

Climate change could 'fundamentally alter' US forests

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The top of Pikes Peak mountain in the Rocky Mountains, within Pike National Forest, on June 8, 2013

Wildfires, insects and drought are crippling forests in the western United States' iconic Rocky Mountains, scientists warned on Wednesday, urging more efforts to stop global warming.

"If left unchecked, the climate change that is driving this triple assault

could fundamentally alter these forests as we know them," said the [report](#) by the Union for Concerned Scientists.

Researchers found that in the American West, "temperatures have risen on average about two degrees Fahrenheit (about one degree Celsius) since 1895 and drought has become more widespread."

Their study, based on data from the US Forest Service, projects for the first time that if emissions continue at recent rates, the land area that is favorable to iconic conifers like the lodgepole and ponderosa pine will decline by 80-90 percent by 2060.

Area where Engelmann spruce can grow will drop by about 66 percent, and for Douglas fir by about 58 percent, it said.

"Heat and [drought stress](#), beetle bark infestations and [wildfires](#) are killing trees across widespread areas in the Rocky Mountains," said Jason Funk, report co-author and senior scientist at the Union of Concerned Scientists.

"The wildfires, infestations and heat and drought stress are the symptoms; [climate change](#) is the underlying disease."

Among the top concerns to forest managers are bark beetle outbreaks, which have "killed trees on a larger scale than ever recorded," the report said.

"In the past 15 years, the beetles have killed trees on western forest lands nearly equal to the size of Colorado," it said.

Wildfires are becoming more common, resulting in a 73 percent rise in annual frequency from 1984 to 2011.

Even more troubling, experts have seen trees die at twice the normal rate for no apparent cause, other than increasing heat and dryness, the report said.

"So far, we have had relatively modest climate changes, but they have already jolted our forests," said Stephen Saunders, report co-author and president of the Rocky Mountain Climate Organization.

"If we continue changing the [climate](#), we may bring about much more fundamental disruption of these treasured national landscapes."

The area includes Glacier Mountain, Rocky Mountain and Yellowstone National Park.

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