

Scientists find strong link between climate change and wildfires

February 7 2018, by Lauren Holland And Albert Kyi



Wildfires are becoming more common due to climate change. Credit: Cal OES via Flickr

Wildfires in western states have been increasing in number and severity over the past few decades. They cause severe destruction to property,

sometimes harm or kill people, and cost a lot of money to local and state governments. One recent wildfire in the news, the Thomas Fire in California, has burned through more than 379 square miles and incurred damages greater than \$110.2 million. Preventing these wildfires is of utmost importance to humans and to wildlife in the area, so scientists have begun trying to find what exactly is causing these fires.

For years, scientists have suspected a number of causes for wildfires, but recent evidence from Columbia University's Lamont-Doherty Earth Observatory, [published in 2016](#), suggests that human-caused [climate change](#) (anthropogenic [climate](#) change) is one of the primary causes of the increase in wildfires. Anthropogenic climate change is caused by an increase in the concentration of greenhouse gases, such as carbon dioxide and methane in the atmosphere. As heat from the sun is trapped in the Earth's atmosphere, the average [global temperature](#) has been rising.

Researchers John T. Abatzoglou and A. Park Williams from Columbia University have found that human-caused climate change is one of the major factors behind the recent spike in wildfire numbers. They came to this conclusion by looking at weather data going back to the 1970s. They included a number of variables such as fuel dryness and global temperature increase.

What they found was that climate change has increased temperatures in the region, which in turn has dried much of the vegetation in western states. Once the vegetation has dried up, it acts as a fuel for many wildfires. They estimate that human-caused climate change caused an additional 4.2 million hectares of forest to burn between 1984 and 2015. That's an area three times the size of Connecticut. This increase in wildfires in the United States is not likely to slow down, and basic practices like landscaping will not be enough to prevent wildfires from happening.

What the Columbia University scientists concluded is nothing new. Other scientists also agree with their opinions. Park Williams, a Center for Climate and Life Fellow, says that [anthropogenic climate change](#) has "doubled the area affected by forest fires in the American West over the last 30 years."

Andrew Robertson from Columbia's International Research Institute for Climate and Society (IRI) said that there are ways to improve [wildfire](#) prediction:

"The IRI and other centers have been issuing seasonal climate predictions routinely since the late 1990s, but prediction on the subseasonal range—which fills the gap between weather forecasts and seasonal forecasts—is an emerging area of research," Robertson told the IRI. "This timescale could be particularly relevant to fire risk early warning and prevention, giving managers forecasts on a range of timescales in a 'seamless' way, from several seasons ahead, down to a few days ahead."

Better prediction can save lives and property, but the ultimate goal is to prevent these wildfires from happening in the first place.

Climate change is caused by humans, and the dangerous wildfires in California is a clear example of how climate change ruins the planet. The more extreme the effects of climate change become, the more destroyed the planet will be. There are future generations that deserve to live a fulfilling life that we strive to achieve now. We cannot let climate change destroy their future.

More information: John T. Abatzoglou et al. Impact of anthropogenic climate change on wildfire across western US forests, *Proceedings of the National Academy of Sciences* (2016). [DOI: 10.1073/pnas.1607171113](https://doi.org/10.1073/pnas.1607171113)

This story is republished courtesy of Earth Institute, Columbia University
<http://blogs.ei.columbia.edu>.

Provided by Earth Institute, Columbia University

Citation: Scientists find strong link between climate change and wildfires (2018, February 7)
retrieved 23 April 2024 from
<https://phys.org/news/2018-02-scientists-strong-link-climate-wildfires.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.