cognitive development and are therefore less equipped to deal with the physical stresses and trauma of disasters. Children are at greater risk of mental ill-health, and more at-risk of death, injury, illness, and abuse. Children may also be vulnerable to other impacts of disasters, including the loss of loved ones, property, pets, and possessions, power, water, phones, and internet connectivity.

Children and young people may experience displacement and lose access to education, health services, and recreational spaces. Left unaddressed, these impacts can have medium and long-term consequences. Lost learning, mental health issues, and homelessness have consequences for life outcomes, and for employment, productivity, and national debt levels in the long run. In the realm of mental health alone, we know that up-front investments in school-based interventions to prevent depression and anxiety alone can return \$1.19 for every \$1 invested in the long run.^x

“ The bushfires [this summer] in Australia were horrific. These catastrophic disasters aren’t going to stop. In fact they are only going to get worse as time progresses without action being taken. It is the responsibility of every single person to do everything they can to reduce the impact of climate change. Everyday people are trying their hardest to do their best, but until huge corporations and governments all around the world take action, this crisis will only get worse. Responsibility to fix this global crisis is falling on youth, because we are the ones growing with this as our reality. It makes me angry. It makes me anxious. I am tired of being angry and anxious about this huge problem especially when I feel so small and powerless. Please, do something. ”

–YOUNG PERSON AFFECTED BY BUSHFIRES



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Since 2019, Australia has experienced some of the most severe, large-scale disasters in the country’s history.



The 2019-2020 ‘Black Summer’ bushfires killed at least 33 people directly,^v destroyed 5,900 buildings, including more than 3,000 homes, burned more than 24.3 million hectares of land,^{vi} impacted 2 in 5 children^{vii}, and cost between \$4 and \$5 billion to farmers alone.^{viii}



The 2022 New South Wales (NSW) and Southeast Queensland floods killed 22 people, damaged 15,000 homes, affected 944 education facilities, affected 14 million people in 84 LGAs, and cost at least \$4.3 billion in insured losses alone.

Note: listed cost figures are those that have been specifically calculated and are designed to provide insight into the scale of the costs of these disasters. Tangible and intangible costs across industries and sectors are much higher.

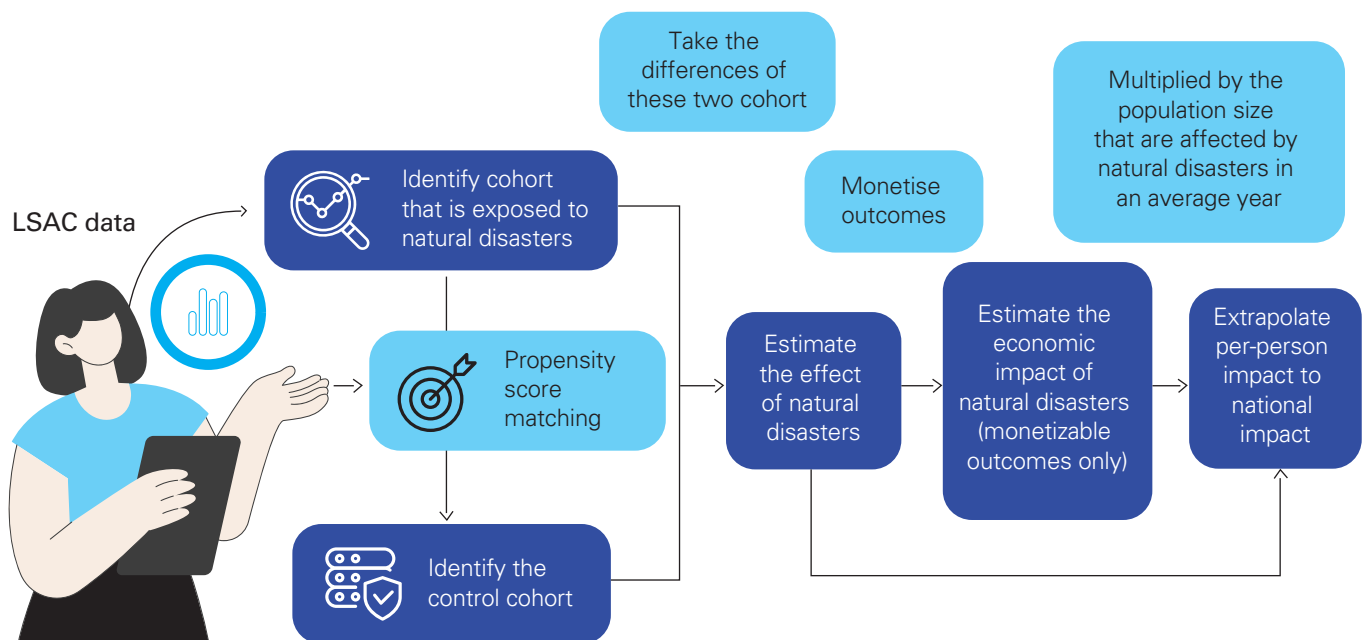
Understanding the impact of disasters on children and young people in Australia

Children and young people make up a third of Australia's population. They are the future of this country: future parents, workers, professionals, policymakers, and leaders. It is in all our interests for children and young people to be prepared to meet the challenge of more frequent and severe climate disasters in the future, and for us minimize the current impacts on this demographic. Although we have a clear qualitative picture of the different impacts of disasters on children and young people, we are yet to fully quantify or understand the economic and social costs of these impacts.

While there are studies which estimate the impact and economic costs of disasters, they rarely include the voices and perspectives of children and young people. Estimating these specific impacts and costs can inform decision-making around disaster preparedness, response, recovery and resilience-building so that they are tailored to the specific needs of children and young people.

In this context, UNICEF Australia engaged Deloitte Access Economics to estimate the impact and costs of disasters on children and young people in Australia using data from the Longitudinal Study of Australian Children (LSAC). The methodology employed to undertake the study is summarized below.

Figure 2: Overview of approach



Source: Deloitte Access Economics

The analysis showed that children and young people who experience disasters have poorer outcomes:

1.4 million

children and young people experience a disaster in an average year.



This figure is equivalent to

1 in 6 children,

and is only likely to increase with more frequent, and severe natural hazards.

Children and young people are more likely to experience disasters if they are in:



Regional or remote areas.



From lower socio-economic backgrounds.



First Nations communities.



Children and young people are 4.2% less likely to finish year 12

later in life leading to \$2,921 million in lost lifetime earnings.



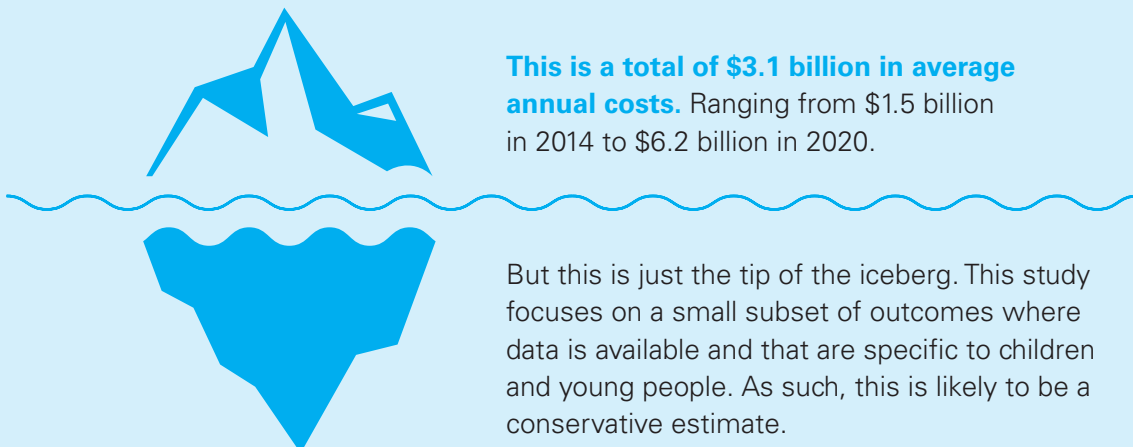
Children and young people are 1.3% to 4.5% more likely to experience psychological distress

leading to \$162 million in healthcare costs.



Children and young people are 0.01% more likely to experience homelessness

leading to \$0.7 million in emergency services.



Insights and recommendations

1

A nationally consistent approach towards supporting children and young people prepare for and respond to disasters:

Australia urgently needs a national framework to support children and young people in the lead up, and aftermath of disasters in a consistent manner. Such a framework would underpin common principles, standards, and action plans to address the most pressing short and long-term needs of all children and young people across mental health, physical health, education, social protection, homelessness, and other key domains of wellbeing and rights. A national framework of this nature can be interpreted in-context and operationalized at Federal, State and Territory and Local Council levels and across sectors.

The creation of such a framework would fill an important gap in Australia's policymaking architecture when it comes to children in disasters. Australia currently lacks a national framework and strategy for child and youth-focused disaster recovery and resilience-building. Existing child-focused plans such as the National Framework for Protecting Australia's Children; Healthy, Safe, and Thriving: National Strategic Framework for Child and Youth Health; the National Action Plan for the Health of Children and Young People: 2020-2030 make no explicit reference to disasters or emergencies. Similarly, Australia's National Disaster Risk Reduction Framework and its First Action Plan make no reference to the needs and priorities of children or young people.

A federal agency may be well placed to lead the development of such a framework, which should begin with the publication of a discussion paper and public consultation process, involving children and young people who have been affected by disasters in Australia, including those from Aboriginal and Torres Strait Islander and marginalized migrant communities.

The creation and implementation of the framework should also be guided by an expert advisory group of specialist agencies, relevant Federal Government departments, state authorities, local council representatives, members of the Federal Government's Youth Steering Committee, NGO and academic experts, and children and young people themselves.

2

A risk-informed approach to disaster recovery and resilience-building for children and young people:

Disasters affect children and young people unequally. Children across Australia, including those in rural and remote communities, indigenous communities, and from low socio-economic backgrounds are being hit by multiple disasters in quick succession or simultaneously, in amidst other crises. Pre-existing disadvantages make them more vulnerable to more significant, compounding impacts, which prevent children and young people in these communities from ever recovering fully or building long-term resilience.

To develop national frameworks, laws, and investments that are more tailored, targeted and effective in addressing the needs of children and young people most in need, governments should prioritize a clearer and more nuanced picture of climate disaster risks across Australia. The level of risk to different cohorts of children and young people can be determined by determining **exposure** – through modelling of the frequency and severity of natural hazards or extreme weather in particular geographies and defining direct and indirect contact – and **vulnerability** – through accounting for pre-existing social, economic, and geographical vulnerabilities which are likely to compound impacts.

UNICEF Australia welcomes the Australian Government's investment in a National Climate Risk Assessment (NCRA). The Assessment should include a specific section on children and young people's exposure and vulnerability to disasters in Australia. There are several ways in which child-sensitivity can be incorporated into climate disaster risk assessments in Australia, including by translating UNICEF's global Children's Climate Risk Index (CCRI)-Disaster Risk Model (CCRI-DRM) methodology to the Australian context. The CCRI-DRM builds country-specific risk assessment models and an interactive geospatial platform to depict exposure and vulnerability to multiple hazards, shocks, and stresses. Measurement of vulnerability also incorporates economic, political, and social characteristics that reflect readiness to withstand the impacts of these hazards, shocks, and stresses.

Developing the capability for child-sensitive climate disaster risk modelling will also enable governments to consider specific, proactive, place-based approaches to disaster funding and programmatic arrangements where required. A place-based approach recognises that there are some places and communities in Australia that experience entrenched disadvantage for a range of context-specific reasons, and that are also more prone to disasters.

This reality, as already been recognised to an extent through recent Federal Budget allocations to address entrenched place-based disadvantage, necessitates larger, longer-term, more proactive, and more flexible funding partnerships between Federal, State and Territory, and Local Governments to address added complexity of disaster response and resilience-building in these communities. Such an approach can be trialled as part of existing investments in the *Stronger Places, Stronger People* initiative, which currently includes place-based partnerships with 10 communities, and State and Territory governments, and aims to enhance shared decision-making and local solutions in six of these communities.

3

Disaster recovery and resilience-building funding should be sensitive to the unique needs of children and young people:

Funding for disaster recovery and resilience-building does not often meet the specific and unique needs of children and young people. Creating a national framework (Recommendation 1) and employing a risk-informed approach to policymaking (Recommendation 2) enables targeted investments in recovery and resilience-building for children and young people. However, existing funding instruments and programs should embed child-sensitivity criteria within their project or programmatic cycles. Doing so will enable decision-makers and funders to consider the unique and specific needs of children and young people in current allocations of funding for disaster recovery and resilience-building.

Employing a proactive and specific approach to child-sensitivity in disaster recovery and resilience funding requires decision-makers to adopt **four criteria**, developed by UNICEF in 2021,^{xi} which if explicitly addressed, will enable faster recovery and build psychosocial, cultural, and economic resilience, ultimately minimizing longer term costs to individuals, to society, and to the economy. Properly considered, child-sensitive disaster funding should be:

- **Holistic and multisectoral:** addressing needs and vulnerabilities of children and young people by including commitments in child-critical sectors such as education, healthcare, housing and nutrition/food security;
- **References:** including explicit and meaningful references to children and young people (in funding arrangements), including those who are particularly disadvantaged or marginalized;
- **Equity-based:** considering children and young people as rights holders and considering the principle of intergenerational equity as a foundational principle in funding arrangements.

- **Inclusive:** identifies inclusiveness and the recognition of children and young people as important agents of change for disaster preparedness, response and resilience as well as climate action.

These criteria can be applied in different ways to existing funding arrangements. An example of child sensitivity within Commonwealth disaster funding arrangements is the Additional Payment for Children within the Australian Government Disaster Recovery Payment (AGDRP), which was introduced during the 2019 – 2020 bushfires.^{xii} The Additional Payment for Children is worth \$400 per eligible dependent child, and as of May 2020, had been provided 84,403 times at a cost of \$33.8 million. Although the Payment criteria does not specify how the money should be used, it is implicitly a recognition that families with children face additional, specific costs in an emergency, and should have the autonomy to spend this funding as required.

Alternatively, these criteria can also be applied to specific child-focused grant windows and whole-of-community programs, enabling investments in key domains of need and wellbeing for children and young people, and ensuring that funding is available for long-term (5-10 years) interventions tailored to the needs of specific communities, and ideally, in collaboration with local services, schools, health providers, and children/young people themselves.

Child-sensitivity criteria can also be applied to what the Sendai Framework for Disaster Risk Reduction (DRR) calls a 'build-back-better' approach to disasters. A child-sensitive approach to building back better in such a scenario would inevitably involve prioritising funding in, for example:

- Long-term (5 – 10 years) quality health and wellbeing programs available in local allied health settings, schools, early learning centres, and community hubs to enable psychosocial recovery and build social and emotional resilience ahead of the next disaster;
- Internet connectivity to ensure minimal disruption to children's health and education in future disasters.
- Flood resistant playgrounds, recreational spaces, early learning centres, school buildings, and housing to minimise disruptions to play, education, and safe living in future disasters;
- Prioritising Disaster Resilience Education (DRE) in classrooms or community-settings.

Child-sensitivity criteria should also be embedded within Australia's next National Adaptation Plan (NAP) to ensure that investments, policies, and laws address the needs and perspectives of children and young people in ways that protect and prioritize them from the worst impacts of the climate crisis in the long-run, and thereby incur fewer social and economic costs to individuals through the life-cycle; to local communities; and to national economies.

4

Further evidence:

As one of the first studies to focus on children and young people's unique needs after a disaster in Australia, this report focuses on three areas that have been found most significantly impacted: mental health, education, and homelessness. To understand the impact of disasters and extreme weather events on children and young people more comprehensively, future studies should focus on a wider range of outcomes, such as domestic and family violence, nutrition, respiratory issues, and other stress induced conditions.

Although LSAC dataset is a rich source of information from a wide range of perspectives, it is relatively limited in its scope and data it uncovers. Only the last two waves of data ask respondents about their specific experiences in disasters. Another challenge with the LSAC is that it is an opt-in survey. Indicators are self-reported, which is a less accurate form of data collection compared to other data sources such as medical records or disaster payment data. A future study

could link the LSAC to other datasets such as Disaster Assist to more accurately identify children and young people who are impacted by disasters, and also consider further health data through Medicare records.

Our study has estimated the impact of disasters and extreme weather events on children from mental health, education and homelessness perspectives, and has built a foundation from which to investigate interventions which may best assist children and young people in the future. However, further analysis needs to be undertaken into the causal mechanisms that drive poorer outcomes for children impacted by disasters. For example, although our analysis found that disasters reduce the probability of children and young people completing year 12, we do not know whether this is due to financial or mental stress, interruptions to education which compromise school performance, or some other factor. Similarly, more research is required into the factors – universal and contextual – that enable greater resilience against disasters, and therefore limit the seriousness of their impacts. New methods and interdisciplinary approaches will be required to undertake these forms of research.

ⁱ Intergovernmental Panel on Climate Change (IPCC), "Assessment Report Six Summary for Policymakers," < IPCC_AR6_WGII_SummaryForPolicymakers.pdf >

ⁱⁱ Bureau of Meteorology, "Australia's Annual Climate Change Statement 2023," <Australia's 2023 in weather: a year of warm temperatures and contrasting rainfall - Social Media Blog - Bureau of Meteorology (bom.gov.au)>

ⁱⁱⁱ Ibid

^{iv} Deloitte Access Economics (DAE), "Building Australia's Resilience to Natural Disasters," <Building Australia's resilience to natural disasters | Deloitte Australia | Deloitte Access Economics report>

^v Parliament of Australia, "2019-2020 Australian bushfires – frequently asked questions: a quick guide," < 2019-20 Australian bushfires—frequently asked questions: a quick guide – Parliament of Australia (aph.gov.au)>

^{vi} Mark Binskin et al, "Royal Commission into Natural Disaster Arrangements," < National Natural Disaster Arrangements | Royal Commissions>

^{vii} UNICEF Australia and Royal Far West, "After the Disaster: Recovery for Australia's Children," < After-the-Disaster-Recovery-for-Australias-Children-produced-by-Royal-Far-West-UNICEF-Australia.pdf (royalfarwest.org.au)>

^{viii} UNICEF Australia and Royal Far West, "2022 Flood Response and Recovery: Children's Needs Assessment," < 2022_FloodResponseRecovery_LoRes.pdf (royalfarwest.org.au)>

^{ix} UNICEF Australia, The Coldest Year of the Rest of their Lives: Protecting Children from the Escalating Impacts of Heatwaves, Pg. 34-44, UNICEF-coldest-year-heatwaves-and-children-EN.pdf

^x National Mental Health Commission (2021) The economic case for investing in mental health prevention: Summary. <https://www.mentalhealthcommission.gov.au/getmedia/ffbf9cc5-f815-4034-b931-dfc0c1ecb849/The-economic-case-for-investing-in-mental-health-prevention>

^{xi} UNICEF (2021), "Making climate and environment policies for and with children and young people: a discussion paper on child sensitivity and 2020-2021 nationally determined contributions (NDCs)," < Making Climate and Environment Policies for and with Children and Young People | UNICEF>

^{xii} Parliament of Australia, Australian Government Natural Disaster Payments and Calls for Reform, <Disaster payment reform – Parliament of Australia (aph.gov.au)>

About UNICEF

UNICEF believes in a fair chance for every child and we are the world's leading organisation working to protect and improve the lives of children in over 190 countries. At UNICEF Australia we work to protect and promote children's rights by advocating for the rights of children in Australia and overseas, and elevating their voices.