

Deadly wildfires burn across Maui—it's a reminder of the growing risk to communities that once seemed safe

August 12 2023, by Mojtaba Sadegh



Credit: Pixabay/CC0 Public Domain

Wildfires, pushed by powerful winds, raced through Lahaina, Hawaii, on Aug. 8 and 9, 2023, leaving a charred and smoldering landscape across

the tourist town of [about 13,000 residents](#) that was once [the capital of the Kingdom of Hawaii](#). [At least six people died](#), Maui Mayor Richard Bissen told reporters. Others were [rescued by the U.S. Coast Guard](#) after going into the ocean to escape the flames.

Fires were still burning on the evening of Aug. 9, both in Maui's tourist-filled [west coast and farther inland](#), as well as on the Big Island of Hawaii. [Dry grasses](#) and [strong winds, influenced by Hurricane Dora](#) passing far to the south, heightened the [fire risk](#).

Most fires in the U.S. are suppressed before they have a chance to threaten communities, but the winds were [too strong to send helicopters](#) into the sky to help contain Maui's fires on the first day, leaving firefighters to battle the blazes from the ground.

Lt. Gov. Sylvia Luke [issued an emergency declaration](#), activating the National Guard to help, and [urged travelers to stay away](#).

Fires have become an increasing risk in many areas of the U.S. that people once considered safe.

Over the past two decades, a staggering [21.8 million Americans](#) found themselves living within 3 miles (5 kilometers) of a large wildfire. Nearly 600,000 of them were directly exposed to the [fire](#), with their homes inside the wildfire perimeter. That number—people directly exposed to [wildfires](#)—more than doubled from 2000 to 2019, my team's [recent research](#) shows.

But while commentators often blame the rising risk on homebuilders pushing [deeper into the wildland areas](#), we found that the population growth in these high-risk areas explained only a small part of the increase in the number of people who were exposed to wildfires.

Instead, three-quarters of this trend was driven by intense fires growing out of control and encroaching on existing communities.

That knowledge has implications for how communities prepare to fight wildfires in the future, how they respond to population growth and whether policy changes such as increasing insurance premiums to reduce losses will be effective.

What climate change has to do with wildfires

Hot, [dry weather](#) pulls moisture from plants and soil, leaving dry fuel that can easily burn. On a windy day, a spark [from a power line](#), campfire or lightning can start a wildfire that quickly spreads.

[Recent research on California's fires](#) found that almost all of the increase in that state's burned area in recent decades was due to anthropogenic [climate change](#)—meaning climate change caused by human activities.

Our new research looked beyond just the area burned and asked: Where were people exposed to wildfires, and why?

Where wildfire exposure was highest

I am a [climate scientist](#) who studies the wildfire-climate relationship and its socioenvironmental impacts. Colleagues and I analyzed the boundaries of more than 15,000 large wildfires across the lower 48 states and annual population distribution data to estimate the number of people exposed to those fires.

If you picture wildfire photos taken from a plane, fires generally burn in patches rather than as a wall of flame. Pockets of homes within the fire boundary survive, but many also burn.

While the population has grown in the [wildland-urban interface](#)—the region where houses intermingle with forests, shrublands or grasslands—we found that [population growth](#) accounted for only about one-quarter of the increase in the number of humans directly exposed to wildfires across the lower 48 states from 2000 to 2019.

Three-quarters of the 125% increase in exposure was due to fires increasingly encroaching on existing communities. The total burned area increased only 38%, but the locations of intense fires near towns and cities put lives at risk.

In California, the state with the most people exposed to fires, several wildfire catastrophes hit communities that had existed long before 2000. Almost all these catastrophes occurred during [dry, hot, windy conditions](#) that have become [increasingly frequent because of climate change](#).

What communities can do to lower the risk

Studies have shown that [even in conservative scenarios](#), the amount of area that burns in Western wildfires is projected to grow in the next few decades.

How much these fires grow and how intense they become depends largely on warming trends. Reducing greenhouse gas emissions will help slow warming. But communities will also have to adapt to more wildfires. Developing community-level [wildfire](#) response plans, reducing human ignitions of wildfires and improving zoning and building codes can help prevent fires from becoming destructive.

This article is republished from [The Conversation](#) under a Creative Commons license. Read the [original article](#).

Provided by The Conversation

Citation: Deadly wildfires burn across Maui—it's a reminder of the growing risk to communities that once seemed safe (2023, August 12) retrieved 29 April 2024 from

<https://phys.org/news/2023-08-deadly-wildfires-mauiit-communities-safe.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.