GUEST ESSAY

Why Didn't Hawaii Evacuate Sooner During the Fires?

Aug. 19, 2023

By Costas Synolakis and George Karagiannis

Dr. Synolakis is a professor of engineering at the University of Southern California. Dr. Karagiannis a disaster resilience consultant in Europe.

Sign up for the Opinion Today newsletter Get expert analysis of the news and a guide to the big ideas shaping the world every weekday morning. Get it sent to your inbox.

Hawaii has one of the most sophisticated tsunami warning systems in the world, fine-tuned over the course of almost 80 years, ever since 1946, when a 55-foot wave hit the island chain, killing 159 people.

For decades, tsunami evacuation maps have appeared in every Hawaiian telephone directory. Signs have alerted beachgoers of the hazard zones; others identified escape routes. The state now has an emergency alert system for all disasters that not only relies on sirens, which get tested on the first working day of every month everywhere in Hawaii, but also on radio and TV broadcasts. It is a system designed to save lives when disaster is about to strike.

And yet, somehow, the fire that ravaged Maui last week seem to have caught the island unawares. For a place so experienced in careful preparation for disaster, the death toll is incomprehensible. More than 111 people have lost their lives in what is now officially the deadliest wildfire in the United States in more than a century. As cadaver dogs sweep the burned area, officials fear how high the number of fatalities will rise. Possibly 1,000 people, or about 8 percent of the population of Lahaina, which was overrun by flames, remain unaccounted for.

Was this catastrophe preventable? Independent investigations will tell us what precisely went wrong. But there is no question that had there been better planning and a timely warning, lives could have been spared.

While Hawaii has a warning system that includes sirens, it was never fully activated. The administrator of the Maui Emergency Management Agency, who resigned Thursday, said this week that he chose not to activate the siren network for fear of sending people toward the flames, and that looking back, his agency wouldn't do anything differently, calling its efforts "the best response we could've done."

> **Climate Forward** There's an ongoing crisis — and tons of news. Our newsletter keeps you up to date. Get it with a Times subscription.

We do not agree. If the agency doesn't do things differently in a similar disaster in the future, the outcome will be just as ghastly.



 ${\it Patrick~T.~Fallon/Agence~France-Presse--Getty~Images}$

So far, it appears that the Maui wildfire quickly got out of control in part because of a combination of high winds, dry vegetation and firefighting resources spread thin across several simultaneous blazes. Brush fires around Lahaina have been a relatively frequent occurrence in recent years, and they might have lulled local authorities into thinking that there was time to control the fire before evacuations were warranted.

As fires broke out in different parts of Maui on Aug. 8, broadcast emergency messages and social media posts from the county provided updates, alerts and evacuation calls for some areas. But some were apparently released late. A major road was closed because of a flare-up around 3:30 p.m. Maui County's Facebook page didn't announce the road's closing until 4:46 p.m.

Maui officials said text alerts were sent out, but it's unclear how many people received them (power and cellular disruptions may have prevented residents from getting these alerts). Some tourists in Lahaina have said that at 4:17 p.m., there was an emergency alert to their cellphones for the first time informing them of the fire. Many local residents have said that they didn't know the flames were approaching until the fire was nearby. We know from New York Times reporting that by 5:19 p.m. the fire had reached the waterfront, and that by 5:33 people were seeking shelter in the water.

If the text alerts were sent out at 4:17 p.m., that was at least 47 minutes too late. It appears that the evacuation order for the entire area was not issued when the road was closed or soon after. Wasn't anyone thinking of the possibility of a runaway fire with no air support because of strong winds? According to a Facebook post by the County of Maui, a fire first reported at 6:37 a.m. east of Lahaina on the same day prompted evacuation orders in that area three minutes later.

Fires spread at rates dependent on vegetation, slope and wind conditions, but the way this one appears to have spread from the road to the beach was not an anomaly. In Mati, Greece, in 2018, a fire took about half an hour to cover one-half mile. The conditions there were similar to Maui's, with very strong winds descending from the local mountains and pushing the fire forward. In Mati, there was no warning; 104 people died and roughly another 800 were trapped by the beach and had to be evacuated from the water. With an alert system, those lives might not have been lost. It was another tragedy that could have been prevented.

Scientists have warned time and again that we have yet to see the end of fires like the ones in Lahaina and Mati as climate change and extreme weather create riskier conditions. But it is unreasonable to expect any single state or local fire service to be able to mobilize the resources to battle a fire without help from the outside world. What's worse, these incidents often happen simultaneously. On Maui alone, firefighters were battling fires near Makawao and Kula when the Lahaina fire erupted, leaving the ranks depleted.

Islands are at a particular disadvantage because of their insularity: Reinforcements have to be flown in and may take too long to arrive. But there is a better way. Europe has had some success in recent years prepositioning firefighters in high-risk areas, like the Greek islands, during the hottest and driest summer months. Hiring seasonal firefighters has also helped some communities there and elsewhere prepare. Hawaii, with help from the federal government, could improve its firefighting resources in these ways, too.

Administrators can also do more to anticipate the worst-case scenarios and plan for the aftermath, using technology and real-time simulations for evacuations. With enough practice, they can improve their response times and decision making, just as they have for tsunamis so they're better prepared for episodes when every minute counts. These tools can also be used to calculate how much shelter and disaster relief will be needed.

Emergency management is the business of saving lives, and this is why planning ahead for the worst but realistically possible situations is so crucial, particularly as we brace for the full impact of climate change. It was not raining when Noah built his proverbial ark. But if all else fails, you warn people and you evacuate them.

Costas Synolakis is a professor of engineering at the University of Southern California, and George Karagiannis is a disaster resilience consultant in Europe.

The Times is committed to publishing a diversity of letters to the editor. We'd like to hear what you think about this or any of our articles. Here are some tips. And here's our email: letters@nytimes.com.

Follow The New York Times Opinion section on Facebook, Twitter (@NYTopinion) and Instagram.