YACVic Submission:

Inquiry into Climate Resilience in Victoria
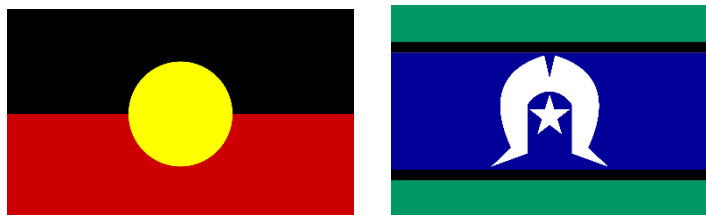
May 2024

YACVIC — Youth Affairs Council Victoria

![Youth Affairs Council Victoria logo]

Acknowledgement of Country

Our work takes place across Victoria.

YACVic's head office is on the lands of the Wurundjeri people of the Kulin Nation in Naarm (Melbourne). YACVic also have offices on the lands of the Gunditjmara Nation in Warrnambool, and on the lands of the Wemba Wemba and Wadi Wadi Nations in Swan Hill.

We pay our respects to Elders past and present for their wisdom, strength, support and leadership. Bunjil's lore states that those who walk on this land must care for Country and the waterways as well as care for the children and young people.

We stand in solidarity to pay respect to the ongoing culture and continued history of all Aboriginal and Torres Strait Islander nations. Sovereignty was never ceded. **This always was, and always will be, Aboriginal land.**

About YACVic

Youth Affairs Council Victoria (YACVic) is the peak body and leading policy advocate for young people aged 12–25 and the youth sector in Victoria. Our vision is that young Victorians have their rights upheld and are valued as active participants in their communities. As a peak body, we work closely with young Victorians, and the sector that supports them, to deliver effective advocacy, events, training, resources and support. We're driven by our valuable members and their vision for a positive future for young Victorians.

YACVic Rural is our advocacy and development arm focused on rural and regional young people and the youth sector throughout Victoria, with a physical presence in the Great South Coast and Southern Mallee regions

Our work in disaster readiness, response and recovery

YACVic has a strong focus on young people and disaster readiness, response and recovery. Key projects include:

- The **Centre of Excellence: Young People and Disasters** ('The Centre') –in partnership with Victoria University's Youth and Community Research Group, YACVic has been funded by the Commonwealth to establish the Centre of Excellence: Young People and Disasters. The Centre aims to empower young Australians to be active citizens in emergency management. The Centre brings together expertise around young people (12-24 years), youth participation and disasters. The Centre takes a strengths-based approach, recognising the capabilities and contributions of young people as active citizens in disaster readiness, resilience, and risk reduction.

- **Future Proof: Young people, Disaster Recovery and (Re)building Communities** – in 2022 YACVic secured a $10 million Commonwealth Government grant to deliver a 14-partner, collective impact project. The project delivers youth-led activities and youth-led community decision-making and capacity building in response to the 2019-20 bushfires.

- **The Umbrella Project** – this project supported organisations through a Victorian Government grant initiative to deliver immediate relief and early recovery activities in flood affected communities.

For more information see our disaster hub: www.yacvic.org.au/rural/disaster-hub/

Contents

Introduction

We welcome the opportunity to make a submission to the Inquiry into Climate Resilience in Victoria.

The climate crisis poses a significant threat for young people, their communities and future generations living in Victoria.[1] Alongside the urgent need to reduce the harms caused by climate change by phasing out fossil fuels, we must also adapt our built environment and infrastructure to the changing climate.[1] This includes adapting to, preparing for and mitigating the impact of disasters which can no longer be viewed as distinct from climate change but inextricably linked.[2,3]

Disasters are now more frequent, more intense and experienced as multiple, compounding and cascading events due to climate change. In Victoria this means communities are increasingly facing severe bushfires and lengthened fire seasons, heatwaves and high temperatures, droughts, heavy rainfall and flooding as a result of climate change, along with the projected continuation of sea level rises.[2]

By taking proactive measures and investing in sustainable adaptation strategies, we can better prepare for the impacts of climate change, help mitigate harms and safeguard the well-being of our communities,[4] including for young people who are disproportionately being affected.[5]

Climate change and its impacts is a key issue for young people.[6,7,8] To improve young people's experiences of these impacts this submission responds to the following terms of reference:

- (a): The main risks facing Victoria's built environment and infrastructure from climate change and the impact these will have on the people of Victoria.
- (e): What more can be done to better prepare Victoria's built environment and infrastructure, and therefore the community, for future climate disaster events.

This submission responds to these terms of reference using the voices of young people and those that work with them, and evidence relating to the current and projected impact of climate change on built environment and infrastructure – with a focus on young people.

The submission recommendations aim to support a future where all young people can thrive despite the current and projected impact of climate change. Mitigating and adapting buildings and infrastructure will help protect Victorian communities; key to this is understanding the unique impacts of climate change on young people and the responsibility of government to protect the places and spaces where young people live, work, study and play, and to ensure meaningful youth participation in disaster readiness, resilience, and risk reduction.

The submission calls on the inquiry to view YACVic's recommendations alongside the Victorian's government's whole-of-government commitment to young people in *Our Promise, Your Future: Victoria's Youth Strategy 2022-2027*, with specific attention to:

- Priority 1: Young people are healthy and well
- Priority 2: Young people are safe and secure
- Priority 3: Young people achieve their goals through education, training and employment
- Priority 4: Young people are respected and involved in decisions in their communities.

We welcome the opportunity to speak to the Committee about our submission, alongside representation from a young person(s).

This submission also supports the key recommendations outlined in the Victorian Council of Social Services submission to the Climate Resilience Inquiry.

Summary of Recommendations

Impacts of climate change on young people and their communities.

Recommendation 1: Develop a Victorian-specific strategy that provides a targeted response to the impact of climate change on young people's mental health.

Recommendation 2: Increase investment in and access to free place-based youth mental health early intervention, prevention and treatment services in rural and regional areas, not limiting services to disaster recovery periods.

Recommendation 3: Scale up funding for place- and school-based youth workers to provide trauma informed, protected and trusted relationships and support to young people, not limiting services to disaster recovery periods.

Recommendation 4: Build the capacity for trauma-informed responses in key providers working with young people in identified high risk locations, including mental health and alcohol and other drug workforces, GPs and school-based nurses, generalist youth services and schools.

Recommendation 5: Provide free access to Youth Mental Health First Aid training for local service providers and community members in identified high risk locations, to support young people in the immediate aftermath of the disaster, and to build the resilience of the community for the recovery and rebuilding stage, and future disasters.

Recommendation 6: Conduct an inquiry into the impact of climate change on Victorian young people, with specific attention to mental and physical health.

Investing in infrastructure resilience upgrades.

Recommendation 7: Deliver climate resilience upgrades to Victoria's housing stock, with a focus on public, social and community housing and First Nations housing.

Recommendation 8: Establish a climate resilient infrastructure fund to support local government and community organisations to mitigate the consequences of climate change on public infrastructure through resilience upgrades. To focus first on infrastructure that supports priority groups such as young people, those in high-risk locations and marginalised communities.

Recommendation 9: Upgrade youth-specific organisations and buildings with solar panels, batteries and generators to ensure they can continue to provide connection, belonging and support to young people during times of disaster.

Recommendation 10: Ensure the roll out of the minimum energy efficiency standards for rental homes and boarding houses includes renter protection – specifically against arbitrary rent raises and/or evictions, combined with strong investment in compliance and enforcement activities.

Recommendation 11: Deliver a public information campaign to inform young renters of the new minimum energy efficiency and safety standards for rental properties and rooming houses. To include information about renter's rights, legal and non-legal supports and landlord responsibilities. Information to be delivered in an accessible youth-appropriate format – including through digital platforms, to reach young people where they work, live, study and play.

Recommendation 12: Develop minimum disaster resilience standards for all rental properties (location relevant), including heat, bushfire, flood, storm and sea level rise.

Recommendation 13: Establish a formalised network of cooling spaces, by funding local councils to develop place-based cooling space models as part of their heat wave action plans.

Recommendation 14: Create a comprehensive place and needs-based analysis of the public transport needs of young people in rural and regional areas, through codesign with young people and the sector.

Recommendation 15: Invest in new public transport routes and increased timetabling that supports access to community cooling spaces in rural and regional areas.

Recommendation 16: Improve urban green space and tree canopy cover, this includes:

- Increasing by 10 million the tree planting target made under the *Land use, land use change and forestry sector emissions reduction pledge*
- Dedicating 10 million trees specifically for urban hotspots to further reduce emissions and on the ground temperatures

- A priority focus on areas projected to experience greater average warming, the places where children and young people frequent for recreation, and in lower socio-economic areas.

Recommendation 17: Strengthen community engagement in urban green and tree canopy cover through investment in Council-led community greening projects and public information campaigns.

Recommendation 18: Strengthen youth engagement in urban greening through school-led greening project fund, include flexible learning and alternative education settings.

Strengthening community climate resilience.

Recommendation 19: Meaningfully engage young people in future disaster preparation, mitigation and recovery strategies at all levels of government, including:

- a statewide forum for young people to talk about and generate new ideas on responding to climate change in their communities

- Infrastructure Victoria to establish a Youth Advisory Group, ensuring diverse representation especially from young people in low socio-economic environments

- incorporate youth-specific roles and responsibilities into local Emergency Management planning, to bring their unique perspectives and skills to community decision making.

Recommendation 20: Strengthen qualification pathways for young people in disaster resilience, to include peer worker positions, traineeships, apprenticeships and fully funded courses in emergency management, agriculture and industry, land management, youth work and mental health to enhance the human infrastructure of communities and capacity to plan, prepare, respond and recover from disaster event.

Education.

Recommendation 21: Invest in climate change literacy education to support young people to be change agents and increase community buy-in for climate adaptation and resilience actions. Including education that is:

- Place-based and community specific.

- Practical and action focused.
- Accessible, age-appropriate and reaches young people through platforms that are credible and relevant to young people, including digital technologies.

Youth climate justice.

Recommendation 22: Embed a duty of care in Victorian government legislative decision making to protect future generations from climate harm.

Recommendation 23: Establish a Victorian Commissioner for Future Generations.

Methodology

This submission is grounded in the voices and lived experiences of young people and youth sector workers in Victoria. As experts in their own lives, young people have experience and knowledge unique to their situation. Young people's perspectives can also lead to more creative and relevant solutions and services.

For this submission a place-based consultation was conducted with 8 young people (14-18 years) in Swan Hill, who told us about their experiences and suggestions regarding climate resilience, the built environment and infrastructure in Victoria. Of these:

- 7 were 14-18 years, and one participant's age was unknown.
- one was male, six female and one participant identified as non-binary.

The submission also draws on findings from YACVic's 2023 Submission to the Parliamentary Inquiry into the 2022 Flood Event in Victoria, which used a survey to consult with young people and youth workers in flood affected areas.

YACVic received 41 responses to the survey, of these:

- 15 were young people 12-25 years

- 21 were youth workers

- 5 were both young people and youth workers

Of these young people:

- 3 were 12-17 years

- 12 were 18-25 years

Survey respondents lived or worked near all rivers affected by the Flood Event, except for Maribyrnong. The numbers of participants affected by flooding were (noting some participants were affected by more than one river):

- Avoca River – 6

- Barwon River – 1

- Campaspe River – 3

- Goulburn River – 13

- Loddon River – 11

- Murray River – 11

Participants live in different LGAs within Victoria, with the highest numbers from:

- Greater Shepparton – 8
- Loddon Shire Council - 5
- Swan Hill Rural City Council – 5
- Gannawarra Shire Council – 3
- Buloke Shire Council – 3
- Campaspe Shire Council - 2

YACVic also conducted consultations with seven young people and six youth workers (total 13) in Mildura, Boort and Charlton.

This submission also draws on findings from YACVic's 2023 Speaking Up Report, which consulted with more than 183 young people across East Gippsland, Towong and Alpine regions, and youth workers on their experiences of the 2019-20 Eastern Victorian Fires.

These above referenced consultations, alongside an evidence review, have informed key findings and recommendations.

Some quotes have been edited for clarity and anonymisation.

PART ONE: Risks and impacts of climate change

1. Setting the context: Risks facing our buildings and infrastructure from climate change

Climate change impacts, and our lack of climate disaster preparedness, are increasingly threatening Victoria's built environment and infrastructure - including through causing direct damage, deterioration, and reduced access to the infrastructure and buildings we rely on. *Climate change impacts* refers to the many ways climate change affects environments and livelihoods. This includes:

- the direct impacts of increases in frequency and intensity of disasters and extreme weather events – such as bushfires, droughts, floods, and storms.

- 'less obvious' effects like heatwaves, air pollution, species extinction, environmental depletion, sea level rise, food insecurity and higher cost of living.[9]

This section explores the key climate change impacts affecting our built environment.

1.1 Built environment and infrastructure

The built environment considers all human-made spaces where we live, work, study and play. Our built environment protects us from the elements and provides us with the services we need to live and survive.[10]

For example:

- Transport – such as vehicles, roads, rail, bridges, tunnels, and farm machinery.
- Buildings – such as housing, shops, municipal buildings, schools, hospitals, libraries, and fencing.
- Parks and gardens.
- Public services – such as water supply and treatment, sewage treatment, electricity and dams.
- Critical infrastructure – such as shelter, food production and distribution, education, water supply, public health, transport, security services, electricity, and telecommunication.[4]

Well-planned, sustainable and climate resilient infrastructure is crucial to mitigate the effects of climate change, to foster resilient communities, and to ensure equitable access to resources and opportunities.[11]

1.2 Increased temperatures and heatwaves

Ongoing climate trends include more hot days and heatwaves.[12] Two degrees warming for example will see Victoria experience double the number of extreme heat events and up to 60 per cent more very high fire danger days.[11] Hotter temperatures will be particularly felt in cities and towns, due to materials used in buildings and infrastructure which absorb more heat compared to the natural environment.[12]

A significant portion of Victoria's essential infrastructure, including roads, railways, and power lines, is susceptible to extreme heat. High temperatures can see asphalt road surfaces soften and melt, pavement cracking and potholes, railway tracks to warp, and disruptions to power supply because of failures or shutdowns in transponders, power lines, and stations.[14]

Transport disruptions may also result in longer exposure to high temperatures for people, increasing the likelihood of heat-related health issues – such as rashes or cramps, heat exhaustion, heat syncope and heat strokes.[14] More broadly extreme heat is the leading cause of weather-related injury in Victoria.[15] And further, over 60% of deaths during heatwaves between 2001 and 2018 were in the most disadvantaged areas in Australia,[16] disproportionately impacting the elderly, very young, disabled people, outdoor workers, and those living in public housing.[9,17]

Hotter temperatures will also lead to lower workforce productivity, with people unable to work outdoors, or having to work in spaces with inappropriate ventilation and air conditioning.[18]

Increased temperatures, along with other climate change impacts like extreme weather events, also significantly impacts agricultural land, affecting both crop and livestock production. Changes in temperature and water availability can reduce the quantity and quality of pasture and forage crops, disrupt feed-grain production, and increase costs.[19] Further, shifting climates may alter the distribution of diseases and pests, posing further challenges to livestock health and productivity.[19] Livestock without access to adequate shade will also be susceptible to heat related issues.[20]

Extreme heat events already cost the Victorian economy on average $87 million per year; this cost is expected to rise as heatwaves become more frequent.[21] And, more broadly in Australia on current trends, loss of wealth due to reduced agricultural productivity and labour productivity because of climate change is projected to exceed $19 billion by 2030, $211 billion by 2050 and $4 trillion by 2100.[22]

1.3 Disasters and extreme weather – fires, floods and storms

Climate change is causing an increase in the frequency and intensity of disasters and extreme weather events.[23]

Climate science expects more extreme fire weather days, particularly in the south and east of Australia.[24] The 2019-20 southeast fires was the worst bushfire season on record, burning through 5.8 to 8.1 million hectares, and resulting in loss of life, property and wildlife and environmental destruction.[25] Following this, a La Niña event in 2022 saw unprecedented flooding along the Eastern seaboard. This led to calls that Australia has entered a 'new era' of unnatural disasters, with less recovery time between these events.[26]

Storms are also becoming increasingly worse and more frequent. The February 2024 storm in Victoria damaged 12,000km of powerlines and poles across the state's electricity distribution networks, resulting in widespread transport disruptions and power outages for over 500,00 homes and businesses.[27]

Here we see flooding, changes to rainfall, storms, and high temperatures all placing stress on essential infrastructure. Within this context of unpredictable weather, infrastructure designed for specific climates can fail quicker – with impact on community safety.[28] For example, water networks are at increased risk of damage, soil run-off, and water pollution.[28] And, damage to infrastructure like bridges, roads and tunnels compromises their safety and access.[28]

One young person from Swifts Creek told us:

*"Is anyone doing research on the impact on the waterways? The run-off
from the rain has been really bad, impacting on fish, Tambo is really
bad, up in Swifts. There is nothing to hold the topsoil and this can cause
landslides. Which is really bad for all the wildlife and people that depend
on that is really bad."*

1.4 Sea level rise

Ongoing sea level rise (SLR) is expected to increase extreme coastal flooding and storm surges in low-lying coastal locations.[24] Most of our population resides in coastal urban centres, with significant infrastructure development located in low-lying regions.[29]

The impacts of SLR and storm surge include inundation and erosion, which can lead to loss of agricultural lands, parks, outdoor areas and coastal reserves.[30] And, intrusion of salt water can harm ecosystems, species and water resources, and cause physical damage to houses, factories, commercial buildings, farms, bridges, railways, electricity and communication networks, water infrastructure, public facilities, beaches and parks.[30]

By 2100, the impacts of SLR and storm surge are predicted to result in a $442 billion economic loss.[30] This includes more than $226 billion in commercial, industrial, road, rail, and residential assets if greenhouse gas emissions continue at high levels.[22] Reserves near Geelong and South Gippsland, residential areas in Port Phillip Bay and east of Melbourne, and commercial areas in Docklands and Southbank will be especially impacted.[30]

2. Impacts of climate change on young people and their communities

Young people are disproportionately impacted by the climate crisis.[31] Their experience of climate change impacts can be vastly different and unique compared to adults, and they will experience the consequences for longer.[6,7,11] Despite this young people do not feel engaged with or listened to by government decision makers.[32,33]

This section discusses the intersection between climate change impacts, built environment and infrastructure and young people, drawing on what young people told us about their experiences. We note these impacts affect young people in unique ways, are interrelated, and should be understood in the context of their communities.

2.1 Loss of property and displacement from homes

What we heard:

Young people expressed concerns about significant damage, destruction, and loss of property caused by climate-related disasters – having long-lasting consequences for them and their communities.

Many rural and regional young people and their families are engaged in agriculture, relying on farmlands for their livelihoods. This means, beyond the immediate loss of property, the devastation often leads to significant income loss and challenges in maintaining their overall way of life. With lost homes, crops, businesses and incomes, financial stress has a significant impact on mental health, including for young people who felt concern and burden about their family's financial wellbeing.

> *"With those generational farms, [and] all the stress with that... you're losing your income, but you're also losing what you know."*

One participant also spoke to flood related damages leading to housing displacement with young people forced to leave rural areas. This has several ramifications, including impacts to local workforce capacity.

> *"If people's farms have been damaged, I know young people who have actually left rural areas...so that's a big impact if young people have to relocate"*

2.2 Disrupted education

What we heard:

Young people reflected on the impacts of the floods on school attendance. With school cancelled, disrupted, or moved online, this impacted their routine and deprived students of valuable learning opportunities.

We heard young people didn't have access to supports such as reliable internet and library access, or quiet spaces to study. For some, studying from home was impacted by practical issues such as displacement.

> *"I know people who, if they live like an hour out of town and they were affected by the floods... they couldn't come to school and would have to stay in town away from their family and stuff."*

Where their farms were affected, many needed to prioritise farm repair work over attending school. In this way, young people are often required to take on 'adult pressures' at times of crisis at the cost of experiencing teenage rites of passage – like spending time with friends and studying.

"When there is a crisis going on… kids are asked to stay home from school to help their families… the pressures of what adults are facing are put onto young people."

Survey participants told us many young people were not able to go to school due to road closures from wet, damaged and unsafe roads, and property damage. This meant attending exams became a source of stress for some young people, as they were uncertain about their ability to attend.

"Our school bus didn't run for a 3-week period and had other last-minute cancellations on several days."

"I wasn't able to get to school due to our roads into town being flooded."

Even when schools remain open, participants discussed how climate change can weigh heavily on young people, with climate anxiety making it challenging to focus on their studies.

"[Climate change] impacts schoolwork… and with what's going to happen in the future… this can make schoolwork more stressful."

2.3 Social connectedness, mental health and wellbeing

What we heard:

The impact of climate related disasters on built environment and infrastructure needs to be considered alongside impact on young peoples' social and emotional wellbeing, including mental ill health, stress and isolation.

"[The] high-water levels created stress, [there was] ongoing high levels of anxiety and pressure."

Young people who experienced the 2022 Victorian Flood Event explained that with towns and properties physically cut off from communities and larger town centres, they had feelings of isolation which contributed to worsening mental health. They discussed having to work and attend school from home, meaning they didn't have their usual supports. Also, extracurricular activities such as sports were cancelled – impacting social connections and physical activity essential for overall well-being.

Due to the road closures and damage to roads, facilities and public spaces, people were also isolated from their social supports and activities. Also, extracurricular activities such as sports were cancelled – impacting social connections and physical activity essential for overall well-being. Young people highlighted the ongoing issue of road damage not yet repaired. Workers noted the impact of free recreational spaces along the river being closed due to flooding and then damage.

> *"I was affected when trying to drive back into the area at night, and the roads were full of potholes and other roads were closed."*

Young people also told us climate change has an ongoing impact on their mental health and overall well-being, expressing heightened levels of anxiety about its long term affects, including on their homes. They share a sense of worry and frustration, feeling that the government's lack of urgent action reflects a disregard for their future.

> *"[There's] lots of anxiety... a lot of young people don't actually talk about how worried they are about those sorts of things long term."*

> *"I think it's called climate anxiety, feeling anxious about the long–term effects of climate change. This comes with fires and floods which have impacts on homes and families."*

What the evidence says:

Exposure to climate change is having a disproportionate impact on young people's mental health and wellbeing.[34] This includes mental health impacts arising from direct exposure, such as lived experience of disasters, as well as from indirect exposure, such as observing, perceiving and thinking about climate change.[6,7,324] This means many young people are experiencing mental health conditions, such as anxiety, depression, post-traumatic stress disorder (PTSD).[34]

In Australia, young people are directly witnessing the "profound and distressing" consequences of extreme weather events, with six in ten expressing deep concern about climate change effects.[35] Importantly, young people affected by extreme

weather events are more likely than their peers to experience social exclusion - like a lack of resources such as housing, relationships, finances and education/employment.[36] Further, because young people are still undergoing cognitive and neural development which can limit their capacity to cope with uncertainty and stress, climate change and experiencing a disaster can have long-lasting negative impacts at a crucial stage in adolescent development.[34]

The uncertainty attached to climate change is a significant barrier for young people to feel hopeful and secure about their future.[37] Yet, the impacts of climate change on mental health continue to be overlooked by policy makers, with current approaches failing to take a whole-of-system response.[33]

It is therefore critical that in considering what more needs to be done to prepare Victoria's built environment and infrastructure for future climate disaster events, the intersection between climate disaster impact, built environment and youth social and emotional wellbeing is recognised and proactively responded to.

Recommendations

1) Develop a Victorian-specific strategy that provides a targeted response to the impact of climate change on young people's mental health.

   Note: this recommendation should be aligned to the first Statewide Plan for the Promotion of Good Mental Health and Wellbeing, and the Prevention of Mental Illness, being delivered as part of the Mental Health Royal Commission roll out; and Priority 1 of Victoria's youth strategy 2022-2027.

2) Increase investment in and access to free place-based youth mental health early intervention, prevention and treatment services in rural and regional areas, not limiting services to disaster recovery periods.

3) Scale up funding for place and school-based youth workers to provide trauma-informed, protected and trusted relationships and supports to young people, not limiting services to disaster recovery periods.

4) Build the capacity for trauma-informed responses in key providers working with young people in identified high risk locations, including mental health and alcohol and other drug workforces, GPs and school-based nurses, generalist youth services and schools.

5) Provide free access to Youth Mental Health First Aid training local service providers and community members in identified high risk locations, to support young people in the immediate aftermath of the disaster, and to build the resilience of the community for the recovery and rebuilding stage, and future disasters.

6) Conduct an inquiry into the impact of climate change on Victorian young people, with specific attention to mental and physical health.

2.5 Access to essential services

What we heard:

Due to severe property damage and road blockages, young people faced challenges in accessing essential resources and services.

Many young people were unable to access schools, GP appointments, recreational activities and support services. While some services still operated online where internet connection was available, other services stopped operating.

> *"Essential services were affected, roads were affected, isolation became an issue. Young people were not a priority group with regards to communication and support."*

What the evidence says:

During the 2019-2020 Victorian bushfires, there was a major loss of communication due to the power outages. Young people noted they experienced poor mobile phone coverage from some providers, inconsistent information or misinformation, and living for days/weeks after the fire without power or access to the internet and online communication.[38] A number of young people indicated that they did not own a phone, had limited coverage, or no credit left on their mobile devices. They also expressed concern for younger children, under the age of 12, who do not have mobile phones or access to social networks.[38]

2.6 Inequality of climate change impacts

What we heard:

The 2022 Victorian Flood Event disproportionately impacted young people and communities already struggling and/or marginalised, including limiting their ability to access services and supports. Many youth workers reported housing services were overwhelmed due to homes affected by flood damage. In rural and regional areas where accessing housing services is already difficult, many young people had no options but to live in overcrowded dwellings.

What the evidence says:

The inequality of climate change impacts is well documented – influenced by factors such as location, age, and socioeconomic inequality.[9,39,40]

- **Location:** While the impacts of climate change are felt state-wide, certain Victorian regions are at higher risk of experiencing disasters or extreme weather because of their location. For example, by the 2050s:
    - Bendigo, Ballarat and Shepparton show a 60% increase in the number of high fire danger days compared to 1986 – 2005.[21]

- o Wentworth, Greater Shepparton, and Wangaratta are at high risk of Riverine Flooding, with up to 65% of properties in Greater Shepparton at risk of damage.[41]
- **Age:** The impact of climate change and associated harms fall disproportionately on young people and future generations, who experience intergenerational climate injustice due to the climate inaction of past generations.[39] This will be addressed below, including the urgent need to embed intergenerational policy thinking within decision-making about climate change.
- **Socioeconomic inequality and access to support:** Exposure and 'vulnerability' to climate change risk is also informed by factors such as social exclusion, racism and discrimination, a lack of private property ownership and social infrastructure, and poverty and power relations.[9] As such, disproportionately impacts those already facing poverty and oppression – such as Aboriginal and Torres Strait Islander people, refugee and migrant communities, disabled people, and people living in rural and regional areas.[42]

So, while climate change has worsened extreme weather events, impacts experienced by individuals and communities are compounded and/or caused by pre-existing inequalities.[40] A lack of investment in disaster preparedness, alongside barriers to accessing health, legal, education, and social infrastructure all contribute to these disproportionate impacts.[7] Therefore, while 'vulnerability' to climate change impacts is often cited to describe a person or community's experience of disaster, it is governments who are accountable for unstable living conditions and inadequate investments in flood or drought prevention infrastructure.[40]

When government invests in systems to cope with climate stressors and disasters that strengthen community resilience and self-determination, the impact on communities can minimised.[9]

Recommendations

7) Deliver climate resilience upgrades to Victoria's housing stock, with a focus on public, social and community housing and First Nations housing.

See also recommendation 8, 11, 12, 14, 16, 22, 23.

PART TWO: How can we better prepare our built environment and infrastructure for climate change?

3. Investing in infrastructure resilience upgrades

3.1 Resilience upgrades to community infrastructure

What we heard:

Young people access a range of community-based infrastructure buildings including community and youth spaces, schools, recreational facilities and clubs, many of which aren't built (or retrofitted) to lessen the impact of a changing climate.

Young people told us about the urgent need to upgrade infrastructure to enhance resilience to climate change. Specifically, so they can access essential infrastructure during times of disaster.

Young people also suggested actions like reinforcing riverbanks, using support beams/stilts, making sure we are not building on flood plains, and utilising heat-resistant materials for roads to prevent deterioration.

> *"[In] floodplain related areas... underneath house[s], it has to have more support beams and stilts."*

What the evidence says:

Climate risks to infrastructure can be reduced by building in areas that are less exposed to risk (like not constructing on flood plains), and by making current infrastructure more resilient to impacts.[43]

Climate resilient infrastructure is planned, built and operated in a way that anticipates, prepares for and adapts to ongoing climate condition changes. And it is infrastructure that can withstand, respond to and recover quickly from climate change-related disruptions.[43]

The development of climate resilient community infrastructure – i.e. schools, hospitals, roads, community services, recreational facilities and public transport – is crucial to ensure young people and their communities have access to essential services and resources.

Victoria must invest in climate-resilient infrastructure projects to reduce the impacts of climate change. For example:

- Building and enhancing costal protection infrastructure.[43]
- Changing the composition of road surfaces so they don't deteriorate in high temperatures.[43]
- Using permeable paving surfaces to reduce run-off in heavy rainfall.[43]
- Installing green roofs and walls in buildings to reduce the urban heat island effect.[44]
- Investing in renewable energy infrastructure such as solar.[44]
- Installation of energy efficiency upgrades.[44]

Importantly, the transition to climate resilient infrastructure pathways must be place-based and empower local people to identify needs and develop solutions. This means:

- Targeting places most at risk – for example the *Resilient Homes Program* in New South Wales defines grant eligibility criteria based on flood mapping.[11]
- Supporting regional and local governments to develop tailored policy actions through deep community engagement.[11]
- Leveraging and building existing community assets, capacities and skills – for example, strengthening local workforce capacity in renewable energy in regions important to green transition.[11]

By investing in resilient infrastructure, we can create a safer and more sustainable future for young people to thrive, learn, work, play and grow, despite the challenges posed by a changing climate.

Recommendations

8) Establish a climate resilient infrastructure fund to support local government and community organisations to mitigate the consequences of climate change on public infrastructure through resilience upgrades. To focus first on infrastructure that supports priority groups such as young people, those in high-risk locations and marginalised communities.

9) Upgrade youth-specific organisations and buildings with solar panels, batteries and generators to ensure they can continue to provide connection, belonging and support to young people during times of disaster.

3.2 Home resilience upgrades and minimum standards for energy efficiency

What the evidence says:

Access to safe and energy efficient housing is crucial for protecting young people and communities from prolonged exposure to extreme temperatures, and associated health issues. And, to overall wellbeing by providing a safe environment for studying, sleeping, work-from-home and recreation.

But, due to housing unaffordability and cost of living pressures, young people are likely to be long-term renters or in public housing,[47] which are often substandard, unsafe, and poorly adapted to temperature changes.[17] It is estimated more than 40 per cent of renters may experience energy hardship.[46]

We therefore welcome the proposed changes to rental minimum standards for energy efficiency, currently subject to the Victorian government passing the legislative changes.[47] These standards may include changes to ceiling insulation, draught sealing, hot water, cooling and a revised heating standard and are a critical starting point towards mandating large-scale adoption of energy-efficient technologies.[46]

Home energy efficiency upgrades have clear health, comfort and wellbeing benefits in addition to lowering the cost of energy bills and reducing carbon dioxide emissions.[13] The proposed changes to minimum standards for rental properties is therefore an important first step for energy efficiency. YACVic is concerned, however, these minimum standards could lead to rent increases or evictions, along with a lack of compliance and enforcement of the standards.

With 7,628 young people experiencing homelessness in Victoria on census night, they make up 25% of all people experiencing homelessness.[48] And, in the context of our housing and cost-of-living crisis, and increasing demand for services, this number continues to grow.[49] It is therefore critical that there are adequate protections for young renters, and that young people are made aware of the incoming minimum standards along with their rights, landlord responsibilities and how to access legal and non-legal assistance if needed.

Ensuring that rental properties, social housing dwellings, and low-income households have access to high quality efficient air conditioning is critical. Although it's noted while reliance on mechanical cooling is necessary to assist habitability in the short term, such measures are inadequate in the medium to long term.[50]

Recommendations

10) Ensure the roll out of the minimum energy efficiency standards for rental homes and boarding houses includes renter protection – specifically against arbitrary rent raises and/or evictions, combined with strong investment in compliance and enforcement activities.

11) Deliver a public information campaign to inform young renters of the new minimum energy efficiency and safety standards for rental properties and rooming houses. To include information about renter's rights, legal and non-le supports and landlord responsibilities. Information to be delivered in an accessible youth-appropriate format – including through digital platforms, to reach young people where they work, live, study and play.

12) Develop minimum disaster resilience standards for all rental properties (location relevant), including heat, bushfire, flood, storm and sea level rise.

3.3 Cooling spaces

What the evidence says:

Free and accessible cool spaces, such as community centres, swimming pools, libraries, and public buildings equipped with air conditioning or cooling systems, provides essential short term relief during heatwaves for those who cannot avoid heat in their homes.[50,51]

But, in rural communities there is a lack of accessible public spaces to seek relief from the heat.[52] And, the lack of transport options and financial costs associated with visiting places such as swimming pools creates additional access barriers.[52] To support a formalised network of cooling spaces, investment is required for councils to develop place-based models of accessible cool spaces as part of their heat wave action plans.[52] This should include:
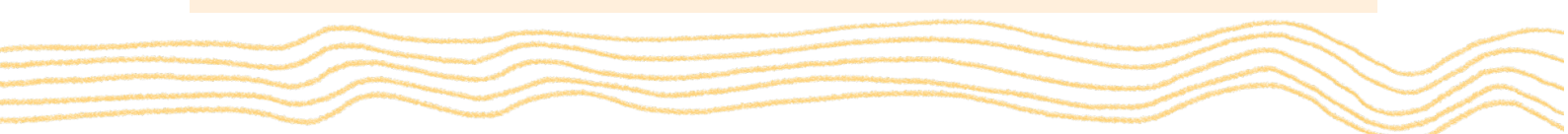
- Engaging with and identifying where young people, families, and community go during hot weather for relief.

- Identify and upgrade centrally located buildings and facilities to be utilised during extreme heat in local communities – such as council buildings, and community services.

- Identify and address access barriers – such as transport options and free access to swimming pools.

- Support community communication of heat wave plans, including heath advice and location or map of cool spaces – through platforms such as social media; newsletters; schools, kindergartens and childcare centres; public message boards, and public meetings.

- Develop monitoring and evaluation plans.

Recommendations

13) Establish a formalised network of cooling spaces, by funding local councils to develop place-based cooling space models as part of their heat wave action plans.

14) Create a comprehensive place and needs-based analysis of the public transport needs of young people in rural and regional areas, through codesign with young people and the sector.

15) Invest in new public transport routes and increased timetabling that supports access to community cooling spaces in rural and regional areas.

3.4 Urban green spaces

What the evidence says:

Urban greenery and tree canopy cover is essential for mitigating the effects of urban heat.[53] Trees provide natural shade, reduce surface temperatures through evapotranspiration, and absorb carbon dioxide, helping to lower ambient temperatures in urban areas.[54] This increases urban resilience and can decrease the energy demand during summer.[53]

Access to green spaces also promotes physical activity, positive mental health, and social connections among young people, fostering a sense of belonging and community resilience.[55]

Recommendations

16) Improve urban green space and tree canopy cover, this includes:
- Increasing by 10 million the tree planting target made under the *Land use, land use change and forestry sector emissions reduction pledge*
- Dedicating 10 million trees specifically for urban hotspots to further reduce emissions and on the ground temperatures
- A priority focus on areas projected to experience greater average warming, the places where children and young people frequent for recreation, and in lower socio-economic areas.

17) Strengthen community engagement in urban green and tree canopy cover through investment in Council-led community greening projects and public information campaigns.

18) Strengthen youth engagement in urban greening through school-led greening project fund, include flexible learning and alternative education settings.

4. Strengthening community climate resilience

4.1 Young people's role in community disaster and climate resilience

What we heard:

Young people emphasised the critical role young people play in fostering community resilience during times of disaster. During flood recovery efforts, young people took an active role in supporting their communities – like sand bagging and participating in cleanup efforts.

Here, participants told us there needs to be more training for young people's workforce capability in helping to rebuild community and home infrastructure after a disaster and to upgrade climate resilient infrastructure.

> *"Everyone expects you to go to uni …But we need the VCAL kids to have their jobs so they can do this sort of stuff… so we need more promotion of trades."*

But, young people often feel like they are left out of conversations about climate and decisions that impact their futures.

> *"I hear a lot of adults saying 'what young people need is' but there is not a lot of opportunities for them to be involved or say what they want."*

> *"The government really [needs] to listen to people's voices about what's going on, because we all do have good ideas."*

What the evidence says:

While young people are disproportionately affected by climate change, they often feel excluded from decision making about climate change policy and are given limited opportunities to participate in disaster resilience and recovery projects.[31] For instance, young people affected by the 2019-20 Black Summer bushfires felt frustrated at the limited opportunities to be actively involved in relief and recovery.[56]

Often, a vulnerability, risk and resilience discourse in disaster management individualises young peoples' experiences and views them through a deficit-based lens as passive disaster victims without agency.[57] As a result, there is a lack of youth-specific commitments within disaster recovery policies.[57]

As experts in their own lives, young people have the right to participate in all aspects of disaster preparedness and recovery. The Sendai Framework (UNDRR 2015) recognises young people as 'agents of change' within disaster risk reduction.[23] When young people are included in disaster management, this benefits themselves, their community and the environment at local, state and national levels.[56]

The National Emergency Management Agency emphasises the importance of seeing young people actively engaged in disaster risk reduction, with a focus on creating community-driven, place-based recovery outcomes.[58]

YACVic welcomes the Victorian and Commonwealth government's respective investments in young people and disaster preparation, recovery and resilience, which has seen major inroads in developing place-based responses that centralise the participation of young people in disaster preparation, recovery and resilience. These investments, highlighted as case studies below, demonstrate the effectiveness of involving young people as active agents in community rebuilding, recovery and resilience.

Future Proof: Young people, Disaster Recovery and (Re)building Communities

The Australian Government's Black Summer Bushfire Recovery Grants program, funded YACVic to coordinate *Future Proof: Young People, Disaster Recovery and (Re)building Communities*.

Future Proof is a collective impact initiative responding to the 2019-20 bushfires, with 14 partners organisations delivering youth-led recovery and resilience efforts across Eastern Victoria.

The project provides educational and career pathways in emergency management and community services. It fosters leadership skills of young people and provides place-based training programs designed to equip both young people and youth workers to further support local communities. The project employs over 30 local placed based youth and peer workers in 14 organisations across 10 communities and supports them via a Community of Practice.

To, date Future Proof has:
- placed 1,183 young people in qualification pathways
- involved 163 young people in advisory roles, guiding and implementing local recovery projects and had involvement.
  seen over 6000 young people participate in local projects.

The *Centre of Excellence: Young People and Disasters*

Victoria University's (VU) Youth and Community Research Group and Youth Affairs Council Victoria (YACVic) are partnering to establish the **Centre of Excellence - Young People and Disasters** ('The Centre'). Funded in 2024 under the Disaster Ready Fund (DRF), the Australian Governments Flagship initiative for disaster resilience and risk reduction.

The Centre brings together expertise around young people (12-24 years), youth participation and disasters. It takes a strengths-based approach, recognising the capabilities and contributions of young people as active citizens in disaster readiness, resilience, and risk reduction. The Centre will act as a clearing house for knowledge translation, commissioning, contributing to, and disseminating research with, and about young people's engagement with disasters. The Centre

champions place-based approaches, prioritising local community responses enabling young people's agency as active citizens.

The Centre's work aims to strengthen the capacity of relevant emergency and disaster organisations to engage and work with young people. The Centre will advocate with and for young people's rights and wellbeing. This work is guided by young people.

Young people have valuable insights to help shape Victoria's broader response to climate change. And young people want more opportunities to voice their insights and concerns about climate change, including greater government engagement with those who have directly experienced disasters.[59] This means facilitating open dialogues to discuss past experiences and devise effective strategies for the future.

The following recommendations should be read in conjunction with Victoria's youth strategy 2022-2027 *Our Promise, Your Future*, with specific reference to Priority 4: young people are respected and involved in decisions in their communities.

Recommendations

19) Meaningfully engage young people in future disaster preparation, mitigation and recovery strategies at all levels of government, including:
    o a statewide forum for young people to talk about and generate new ideas on responding to climate change in their communities
    o the establishment of an Infrastructure Victoria Youth Advisory Group, ensuring diverse representation especially from young people in low socio-economic environments
    o incorporating youth-specific roles and responsibilities into local Emergency Management planning, to bring their unique perspectives and skills to community decision making

20) Strengthen qualification pathways for young people in disaster resilience, to include peer worker positions, traineeships, apprenticeships and fully funded courses in emergency management, agriculture and industry, land management, youth work and mental health to enhance the human infrastructure of communities and capacity to plan, prepare, respond and recover from disaster event.

5. Education

5.1 Climate change education to support community preparation

What we heard:

Young people told us different communities have variable education and knowledge about climate change. They suggested some rural areas may have limited education, noting many of their peers remain unaware of its significant consequences.

> *"Rural people aren't being taught as much as metropolitan areas about [climate change] effects... there's not as much education in rural communities."*

Importantly, participants stressed that while many young people are aware of climate change and its impacts, they felt the negative news cycle made them disengage. Often dominated by alarming reports and dire predictions about the state of the environment, the news cycle can increase young people's climate anxiety and make them feel hopeless.

Further, young people can feel disconnected from discussions about climate change, because of a lack of their representation in decision-making processes.

Young people stress the importance of enhanced education and awareness initiatives to address this gap, wanting greater comprehensive coverage of climate change impacts across various platforms, including social media. Young people want communication that is action focused, achievable and age appropriate, so that they are well-informed and empowered to take meaningful steps that will make a difference.

In our consultations young people also emphasised the need for positive news and progress updates to foster a sense of optimism and engagement among young people, encouraging them to actively contribute to building a more climate-resilient future.

> *"I think tapping into speaking with the education sector [about] how young people can contribute to helping out with the climate crisis."*

What the evidence says:

Some of the key barriers to climate adaption is lack of citizen engagement, low climate literacy and a low sense of urgency.[11] Young people have said that they feel unprepared, under-educated, and increasingly fearful about potential disasters.[59]

Climate change education is crucial for the development of the necessary knowledge, skills and attitudes to support young people to become agents of change, and to recognise the role of young people as future policy makers and civic citizens.[60]

Importantly, effective education must move away from climate change as something abstract or distant, towards something of personal relevance.[59] For example, field work and place-based education – including platforming local knowledge and lived experiences. This can better connect young people with local environments, instil a sense of agency, and provide practical tools to take part in local action, for example support for infrastructure upgrades and engagement in community greening and tree canopy projects.[61] In turn, increasing engagement and reducing the sense of hopelessness.[57]

Recommendations

21) Invest in climate change literacy education to support young people to be change agents and increase community buy-in for climate adaptation and resilience actions. Include education that is:

- Place-based and community specific.

- Practical and action focused.

- Accessible, age-appropriate and reaches young people through platforms that are credible and relevant to young people, including digital technologies.

6. Youth climate justice

What we heard:

Young people emphasised that while climate adaption strategies are crucial to mitigate climate change harms, it's important to address the underlying causes of climate change. They stressed the urgent need to phase out fossil fuels, rather than relying solely on short-term and 'band-aid' solutions like infrastructure resilience upgrades.

Addressing the root causes of climate change requires governments to hold oil and gas corporations accountable for their emissions. And, a political commitment to ambitious climate policies.

"We shouldn't be trying to just adapt, we should be trying to change it."

What the evidence says:

With young people at increased risk of experiencing climate change impacts, they appear at the forefront of the climate justice movement mobilising through youth-led networks such as the 'School Strike 4 Climate.[62]

Climate justice focuses on addressing the root causes of climate change, with an emphasis on the role of production and distribution of fossil fuels in causing harm to future generations.[63] A crucial part of this is intergenerational equity that recognises there is a responsibility of current generations to ensure future generations are not harmed by current decision making on pollution and other climate risk management.[64]

Insights from 'A Fair Go for All', the intergenerational policy survey, demonstrates:

- 97% agree that policies in the present day should take into account the interests of future generations.

- 81% agree that Australian politicians generally think too short-term when making decisions.

- 78% believe that Australia should establish a Commissioner for Future Generations.

For Victoria to properly adapt to, prepare for and mitigate climate change impacts – including through addressing risks in our built environment and infrastructure and climate disaster response, recovery and preparation, it is critical an intergenerational lens is applied to legislative decision making.

Recommendations
22)   Embed a duty of care in Victorian government legislative decision making to protect future generations from climate harm.
23)   Establish a Victorian Commissioner for Future Generations.

7. Summary

To better prepare for the risks of climate change on Victoria's built environment and infrastructure, the unique risks and impacts of climate change on young people need to be considered. This means safeguarding the places and spaces young people live, work, study and play – including homes, green spaces and youth specific buildings that act as a place of connection and continuity during times of climate-related disasters. And ensuring, as we increasingly see hotter temperatures, young people can easily access cool spaces including in their own homes and in the community.

Young people continue to demonstrate they want to be part of community decision making processes regarding climate change, including disaster

preparation, response and recovery. We call on government to ensure meaningful youth participation processes are embedded at the local and state government level, and young people are equipped with the skills and qualifications to support preparedness and mitigation.

It is further critical that in considering what more needs to be done to prepare Victoria's built environment and infrastructure for future climate disaster events and other impacts, the intersection between climate disaster impact, built environment and youth mental health is recognised and proactively responded to. As such, we strongly urge further investigation into the impact of climate change on youth mental and also call for a duty of care to be embedded into Victorian government legislative decision making.

References

1. IPCC. Summary for Policymakers [Internet]. Cambridge: Cambridge University Press; 2022 [cited 2024 Apr 30]. Available from: https://www.ipcc.ch/report/ar6/wg2/chapter/summary-for-policymakers/
2. Victoria. Department of Environment, Land and Water Planning. Victoria's Climate Science Report 2019 [Internet]. Victoria; the Department: 2019 [cited 2024 Apr 30]. Available from: Victorias-Climate-Science-Report-2019.pdf (climatechange.vic.gov.au)
3. Asian Development Bank. A Region at Risk: The Human Dimensions of Climate Change in Asia and the Pacific. Phillipines: Asian Development Bank; 2017 [cited 2024 Jun 24]. Available from: A Region at Risk: The Human Dimensions of Climate Change in Asia and the Pacific (adb.org)
4. Infrastructure Victoria. Climate change [Internet]. Infrastructure Victoria. 2024 [cited 2024 Mar 26]. Available from: https://www.infrastructurevictoria.com.au/topics/climate-change
5. Fava N, Gao C X, Baker, D. Climate distress: responding to the youth mental health impacts of climate change [Internet]. Melbourne: Orygen; 2023 [cited 2024 Apr 30]. Available from: Climate-of-Distress-policy-paper-Aug-2023.aspx (orygen.org.au)
6. Hickman C, Marks E, Pihkala P, Clayton S, Lewandowski RE, Mayall E, et al. Climate anxiety in children and young people and their beliefs about government responses to change: a global survey. The Lancet: Planetary Health [Internet]. 2021 [cited 2024 Apr 30];5(12):863-873. Available from: Climate anxiety in children and young people and their beliefs about government responses to climate change: a global survey - The Lancet Planetary Health
7. Chiw A, Ling H. Young People of Australia and Climate Change: Perceptions and Concerns, A Brief Report. Australia: Millenium Kids Inc.; 2018 [cited 2024 Jun 24]. Available from: Microsoft Word - w -CA CHIW_21027811_Brief Report-3.docx (millenniumkids.com.au)

8. Porter L, Rickards L, Verlie B, Bosomworth K, Moloney S, Lay B, et al. Climate Justice in a Climate Changed World. Planning Theory & Practice [Internet]. 2020 [cited 2024 Apr 30];21(2):293-321. Available from: Full article: Climate Justice in a Climate Changed World (tandfonline.com)

9. Victoria. Federation of Community Legal Centres. Climate Change Impacts on Access to Justice [Internet]. 2023 [cited 2024 Apr 10]. Available from: Climate_Change_Impacts_on_Access_to_Justice_Review_21_Dec_(1).pdf (nationbuilder.com)

10. Australian Institue of Health and Welfare. Built environment and heath [Internet]. Canberra: The Institute; 2022 [updated 2024 Mar 13; cited 2024 Jun 5]. Available from: Built environment and health - Australian Institute of Health and Welfare (aihw.gov.au)

11. Organisation for Economic Co-operation and Development. Infrastructure for a Climate-Resilient Future [Internet]. Paris: OECD; 2024 [cited 2024 May 30]. Available from: Infrastructure for a Climate-Resilient Future | OECD iLibrary (oecd-ilibrary.org)

12. Intergovernmental Panel on Climate Change. Climate Change 2023: Synthesis Report; Summary Report for Policymakers [Internet]. Geneva: Switzerland; 2023 [cited 2024 Apr 30]. Available from: IPCC_AR6_SYR_SPM.pdf

13. Legislative Assembly Environment and Planning Committee. Inquiry into tackling climate change in Victorian communities [Internet]. Parliament of Victoria; 2020 Nov [cited 2024 Apr 19]. Available from: https://www.parliament.vic.gov.au/494700/contentassets/1f7c789136dd414f b4cf094bacf0d087/laepc-59-01-inquiry-into-tackling-climate-change-in-vic-communities.pdf

14. Natural Capital Economics. Heatwaves in Victoria: A Vulnerability Assessment [Internet]. 2018 [cited 2024 Apr 30]. Available from: Heatwaves in Victoria_a vulnerability assessment (climatechange.vic.gov.au)

15. Australian Institute of Health and Welfare. Let's talk about the weather: injuries related to extreme weather [Internet]. Canberra: The Institute; 2023 [updated 2023 Nov 02; cited 2024 May 31]. Available from: https://pp.aihw.gov.au/reports/injury/extreme-weather-injuries/contents/an-overview-of-extreme-weather-related-injuries

16. Coates L, van Leeuwen J, Browning S, Avci A, Gissing A. Heatwave fatalities in Australia: a new analysis. Risk Frontiers [Internet]. 2021 [cited 2024 May 31];20(3)1-6. Available from: https://riskfrontiers.com/wp-content/uploads/2021/12/newsletter_V20_Issue3_December-2021.pdf

17. Lander J, Breth-Preseton M, Moait R, Forbes C, Stephens L, Dickson M. Extreme heat driven by the climate emergency: impacts on the health and wellbeing of public housing tenants in Mildura, Victoria [Internet]. Sydney: Mallee Family Care; 2019 [cited 2024 May 29]. Available from: https://www.malleefamilycare.org.au/MFCSite/media/PDFDocuments/PublicHousing/2019/MalleeFamilyCare_PublicHousing_Report_2019.pdf

18. Chavaillaz Y, Roy P, Partanen AI, Da Silva L, Bresson É, Mengis N, et al. Exposure to excessive heat and impacts on labour productivity linked to cumulative CO2 emissions. Sci Rep [Internet] 2019 [cited 2024 May 29];9(1):13711+. Available from: Exposure to excessive heat and impacts on labour productivity linked to cumulative CO2 emissions | Scientific Reports (nature.com)

19. Henry B, Charmley E, Eckard R, Gaughan JB, Hegarty R. Livestock production in a changing climate: adaptation and mitigation research in Australia. Crop Pasture Sci [Internet] 2012 [cited 2024 May 29];63(3):191+. Available from: Livestock production in a changing climate: adaptation and mitigation research in Australia (csiro.au)

20. Victoria. Department of Environment, Land, Water and Planning. Victoria's Climate Science: Report 2019 [Internet]. Victoria; the Department: 2019 [cited 2024 May 31]. Available from: https://www.climatechange.vic.gov.au/__data/assets/pdf_file/0029/442964/Victorias-Climate-Science-Report-2019.pdf

21. Victoria. Department of Energy, Environment and Climate Action. Victoria's changing climate [Internet]. Victoria; the Department: 2021 [cited 2024 May 30]. Available from: https://www.climatechange.vic.gov.au/victorias-changing-climate

22. Steffen W, Mallon K, Kompas T, Dean A, Rice M. Compound costs: How climate change is damaging Australia's economy [Internet]. Climate Council of Australia: 2019 [cited 2024 Jun 3]. Available from: https://www.climatecouncil.org.au/wp-content/uploads/2019/05/costs-of-climate-change-report-v3.pdf

23. United Nations Office for Disaster Risk Reductio. Sendai Framework for Disaster Risk Reduction 2015-2030 [Internet]. Geneva; 2015 [cited 2023 Nov 16]. Available from: http://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030

24. Lawrence J, Mackey B. Australasia. In: Portner H-O, Roberts D, editors. Climate Change 2022 - Impacts, Adaption and Vulnerability: Working Group II Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [e-book]. Cambridge (UK): Cambridge University Press; 2023 [cited 2024 Apr 10]: 1581–688. Available from: https://www.cambridge.org/core/books/climate-change-2022-impacts-adaptation-and-vulnerability/australasia/503478DD0DDCA3ED5C93DA75A77DF5DB

25. Commonwealth of Australia. Royal Commission into National Natural Disaster Arrangements: Report [Internet]. Commonwealth of Australia; 2020 [cited 2024 Apr 29]. Available from: Royal Commission into National Natural Disaster Arrangements Report

26. Climate Council of Australia. The great deluge: Australia's new era of unnatural disasters [Internet]. Climate Council; 2022 [cited 2024 Apr 29]. Available from: https://www.climatecouncil.org.au/resources/the-great-deluge-australias-new-era-of-unnatural-disasters/

27. Victoria. Department of Energy, Environment and Climate Action. Putting Victorians first through Network Outage Review [Internet]. Victoria; the Department: 2024 [cited 2024 May 28]. Available from: https://www.energy.vic.gov.au/about-energy/news/news-stories/putting-consumers-first-through-network-outage-review

28. Low L. How climate change impacts infrastructure: experts explain. The University of Sydney [Internet]. 2019 Nov 27 [cited 2024 Apr 19]. Available from: https://www.sydney.edu.au/news-opinion/news/2019/11/27/how-climate-change-impacts-infrastructure--experts-explain.html

29. Climate Council of Australia. Climate change 2015: growing risks, critical choices [Internet]. Climate Council; 2015 [cited 2024 Mar 27]. Available from: https://apo.org.au/node/56783

30. Kompas T, Mallan K, Bojka M, Nhu Che T, Strain B, McKinlay M, et al. A general summary of the report: Economic Impacts from Sea Level Rise and Storm Surges in Victoria, Australia over the 21st century [Internet]. East Melbourne: Victorian Marine and Coastal Council; 2022 [cited 2024 May 31]. Available from: https://www.marineandcoastalcouncil.vic.gov.au/__data/assets/pdf_file/0036/665649/General-Summary-of-the-Kompas-Report-Economic-Impacts-from-SLR-and-SS-19072023.pdf

31. Climate Council of Australia. Mission zero: how today's climate choices will reshape Australia [Internet]. Climate Council; 2023 [cited 2024 Jun 24]. Available from: Mission-Zero_Updated-190923_IL_2.pdf (climatecouncil.org.au)

32. Climate Council of Australia. Survey results: national study of the impact of climate-fuelled disasters on the mental health of Australians [Internet]. Climate Council; 2023 [cited 2024 Jun 20]. Available from: Survey results: National study of the impact of climate-fuelled disasters on the mental health of Australians | Climate Council

33. Australian Institute for Disaster Resilience. Our World, Our Say: National survey of children and young people on climate change and disaster risk [Internet]. 2020 [cited 2023 Nov 14]. Available from: https://www.aidr.org.au/media/7946/ourworldoursay-youth-survey-report-2020.pdf

34. Youth Affairs Council Victoria. 'Speaking Up'; Young People's Experiences of Bushfire Recovery: A partnership between YACVic, DET, and BRV [Internet]. 2021 [cited 2024 May 19]. Available from: YACVic-Speaking-Up-Report.pdf https://www.yacvic.org.au/assets/Documents/YACVic-Speaking-Up-Report.pdf

35. Ma T, Moore J, Cleary A. Climate change impacts on the mental health and wellbeing of young people: A scoping review of risk and protective factors. Social Science & Medicine. 2022;301:114888+. 10.1016/j.socscimed.2022.114888.

36. Orygen. Six in 10 young Aussies worry about climate change, many experience extreme weather events first-hand [Internet]. Orygen; 2024 [cited

2024 Apr 23]. Available from: [Six in 10 young Aussies worry about climate change, many experience extreme weather events first-han - Orygen, Revolution in Mind](#)

37. Gao C, Ziou M, Gan D, Teo SM, Fava N, Menssink J, et al. Impact of extreme weather events on young people: Findings from the 2023 Mission Australia Youth Survey [Internet]. Orygen: Melbourne and Mission Australia: Sydney; 2024 [cited 2024 Apr 29]. Available from: [eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJpbXBhY3Qtb2YtZXh0cmVtZS13ZWF0aGVyLWV2ZW50cy1vbi15b3VuZy1wZW9wbGUtZmluZGluZ3MtZnJvbS10aGUtMjAyMy1taXNzaW9uLWF1c3RyYWxpYS15b3V0aC1zdXJ2ZXkiLCJpYXQiOjE3MTMyMjgxNTYsImV4cCI6MTcxMzMxNDU1Nn0.Zvm09oWV2bShkLQb95J186OwzKtLKrv6UfbMxlOSZ1M (missionaustralia.com.au)](#)

38. Victorian Student Representative Council. VicSRC 2023 Congress Report: Student-driven perspectives and recommendations to make the Victorian education system stronger, fairer, and more equitable for every student [Internet]. Victoria: VicSRC; 2023 [cited 2024 May 30]. Available from: https://files.vicsrc.org.au/shared/[[FINAL]%202023%20VicSRC%20Congress%20Report%201.pdf](#)

39. Victoria. Inspector-General for Emergency Management. Evidence from Experience: Young people's experiences and perceptions of the effect [Internet]. Victoria: Inspector-General for Emergency Management Victoria; 2021 Nov [cited 2024 Apr 30]. Available from: [https://www.igem.vic.gov.au/index.php/publications/publications/evidence-from-experience](#)

40. Gorman J, Baker A, Corney T, Cooper T. Youth and Community Work for Climate Justice: Towards an Ecocentric Ethics for Practice. Ethics and Social Welfare. 2024 [cited 2024 Apr 30];18(2):115-130. Available from: [Youth and Community Work for Climate Justice: Towards an Ecocentric Ethics for Practice (tandfonline.com)](#)

41. Lahsen M, Ribot J. Politics of attributing extreme events and disasters to climate change. WIREs Climate Change. 2022 [cited 2024 Apr 30];13(1):e750. Available from: [Politics of attributing extreme events and disasters to climate change - Lahsen - 2022 - WIREs Climate Change - Wiley Online Library](#)

42. Climate Council of Australia. Climate Risk Map of Australia [Internet]. Climate Council. [cited 2024 May 30]. Available from: [https://www.climatecouncil.org.au/resources/climate-risk-map/](#)

43. MacDonald F, Woods B, Hall C, Corney T, Ryan D. Joining the dots to reimagine community resilience: empowering young people. Australian Journal of Emergency Management [Internet]. 2023 [cited 2024 Apr 30];38(4):85–89. Available from: [Joining the dots to reimagine community resilience: empowering young people | AJEM October 2023 (aidr.org.au)](#)

44. Organisation for Economic Co-operation and Development. Climate-Resilient Infrastructure. OECD Environment Policy Paper No. 14 [Internet]. Paris; 2018 [cited 2024 Apr 15]. Available from:

https://www.oecd.org/environment/cc/policy-perspectives-climate-resilient-infrastructure.pdf

45. Victoria. Department of Environment, Land, Water and Planning. Environmentally sustainable development of buildings and subdivisions: A roadmap for Victoria's planning system [Internet]. Victoria; the Department: 2020 [cited 2024 Apr 30]. Available from: Environmentally-sustainable-development-of-buildings-and-subdivisions-A-roadmap-for-Victorias-Planning-System.pdf

46. Power E. Housing, home ownership and the governance of ageing. The Geographical Journal. 2017 [cited 2024 Apr 30];183(3):233–46. Available from: The Geographical Journal - Wiley Online Library

47. Daniel L, Moore T, Baker E, Beer A, Willand N, Horne R, et al. Warm, cool and energy-affordable housing policy solutions for low-income renters. AHURI Final Report [Internet]. 2020 [cited 2024 Jun 3];(338). Available from: http://www.ahuri.edu.au/research/final-reports/338

48. Consumer Affairs Victoria. Rental properties - minimum standards [Internet]. Victoria: Consumer Affairs Victoria [updated 2024 June; cited 2024 Jun 5]. Available from: https://www.consumer.vic.gov.au/housing/renting/repairs-alterations-safety-and-pets/minimum-standards/minimum-standards-for-rental-properties

49. Australian Bureau of Statistics. Estimating Homelessness: Census [Internet]. Canberra: ABS; 2021 [cited 2024 Jun 20]. Available from: Estimating Homelessness: Census, 2021 | Australian Bureau of Statistics (abs.gov.au)

50. Australian Institute of Health and Welfare. Australia's youth: Housing stress [Internet]. Canberra: The Institute; 2021 [updated 2021 Jun 05, cited 2024 Jun 20]. Available from: Australia's youth: Housing stress - Australian Institute of Health and Welfare (aihw.gov.au)

51. Australian Housing and Urban Research Institute. Climate change and low-income housing [Internet]. 2021 [cited 2024 Jun 3]. Available from: https://www.ahuri.edu.au/research/brief/Climate-change-and-low-income-housing

52. Diez S, Macdonald F, Harsha Yeggina P. Everybody Be Cool: Using Community Spaces to Manage Heatwaves [Internet]. Victoria: The Royal Society of Victoria; 2023 [cited 2024 Apr 15]. Available from: Everybody Be Cool: Using Community Spaces to Manage Heatwaves - The Royal Society of Victoria (rsv.org.au)

53. Bendigo Health. Cool Spaces [Internet]. Victoria: Loddon Mallee Public Health Unit; 2023 [cited 2024 May 29]. Available from: COOL SPACES Version 5 (bendigohealth.org.au)

54. Sharifi E, Larbi M, Omrany H, Boland J. Climate change adaptation and carbon emissions in green urban spaces: Case study of Adelaide. Journal of Cleaner Production [Internet]. 2020 [cited 2024 May 29];254(1)1-9. Available

from: Climate change adaptation and carbon emissions in green urban spaces: Case study of Adelaide – Treenet

55. Winbourne JB, Jones TS, Garvey SM, Harrison JL, Wang L, Li D, et al. Tree Transpiration and Urban Temperatures: Current Understanding, Implications, and Future Research Directions. Bioscience [Internet]. 2020 [cited 2024 Apr 15];70(7)576-588. Available from: https://academic.oup.com/bioscience/article/70/7/576/5857071

56. South Australia. Creating Greener Places for Healthy and Sustainable Communities Ideas for Quality Green Public Space in South Australia [Internet]. South Australia: Preventive Health SA; 2021 [cited 2024 Apr 15]. Available from: Green-Public-Spaces-Principles-FIN-WEB-V3.pdf (odasa.sa.gov.au)

57. MacDonald F, Lanyon C, Munnery L, Ryan D, Ellis K, Champion S. Agents of change in bushfire recovery: Young people's acts of citizenship in a youth-focused, animal-welfare and environmental program. International Journal of Disaster Risk Reduction. 2023 [cited 2024 Apr 19];87. Available from: Agents of change in bushfire recovery: Young people's acts of citizenship in a youth-focused, animal-welfare and environmental program (vu.edu.au)

58. Office of the Advocate for Children and Young People. Children $ Young People's Experience of Disaster [Internet]. 2020 [cited 2024 Apr 3]. Available from: https://f.hubspotusercontent20.net/hubfs/522228/docs/ACYP-children-and-young-peoples-experience-of-disaster-2020_(160720).pdf

59. National Emergency Management Agency. Australia's national midterm review of the Sendai framework for disaster risk reduction 2015-2030 report - Are we succeeding at making Australian communities safer in the face of growing disaster risk? [Internet]. Canberra: NEMA; 2022 [cited 2024 Apr 19]. Available from: Australia's National Midterm Review of the Sendai Framework for Disaster Risk Reduction 2015-2030 Report (nema.gov.au)

60. Australian Institute for Disaster Resilience. Our World Our Say: National survey of children and young people on climate change and disaster risk [Internet]. Australia: World Vision; 2020 [cited 2024 Apr 13]. Available from: youth-survey-report_2020-08-12_v1-2.pdf (worldvision.com.au)

61. Favier T, Van Gorp B, Cyvin JB, Cyvin J. Learning to teach climate change: students in teacher training and their progression in pedagogical content knowledge. Journal of Geography in Higher Education. 2021 [cited 2024 Apr 19];45(4):594–620. Available from: Learning to teach climate change: students in teacher training and their progression in pedagogical (ntnu.no)

62. Mutch C. The role of schools in disaster preparedness, response and recovery: what can we learn from the literature? Pastoral Care in Education. 2014 [cited 2024 Apr 19];32(1):5-22. Available from: The role of schools in disaster preparedness, response and recovery: what can we learn from the literature?: Pastoral Care in Education: Vol 32, No 1 (tandfonline.com)

63. Atkinson L. Roles of Schools and Educators in Supporting Resilience in Young Children after Disasters. Canadian Journal of Emergency Management. 2023 [cited 2024 Apr 19];3(2):157-175. Available from: View of

Roles of Schools and Educators in Supporting Resilience in Young Children after Disasters (yorku.ca)

64. Hohenhaus M, Rutherford S, Boddy J, Borkoles E. Climate warriors down under: Contextualising Australia's youth climate justice movement. npj Clim Action [Internet]. 2023 [cited 2024 Apr 19];2(1):1–6. Available from: Climate warriors down under: Contextualising Australia's youth climate justice movement | npj Climate Action (nature.com)