IDEAS CLIMATE CHANGE

The Critical Role Trees Play During Heat Waves

6 MINUTE READ

People enjoying a summer afternoon in Rittenhouse Square in Philadelphia, Penn. Matthew Lovette—Jumping Rocks/Universal Images Group/Getty Images

BY **CARLOS CLAUSSELL VELEZ** JULY 9, 2024 11:46 AM EDT

Velez serves as Manager of Climate and Environmental Justice at World Wildlife Fund (WWF) and former vice-chair for Philadelphia's Environmental Justice Advisory Commission. For over 10 years he has worked with partners from every sector of society to advance climate justice and

IDEAS

My two-year-old is too young to know about climate change. He doesn't understand what an "urban heat island" is either. He just knows that his

papa keeps saying “No” because it's too hot out to go to our local park in Point Breeze, South Philadelphia, which lacks the shady tree cover found in other neighborhoods. As we head home, and he's in full melt-down, pointing over my shoulder and repeating “*Pahk! Pahk!*” in that plaintive voice that breaks my heart, the father and environmentalist in me deeply worries about extreme heat and how it will affect my son’s generation.

You may have never heard the term “urban heat island,” but you can probably guess its meaning—especially if you live in a city. Modern cities have become concrete jungles with buildings, roads, and other infrastructure absorbing and retaining heat; when these urban areas “lack nature” like trees and green spaces, residents can’t benefit from tree shade and evapotranspiration, the process by which plants release water vapor that cools the air, bringing down temperatures. Extreme heat caused by climate change exacerbates this issue, making it a public health crisis.

Read more: *The Quiet Work Trees Do for the Planet*

But just how much of a difference do trees make? Studies show the temperature in urban areas can differ from 12-18°F between the hottest and coolest neighborhoods—and much of that variation is due to differences in tree cover and green space. As heat waves become more frequent and intense, an increase of 18° can be the difference between life and death. Heat-related illnesses such as heat stroke and dehydration pose a serious threat to vulnerable populations like the elderly and those with pre-existing health conditions. In 2023 alone, extreme heat exposure was responsible for over 2,300 deaths across the U.S., the highest in a half-century.

Dig deeper into this growing public health crisis and you'll also find a crisis of environmental justice, with the haves and the have-nots splitting along familiar lines. Predominantly white and affluent neighborhoods tend to have more trees, while historically marginalized and underserved communities have significantly less. This disparity exacerbates inequities in health outcomes, with poorer air quality and higher heat vulnerability in areas with fewer trees. It also means higher energy costs, imposing another financial burden on

already cash-strapped communities, as well as higher rates of violent crime, as higher temperatures can increase incidences of aggression and irritability.

Climate impacts have always disproportionally impacted minority populations, from Black and Brown communities that lack sufficient infrastructure and insurance to cope with increasingly frequent and extreme storms, to Indigenous tribes that depend on fish stocks threatened by ocean acidification. Extreme heat exposure is one of the most immediate and deadly impacts of climate change, however, and once again communities of color are taking the brunt of it. In Philadelphia and elsewhere, that 18° difference between neighborhoods can be linked to redlining, which has systematically denied services and investments to neighborhoods predominantly inhabited by racial minorities, leaving these areas with inadequate green spaces.

Nature can be our ally in helping people adapt to an increasingly inhospitable climate. We need to rethink how we develop our cities and the built environment. It's not just about planting more trees; it's about integrating nature-based solutions into our urban planning. This includes some obvious steps like creating more parks and community gardens, but it also includes

innovative methods like green roofs and walls. These structures, which are partially or completely covered with vegetation, help filter out pollutants, improve insulation, reduce energy costs, absorb rainwater to reduce runoff and enhance biodiversity in urban areas.

Local initiatives, like Philadelphia's Beat the Heat campaign and the Philly Tree Plan, which received $12 million in federal funding for urban forestry, aim to increase tree cover in areas that need it most. Other cities, such as Miami-Dade, have appointed Chief Heat Officers to implement strategies like increasing tree canopy, creating cool roofs and developing public awareness campaigns about the dangers of extreme heat. By learning from these initiatives and scaling them up, we can create healthier, more resilient and more equitable cities.

We also need to extend protections to people who put their lives on the line in the scorching heat to keep our economy running. Those who work in construction or on farms—two professions disproportionately comprised of people of color—are many times more likely to die from heat-related illnesses than the average person. Providing basic improvements like paid rest breaks

and more access to water and shade would be huge benefit to these essential workers, yet just a few months ago Florida Gov. Ron DeSantis signed a law that prevents cities and counties from doing exactly that. My message to our elected leaders is simple: a bit more empathy—and a lot more trees—can save lives.

Finally, community involvement in planning and implementation is essential, not just because it's the fair thing to do, but because it increases the chances that solutions are effective and stand the test of time. A study conducted last year by some of my colleagues at World Wildlife Fund (WWF) found conservation efforts that incorporate the views and values of local communities result in better outcomes—for people and nature. When we take the time to build trust, recognize communities' personal stake in the issues we're working to solve, and tap into their wisdom to ensure that these initiatives stand the test of time, we sow the seeds for lasting, large-scale change that benefits everyone.

A few nights ago, right before I put my son to bed, we read a children's book about the life of Wangari Maathai and how she inspired the women of Kenya to plant over 30 million trees to protect their communities. The first African

woman to win the Nobel Peace Prize, Wangari encouraged us to start by planting 10 trees each and getting involved with local initiatives that help our communities. We can tackle the urban heat islands that disproportionately impact people of color. Our neighborhood's park doesn't have to be hotter, dirtier, and deadlier than another one just a few neighborhoods over.

By investing in green spaces and planting more trees, we help build a future where healthy, happy children from all walks of life can enjoy the simple joy of playing in the park.

- The Rise of the **Thirst Trap Villain**
- Why So Many **Bitcoin Mining Companies** Are Pivoting to AI
- The 15 Best **Movies to Watch on a Plane**
- Get Our **Paris Olympics Newsletter** in Your Inbox

CONTACT US AT LETTERS@TIME.COM

▶ Discover