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HAWAII NEWS

Climate change report highlights health impacts, Hawaii's wildfire risks

By [Nina Wu](#) • Today • Updated 12:34 am

The extreme weather brought about by climate change affects not just the ecosystem, but human health in the Hawaiian Islands.

With altered rainfall patterns, rising ocean and air temperatures, and sea level rise, access to clean water and healthy food will become more challenging, researchers said. This is already evident with the onslaught of drought that occurs in the region during El Nino years.

The impacts are detailed in the [Fifth National Climate Assessment](#) released Tuesday, a federal review of the impacts of climate change in the U.S.

The newest assessment includes an entire chapter — the most comprehensive one yet — dedicated to climate change impacts on Hawaii and U.S.-affiliated Pacific islands, which was written with the involvement of several University of Hawaii at Manoa researchers.

“Climate change continues to threaten things we care about,” said Abby Frazier, the chapter’s lead author, an assistant professor at Clark University, in a statement. “As the devastating hurricane-fueled wildfires on Maui and Typhoon Mawar in Guam made clear, when communities are already hurting from stressors like COVID-19, extreme weather can multiply harms. The sooner we scale up global action to curb threats from climate change, the better. Fortunately, cutting emissions or preparing for new extremes also creates immediate local benefits — improved health, a stronger economy, and more resilient communities.”

Hawaii and Pacific islands such as American Samoa and Guam are particularly vulnerable to climate change due to their geographic isolation and reliance on imports, according to the report.



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Additionally, they depend on local natural resources vulnerable to drought, sea level rise and natural disasters.

Between 1951 and 2020, annual average air temperatures across the Pacific island region increased 2 degrees Fahrenheit, according to the report, and are projected to double or increase even more by the end of the century.

Although the report was completed well before the Aug. 8 wildfires on Maui, it discusses the impact of increasing drought and its link to severe wildfires, which directly threaten residents' health.

The chapter notes that the annual percentage of land area burned for seven Pacific islands, including Hawaii, is equivalent to or greater than the percentage burned for the Western U.S. states.

The addition of invasive species, such as fire-prone vegetation, further increases future climate-driven fire risk, the report said. Other invasives, such as strawberry guava trees, reduce the amount of rain reaching the forest floor.

"Scientists know that wildfire risk has been increasing with climate change," said Zena Grecni, an author and researcher with Arizona State University's Global Institute of Sustainability and Innovation.

Droughts are generally worse during El Nino years, she said, which result in below-average rainfall for Hawaii, and will continue to be a "a major source of climate variability" for the region. The drought will [likely continue](#) into spring or early summer of 2024, increasing wildfire risks.

Extreme weather takes a toll on human health in the form of increased food- and waterborne pathogens, along with more mental and physical stress. Higher temperatures also result in heat-related illnesses and increases in hospitalizations and deaths.

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"In Hawaii we know that climate change is undermining human health," said Grecni, also a former East-West Center researcher. "There's growing evidence for this and it's now undeniable. We're seeing, for example, hotter weather that's stressing human health and worsening existing conditions such as diabetes and heart disease."

On Oahu a community heat assessment conducted in August 2019 found record high temperatures in some neighborhoods that ranged from 100 to 107 degrees Fahrenheit.

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One study found 82% of heat-related deaths in Honolulu attributable to climate change, with construction workers and those with less access to cooling the most vulnerable.

To avoid future catastrophes like the devastating wildfires on Maui, the state needs to take action to reduce fire risk, said Grecni.

“We see now from the Maui wildfire disaster, there’s all kinds of cascading effects on health,” she said.

That includes the loss of access to medications, loss of electricity needed for medical equipment and medical facilities, and disruption to transportation and social networks.

“When a disaster does happen in Hawaii, the recovery is especially prolonged because of the high costs of bringing in materials or supplies due to the island’s remoteness,” she said. “The bottom line is we need to substantially increase funding for wildfire management. That’s even more important with climate change as a stressor that’s driving wildfire risk.”

At the same time, there has been an incredible community response, demonstrating the importance of community networks and relationships in recovery from disasters.

Additionally, Hawaii and the Pacific islands have a valuable resource: Indigenous knowledge. This knowledge, the report said, is derived from thousands of years of stewardship that have sustained Pacific Islanders in the form of seafaring, canoe building, water management and agroforestry.

The report emphasizes the value of this Indigenous knowledge as “central to the resilience of island communities amidst the changing climate.”

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For too long, the report said, these Indigenous knowledge systems “foundational to responding to climate change” have been undervalued, suppressed and ignored by Western science and have only recently been recognized as valid at the federal level.

The Fifth National Climate Assessment was developed by more than 500 experts from across the nation, with multiple rounds of review, according to the U.S. Global Change Research Program. The Fourth National Climate Assessment was published in 2018.

“This report makes clear what we’ve long known to be true: the impact of the climate crisis is only getting worse, and we need to take big, bold action to address it,” said U.S. Sen. Brian Schatz in a statement. “The historic investments Congress made through the Inflation Reduction Act and the infrastructure legislation are already helping unlock clean energy and making communities across America more climate-resilient. But there’s still much more work to do, and I look forward to working with my colleagues and the Biden administration to take the kind of bold steps we need on climate to meet this moment.”

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Highlights of the climate change report

>> Climate change impairs access to healthy food and water.

>> Climate change undermines human health, worsening social and economic i Ad 1 of 1 (0:20)

>> Rising sea levels harm infrastructure and island economies.

>> With climate change comes increased fire risk, severe droughts and ocean c
ocean ecosystems.

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>> Climate change can increase vector-borne diseases. Higher temperatures result in heat-related illnesses, increases in hospitalizations and deaths.

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>> Indigenous knowledge systems are central to the resilience of island communities amidst the changing climate.

Source: *Fifth National Climate Assessment*



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