

Laureates Open Letter

An Open Letter on Australian Bushfires and Climate: Urgent Need for Deep Cuts in Carbon Emissions

The tragedy of this summer's bushfires commands our attention, and after aiding and supporting the victims it is important to learn from the event. The scale and ferocity of the recent fires are unprecedented since European settlement of this country. They arrived at the end of a year with the lowest average rainfall and the highest average temperatures ever recorded across Australia. Climate change has arrived, and without significant action greater impacts on Australia are inevitable.

While many factors have contributed to the bushfire crisis, the role of exceptional heat and dryness cannot be ignored. Temperatures nearly everywhere on Earth have been rising for decades, a clear result of the buildup of greenhouse gases in the atmosphere from fossil fuel use and other human activities. The increasing variability of rainfall across Australia, bringing more dry years, is a consequence.

These outcomes were predicted decades ago. We should listen to the voices of not only our scientists, but also those who are on the front lines fighting fires. The message is clear: the situation is becoming ever less manageable as extreme-fire-risk weather becomes more common, while conditions suitable for controlled burns to reduce fuel loads are becoming less frequent. While much remains to be learned about the impacts of climate change, more than enough studies have been conducted to tell us we have a serious problem that requires urgent changes to be made.

We welcome government actions to help current victims and improve adaptation to future fires, as well as its acceptance of a role for climate change in the catastrophe. But this is not enough, because the greenhouse gas amounts driving warming are still rising: the world is only at the beginning of the climate change phenomenon. The current impacts are happening with just 1 Celsius of global temperature increase, but we are set for the best part of another degree even if very strong international action is taken to reduce emissions. This means further increases in extreme fire risk, heat waves and

flooding rains; ecosystems degraded and wild species forced to migrate or vanish; agricultural activities moved or abandoned, challenging our food security; and so on. If strong action is *not* taken, environmental degradation and social disruption will be much greater and in many cases adaptation will no longer be achievable. It would be naive to assume that such a world will still support human societies in their current form and maintain human well-being.

This dire outlook demands stronger mitigation of carbon emissions. Many argue that actions to achieve this would be economically destructive. This claim has no basis, nor is it consistent with Australia's traditional optimism and ingenuity, nor with historical experience. Similar objections were raised in the past against government policies to limit air pollution, environmental toxins and ozone-destroying chemicals, but we collectively found ways to achieve mitigation at manageable cost, and with net benefits to society that are clear in hindsight.

A transition to lower, and eventually net zero emissions, is a huge task but is achievable and far less risky and irresponsible than allowing unmitigated warming. This transition requires determination on the part of leaders, as well as empathy, aid and forward planning for communities disadvantaged by the transition. Large transformations in the face of comparable challenges have been successfully achieved in the past, such as the development of road and mass transportation systems, waste-water and sewage handling to minimise diseases, and many others. These transformations created new jobs and whole industries, and will do so again.

Australia cannot solve climate change on its own. Reducing emissions is a global challenge that requires collective action. But Australia's current visibility as ground zero for both climate impacts and climate policy uncertainty presents a unique opportunity for us to emerge as a leader on this challenge. Doing so will aid our economy, strengthen our standing in international affairs and relations with neighbours, and help secure Australia and the world from the impacts of climate change. Much research has already been done to identify the policies and technologies that can move us to where we need to go. What is lacking is the courage to implement them on the required scale. We call on all governments to acknowledge the gravity of the threat posed by climate change driven by human activities, and to support and implement evidence-based policy responses to reduce greenhouse gas emissions in time to safeguard against catastrophe. We owe this to younger generations and those who come after them, who will bear the brunt of our decisions.

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