

What could 4 degree warming mean for the world?

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Scientists say the need to cut emissions is even more urgent.

(PhysOrg.com) -- A leading climate scientist has presented new research findings on the increasing potential for a 4 degrees Celsius rise in global temperatures if the current high emissions of greenhouse gases continue.

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The conference at Oxford University is the first to consider the global consequences of climate change beyond 2 degrees Celsius, and is jointly sponsored by University's Environmental Change Institute, the Tyndall Centre for Climate Change Research and the Met Office Hadley Centre.

Speaking at the international conference called '4 degrees and beyond' at

Oxford University, Dr Richard Betts, Head of Climate Impacts at the Met Office Hadley Centre, described the possibility of a 4 degree warming happening ‘before the end of the century’. He added that a scenario of very intensive fossil fuel burning could bring this forward by 20 years.

Topics from over 50 other conference research papers will include: food and water security, vulnerable populations, human health, migration, wild fires, [sea level rise](#), wildlife conservation, and ecosystem services. Regional case studies will include Amazonia, Australia, Bangladesh, Brazil, Ethiopia, Finland, Mauritius, Siberia, Vietnam, and the monsoon region.

Conference convenor Dr Mark New, from the Oxford University School of Geography and the Environment, and the Tyndall Centre, said: ‘Since the late 1990s, [greenhouse gas emissions](#) have increased at close to the most extreme IPCC scenarios, meaning that rates of warming will be faster than most people expect. The conference will review the best science on the consequences of these large climate changes and what we can do about it.’

In today’s presentation Dr Betts warned that 4 degrees of warming could have extreme regional implications along with major changes in rainfall. He said: ‘If greenhouse emissions are not cut soon, then we could see major climate changes within our own lifetimes.’

Other speakers are Professor John Schellnhuber, Director of the Potsdam Institute for Climate Impact Research, on 4 degrees warming and the potential for tipping points; Professor Yadvinder Mahli, from Oxford University’s Environmental Change Institute, on the impact on tropical forests; Dr Philip Thornton, International Livestock Research Institute, Nairobi, on sub-Saharan agriculture; Dr Pier Vellinga, from Wageningen University, on sea-level rise; and Professor Kevin

Anderson, Director of the Tyndall Centre for [Climate Change](#) Research, on global emission pathways.

Provided by Oxford University ([news](#) : [web](#))

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