

Study: Homeowners' cultural traits should be considered when promoting wildfire mitigation efforts

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People's cultural worldviews play a part in how they respond to wildfire risk, and should be taken into account in efforts to get homeowners to engage in pre-fire mitigation efforts such as adjusting landscaping and preparing an evacuation plan, an Oregon State University study found.

The study tapped into participants' cultural worldviews and perception of risk to help predict which communication strategies work best to convince different types of people.

"There's going to have to be multiple different avenues to reach people to get them to engage in pre-fire mitigation," said study author Erika Allen Wolters, an assistant professor of political science in OSU's College of Liberal Arts. "Our identities are not monolithic; our experiences are what comprise our understanding of risk and our willingness to engage in risk mitigation."

For the study, OSU's Oregon Policy Analysis Laboratory conducted a survey in Deschutes County, Oregon, in spring and summer of 2021. It was completed by 458 households located in the wildland-urban interface, the transition zone between wilderness and developed land.

About one-third of housing in the lower 48 states of the U.S. now lies in the wildland-urban interface, where they are more susceptible to wildfires, prior research has found.

The OSU survey asked participants about their experience with wildfire near their homes; the probability of a fire occurring near their home in the near future and their level of concern about it; and whether their home was under any neighborhood or zoning rules regarding fire-safe landscaping or building materials.

It also asked participants if they engaged in pre-fire mitigation activities, such as planting fire-resistant plants, cleaning gutters to limit wildfire fuel, preparing a home evacuation plan or seeking out information from local organizations on how best to prepare for wildfire.

The survey included questions meant to determine participants' dominant cultural traits, dividing them into four groups: egalitarian, fatalist, hierarchical or individualist. Cultural theory holds that hierarchical and egalitarian people are more likely to act collectively, while individualist and fatalist people are more likely to act independently.

For two of the cultural trait groups, participants' traits were significantly related to their responses regarding wildfire risk and mitigation.

On each of the 11 pre-fire mitigation efforts listed in the survey, egalitarians were the most likely of the four groups to engage in the activity. Fatalists reported doing the least mitigation behaviors.

These results are not surprising in the context of cultural theory, Wolters said. Egalitarians are risk-averse and more likely to recognize how their efforts could benefit both self and community, and more likely to want to protect the environment. Conversely, fatalists view risk as unpredictable and outside their control, so they are less likely to engage in mitigation.

"The takeaway with the cultural theory is thinking about how we adopt policies that would reach out to those worldviews in different ways. For example, individualists would be more inclined to engage if there are market-based incentives for doing the work, and egalitarians and hierarchical people are more responsive to community messaging," Wolters said.

Across the board, official policies also made a significant difference in people's level of engagement, she said. People were more likely to participate when building codes or neighborhood associations mandated certain wildfire mitigation activities.

Demographic factors were significantly predictive, as well: Women were more likely than men to engage in home planning and home protection activities, while younger adults were more likely to engage in home protection activities compared with older adults.

“There’s not going to be one right thing that’s going to work for everybody,” Wolters said. “We need a combination of appeals and ways we can incentivize people.”

She pointed to recent Oregon legislation aimed at improving the state’s wildfire preparedness, which includes efforts to build fire-adapted communities, as an avenue where policymakers might consider a variety of approaches to capture more people’s attention.