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The Fire in Maui and the Lesson of Greece

Athens learned the lessons of a 2018 blaze that killed 104. In Rhodes last month, only one person died.

By Costas Synolakis

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Firefighters put out a pocket of fire still burning in a neighborhood destroyed by a wild fire in Lahaina, Hawaii, Aug. 11. PHOTO: ETIENNE LAURENT/ZUMA PRESS

What went wrong in Maui? Last week a fire burned the historic city of Lahaina to the ground and killed at least 93 people, the deadliest U.S. wildfire in more than a century. Some local politicians have called the fire the worst natural disaster in Hawaii's history, and compared it with the 1960 tsunami in Hilo, although a 1946 tsunami in Hilo, caused by an earthquake in Alaska, killed 158.

Critics are questioning the emergency response and the effectiveness of evacuations. As in other disasters, comparisons with practices elsewhere are helpful and provide perspective.

Consider Rhodes, Greece, an island roughly the same length and width as Maui. Its economy depends almost entirely on tourism, with about 2.5 million visitors in 2022, about the same number as Maui. Maui is a typical tropical Polynesian island; Rhodes is subtropical, and by Eastern Mediterranean standards, quite wooded and wet.

Last month several fires broke out in Rhodes, and there were big differences in crisis management. In Maui, about 11,000 tourists were evacuated, mainly from two locales. In Rhodes, between 20,000 and 30,000 people were evacuated from 12 locales in a single day. The fires in Maui burned for two days, in Rhodes for about eight. In Rhodes about 1,500 were evacuated from beaches, in Maui fewer than 20. In Rhodes, local residents, the Red Cross and Greek Civil Protection delivered humanitarian supplies to evacuees. In Maui some survivors reportedly had to buy their own mattresses and pillows.

In Rhodes there was only one casualty, a volunteer firefighter. There were evacuation orders from the Greek emergency communications service, known as 112. In addition to being a single emergency number like 911, the 112 service encompasses a national integrated public alert and warning system, which provides emergency information to the public through mobile and landline telephones. The service doesn't require an app or subscription; the messages go to all cellphones in an area at risk, in Greek and in English.



Firefighters operate during a wildfire in Vati village, Greece, July 26. PHOTO: DAMIANIDIS LEFTERIS/SHUTTERSTOCK

In Maui, many people didn't receive timely warnings from the local system, which "relied on a series of sometimes confusing social media posts," according to the Associated Press. Some survivors have reported receiving no warning messages before the fire reached them, while others said messages appeared and then disappeared from their mobile phones and they couldn't find instructions. In a state that rolled out sirens and emergency alerts for tsunamis more than 60 years ago, and where sirens are tested every month, there were reportedly no sirens in the melee that followed the fire and the power and communication outages.

Emergency personnel have reported that it was impossible to foresee the combination of strong winds, a fire advancing within minutes in a densely populated area with few escape routes, and possible sparks from power lines.

Compare what happened in Lahaina with another Greek fire, in Mati, in 2018. Photos of the disasters are eerily similar. In both cases, apparently winds descended from the mountains with speeds up to about 60 miles an hour in Mati and 80 in Lahaina. In Mati, the fire took about half an hour to spread about half a mile from the nearest highway east of the town to the sea. There was no warning, and 104 people were killed. In Lahaina, there was some semblance of warning, and the fire took a bit less time to spread about a quarter-mile from the local highway, west toward the beach. In both cases, firefighting resources were spread thin, as responders were fighting other fires.

In Mati, the fire took two hours to spread from where it started to the nearest beach. In Maui, it is still unclear. In Lahaina all of its about 1,800 buildings completely burned; in Mati, fewer than 300 did. In both places, people were burned in their cars, in Mati some because of flawed crisis traffic management that directed drivers to the inferno, while in Lahaina possibly because of delays in evacuation and confusion.

Similar conclusions could have been drawn from the Camp Fire in Paradise, Calif., in 2018, as [argued](#) in these pages. There are no obvious excuses yet for not foreseeing the consequences of a fire attacking Lahaina, with descending strong winds in dry conditions. It was a worst-case scenario, and one that had played out elsewhere in the world, with deadly consequences.

After the Mati fire, in which 104 people died, I led a group of U.S., Japanese and Greek scientists in running fire- and evacuation-simulation models. It was clear that there would have been enough time to evacuate the entire population of the hamlet, had there been warning. Our study led the rollout of the revamped 112 service in spring 2020 in Greece, saving hundreds of lives.

Preventing or mitigating such disasters will require advanced technology to detect fires (some already in trials in California), improved emergency alert systems with fast projections of fire spread and intensity, better first responses, forest management that adapts to changing weather conditions, and analysis of the lessons from other catastrophic fires around the world.

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