

Climate Change in Australia

by Nico Jacobs

Australia is the world's sixth largest country by surface area. It is a continent, a country, and an island, and lies between the Indian Ocean and the South Pacific Ocean. For at least 40,000 years before British settlement in the late eighteenth century, Australia was inhabited mostly by indigenous Australians. Today it is highly developed, having the world's twelfth largest economy and the fifth-highest income per capita, and is ranked second on the United Nations' human development index. It is rated highly in terms of quality of life, health, education, economic freedom, civil liberties and political rights, and it is a member of many important international political organizations including the United Nations, the G20, Commonwealth of Nations, the ANZUS Alliance, the OECD, the WTO, and the Pacific Islands Forum.

Australia's climate is dominated by the dry, sinking air of the subtropical high pressure belt that moves north and south with the seasons. This causes the rainfall pattern over Australia to be strongly seasonal and helps to define the main climate regions. Amongst all continents excluding Antarctica, Australia's rainfall is easily the lowest. Particularly in inland Australia, low rainfall combined with very high evaporation leads to low surface water flows and seasonal river systems.

Overall, Australia's climate faces a number of natural fluctuation variabilities; the continent experiences major droughts alternating with voluminous wet periods. Recurrences of tropical cyclones, heatwaves, bushfires, and frosts are also part of this 'southern oscillation.' But now, due to Australia's generally low and variable rainfall, the effects of global climate change have raised concerns about the management, usage, and quality of surface water in Australia, and even its very existence in some places.

Australia naturally has an extreme climate, but climate change makes its extremes even more extreme. Recently, for instance, it has been hit by a number of disastrous events. A reporter who traveled to Australia to see the effects of global warming on "this most vulnerable of nations" reported on a record heatwave, a debilitating drought, bushfires, colossal floods, and even a plague of locusts over the span of just a few weeks. The fear that Australia will be destroyed by global warming is supported by a series of related scenarios from the last few years. The Murray-Darling Basin has been suffering a drought for decades, the remaining water is becoming salty and thus unusable, and wildfires in 2009 torched huge amounts of land and killed more than 172 people. This spring there have already been over fifty separate bushfires, burning about 30,000 hectares or 74,000 acres of forest, bush, houses and land. Scientists speculate that the Great Barrier Reef will disappear within the next forty years due to oceanic warming and increasing ocean acidity. The head of the Australian police believes that Australia "could see a catastrophic decline in the availability of clean water" and "crops could fail, disease could be rampant, and flooding

might be so frequent that people, en masse, would be on the move.” The country’s largest cities are all at risk of being swallowed by the sea, so this nation will probably not only become a lot hotter and drier but definitely a lot poorer as well as it struggles to cope with the costs of these sorts of disasters.

Because of the high risk that the continent faces, one might think Australia would be a global leader in fighting against carbon pollution and fighting for clean energy. After all, Australia’s vast desert region and high solar energy radiation provide excellent conditions for solar power plants. But Australia still has one of the world’s largest per capita emissions of greenhouse gases, and has not agreed to the terms of the Kyoto Protocol because the protocol does not include the world’s largest emitters of carbon dioxide: India, China and the States. In addition, Australia remains dependent on coal, which is not only its leading export but also the source of 80% of its electricity. Why hasn’t Australia done anything serious to address the problems of climate change?

“Climate change is going to be the security issue of the twenty first century,” according to Australia’s most influential scientific research body, the Commonwealth Scientific and Industrial Research Organization (CSIRO), which recently released a report instructing Australians to expect significant temperature rises and reduced rainfall over areas that are already “the driest part of the driest inhabited continent on earth.” The report concluded that climate change is real and that humans are most definitely causing it. Former Australian prime ministers Kevin Rudd and Julia Gillard accepted these findings and began to act in response to climate change. On 3 December 2007, Rudd signed Australia’s ratification of the Kyoto Protocol, and under Gillard’s leadership Australia introduced a carbon tax in 2012. Furthermore, at the United Nations climate change negotiations in Durban, South Africa in 2011, countries around the world decided to establish a second emissions reductions commitment from 1 January 2013, and at the time Australia intended to join this second commitment. Australian delegates said that they were “committed to taking strong action on climate change and we are playing our part in the global effort to achieve an ambitious international outcome.”

But the current prime minister, Tony Abbott, elected in late 2013, opposes emissions trading schemes and carbon taxation and even rejects the idea of increased extreme weather events being linked to human-induced climate change. Abbott’s attitudes towards climate change are unsettling in light of recent events. In 2013, bushfires began to occur earlier than usual and caused property damage in excess of \$100 million. Abbott, however, believes fires to be part of “the Australian experience” and does not believe the increase in frequency and intensity has anything to do with climate change. He is right that bushfires are a natural part of the Australian climate, but several studies published recently, such as last year’s *International Journal of Climatology* study, looked at thirty-eight bushfire sites around Australia between 1980 and 2010, and found that sixteen of these showed a significant increase in fire intensity and frequency and none of them showed any decline or decrease. These fires are attributable to climate change because climate change is making Australia much hotter and drier in general, and hot and dry conditions are perfect for sustaining fires with unbelievably disastrous consequences.

In November 2013, sixty thousand Australians took to the streets to protest against the government's lack of action against climate change. These protests demonstrate that there is substantial popular support for action and for putting a price on carbon, although it seems that the Australian government remains rather passive in response to climate change. During 2013 election, Tony Abbott was careful to confine his campaign to essentially opposing Julia Gillard's carbon tax, not the efficacy of climate change action. "After a campaign which saw a return to 2012's focus on the costs of carbon pricing," says John Connor of the Climate Institute, "there was no majority support for repeal with voters split 47 per cent for repeal and 47 per cent for maintaining some form of carbon pricing when asked to choose between the two." In a press conference five days before the election, Abbott mentioned the carbon tax thirty-seven times but did not mention climate change or its consequences at all. He announced that the funds available for meeting the five per cent emissions reduction target by 2020 would be limited to the \$3.2 billion he had budgeted in his climate policy regardless of whether that was enough to allow Australia to meet its target. "The bottom line is we will spend as much as we have budgeted, no more and no less," he said. "We will get as much environmental improvement, as much emissions reduction as we can for the spending that we've budgeted." The fact that Abbott brought this up in the final days meant that discussion and opposition were severely limited.

Since the election, Abbott has retreated even further on acting against climate change, saying that the emissions target range of five to twenty-five per cent could not be achieved unless other countries made similar commitments. Under Abbott's 'Direct Action' policy, Australia's emissions are estimated to increase by twelve percent by 2020 according to the Climate Action Tracker. But for Australia to actually make a difference and slow down the effects of climate change on such a dry consequence, the country urgently needs to find an effective and economically efficient way of reducing its greenhouse gas emissions.