

## Ten years ago, climate adaptation research was gaining steam. Today, it's gutted

Written by Rod Keenan, Professor, University of Melbourne

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Ten years ago, on February 7, 2009, I sat down in my apartment in central Melbourne to write a job application. All of the blinds were down, and the windows tightly closed. Outside it was 47°C. We had no air conditioning. The heat seeped through the walls.

When I stepped outside, the air ripped at my nose and throat, like a fan-forced sauna. It felt ominous. With my forestry training, and some previous experience of bad fire weather in Tasmania, I knew any fires that day would be catastrophic. They were. Black Saturday became Australia's worst-ever bushfire disaster.

I was applying for the position of Director of the [Victorian Centre for Climate Change Adaptation Research \(VCCCAR\)](#). I was successful and started the job later that year.

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The climate in Victoria over the previous 12 years had been harsh. Between 1997 and 2009 the state suffered its worst drought on record, and major bushfires in 2003 and 2006-07 burned more than 2 million hectares of forest. Then came Black Saturday, and the year after that saw the start of Australia's wettest two-year period on record, bringing major floods to the state's north, as well as to vast swathes of the rest of the country.

In Victoria alone, hundreds of millions of dollars a year were being spent on response and recovery from climate-related events. In government, the view was that things couldn't go on that way. As climate change accelerated, these costs would only rise.

We had to get better at preparing for, and avoiding, the future impacts of rapid climate change. This is what we mean by the term "climate adaptation".

### Facing up to disasters

A decade after Black Saturday, with [record floods in Queensland](#), severe bushfires in [Tasmania](#) and [Victoria](#), widespread [heatwaves and drought](#), and a [crisis in the Murray-Darling Basin](#), it is timely to reflect on the state of adaptation policy and practice in Australia.

In 2009 the Rudd Labor government had taken up the challenge of reducing greenhouse gas emissions. With Malcolm Turnbull as opposition leader, we seemed headed for a bipartisan national solution ahead of the Copenhagen climate summit in December. Governments, meanwhile, agreed that adaptation was more a state and local responsibility. Different parts of Australia faced different climate risks. Communities and industries in those regions had different vulnerabilities and adaptive capacities and needed locally driven initiatives.

Led by the Brumby government in Victoria, state governments developed an [adaptation policy framework](#) and sought federal financial support to implement it. This included research on climate adaptation. The federal government put A\$50 million into a new [National Climate Change Adaptation Research Facility](#), based in Queensland, alongside the [CSIRO Adaptation Flagship](#) which was set up in 2007.

The Victorian Government invested A\$5 million in VCCCAR. The state faced local risks: more heatwaves, floods, storms, bushfires and rising sea levels, and my colleagues and I found there was plenty of information on climate impacts. The question was: what can policy-makers, communities, businesses and individuals do in practical terms to plan and prepare?

### Getting to work

From 2009 until June 2014, researchers from across disciplines in four universities collaborated with state and local governments, industry and the community to lay the groundwork for better decisions in a changing climate.

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We held 20 regional and metropolitan consultation events and hosted visiting international experts on urban design, flood, drought, and community planning. Annual forums brought together researchers, practitioners, consultants and industry to share knowledge and engage in collective discussion on adaptation options. We worked with eight government departments, driving the message that adapting to climate change wasn't just an "environmental" problem and needed responses across government.

All involved considered the VCCCAR a success. It improved knowledge about climate adaptation options and confidence in making climate decisions. The results fed into Victoria's [2013 Climate Change Adaptation Plan](#), as well as policies for urban design and natural resource management, and practices in the local government and community sectors. I hoped the centre would continue to provide a foundation for future adaptation policy and practice.

### Funding cuts

In the 2014 state budget the Napthine government chose not to continue funding the VCCCAR. Soon after, the Abbott federal government reduced the funding and scope of its national counterpart, and funding ended last year.

Meanwhile, CSIRO chief executive Larry Marshall argued that climate science was less important than the need for innovation and turning inventions into benefits for society. Along with other areas of climate science, the Adaptation Flagship was cut, its staff let go or redirected. From a strong presence in 2014, climate adaptation has become almost invisible in the national research landscape.

In the current chaos of climate policy, adaptation has been downgraded. There is a [national strategy](#) but little high-level policy attention. State governments have shifted their focus to energy, investing in renewables and energy security. Climate change was [largely ignored](#) in developing the Murray-Darling Basin Plan.

Despite this lack of policy leadership, many organisations are adapting. [Local governments](#) with the resources are addressing their particular challenges, and building [resilience](#)

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. Our public transport now functions better in [heatwaves](#), and climate change is being considered in new transport infrastructure. The public is more aware of heatwave risks, and there is investment in [emergency management research](#), but this is primarily focused on disaster response.

Large companies making long-term investments, such as [Brisbane Airport](#), have improved their capacity to consider future climate risks. There are better planning [tools](#) and [systems](#) for business, and the [finance](#) and [insurance](#) sectors are seriously considering these risks in investment decisions. Smart [rural producers](#) are diversifying, using their resources differently, or shifting to different growing environments.

### Struggling to cope

But much more is needed. Old buildings and cooling systems are not built to cope with our current temperatures. Small businesses are [suffering](#), but few have capacity to analyse their vulnerabilities or assess responses. The [power generation system](#) is under increasing pressure. Warning systems have improved but there is still much to do to design warnings in a way that ensures an [appropriate public reaction](#). Too many people still adopt a “she’ll be right” attitude and [ignore warnings](#), or leave it until the last minute to evacuate.

In an internal submission to government in 2014 we proposed a Victorian Climate Resilience Program to provide information and tools for small businesses. Other parts of the program included frameworks for managing risks for local governments, urban greening, building community leadership for resilience, and new conservation approaches in landscapes undergoing rapid change.

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Investment in climate adaptation pays off. Small investments now can generate payoffs of 3-5:1 in reduced future impacts. A recent [business round table report](#) indicates that carefully targeted research and information provision could save state and federal governments A\$12.2 billion and reduce the overall economic costs of natural disasters (which are projected to rise to A\$23 billion a year by 2050) by more than 50%.

Ten years on from Black Saturday, [climate change is accelerating](#). The 2030 climate forecasts made in 2009 have come true in half the time. Today we are living through more and hotter heatwaves, longer droughts, uncontrollable fires, intense downpours and significant shifts in seasonal rainfall patterns.

Yes, policy-makers need to focus on reducing greenhouse emissions, but we also need a similar focus on adaptation to maintain functioning and prosperous communities, economies and ecosystems under this rapid change. It is vital that we rebuild our research capacity and learn from our past experiences, to support the partnerships needed to make climate-smart decisions.

*Rod Keenan was Director of the Victorian Centre for Climate Change Adaptation Research from 2009-2014 and has received research funding from the Victorian Government, the Australian Research Council, the Australian Centre for International Agricultural Research and the forest industry. He was a member of the Australian Academy of Science Committee that undertook the Australian Climate Science Capability Review in 2016*

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