

Study finds disproportionate minority populations in heat-prone areas

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BY ALYSSA NEUMANN | STAFF

African Americans, Asians and Hispanics are more likely to experience extreme heat waves because of where they live, according to researchers at UC Berkeley.

UC Berkeley researchers Bill Jesdale, Rachel Morello-Frosch and Lara Cushing published the study Tuesday in *Environmental Health Perspectives*. Using U.S. census data and satellite imagery, the researchers found that heat-prone neighborhoods without tree canopy and surrounded by hard surfaces like cement were disproportionately populated by African Americans, Asians and Hispanics.

The study found that African Americans were 52 percent more likely than Caucasians to live in neighborhoods that were “urban heat islands” — microclimates that cause their environments to be slightly hotter than areas with trees — while Hispanics were 21 percent more likely and Asians 32 percent more likely.

“There is a lot of literature and a lot of evidence that shows in the U.S. how low-income communities of color are disproportionately burdened by pollution and have less access to environmental amenities,” Cushing said. “We are concerned that disadvantaged populations might be at greater risk because of climate change.”

Researchers say the findings highlight racial disparities between different neighborhoods during a time when some experts say climate change is increasing the frequency and intensity of heat waves.

Incidents of extreme heat are responsible for about one in five natural hazard deaths, and studies of extreme heat have shown large racial disparities in heat-related deaths, the study says.

Cushing said the lack of tree canopy and number of impervious surfaces like sidewalks, roofs and driveways in such neighborhoods trap heat and can actually create “urban heat islands.”

Diana Almanza Camarena, an East Oakland community organizer with Communities for a Better Environment, a California-centered environmental justice organization, said that the study confirms the conditions she sees when organizing in communities of color.

“You’ll see no trees for the entire stretch of a whole block,” Almanza Camarena said. “(The study) definitely sheds light on the fact a lot of these communities are suffering disproportionately. (They) don’t have a lot of greenery. There is a lot of industry, not trees and not community spaces — like parks, for example.”

Morello-Frosch said the findings reveal the residential segregation of communities of color on a national scale.

The researchers looked at 304 metropolitan areas across the United States, including more than 63,000 census tracts. Some of the most pronounced racial and ethnic disparities were in the midwestern, northeastern and southern parts of the country, Morello-Frosch said.

Many of these communities have the least resources — like access to air conditioning — and therefore need more aid in protecting their families against heat-related illnesses.

“Not everyone is equally protected,” Cushing said. “We need to make sure that (these communities) are getting the resources and the attention needed. Those who are exposed to more heat risk-related cover are often least able to protect themselves, so it is kind of a double jeopardy.”

Researchers suggested that to minimize heat risks in neighborhoods, city planners can plant more trees, paint roofs white and use pavement surfaces that absorb less heat.

“These social equity issues are going to have to be taken into account if we are going to protect the most vulnerable populations,” Morello-Frosch said.

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