

Facing floods, non-white homeowners prepare, protect property

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In flood-prone areas of New York state, non-white homeowners are more likely than white homeowners to take active, sometimes-costly measures—such as finding a way to protect a furnace, a water heater or

installing a sump pump—to prepare for a possible deluge, according to a new Cornell study.

White respondents to a survey, the researchers learned, were generally more confident of better outcomes from dire situations and saw the possibility of a flood threat differently. Thus, people who identified as white took more low-cost actions to protect their property from flooding—but tended to stop short of expensive measures.

"Most of the time for people who live in flood-prone areas, flooding is not a top-of-the-mind worry," said John Zinda, assistant professor in the Department of Global Development, in the College of Agriculture and Life Sciences and first author of "How Homeownership, Race, and Social Connections Influence Flood Preparedness Measures: Evidence from Two Small U.S. Cities," published in *Environmental Sociology*.

"There are so many other things going on in our lives that for flooding—or any other kind of possible disaster—people often resist thinking about outcomes that are scary," Zinda said.

In partnership with the Hudson River Estuary Program, part of the New York State Department of Environmental Conservation, Cornell scientists surveyed residents of Troy and Kingston, New York—cities on the Hudson River that were affected by Hurricane Irene in August 2011.

The researchers sought to know why homeowners and renters adopted low-cost and high-cost flood protection measures. Understanding this behavior, the paper said, identifies ways to improve the disparities in flood vulnerability across communities.

Due to [global warming](#) and rising seas, towns along the Hudson River face changing—and worsening—flood regimes. Immediately after the Hurricane Irene flooding of Troy and Kingston, residents showed

heightened awareness, but cognizance and protective action waned over time, as research commonly finds in disaster-affected communities.

In the survey, race and homeownership status—as well as previous experience in a flood and involvement in community groups—shaped a person's preparedness.

Mortgage holders who have had experience with floods understandably are the most likely to take protective measures. People who own their homes outright—along with renters—take the fewest high-cost measures, according to the paper.

The researchers expected that racial privilege would result in households of white respondents showing higher levels of costly flood protection measures. That was not the case. Instead, [white respondents](#) took on more low-cost protective measures, such as simply making sure that important documents, like passports and birth certificates, could be easily rescued.

Zinda said that homeowners with mortgages who live in Special Flood Hazard Areas, where the Federal Emergency Management Administration has estimated a 1% or greater annual chance of flooding, are required to purchase flood insurance. Learning about this requirement, the homeowners are more likely to know they reside in an area with high flood risk. That 1% annual chance equates to a greater than one-in-four probability of a house [flood](#) over the course of a 30-year mortgage.

"The big challenge for a city's emergency managers," said Zinda, who is a faculty fellow with the Cornell Atkinson Center for Sustainability, "is to make sure that residents are aware of a risk and taking measures to address it at a reasonable cost."

Research on a variety of dangers and risks, he said, "generally finds that women and people of color are more likely to express higher levels of concern about hazards like flooding. And researchers expect that concern to translate into action—sometimes high-cost action—for measures that are not easy to do."

More information: John Aloysius Zinda et al, How Homeownership, Race, and Social Connections Influence Flood Preparedness Measures: Evidence from 2 Small U.S. Cities, *Environmental Sociology* (2023).

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