



Level 4 Trades Hall  
54 Victoria St  
Carlton, VIC 3053  
[www.aycc.org.au](http://www.aycc.org.au)

## **Submission to the Senate Inquiry on: Recent Trends in and Preparedness for Extreme Weather Events**

### **About the AYCC**

The Australian Youth Climate Coalition (AYCC) comprises Australia's largest youth organisations and over 90,000 young people from across Australia. Our mission is to build a generation-wide movement to solve climate change before it's too late. We focus on both political impact and cultural change. Since our founding in 2006, we have grown to become one of Australia's most effective and innovative social change organisations.

### **The extent of extreme weather events**

Australia's recent onslaught of extreme heat and bushfires are an unfortunate, yet timely, reminder of why climate change deserves to be front and centre of the national political agenda. In the past 12 months, Queensland has faced floods the size of Germany and France combined, heat-waves have swept from the West to the Eastern seaboard, bushfires have devastated communities across Tasmania, Victoria and NSW and the South has recorded the nation's lowest average rainfall ever.<sup>1</sup>

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<sup>1</sup> National Climate Data Center (2012), [State of the Climate Global Hazards Report – October](#), National Oceanic and Atmospheric Administration.

This summer, we've experienced the fiercest heat wave in over 80 years,<sup>2</sup> the hottest average temperature in Australia's history (prompting the addition of new colours to the weather map), and intense fires in five states including over 100 in NSW alone. As we head again into an El Nino cycle, the Bureau of Meteorology predicts Australia will face more frequent and intense heat-waves in 2013 than ever before. In fact, climatologists expect 2013 to be the world's hottest year yet.

Australia is not alone. Whilst the past decade saw 9 of the 10 hottest years on record, 2012 was marked by over 30 severe weather events,<sup>3</sup> including: 5 million people evacuated and \$US2 billion worth of damage from flooding in China; 130 people killed by flash flooding and landslides in Bangladesh; half of Manila submerged by floods and over 1000 people killed by tropical cyclone Bopha; unprecedented wildfires,<sup>4</sup> dust storms and temperature extremes<sup>5</sup> in the United States not to mention \$US50 billion in damages from Hurricane Sandy;<sup>6</sup> 650 people killed in Europe's coldest winter in 25 years and 3 super typhoons in the Western Pacific.

## Climate change and extreme weather

As efforts to curb our emissions fail to match the scale of the climate crisis, it is no coincidence that the frequency and severity of extreme weather events is increasing. The connection between climate change and extreme weather events is well documented<sup>7</sup> and acknowledged by authorities worldwide, including our own Prime Minister:

*"We do know over time that as a result of climate change we are going to see more extreme weather events and conditions."*<sup>8</sup>

The question now is how much devastation we are willing to endure before acting to prevent these events becoming the "new normal."

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<sup>2</sup> The Climate Commission (2013), [Off the Charts: Extreme Australian Summer Heat Report](#).

<sup>3</sup> The World Resources Institute (2012), [Timeline: Extreme Weather Events in 2012](#).

<sup>4</sup> National Climate Data Center (2012), [State of the Climate Global Hazards Report – June](#), National Oceanic and Atmospheric Administration.

<sup>4</sup>Ibid.

<sup>5</sup> National Climate Data Center (2012), [NCDC Announces Warmest Year on Record for Contiguous U.S.](#)

<sup>6</sup> The New York Times (2012), "[Estimate of Economic Losses Now up to \\$50 billion](#)", November 1.

<sup>7</sup> Peterson, T.C., Stott, P. A. and S. Herring (2012), "[Explaining Extreme Events of 2011 from a Climate Perspective](#)", Bulletin of the American Meteorological Society: 1041-1067; Coumou, D. and S. Rahmstorf (2012), "[A Decade of Weather Extremes](#)", Nature Climate Change, (2)491-496.

NASA (2012), [Research Links Extreme Summer Events to Global Warming](#), June 8.

<sup>8</sup> Statement made during her tour of the Tasmania bushfires over summer 2012-13

## The impacts of extreme weather events

Recent events demonstrate that a failure to act on climate change comes with profound costs.

These include economic costs from damage to infrastructure and industry. For example, the Queensland floods cost Australian taxpayers over \$5 billion<sup>9</sup> and the coal industry \$2 billion.<sup>10</sup> Severe weather events reduce worker productivity, test the limits of our emergency services and inflate energy bills as our grid works over-time to insulate us against temperature extremes.<sup>11</sup>

Ironically, extreme weather also exacerbates climate change. Fires pump millions of tonnes of carbon into the atmosphere while heat waves and infrastructure replacement prompt increases in energy consumption.

The social impacts of extreme weather impacts are similarly disturbing and include a rise in mental illness, crime and mortality rates - especially among children and the elderly.<sup>12</sup> Heat waves alone currently kill over 1000 Australians each year but by 2020, that number could more than double.<sup>13</sup>

Statistics aside, nothing conveys the social cost of climate change more profoundly than the personal stories of those who've experienced its impacts first-hand. Each year, more and more young people are forced to experience climate change's harsh reality. Here, two of our members share their experiences:

### **Louise England, 19 years old, Brisbane Floods, QLD**

*"During the summer of 2008, a devastating storm hit my home in Brisbane's North-West. Water rushed in through all the doors and windows and there was a landslide into the back of our house. I was 15 years old. I was home alone. A few years later and great floods hit Brisbane again. I saw the floodwaters from the supermarket that I work at. Many of our regular customers and colleagues told me*

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<sup>9</sup> The Age (2011), "[Queensland flood bill to top \\$5 billion](#)", January 28.

<sup>10</sup> The Australian (2010), "[Flood crisis paralyses coal miners](#)", December 31.

<sup>11</sup> The Climate Institute (2006), [Heatwaves Briefing Paper](#), December, p.3.

<sup>12</sup> Ibid.

<sup>13</sup> CSIRO (2006), [Climate Change Risk Guidance Scenarios for 2030](#), Australian Greenhouse Office.

*that they'd lost their homes and all of their possessions. This time I was old enough to volunteer, so I spent days helping people clear out their damaged belongings. I saw wedding dresses, baby photos and children's toys covered in mud, thrown into the street and taken to the dump. I also volunteered in Grantham, where we met people who had lost their crops, their homes and even members of their family. I worry about how many more people must suffer in this way before climate change is taken more seriously."*

**Sam Millar, 21 years old, Black Saturday Bushfires, VIC**

*"In February 2009, my home town of Yackandandah in North-East Victoria was hit by the Black Saturday Bushfires. I took time out of my year 12 studies to fight the fire as a volunteer with my local brigade. Many in my local community struggled to deal with the emotional loss of the damage done to their properties and the surrounding landscape. Personally, my heart is filled with anxiety at the thought that my generation will face more extreme weather events like this because of the current lack of political will to reduce emissions. Given the severity of recent extreme weather events, I hope that communities and government can now work together to avoid these risks altogether."*

**Michael Rosser, 21 years old, Bathurst Bushfires, NSW**

*"It was late October in 2006 when I heard that my family was possibly in danger. A bushfire had hit Mount Rankin and smoke was coating the sky from Eglinton, through to Windradyne and Kelso. I was in high school at the time but even then I had friends who were volunteering with the Eglinton Rural Fire Brigade and their Bathurst counterparts. The Firefighters had made their base on the highest hill on the Mount, less than a few hundred metres from my cousins' house. The fire was strong and had been burning, largely uncontrolled, for days. The promised rain did not come and the commanding hill was to be abandoned. My family was distraught and began to evacuate with the help of neighbours and local firefighters. Luckily for us, the winds changed at the final minute, moving the fire's path away from our home. But with climate change, weather events such as these are becoming more frequent and extreme. We can't simply depend upon a changing wind to save our homes – we need political will instead."*

## It's time to act

The science tells us that a failure to act now will increase the frequency and intensity of the impacts outlined above. Floods and fires will get worse and, by 2030, our capital cities could see a tripling in the number of days over 35 degrees (on their current level).<sup>14</sup> This is not a future that our young people deserve to inherit. Fortunately, if we act now we can avoid more suffering but the window of opportunity is closing, so we must move quickly.

As such, the AYCC strongly urges the Government to increase its climate ambition. It is time for Australia to become a climate leader, to set stronger emissions reduction targets, to hold the big polluters to account and to start building the foundations for a 100% renewable energy future. We have the resources, the community support and the scientific basis to start this today and the wellbeing of our young people depends upon it.

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<sup>14</sup> Ibid.