

Global warming is due to humans: US ex-skeptic (Update)

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The Department of Water and Power (DWP) San Fernando Valley Generating Station is seen in 2008 in Sun Valley, California. A prominent US skeptic of the human causes of climate change, Richard Muller, has reversed course and said on Monday that he now believes greenhouse gases are responsible for global warming.

A prominent US skeptic of the human causes of climate change, Richard Muller, has reversed course and said on Monday that he now believes greenhouse gases are responsible for global warming.

"I was not expecting this, but as a scientist, I feel it is my duty to let the evidence change my mind," Muller, a professor of physics at the University of California, Berkeley, said in a statement.

Muller is part of a group of more than a dozen scientists on the Berkeley

Earth Surface Temperature team studying how temperature changes may relate to human activity, or to natural events such as solar and volcanic activity.

The average temperature of the Earth's land has risen 1.5 degrees Celsius (2.5 degrees Fahrenheit) over the past 250 years, and "the most straightforward explanation for this warming is human greenhouse gas emissions," the team said in a report posted online Monday.

The analysis goes 100 years further back than previous research, and takes an even stronger stance than the UN Intergovernmental Panel on Climate Change which said in 2007 that "most" of the warming of the past 50 years could be attributed to human activity, and that higher solar activity prior to 1956 might have fueled some of the warming the Earth has experienced.

The Berkeley team's analysis said "the contribution of solar activity to global warming is negligible."

It added that its finding does not rely on climate models, which critics say have the potential for inaccuracies.

Instead, it is based "simply on the close agreement between the shape of the observed temperature rise and the known greenhouse gas increase."

Further research will factor in ocean temperatures, which are not included in the latest report, it said.

In an op-ed in the New York Times over the weekend, Muller explained his transformation from being a scientist who doubted the "very existence of global warming" to one who now sides with the majority of the scientific community.

"Call me a converted skeptic," wrote Muller.

"Last year, following an intensive research effort involving a dozen scientists, I concluded that global warming was real and that the prior estimates of the rate of warming were correct.

"I'm now going a step further: Humans are almost entirely the cause."



Nobel Prize winner Saul Perlmutter, an astrophysicist at the University of California at Berkeley, is shown in his office in 2011. Members of the Berkeley Earth science team include Perlmutter, physics professor Richard Muller and climatologist Judith Curry of the Georgia Institute of Technology.

Other members of the Berkeley Earth science team include Nobel Prize winner Saul Perlmutter and climatologist Judith Curry of the Georgia Institute of Technology.

However Curry expressed her discontent with the findings and told the New York Times she had declined to be listed as a co-author on the latest paper.

"I gave them my review of the paper, which was highly critical. I don't

think this new paper adds anything to our understanding of attribution of the warming," she was quoted as saying.

"Their analysis is way oversimplistic and not at all convincing in my opinion."

Looking forward, Muller said he expects the current trends to continue.

"As carbon dioxide emissions increase, the temperature should continue to rise. I expect the rate of warming to proceed at a steady pace, about one and a half degrees over land in the next 50 years, less if the oceans are included," he wrote in the New York Times.

"But if China continues its rapid economic growth (it has averaged 10 percent per year over the last 20 years) and its vast use of coal (it typically adds one new gigawatt per month), then that same warming could take place in less than 20 years."

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