

Wildfires: a call to action

Summer or dry season wildfires are an annual occurrence in many parts of the world and are a natural part of some ecosystems. However, the sheer number and scale of wildfires and the devastation wrought in some regions has shocked many this year. Record-breaking temperatures and long, severe droughts have created the conditions for exceptional wildfires in parts of Mediterranean southern Europe and North Africa, including in Greece and the Spanish Canary Islands, where fires have destroyed homes and displaced thousands of people. Heat and prolonged drought have driven the most extensive wildfire season in Canada for decades. As of August 21, 2023 there were more than 1000 active fires across Canada and more than 15 million hectares of land has burned so far this year. The Pacific Northwest region of Canada has been very badly affected, with tens of thousands of people requiring evacuation. In the US, the tragic wildfires on the Hawaiian island of Maui were the deadliest seen in a century. More than 100 people are thought to have lost their lives in the Maui wildfires, which also destroyed more than 2000 buildings in the historic city of Lahaina and caused an estimated US\$ 5.5 billion worth of damage.

The impacts of wildfires extend beyond the immediate toll on human life and property. Severe wildfires can increase rates of water runoff of a landscape, increasing the risk of erosion, and affecting local water quality. Wildfires can reduce air quality and damage respiratory health hundreds of miles from their source. In June, for example, smoke from wildfires in Quebec brought substantially reduced air quality as far south as New York City. As Dana Rose Garfin writes in this issue, wildfires can also impact mental health over long distances, by creating climate anxiety. Fires can damage or erase communities, as in Maui, and jeopardize livelihoods from tourism or agriculture, as in the Spanish and Greek islands. These exceptionally large, fast-moving, and long-lasting wildfire events also have an enormous destructive impact on nature killing and displacing wildlife, clearing plant life, and destroying habitats.

Questions must, rightly, be asked and investigations take place into the existing wildfire preparedness efforts and emergency plans in those regions that have been affected by intense wildfires this year, and in other high-risk regions. There will no doubt, correctly, be

calls to look at adaptation and how communities can be better prepared for increased wildfire risk through better land management, fire safety awareness, building regulations and maintenance guidelines, and emergency warning and fire-fighting systems. Future research could also be directed at improving the monitoring and modelling of the transboundary health effects of more frequent wildfires such as air pollution and at adapting public health strategies accordingly. However, it is also vital that these calls for adaptation do not detract from the equal need for climate change mitigation.

A shifting of fire seasons and increased risk of more intense wildfires as the globe warms have long been predicted by climate scientists. In some regions, factors like land management that has suppressed fires, causing fuel wood to build up over time, have increased the potential for rapid-spreading, uncontrollable fires but longer dry seasons, higher peak annual temperatures, and more frequent heatwaves caused by anthropogenically-driven climate change will likely be the leading factors shaping future global fire regimes. In our already warming world, we expect the higher risk of intense wildfires to become a much more common feature of summers in many regions. Wildfires in recent years are a warning of the impact that unchecked anthropogenic climate change might have, given the effects of the 1.1°C of global warming seen so far. The climate impacts that the world is already experiencing should reinforce the urgency and necessity of averting a global average temperature rise of more than 1.5–2°C; the internationally agreed goal of the 2015 Paris Agreement.

The twin to climate denialism is doomism. Scientists, politicians, and activists need to be prepared to offer hope to counter a potential narrative of hopelessness around increasing disasters like wildfires and not just hope that society can adapt to absorb climate change impacts, but a reminder and reassurance that mitigating climate change, through actions like reducing greenhouse gas emissions, is a safeguard against potentially much worse outcomes.

■ *The Lancet Planetary Health*

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For more on the **active fires across Canada** see <https://www.ciffc.ca/>

For more on the **Maui wildfires** see <https://www.reuters.com/world/us/how-did-hawaii-wildfires-start-what-know-about-maui-big-island-blazes-2023-08-11/>

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