

Australian bushfires will cause jump in CO₂ in atmosphere, say scientists

Fires released vast amounts of carbon dioxide and reduced vegetation, pushing planet closer to point of no return

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The unprecedented extent of the blazes means regrowth is likely to be slower than in previous years. Photograph: Department of Environment/AFP/Getty

The devastating bushfires in Australia are likely to cause a jump in carbon concentrations in the atmosphere this year, a forecast suggests, bringing the world closer to 1.5C of global heating.

The fires have not only released vast amounts of carbon dioxide and soot, but the unusual extent of the blazes means regrowth is likely to be slower than in previous years. That will reduce the amount of vegetation available to act as a carbon sink, meaning less carbon dioxide is removed from the air.

Experts at the UK's Met Office have predicted that this year will see another large rise in the carbon content of the atmosphere, which has been measured at the **Mauna Loa observatory in Hawaii since 1958**. They predict that carbon dioxide will peak at more than 417 parts per million in May, usually the highest point of the year for carbon concentrations, and settle to about 414ppm as the average for 2020.

The predicted year-on-year rise of about 2.74ppm would be one of the biggest on record. Emissions from the Australian bushfires will make up one-fifth of the increase, according to the Met Office. Last year, scientists recorded the **second biggest yearly increase on record**, of 3.5ppm compared with 2018.

The absorption of carbon dioxide by land ecosystems, such as vegetation and forests, is linked to swings in Pacific Ocean temperatures, the **Met Office** noted. Many regions become warmer and drier in years with a warmer tropical Pacific, limiting the ability of plants to grow and absorb carbon, while the risk of wildfires increases. That has contributed to the hot dry weather in Australia, making the bushfires more severe.

Since the Mauna Loa records began, human activities have resulted in a yearly rise in the carbon content of the air. Some years have seen only a modest rise, but in recent years the rise has been stronger, despite global efforts to reduce greenhouse gas emissions.

Professor Richard Betts, of the Met Office Hadley Centre, said: "The [annual] rate of rise isn't perfectly even because there are fluctuations in the response of ecosystem carbon sinks, especially tropical forests. Overall, these are expected to be weaker than normal for the second year running. The year-to-year variability in the rate of rise of CO₂ is affected more by the strength of ecosystem carbon sinks and sources than year-to-year changes in human-induced emissions. Nevertheless, anthropogenic emissions are still the overall driver of the long-term rise in concentrations."

Each annual rise takes the planet **closer to the crucial 450ppm threshold**. That is regarded by scientists as the limit of safety, beyond which the impacts of climate change – droughts, floods, heatwaves, fiercer storms, and sea level rises – are likely to become much worse.

"This analysis illustrates how feedback processes can accelerate the rise in greenhouse gas levels and hence the rate of warming," said Bob Ward, policy director at the Grantham Research Institute on Climate Change at the London School of Economics. "Global warming in Australia, western North America and many other parts of the world is increasing the risk and extent of wildfires, releasing ever more carbon dioxide into the atmosphere. Such feedback processes will lead to the exhaustion of our emissions budgets even more quickly than expected. We are closer than we

think to the point of no return.”

Governments pledged at Paris in 2015 to hold global temperature rises to no more than 2C above pre-industrial levels, with an aspiration not to exceed 1.5C. In the years since, **greenhouse gas emissions have risen by 4%**, according to recent estimates.

Current national pledges under the Paris agreement would **take the world to 3C of heating**. This November, governments will meet in Glasgow to try to set the world back on track to meet the Paris goals.

Australia fires: Malcolm Turnbull accuses Scott Morrison of 'misleading' nation

By Phil Mercer BBC, Sydney 3 hours ago



Australia fires: 'I can't explain Morrison actions'

Australian PM Scott Morrison has been accused of lacking leadership during the bushfire crisis - by the man he replaced after a party room coup.

Malcolm Turnbull, who was deposed in 2018, told the BBC that Mr Morrison had misled the country by "downplaying" the influence of global warming. Mr Morrison apologised last month for taking a US holiday amid the fires. He has insisted his policies are adequate.

But Mr Turnbull said he "cannot explain" his successor's approach.

In a wide-ranging interview, Mr Turnbull also said US President Donald Trump was the world's "leading climate denier" and that America's lack of leadership was "extremely damaging".

Mr Turnbull said "everybody knew we were in a very dry time" before the fire season, and that it "was likely to be very bad".

"Rather than doing what a leader should do... [Mr Morrison] downplayed it, and at times discounted the influence of climate change, which is just nonsense from a scientific point of view. So that's misleading people," said Mr Turnbull.

"Then of course [he] chose to go away on holiday in Hawaii at the peak of the crisis. So I can't explain any of that.

"It's just not consistent with the way in which a prime minister would or should act in a national crisis like this."



Can Australia's PM Scott Morrison recover from the fires?

Since September, bushfires have scarred Australia. At least 30 people have died, livelihoods have been lost along with thousands of homes, while the

catastrophic impact on wildlife may never be known.

Mr Morrison has conceded he caused "great anxiety in Australia" by taking his family to the US as record-breaking heat exacerbated fires.

"I know there are some who've tried to make political points and score points in the midst of these disasters, and that's disappointing," he said before Christmas.

He asserted that climate change was "one of many factors" responsible for the blazes.

As the fires have raged, so has the debate about climate change and its part in Australia's destructive summer.

Mr Turnbull took aim at former colleagues in the governing Liberal Party, accusing another ex-prime minister, Tony Abbott, of being "probably the most prominent climate denier in Australian politics, but there are plenty of others" who were engaged in a "war against science".

"It is an extraordinarily irrational and self-destructive approach," Mr Turnbull said.

Mr Turnbull's prime ministership began in 2015 when he removed Mr Abbott, a long-time rival. He was in power for three years before being ousted in similar fashion.

It was a fevered period in Australian politics, and Mr Turnbull was castigated by a senior minister as being spiteful and indecisive. He also faced criticism externally for not doing more while in power.

Shortly before he was replaced, **Mr Turnbull abandoned his government's flagship energy policy** in a last-ditch concession to his party's right wing.

The policy would have set in legislation Australia's emissions target, which has long been criticised as inadequate for a wealthy nation. The 2030 target of a 26% reduction on 2005 levels is one of the weakest among G20 nations.

But the University of Oxford graduate, and former barrister and banker told the BBC he was the victim of a ruthless political insurgency.

"The right [wing] in the Liberal Party essentially operate like terrorists," he said.

"Now I'm not suggesting that they use guns and bombs or anything like that, but their approach is one of intimidation.

"And they basically say to the rest of the party...if you don't do what we want, we will blow the show up. Famously one of the coup leaders said to me, 'you have to give in to the terrorists!'"



Footage shows bushfire "crowning" across treetops

In his offices overlooking Sydney's harbour are small-framed photographs of Mr Turnbull with world leaders: former US president Barack Obama, Indian PM Narendra Modi and Indonesian president Joko Widodo.

There is also a picture with Mr Trump. Not so much a happy snap - **the pair famously clashed over a refugee swap deal** and there's hostility, too, over the environment.

"Trump is playing a very destructive role in terms of climate action. Trump makes no bones about it. He says global warming is rubbish," Mr Turnbull said.

"Trump is trying to put a brake on global action to reduce emissions. The lack of American leadership is extremely damaging."

He added: "How many more coral reefs have to be bleached? How many more million hectares of forest have to be burned?"

"How many more lives and homes have to be lost before the climate change deniers acknowledge they are wrong?"