

Unequal Heat Exposure

Climate Ready City

Healthy City



Climate Issue: Urban Heat

- Heat-related mortality causes 1,500 deaths across the United States each year
- Besides death, urban heat causes short-term and long-term negative health impacts
- Extreme heat events also lead to lost worker productivity and decreased learning
- Marginalized groups in urban areas shoulder a greater heat burden than non-marginalized groups, both generally and during heat events
- Understanding large-scale heat patterns can help leaders strategically fund solutions that save lives.

The Need for Action: Heat Inequities

Extreme heat is experienced inequitably between different demographic groups and across multiple climate zones in the United States. The science shows that:

- Residents of color face higher temperatures than white residents in 169 out of the country's 175 largest cities
- Poor residents tend to experience greater heat than richer residents
- Young (<5 years) and elderly (>65 years) residents of color are **particularly burdened** by heat
- Heat inequity is most pronounced in the Midwest and Northeast regions

There is an urgent need to strategically direct resources to protect these demographic groups from extreme heat.

Time is of the essence: Scientists predict heat inequities to worsen due to urbanization, aging populations, and climate change.

Heat Planning: An Urgent Task

- Most cities are **not considering the spatial location of vulnerable groups** when deploying resources for heat mitigation
- This must change in order to maximize the positive effects of cooling strategies, and to protect our most vulnerable citizens.



Baltimore: one of the 169 major US cities where residents of color face unequal heat

IN A NUTSHELL

- In 169 out of the 175 largest cities in the continental United States, people of color are unequally burdened by heat
- Poor residents also face hotter temperatures than rich residents
- Nationwide, city leaders must consider these marginalized communities when pursuing heat mitigation planning.

WHAT CAN YOUR CITY DO?

ASSESS how heat exposure varies across different neighborhoods

DEVELOP action plans that consider equity and help vulnerable age groups access resources during extreme heat events

PRIORITIZE investment in emergency services and cooling amenities in marginalized communities

AMEND the city general plan to pursue long-term equitable development.

To find out how your city can address urban heat inequality, email **Professor Angel Hsu** at angel.hsu@unc.edu. Fact sheet based off Hsu, A., et al.(2021). Disproportionate exposure to urban heat island intensity across major US cities. Nature Communications. 12(1). <https://doi.org/10.1038/s41467-021-22799-5>.