

Urgent CO2 cuts may spare millions hardship, report says

January 13 2013



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[Climate researchers](#) in Britain and Germany said [emission cuts](#) now

would delay some crippling impacts by decades and prevent some altogether.

By 2050, an Earth heading for warming of 2-2.5 degrees Celsius (3.6-4.5 degrees Fahrenheit) by 2100 could have two very different faces, depending on the route taken to get there, said their study published in the journal *Nature Climate Change*.

Policies that cap Earth-warming [carbon emissions](#) in 2016 and then reduce them by five percent per year could see between 39 and 68 million people spared exposure to a higher risk of [water shortages](#) by 2050, Nigel Arnell of the University of Reading told AFP.

This is the best-case scenario, though.

In contrast, if emissions peak in 2030 and fall by five percent annually, the number who escape this risk drops to between 17 and 48 million.

Similarly, about 100-161 million people would avoid a higher risk of river flooding on the 2016-peak scenario.

This compares to 52-120 million people if emissions peak 14 years later, said Arnell, director of the university's Walker Institute on climate change.

"Basically in 2050, the 2030-peaking policy has about half to two-thirds of the benefit than the best (2016) policy," even though both lead to a similar temperature peak of about 2-2.5 deg C by 2100, he said.

"You may hit the same (temperature) point at the end of the century but... the mayhem that's been caused on the way to that point is different under the different pathways."

Under a scenario without any emissions curbs, temperatures could rise as much as 4-5.5 deg C, said the new paper which claimed to be the broadest assessment yet of the benefits of avoiding [climate change impacts](#).

Global average warming of 4 deg C would see almost a billion people have less water in 2100 than they have now, and 330 million will be at greater risk of river flooding, Arnell told a pre-release press conference.

A peak in 2016 seems unlikely, with the world's nations aiming to adopt a new global climate pact by 2015 for entry into force only five years later.

The latest round of UN climate talks that concluded in Doha, Qatar in December failed to set pre-2020 emissions cuts for countries that have not signed up to the Kyoto Protocol that seeks to curb warming, even as scientists warned the concentration of carbon in the atmosphere continues to rise.

Three of the world's four biggest polluters—China, the United States and India—are among those with no binding emission limits, which cover countries responsible for only about 15 percent of the world's carbon pollution.

Many scientists believe that Earth is set for warming that will be far above the United Nations' 2 deg C target on pre-industrial levels.

"Reducing greenhouse gas emissions won't avoid the impacts of climate change altogether of course, but our research shows it will buy time to make things like buildings, transport systems and agriculture more resilient to climate change," said Arnell.

More information: Paper DOI: [10.1038/nclimate1793](https://doi.org/10.1038/nclimate1793)

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