

# Bushfire Crisis Q & A





# MODERATOR'S BUSHFIRE APPEAL

The Moderator's Bushfire Appeal directs funds to communities and individuals during emergencies for urgent, short term financial assistance for those who are suddenly and unexpectedly in need.

Donate to the Moderator's Bushfire appeal:

<https://nswact.uca.org.au/about-us/giving/moderators-appeal/>

## **Are these bushfires caused by climate change?**

There is a direct link between the unprecedented nature of these bushfires and climate change, because climate change exacerbates the conditions in which bushfires happen.<sup>1</sup>

There is a complex but clear relationship between rising greenhouse gas emissions and increased bushfire risk. "Climate change does not create bushfires but it can and does make them worse."<sup>2</sup>

"A number of factors contribute to bushfire risk, including temperature, fuel load, dryness, wind speed and humidity."<sup>3</sup>

According to Greg Mullins, Former Fire and Rescue NSW commissioner, what we have been seeing includes:

"Unprecedented dryness; reductions in long-term rainfall; low humidity; high temperatures; wind velocities; fire danger indices; fire spread and ferocity; instances of pyro-convective fires (fire storms – making their own weather); early starts and late finishes to bushfire

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<sup>1</sup> <https://www.bbc.com/news/world-australia-50341210>

<sup>2</sup> <https://www.theguardian.com/australia-news/2019/nov/11/what-are-the-links-between-climate-change-and-bushfires-explainer>

<sup>3</sup> To read more, see: <https://www.theguardian.com/australia-news/2019/nov/11/what-are-the-links-between-climate-change-and-bushfires-explainer>

seasons. An established long-term trend driven by a warming, drying climate. The numbers don't lie, and the science is clear.

If anyone tells you, "This is part of a normal cycle" or "We've had fires like this before", smile politely and walk away, because they don't know what they're talking about."<sup>4</sup>

Record breaking heat across the country made 2019 the hottest year on record for Australia, with the average temperature being 1.52C above the long-term average taken between 1961 and 1990. This is followed by 2013, 2005, 2018 and 2017.<sup>5</sup> This increase in temperature, along with record breaking drought, has increased dangerous fire conditions and lengthened the fire season.<sup>6</sup>

Professor David Bowman from the University of Tasmania says, "this increasingly frequent fire activity is completely consistent with what climate modelling was suggesting. The whole system is moving to a world that is hotter, drier, and with more frequent fire activity. It's what was forecast and it's what is now happening."<sup>7</sup>

Read the Climate Council's full briefing paper here: <https://www.climatecouncil.org.au/not-normal-climate-change-bushfire-web/>

## Will Australia's bushfires get worse?

According to Dr Richard Thornton, chief executive of the Bushfires & Natural Hazards Co-operative Research Centre: "We will start to see the extreme end of the fire behaviour scale occur more frequently because of the increase of temperatures".

"Everything we normally see as variability between a good fire season and a bad season is sitting on top of that extra 1C<sup>8</sup> - and that means that the severe events will occur more frequently."<sup>9</sup>

This will make firefighting extremely difficult, as previous experience will no longer provide accurate guidance for how to deal with future events and conditions.<sup>10</sup>

Yet "although things are bad, they will keep on getting worse if the concentrations of greenhouse gas emissions in the atmosphere keep increasing".<sup>11</sup> Sadly, this season's bushfires have already contributed two thirds of our usual annual carbon dioxide emissions in just three

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<sup>4</sup> <https://www.smh.com.au/national/this-is-not-normal-what-s-different-about-the-nsw-mega-fires-20191110-p5395e.html>

<sup>5</sup> <https://www.theguardian.com/australia-news/2020/jan/02/2019-australia-hottest-year-record-temperature-15c-above-average-temperature?fbclid=IwAR2jmkzQOTLQrGFpTkZqzCM1Cow3A1OXbtJMbwA4EEOZcAyrLcqhUUVWXS0>

<sup>6</sup> <https://www.climatecouncil.org.au/not-normal-climate-change-bushfire-web/>

<sup>7</sup> [https://theconversation.com/as-bushfire-and-holiday-seasons-converge-it-may-be-time-to-say-goodbye-to-the-typical-australian-summer-holiday-129337?fbclid=IwAR0u59RfNBaonfq3iTzE5L4AnDLWa31TjCvGU8ktOzKkXKJzp\\_8LOHLnDo](https://theconversation.com/as-bushfire-and-holiday-seasons-converge-it-may-be-time-to-say-goodbye-to-the-typical-australian-summer-holiday-129337?fbclid=IwAR0u59RfNBaonfq3iTzE5L4AnDLWa31TjCvGU8ktOzKkXKJzp_8LOHLnDo)

<sup>8</sup> The warming already created by our greenhouse gas emissions.

<sup>9</sup> <https://www.bbc.com/news/world-australia-50341210>

<sup>10</sup> <https://www.unsw.adfa.edu.au/science/news/unsw-canberra-researchers-examine-link-between-climate-change-and-bushfires>

<sup>11</sup> <https://www.sbs.com.au/news/how-a-climate-change-study-from-12-years-ago-warned-of-this-horror-bushfire-season>

months.<sup>12</sup> These emissions will contribute to the ppm of CO<sub>2</sub> in our atmosphere, creating further warming, which will in turn, make future fires worse.

To prevent future disasters, we must act on climate change.

“Perhaps more than any other wealthy nation on Earth, Australia is at risk from the dangers of climate change. It has spent most of the 21st century in a historic drought. Its tropical oceans are more endangered than any other biome by climate change. Its people are clustered along the temperate and tropical coasts, where rising seas threaten major cities. Those same bands of livable land are the places either now burning or at heightened risk of bushfire in the future.”<sup>13</sup>

Australia’s extreme vulnerability to the effects of climate change means that we have more incentive for change than any other developed country. According to economist Dr. Ross Garnaut, we could also “be the biggest economic beneficiary of effective global mitigation because we have the best renewable energy resources and the best opportunities for capturing carbon in our geological and biological landscapes.”<sup>14</sup>

## Did we know this was coming?

Scientists have been warning for over 20 years, that climate change “would increase the risk of extreme bushfires in Australia. This warning was accurate. Scientists expect extreme fire weather will continue to become more frequent and severe without substantial and rapid action to reduce greenhouse gas emissions.”<sup>15</sup>

The Garnaut Climate Change Review in 2008 predicted that more intense fire seasons should be observable by 2020. According to the report, there could also be a 300 per cent increase in the number of days with extreme fire weather by 2067.

The Garnaut Climate Change Review

### Bushfires

Recent projections of fire weather (Lucas et al. 2007) suggest that fire seasons will start earlier, end slightly later, and generally be more intense. This effect increases over time, but should be directly observable by 2020.

Table 5.4 shows projections of the percentage increase in the number of days with very high and extreme fire weather.<sup>6</sup>

**Table 5.4** Projected per cent increases in the number of days with very high and extreme fire weather for selected years

	Approximate year		
	2013	2034	2067
Very high	+2–13	+10–30	+20–100
Extreme	+5–25	+15–65	+100–300

Note: This study was based on scenarios producing 0.4°C, 1.0°C and 2.9°C temperature increases, which equate to the years in this table under a no-mitigation case.

Source: Lucas et al. (2007).

<sup>12</sup> <https://www.smh.com.au/politics/federal/bushfires-spew-two-thirds-of-national-carbon-emissions-in-one-season-20200102-p53oez.html?fbclid=IwAR1zBCzBxAbTt-BsQyc4iDUpgtNtWXZUoZY3EwPcTiC4WtPMpsHOG6j1zJ8>

<sup>13</sup> <https://www.theatlantic.com/science/archive/2020/01/australia-caught-climate-spiral/604423/?fbclid=IwAR2bdZB5CwlIn81W9h1ukiu1ltdeVQugNJOgPuzxfeuvb-YRJVsuWk63rw>

<sup>14</sup> <https://www.sbs.com.au/news/how-a-climate-change-study-from-12-years-ago-warned-of-this-horror-bushfire-season>

<sup>15</sup> <https://www.climatecouncil.org.au/not-normal-climate-change-bushfire-web/>

More recently:

In 2018, the **State of the Climate report** from the Australian Bureau of Meteorology observed that climate change had led to an increase in extreme heat events and increased the severity of other natural disasters, such as drought.

In April 2019, **23 former fire chiefs and emergency leaders issued a letter**, warning the government about "increasingly catastrophic extreme weather events".

## The Planned Burning Debate

### Definition of terms:

"Hazard-reduction burning is the deliberate, authorised lighting of fire to reduce the threats to people and property from wildfires.

"Prescribed burning" is an equivalent term favoured by researchers, while "controlled" or "planned" burning are alternatives."

The term should not be confused with "backburns". These are lit during an emergency with the aim of creating a scorched buffer to inhibit the advancement of an active bushfire.<sup>16</sup>

A lack of Hazard-reduction burning this season has been pointed to by some as the cause of these bushfires.

Professor Ross Bradstock is the director of the centre for environmental risk management of bushfires at the University of Wollongong, who has been researching bushfires for 40 years.

He said, "as firefighters try and beat back the bushfires, a familiar blame game began with critics pointing fingers at "greenies", claiming they get in the way of hazard reduction efforts that might have reduced the size and scale of the disaster.

"These are very tired and very old conspiracy theories that get a run after most major fires,"

"They've been extensively dealt with in many inquiries."<sup>17</sup>

"It's simply conspiracy stuff. It's an obvious attempt to deflect the conversation away from climate change."<sup>18</sup>

According to Rural Fire Service Commissioner Shane Fitzsimmons, "Hazard reduction burning is really challenging and the single biggest impediment to completing hazard reduction burning is the weather."

The Fire and Rescue NSW Station 428 Queanbeyan Facebook page posted:

"The main reason Hazard Reduction burns are cancelled or delayed is due to the predicted intensity of the burn exceeding the limits that would make it safe for firefighters, native flora and fauna and obviously you wonderful people."<sup>19</sup>

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<sup>16</sup> [https://www.smh.com.au/national/prescribed-burning-what-is-it-and-will-more-reduce-bushfire-risks-20200106-p53paf.html?fbclid=IwAR2q4M4r-AGKiaAYgHwJGjeIktYs2tfzl-HgtqdKQRVzU3vjU6\\_t\\_EbQdI](https://www.smh.com.au/national/prescribed-burning-what-is-it-and-will-more-reduce-bushfire-risks-20200106-p53paf.html?fbclid=IwAR2q4M4r-AGKiaAYgHwJGjeIktYs2tfzl-HgtqdKQRVzU3vjU6_t_EbQdI)

<sup>17</sup> <https://www.theguardian.com/australia-news/2019/nov/12/is-there-really-a-green-conspiracy-to-stop-bushfire-hazard-reduction?fbclid=IwAR1Ktr7q2IIa65Si9vKixpOm6fWxj5mj3O43Gfo3T020ZUeJ6vhlicQO7e0>

<sup>18</sup> [https://www.ladbible.com/news/news-fire-brigade-dispels-the-rumour-that-greens-are-to-blame-for-bushfires-20200105?fbclid=IwAR2MlugOYEu-5tCerKqCH81rB6ytus4IHkrhgu8\\_UGbJKWpU8-LN6oW5f8E](https://www.ladbible.com/news/news-fire-brigade-dispels-the-rumour-that-greens-are-to-blame-for-bushfires-20200105?fbclid=IwAR2MlugOYEu-5tCerKqCH81rB6ytus4IHkrhgu8_UGbJKWpU8-LN6oW5f8E)

<sup>19</sup> [https://www.ladbible.com/news/news-fire-brigade-dispels-the-rumour-that-greens-are-to-blame-for-bushfires-20200105?fbclid=IwAR2MlugOYEu-5tCerKqCH81rB6ytus4IHkrhgu8\\_UGbJKWpU8-LN6oW5f8E](https://www.ladbible.com/news/news-fire-brigade-dispels-the-rumour-that-greens-are-to-blame-for-bushfires-20200105?fbclid=IwAR2MlugOYEu-5tCerKqCH81rB6ytus4IHkrhgu8_UGbJKWpU8-LN6oW5f8E)

According to QFES Superintendent James Haig “The most common reason for a permit not being granted would be because the local conditions were too dry; that it was difficult to conduct safely and with the appropriate outcome.” “In other areas, it was too wet too early on and dried out rapidly, leaving a short window of opportunity to safely conduct mitigation activities.”<sup>20</sup> Nevertheless, 108 of 175 planned hazard-reduction burns in QLD were completed in 2019.<sup>21</sup>

Experts, including Professor Bradstock, say that Australia is in fact carrying out more planned burning than in previous decades,<sup>22</sup> but such burns are ineffective against extreme fires like those seen this summer,<sup>23</sup> and their effectiveness will continue to diminish as the climate changes.<sup>24</sup>

Professor Trent Penman has emphasised that “in extreme and catastrophic fire conditions, the surface fuel available for burning makes next to no difference to the level of a fire’s intensity.”

“when you exceed an FFDI [Forest Fire Danger Index] of about 50, you switch from fuel-dominated to a weather-dominated fire.

“At this point, while fuel has a small effect, it is overwhelmed by the weather.”

Associate Professor Philip Zylstra, from Wollongong University’s Centre for Sustainable Ecosystem Solutions, said fuel loads in forests were not responsible for the catastrophic fire season.

“The reality is we are at a peak of prescribed burning by state agencies. More has been done in the past decade than in many, many decades.”

Professor Zylstra said a vast increase to the current hazard reduction effort would blanket cities and towns with smoke over winter\* and create “huge risks” of accidental property damage and even death.<sup>25</sup>

\*Increased planned burning contributes to heavy smoke affecting communities during winter, which leads to fatalities from air pollution and smoke inhalation.<sup>26</sup>

## Does Planned Burning help prevent bushfires?

The effectiveness of planned burning is “highly debatable, not least because ecosystems may be irreversibly changed with limited benefit.”<sup>27</sup>

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<sup>20</sup> <https://mobile.abc.net.au/news/2019-12-20/hazard-reduction-burns-bushfires/11817336?pfmredir=sm>

<sup>21</sup> <https://mobile.abc.net.au/news/2019-12-20/hazard-reduction-burns-bushfires/11817336?pfmredir=sm>

<sup>22</sup> <https://www.theguardian.com/australia-news/2019/nov/12/is-there-really-a-green-conspiracy-to-stop-bushfire-hazard-reduction>

<sup>23</sup> <https://www.smh.com.au/politics/federal/more-hazard-reduction-burns-not-the-answer-experts-warn-20200107-p53p8i.html?fbclid=IwAR1G7mZcoRakKDAXLkGDMkjdlJqmO6wlm21SQUbrymj8fx0WFnxa9PYrecg>

<sup>24</sup> <https://www.theguardian.com/australia-news/2019/nov/12/is-there-really-a-green-conspiracy-to-stop-bushfire-hazard-reduction?fbclid=IwAR1Ktr7q2IIa65Si9vKixpOm6fWxj5mj3O43Gfo3T020ZUeJ6vhIicOO7e0>

<sup>25</sup> <https://www.smh.com.au/politics/federal/more-hazard-reduction-burns-not-the-answer-experts-warn-20200107-p53p8i.html?fbclid=IwAR1G7mZcoRakKDAXLkGDMkjdlJqmO6wlm21SQUbrymj8fx0WFnxa9PYrecg>

<sup>26</sup> <https://www.theguardian.com/australia-news/2019/nov/12/is-there-really-a-green-conspiracy-to-stop-bushfire-hazard-reduction?fbclid=IwAR1Ktr7q2IIa65Si9vKixpOm6fWxj5mj3O43Gfo3T020ZUeJ6vhIicOO7e0>

<sup>27</sup> [https://www.smh.com.au/national/prescribed-burning-what-is-it-and-will-more-reduce-bushfire-risks-20200106-p53paf.html?fbclid=IwAR2q4M4r-AGKiaAYgHwJGjeIktYs2tfzl-HgtqdKQRVzU3vjU6\\_t\\_EbQdI](https://www.smh.com.au/national/prescribed-burning-what-is-it-and-will-more-reduce-bushfire-risks-20200106-p53paf.html?fbclid=IwAR2q4M4r-AGKiaAYgHwJGjeIktYs2tfzl-HgtqdKQRVzU3vjU6_t_EbQdI)

A study in Tasmania has found that planned burn-offs have little impact on reducing the extent and intensity of bushfires. <sup>28</sup>

Meanwhile anecdotal evidence suggests that prior burning has not saved many properties this fire season.

Longtime resident of Wyaliba, Badja Sparks, described the experience of his home being badly damaged in the current fires after a previous fire in September (just two months earlier) burned to the perimeter of the property.

“There was no fuel on the ground, it was already burned.” He said.

“Everything that should be done, was done and lots more.

The fire that came last Friday was of another order of magnitude altogether. A crown fire roaring in from the west on a hot afternoon with an 80km per hour wind, it wasn't on the ground, it was a firestorm in the air, raining fire.”<sup>29</sup>

A 2010 study from Wollongong University found there was only a 10% chance of a fire being stopped by a planned burn. More effective were road barriers, or cleared buffer zones around houses. Yet Professor Philip Gibbons from the Australian National University emphasised that no one technique was a solution.

“If there was a silver bullet on bushfires we'd have found it by now, after the 51 inquiries since 1939.” He said.

Associate Professor Trent Penman, from the University of Melbourne bushfire behaviour and management group, said “broader thinking” was needed and “blindly putting money into prescribed burning won't stop the problem”.<sup>30</sup>

For more info see: <https://www.sciencedirect.com/science/article/pii/S0301479712001752>

### **Is cultural burning the same as planned burning?**

Shaun Hooper is a Wiradjuri man, a Fire Behaviour Analyst, volunteer fire fighter, and a cultural burning practitioner currently doing his post grad studies on cultural burning. He says:

“Non-Aboriginal People sometimes struggle with understanding the basis of how Aboriginal Cultural Fire Practitioners implement an Aboriginal Cultural Burn; it does not generally look like a hazard reduction. This is because it is not.

An Aboriginal Cultural Burn is not guided by a prescription, it is guided by the close relationship that the Aboriginal Cultural Fire Practitioner has with Country and everything in it.

This relationship based approach allows for the involvement of other than human beings such as bettongs, bandicoots, lyrebirds, wombats and brush turkeys who all assist with Cultural burning by turning over and reducing the leaf litter.

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<sup>28</sup> <https://www.theguardian.com/australia-news/2017/dec/15/burn-offs-bushfire-risks-australia-tasmania?fbclid=IwAR3zheDkrCIfJ52zQjMbalnTj3-SorocPPAKQDDqzC9CkSwl58JmERmszT0><sup>28</sup>

<sup>29</sup> [https://www.northerndailyleader.com.au/story/6494097/opinion-we-did-burnoffs-badja-sparks-hits-back/?fbclid=IwAR08aTTzLs8dAgt\\_rJgkgBSXOkBA\\_7dc2mEYOShXuCGfmkkkpGLecD\\_ehc](https://www.northerndailyleader.com.au/story/6494097/opinion-we-did-burnoffs-badja-sparks-hits-back/?fbclid=IwAR08aTTzLs8dAgt_rJgkgBSXOkBA_7dc2mEYOShXuCGfmkkkpGLecD_ehc)

<sup>30</sup> <https://www.smh.com.au/politics/federal/more-hazard-reduction-burns-not-the-answer-experts-warn-20200107-p53p8i.html?fbclid=IwAR1G7mZcoRakKDAXLkGDMkj1JqmO6wlm21SQUbrymj8fx0WFnxa9PYrecg>

Cultural Burning is a landscape wide approach unlike the more strategic hazard reduction approach. It provides for emergent outcomes for a range of species who contribute in various ways to the implementation, Cultural Burning in its true sense is not just people driven, this is important as it respects the relational requirements of Aboriginal Cultural Practice.”

Read more: <https://indigenoux.com.au/cultural-burning-is-about-more-than-just-hazard-reduction/>

## Spare a thought for our wildlife

Scientists are expressing considerable concern about the ability of animals to recover from this bushfire season. It is estimated, conservatively, that half a billion animals have already died in the fires. This comes on top of the already serious impacts of land clearing, deforestation and climate altered habitats.

While Australian animals are adapted to fire, they have not dealt with fires of this size and intensity before, and with over 1,000 species already threatened in Australia, these fires may push some species into extinction.<sup>3132</sup>

For example, hopes are low for the Kangaroo Island Dunnart, after its entire known range was burned in the last week. Corroboree frog habitats have also burned, with the impacts on the frogs unknown as the area is still unsafe to enter. The Alpine Bog Skink is also of concern, as are other species with populations small enough to be wiped out by a single fire event. This includes the Guthega skink in the Bogong High Plains, Martin's toadlet in east Gippsland, the alpine she-oak skink, the Blue Mountains water skink, the broad-headed snake in NSW, and the hip-pocket frog in NSW and Queensland.<sup>33</sup>

Whole ecosystems will also be affected. Camille Stevens-Rumann, an ecologist at Colorado State University, described the impact on ecosystems like a cold, “We’re all adapted to a certain amount of disturbance. I can get a certain number of colds per year and be OK, but if I’m sick for eight months in a row, that’s really going to wear on me. That’s the same thing with an ecosystem.”<sup>34</sup>

Prof John Woinarski, of Charles Darwin University said, “This is a harbinger of a bleak future for our wildlife. They have set back conservation in Australia for a very long period, but [the fires] are a sign of an even more bleak future ahead. Because of climate change, they will become more frequent and more severe. It’s a sad time for conservation in Australia.”

He said it was “quite likely” the fires would have caused some extinctions but “we won’t know until after this summer ends”.<sup>35</sup>

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<sup>31</sup> <https://indigenoux.com.au/cultural-burning-is-about-more-than-just-hazard-reduction/>

<sup>32</sup> [https://www.nbcnews.com/science/environment/australia-s-fires-could-change-country-forever-n1110301?fbclid=IwAR2KATdaIC2mDn26v5AKrD4HIxMsLAvdYoUho\\_L0yDSfbXmWOEluBmmnVY](https://www.nbcnews.com/science/environment/australia-s-fires-could-change-country-forever-n1110301?fbclid=IwAR2KATdaIC2mDn26v5AKrD4HIxMsLAvdYoUho_L0yDSfbXmWOEluBmmnVY)

<sup>33</sup> <https://www.abc.net.au/news/science/2020-01-08/insects-invertebrates-frogs-affected-by-bushfire/11843458?fbclid=IwAR0IKtNlxw2RUQTMXSgrqbW9xLYv076e2YVQS7RTq3YE2f7Kr1r9iT1SWM>

<sup>34</sup> [https://www.nbcnews.com/science/environment/australia-s-fires-could-change-country-forever-n1110301?fbclid=IwAR2KATdaIC2mDn26v5AKrD4HIxMsLAvdYoUho\\_L0yDSfbXmWOEluBmmnVY](https://www.nbcnews.com/science/environment/australia-s-fires-could-change-country-forever-n1110301?fbclid=IwAR2KATdaIC2mDn26v5AKrD4HIxMsLAvdYoUho_L0yDSfbXmWOEluBmmnVY)

<sup>35</sup> <https://www.theguardian.com/environment/2020/jan/04/ecologists-warn-silent-death-australia-bushfires-endangered-species-extinction?fbclid=IwAR1U1X5E8FTpG09qRr4eX6cg8rt79hCeGIrHnsIEso24EPFNhz2D-C1CWyU>

## How should we respond?

### Immediately –

1. Donate to the Moderator’s Bushfire Appeal: <https://nswact.uca.org.au/about-us/giving/moderators-appeal/>
2. Donate to WIRES and wildlife rescue charities: <https://www.wires.org.au/donate/emergency-fund>
3. Help slow the spread of fire misinformation, and spread reliable information sources instead.
4. If you are in a burned area, please provide fresh water and food for local wildlife. Here are some ideas: <https://perfectpets.com.au/best-pet-blog/post/what-you-should-feed-wildlife-during-drought-and-bushfires>

### Beyond the Fires -

#### 1. With unprecedented climate action

Kallan Benson, 15 and a national coordinator for the youth climate organization Fridays for Future, says the 2010s were a “decade of disappointment,” and “If the world is to stave off further disasters, the next decade must be one of unprecedented climate action”.<sup>36</sup>

If you’re not sure where to start:

- Check out this guide: [I’m worried about the climate — what can I do?](#)
- Sign up for our [Uniting Earth e-news](#), or follow us on FB for our campaign information and updates.
- Sign Up to one of our [Climate Action Task Groups](#).

#### 2. By preparing for climate disasters

Further climate disasters will come.

“Global warming is already lengthening the fire season and making heatwaves more intense, more frequent, and longer. It is also increasing the likelihood of heavy rains, and making droughts worse.

We must keep adapting to these changing threats, and further improve our ability to forecast them. And the community must stay aware of the many weather and climate extremes that threaten lives and property.” (Monash University’s Neville Nicholls)<sup>37</sup>

We must be prepared for them.

This will be expensive, but:

“If we think about earthquakes you don’t hear people complaining, certainly in New Zealand, about the cost of a house that’s going to survive an earthquake,” Bowman said. “Yet in the

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<sup>36</sup> [https://www.washingtonpost.com/science/2019/12/31/s-were-lost-decade-climate-we-cant-afford-repeat-scientists-warn/?fbclid=IwAR1BUGwkltkvQjiFy9OCl86o\\_jrpYKmd\\_wFYgpN7CNy0QBs23TvbE0dWMhY](https://www.washingtonpost.com/science/2019/12/31/s-were-lost-decade-climate-we-cant-afford-repeat-scientists-warn/?fbclid=IwAR1BUGwkltkvQjiFy9OCl86o_jrpYKmd_wFYgpN7CNy0QBs23TvbE0dWMhY)

<sup>37</sup> <https://theconversation.com/the-bushfires-are-horrendous-but-expect-cyclones-floods-and-heatwaves-too-129328>

fire space we have some building regulations but surely having fire-safe communities is a good investment.”<sup>38</sup>

And it will be cheaper than the alternative.

As it is, natural disasters are estimated to cost Australia around \$13 billion each year.

The Australia Institute has proposed a National Climate Disaster Fund to help meet the growing costs of climate-fuelled disasters, through actions such as assisting businesses to recover, providing more firefighting equipment including water bombing planes, and paid leave for volunteer firefighters. Grants could also be made to at-risk households and businesses to assist with fire-prevention measures, or to help communities recover and rebuild.<sup>39</sup>

We can begin by implementing the [National Disaster Risk Reductions Framework](#).

### 3. With adaptation

University of Tasmania’s Professor David Bowman says,

“The old idea was that we can head off the crisis by reducing our emissions through decarbonisation. We had an opportunity to do that and we didn’t take it. We still have to decarbonise but now we also have to adapt.

And the sort of adaptation needed is not just about infrastructure, it’s also about the way we shape our lifestyle, our culture and traditions.

Climate change adaptation will nearly always be met with political, social and cultural resistance. It is not easy...

There’s going to need to be a systematic change in behaviour and lifestyle as we adapt... We need to put some serious thought into what future life will be like under climate change.”<sup>40</sup>

Lifestyle change that may need to be made is rescheduling our peak holiday period to March or April, instead of December and January.

Bowman says, “As we contemplate a future where catastrophes like the one currently engulfing Australia become increasingly frequent, there’s an idea to which I keep returning: maybe it’s time to say goodbye to the typical summer Australian holiday...

It’s easy to dismiss this idea as stupid but that’s the nature of adaptation. Things that once seemed absurd will now need serious consideration.

What’s truly absurd is the business-as-usual approach that sees thousands of holidaymakers heading directly into forests and national parks right in the middle of peak bushfire season.”<sup>41</sup>

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<sup>38</sup> <https://www.theguardian.com/australia-news/2017/dec/15/burn-offs-bushfire-risks-australia-tasmania?fbclid=IwAR3zheDkrCifJ52zQjMbalnTj3-SorocPPAKQDDqzC9CkSw158JmERmszT0>

<sup>39</sup> <https://www.canberratimes.com.au/story/6558856/it-turns-out-morrison-doing-nothing-on-climate-was-the-best-case-scenario/?fbclid=IwAR3maALnuQ3O9PjqcudgeuNeJYpObgNEV82M-IRtnX1Kn8Sbv4eoKbCnXzU>

<sup>40</sup> [https://theconversation.com/as-bushfire-and-holiday-seasons-converge-it-may-be-time-to-say-goodbye-to-the-typical-australian-summer-holiday-129337?fbclid=IwAR0u59RfNBaonfqp3iTzE5L4AnDLWa31TjCvGU8ktOzKkXKJzp\\_8LOHLnDo](https://theconversation.com/as-bushfire-and-holiday-seasons-converge-it-may-be-time-to-say-goodbye-to-the-typical-australian-summer-holiday-129337?fbclid=IwAR0u59RfNBaonfqp3iTzE5L4AnDLWa31TjCvGU8ktOzKkXKJzp_8LOHLnDo)

<sup>41</sup> [https://theconversation.com/as-bushfire-and-holiday-seasons-converge-it-may-be-time-to-say-goodbye-to-the-typical-australian-summer-holiday-129337?fbclid=IwAR0u59RfNBaonfqp3iTzE5L4AnDLWa31TjCvGU8ktOzKkXKJzp\\_8LOHLnDo](https://theconversation.com/as-bushfire-and-holiday-seasons-converge-it-may-be-time-to-say-goodbye-to-the-typical-australian-summer-holiday-129337?fbclid=IwAR0u59RfNBaonfqp3iTzE5L4AnDLWa31TjCvGU8ktOzKkXKJzp_8LOHLnDo)

#### 4. Campaigning against logging of native forests

Logging has been linked to increased bushfire risks in affected regions. Because this is somewhat counterintuitive, some will suggest greater logging as a way to reduce fuel loads in our forests. This approach is not supported by the science.

International studies have found that “Commercial logging of moist native forests creates conditions that increase the severity and frequency of bushfires”.

Professor David Lindenmayer of the Fenner School of the Environment and Society at the Australian National University, says “When you mess with [native wet] forests they become more flammable.”

"Work in tropical rainforests suggests that when microclimatic conditions are altered by selective logging, the number of dry days needed to make a forest combustible is reduced," he says.

In one study, uncut native forest would generally not burn after less than 30 rainless days but selectively logged forest would burn after just six to eight days without rain.

According to Lindenmayer, logging in the moist eucalypt forests of East Gippsland "has shifted the vegetation composition toward one more characteristic of drier forests that tend to be more fire prone".

Logging also contributes to forest flammability by encouraging dense sapling regrowth, changing the density and pattern of trees and leaving behind logging slash (debris).<sup>42</sup>

#### 5. Helping our young people to cope

Research shows that between 7% and 45% of children suffer depression after experiencing a natural disaster. Children more at risk of depression include those who were trapped during the event; experienced injury, fear, or bereavement; witnessed injury or death; and had poor social support.<sup>43</sup> Here is some advice for talking to young people about the bushfires:

[Bushfires can make kids scared and anxious: here are 5 steps to help them cope](#)

[Expert Advice: How we can help kids feel safe during bushfires](#)

[Four ways you can help your kids deal with a natural disaster:](#)

[Natural disasters: helping kids cope](#)

[Supporting children after natural and human-induced disasters](#)

[Re-establishing routines and rules following a disaster or traumatic event](#)

[Supporting your child after a natural disaster](#)

[What to tell the children](#)

Impacts on children from natural disasters can also be long term, and include reduced academic performance, so it is important to work to reduce these impacts in our communities and monitor them long after the fires are gone.<sup>44</sup>

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<sup>42</sup> <https://www.abc.net.au/science/articles/2010/02/11/2816526.htm>

<sup>43</sup> [https://theconversation.com/bushfires-can-make-kids-scared-and-anxious-here-are-5-steps-to-help-them-cope-126926?utm\\_source=facebook&utm\\_medium=facebookbutton&fbclid=IwAR22pV7YIumc\\_G\\_PVQ1dPVq2w6OkCPm-4UYoiVPvTWZaiMQJsB4be1q5Ug](https://theconversation.com/bushfires-can-make-kids-scared-and-anxious-here-are-5-steps-to-help-them-cope-126926?utm_source=facebook&utm_medium=facebookbutton&fbclid=IwAR22pV7YIumc_G_PVQ1dPVq2w6OkCPm-4UYoiVPvTWZaiMQJsB4be1q5Ug)

<sup>44</sup> <https://srcd.onlineibrary.wiley.com/doi/full/10.1111/cdev.13200>

## **What does this mean for the church?**

In times of disaster, our churches and communities come together to help. Rev John Squires has summarised our UCA response so far here:

[https://johntsquires.com/2020/01/06/what-are-the-churches-doing-during-the-bushfire-crisis/?fbclid=IwAR33wbIsnRo9zddnuHWf0-ms2miLOFwq\\_Pjg-EzBfueh5Z4DAJbhcW3omIY](https://johntsquires.com/2020/01/06/what-are-the-churches-doing-during-the-bushfire-crisis/?fbclid=IwAR33wbIsnRo9zddnuHWf0-ms2miLOFwq_Pjg-EzBfueh5Z4DAJbhcW3omIY)

In the longer term, the best way we can care for our communities and God's creation, and reduce future disasters, is to take action on climate change.

The Uniting Church is called to the reconciliation and renewal of all creation. This starts with our individual action, but also calls us into communal and societal action.

Together we need to raise our voices for real climate action. Let your government representatives of all levels know how these fires have affected you and your community, and that you expect a real response including serious reductions of Australia's greenhouse gas emissions. Then sign up to get involved in our Uniting Earth advocacy campaigns this year.

Also, one opportunity we have is to become a place where people can find comfort and help for their climate related grief, trauma and anxiety. By training our leaders in climate pastoral care, and using tools like this Community Trauma Toolkit, we can be prepared to help in the next disaster, and with the emotional experiences of our community even in "peaceful" times.

Community Trauma Toolkit: <https://emergingminds.com.au/resources/toolkits/community-trauma-toolkit/>

(If you're interested in this area, [sign up](#) for our Climate Anxiety and Pastoral Care Task Group.)

*Compiled by Jessica Morthorpe, Uniting Earth Advocate, 08/01/2020*