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- [CLIMATE CHANGE](#)
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- [NATURAL DISASTERS](#)

# The Rise of the Year-Round Wildfire

*Humanity may already have passed the point of simply managing ourselves out of the fiery apocalypse scientists predict we're heading for.*

*By Jane Braxton Little*

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A lot on Skyway after a wildfire burned through Paradise, Calif., Friday, November 9, 2018. (Noah Berger / AP Photo)

EDITOR'S NOTE: *This article originally appeared at [TomDispatch.com](http://TomDispatch.com). To stay on top of important articles like these, [sign up](#) to receive the latest updates from TomDispatch.com.*

**M**ike Savala's boots scuffed the edge of a singed patch of forest littered with skinny fingers of burnt ponderosa pine needles. Nearby, an oak seedling sizzled as a yellow-shirted firefighter hit it with a stream of water. Spruts of smoke rose from blackened ground the size of a hockey rink. A 100-foot Ponderosa pine towered overhead. "Third response today," said Savala, shaking his head.

This hillside in my own backyard in California's northern Sierra Nevada mountains hadn't seen lightning for months and yet it had still burst into flames. All summer long, it had baked in heat that extended into an unseasonably hot autumn. Now, in late October, it was charred by a fire of mysterious origin. A spark from a wandering hiker? An errant ember from a burn pile? Spontaneous combustion?

Savala, a [fire-crew boss](#) for the Greenville Rancheria of Maidu Indians, scanned the sky. Cloudless. There had only been three inches of precipitation since July 1—15 percent of [normal](#). And no wonder, since California is in the throes of its fourth dry year. More than 95 percent of the state is now [classified](#) as under severe or extreme drought.

Although small and easily contained, this tiny fire in rural Northeastern California was another wake-up call, up close and personal, about an ominous trend. A warming planet and changing land use are fueling a dramatic surge in forest fires worldwide. Terrifying [projections](#) forecast a 57 percent increase in extreme fires globally by century's end. The indisputable cause: climate change.

"The heating of the planet is turning landscapes into tinderboxes," a team of 50 researchers from six continents reported in "[Spreading Like Wildfire: The Rising Threat of Extraordinary Landscape Fires](#)," published this year by the United Nations Environment Program. That document describes what can only be viewed as a future flaming version of

planetary collapse that could push humanity perilously close to a precipice of no return.

Like dozens of previous reports from the UN and other international organizations, it describes a situation that, while dire, isn't yet hopeless. Despite those ever stronger, hotter, drier winds that will fan the flames, governments could slow climate change by improving their forest management techniques, planning and preparing far better, and communicating more effectively. To reduce the likelihood of future mega-fires means working with forests where fire is an element as essential to ecosystems as sunshine or rain. It also means working with forest communities, where local knowledge accumulated over generations is too often shunned. And of course, it means honestly confronting our reluctance to wean ourselves from the fossil fuels that power our factories, cars, and those absurdly unnecessary leaf blowers that are backing us toward the cliff.

## A FIERY FEEDBACK LOOP

If my small backyard fire was a personal wake-up call, the 2021 Dixie fire was a four-alarm blaze. On its rampage from the Feather River Canyon through Lassen Volcanic National Park and beyond, it **destroyed** my adopted town of Greenville, 160 miles northeast of San Francisco. In fact, it torched close to a million acres. Nearly half of them burned so intensely that the once-majestic, now blackened pine and fir forests there may never again support the biologically diverse ecosystems that drew me here so long ago.

The single-largest fire in California's history, Dixie was part of a record-breaking fire year globally. Around the world, fires burned nearly 23 million acres, an area almost the size of Portugal. Dixie contributed to the worldwide loss to fire of more than a third of the tree cover that disappeared in those 12 months, according to a **report** from the World Resources Institute. And this is only a preview of what's to come. Scientists believe that there may be a 30 percent increase in extreme fires globally by 2050.

Such an acceleration of forest fires will, it seems, spare few parts of the world. Fires, burning longer and hotter, are already flaring in unexpected places, shattering assumptions about what's safe, let alone normal. Even the Arctic, that remote expanse of sea ice, treeless permafrost, and minus-40-degree Celsius temperatures, home to polar bears, lemmings, and snowy owls, is now beginning to burn. After July 2019, the hottest month on record so far, fires erupted across the Arctic Circle in Alaska, Greenland, and Siberia. As temperatures soared to as much as six degrees Celsius above normal, flames spurted across an expanse of tundra larger than England.

Arctic fires are particularly worrisome because of the vast amounts of carbon locked beneath that frozen soil. Much of it, after all, is peatlands, largely formed at the end of the last ice age, 12,000 years ago. Although it covers just 3 percent of Earth's surface, peat sequesters 42 percent of the carbon stored in all other types of vegetation, including the world's forests. Global warming is now drying out that peat, making it ever more susceptible to fire. As it burns, of course, it releases that carbon.

In California, state and federal officials have committed to reducing the threat of catastrophic wildfires by returning fire to the forest ecosystems that evolved with it. They've set a goal of igniting planned fires to burn away such brush and seedlings on one million acres annually. In September 2021, Governor Gavin Newsom signed legislation allocating \$1.5 billion to wildfire mitigation projects, the largest such investment in state history. Last January, the federal government also announced a \$600 million program to support California's wildfire recovery efforts. As well-intentioned as such programs may be, however, they have so far fallen well short of their objective. Fire managers hope that, in 2022, they will have set prescribed burns on 200,000 acres, only 20 percent of the goal. Add in logging to thin overcrowded stands of trees and they may reach 300,000 acres.

Amid the frightening statistics on rising temperatures and scorched acres, an 8,800-acre area in California demonstrates the potential for active management to reduce the dangers of destructive wildfires. In

2019, Forest Service crews set intentional fires on the western slopes of the central Sierra Nevada near Caples Lake. Last summer, when the 222,000-acre Caldor fire roared through there en route to South Lake Tahoe, it left a finger of green where prescribed fires had reduced the forest's fuels. While that was only a small island of resilience, consider it an enormous example of possibility.

## THE PROMISE OF TECHNOLOGY

Some of the government agencies most criticized for their management of wildfires are now turning to technology to help detect them before they turn into infernos. In this, they are not alone globally. Take Australia, where fires in the catastrophic 2019-2020 summer season, the worst in that country's recorded history, killed 34 people directly and another 445 through smoke inhalation. Often sparked by lightning at a time of warmer-than-average temperatures and lower-than-average precipitation, they destroyed about 6,000 buildings and killed an estimated 1.5 billion animals. In response, last year, Australia launched a satellite system connected to ground-based cameras and aerial drones meant to spot any fire within one minute of ignition.

Sonoma County, California, has similarly been testing fire-detecting artificial intelligence technology for two years now. In 2017, that area just north of San Francisco was devastated by the deadly 37,000-acre Tubbs fire. Three other fires followed in 2019 and 2020. In 2021, county officials linked artificial intelligence software to an already existing system of tower-mounted cameras. Called ALERTWildfire, it snaps photographs every 10 seconds, exposing smoke and flames. The AI sifts through the camera images in a fashion designed to increase the speed of detecting such blazes and so getting firefighters to them faster.

After the first full season, the results, however, were anything but overwhelming: AI detections beat humans in spotting fires only once out of every 10 times. Now, managers are directing their AI-adapted cameras to look for fires where humans are unlikely to spot them—as Sam Wallis, a community alert and warning manager, put it: the fires “way out in the

middle of nowhere, the ones that really scare us.” He’s also optimistic about AI’s potential for detecting nighttime fires, which can smolder in the forest duff for significant periods before bursting into uncontrollable flames. Overall, Wallis said, “the AI is not a silver bullet, but it is a bullet.”

Last year, Pacific Gas and Electric also began adding AI software similar to the kind Australia is testing to its network of cameras. It’s a better-late-than-never effort to reduce the number of deadly wildfires sparked all too notoriously by its own faulty equipment. The company has, after all, been implicated in at least five major California wildfires including the Dixie one.

Then there are the “dragon eggs.” The Forest Service is dropping those ping-pong-sized balls from remote-controlled aircraft to start controlled burns designed to return fire to its natural role of keeping forest fuels more balanced. The chemicals in the spheres ignite when they hit the ground. During the Dixie fire, drones dropped such incendiary balls on a mountainside ahead of the advancing flames to start what’s known as a backfire and did indeed create a fire-unfriendly zone in its wake.

Such management efforts may prove effective both in returning forest stands to a state of fire resilience and in curbing runaway blazes. They don’t, however, relieve officials of what many consider their unconscionable failure to enact the most basic laws to curb the greenhouse gases that are driving such climate-change-induced disasters. Apocalyptic scenes—cities blanketed in smoke, vast landscapes left lifeless—have prompted proposals before the UN to include “ecocide” as the 5th international crime, alongside genocide, crimes against humanity, war crimes, and crimes of aggression. Sadly, humanity may already have passed the point of simply managing ourselves out of the fiery apocalypse scientists predict we’re heading for. Global mean surface temperatures are already up 1.09 degrees Celsius and rising. The precipice looms.

Yes, technology can help and, if the feet of agencies are held to the proverbial flames they’re committed to managing more effectively, the oncoming inferno may yet be slowed, if not halted altogether. But if we

don't take responsibility for what's happening, all our talk, all that bureaucratic lingo about creating a low-carbon economy and hitting net zero in greenhouse gas emissions by 2050 may be little more than what environmental activist Greta Thunberg has called the "blah blah blah."

Still, hope is empowering and activity galvanizing. While it's taken far too many destroyed towns to get there, California, at least, is beginning to grasp what's needed to live with fire. Both cultural and monetary support is now strong—and growing—for prescribed burns and fuel-treatment projects. And so, locally, we take chainsaws to the smaller trees overcrowding our woods, using what we remove to heat our homes. We prune the branches from the large fire-resilient trees, chopping them to fit our stoves. We rake the small debris and forest litter into burn piles, wishing we had a way to utilize those forest products, too, instead of adding to the very emissions we're trying to reduce. And we keep on igniting small, safe burns to return resilience to these lands that once enjoyed the benefits of fire. On such a planet in such a time, the question remains: Will any of it be enough to live with the fire next time?

Days after our backyard blaze flared up, it snowed: eight inches of reassurance that this fire, at least, would not smolder and restart. But by the end of November, the Sierra had no additional rain and state officials were at the edge of declaring a fourth year of drought. Somewhere in our future, the inferno still lurks.

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