

Worst climate warnings ‘will not come true’

Ben Webster, Environment Editor, The Times, 18 January 2018

Earth’s climate may be less sensitive to man-made emissions than previously feared, a study has found. It raises hopes that the worst predictions about global warming can be avoided.

It suggests that the target set in the Paris Agreement on climate change of limiting the average temperature increase to well below 2 °C is more achievable than some scientists have claimed.

Apocalyptic predictions that the world could warm by up to 6 °C by 2100 with devastating consequences for humanity and nature are effectively ruled out by the findings.

However, the study makes clear that steep reductions in emissions will still be needed to avoid dangerous climate change. It also concludes that the aspirational target in the 2015 Paris Agreement of limiting warming to 1.5 °C is less likely to be achieved.

The study, published in the journal *Nature*, refines previous estimates of how sensitive the climate is to carbon dioxide by considering the historical variability in global temperature. It focuses on the key measure, known as equilibrium climate sensitivity (ECS), which is used by climate scientists to make predictions. ECS is the amount of warming that would occur if the concentration of carbon dioxide in the atmosphere doubled.

The concentration has already increased by about 50 per cent since pre-industrial times, from 270 parts per million (ppm) to 403ppm.

The UN’s Intergovernmental Panel on Climate Change, a scientific body which advises governments, gives a range for ECS of 1.5–4.5 °C. The new study narrows this range to 2.2–3.4 °C.

Peter Cox, professor of climate system dynamics at the University of Exeter and lead author of the paper, said his team had “squeezed both ends” of the range presented by the IPCC.

“We can rule out very low climate sensitivities that might imply you don’t need to do very much at all but also very high climate sensitivities that would be very difficult to adapt to.

“That’s useful because it gives policymakers and people an idea of what they have got to deal with and they can make decisions on that basis.”

Mr Cox said his study showed there was less need to worry about apocalyptic visions of the future, such as those presented in the 2007 award-winning science book *Six Degrees – Our Future on a Hotter Planet*, which had an image on the cover of a tidal wave breaking over Big Ben.

“The very high warming rates are looking less likely so that’s good news,” he said.

“Unless we do something bizarrely stupid, we are not looking at catastrophic climate change.

“But I wouldn’t want people to think we don’t need to act. It means that action is worthwhile. We can still stabilise the system if we choose to do so.

“We are definitely up against it but we aren’t in a position where we are talking about such large climate changes that we are just messing around on the decks of the *Titanic*. We know better now, I hope, from our work what we have got to do.”

He said his study showed the 2 °C target set in Paris was “still just about achievable” but limiting warming to 1.5 °C in the long term could only be achieved by “overshooting” and then somehow reducing the temperature using futuristic technology, such as artificial trees which suck CO₂ out of the atmosphere.

Piers Forster, director of the Priestley International Centre for Climate at the University of Leeds, said the study “confirms that we will see significantly more warming and impacts this century if we don’t increase our ambition to reduce CO₂ emissions; but the possibility of 6 degrees or more warming with associated devastating impacts can perhaps begin to be ruled out”.