



Killer heat: US racial injustices will worsen as climate crisis escalates

Exclusive: new research shows how black and brown neighbourhoods will be hit hardest by global heating

Supported by

**WE MEAN
BUSINESS**
COALITION

Your privacy

California residents have certain rights with regard to the sale of personal information to third parties. Guardian News and Media and our partners use information collected through cookies or in other forms to improve experience on our site and pages, analyze how it is used and show personalized advertising.

At any point, you can opt out of the sale of all of your personal information by pressing

[Do not sell my personal information](#)

You can find out more in our [privacy policy](#) and [cookie policy](#), and manage your choices by going to 'California resident – Do Not Sell' at the bottom of any page.



Heatwaves have been occurring more frequently since the mid-20th century, and there's mounting consensus among climate scientists that dangerous bouts of high temperatures and humidity will become substantially more common, more severe, and longer-lasting without adequate action to curb global heating.

Now, new data provided exclusively to the Guardian by the Union of Concerned Scientists (UCS), reveals:

Killer heat is already affecting communities unequally: between 1971 and 2000, US counties with more than 25% black residents endured an average of 18 days with temperatures above 100F (38C) compared to seven days per year for counties with fewer than 25% African Americans.

By mid-century if Paris climate accord targets are not met, US counties with larger black populations will face a staggering 72 very hot days a year on average - compared with 36 days in counties with smaller African American populations, according to the UCS.

Latin communities also suffer disproportionately: historically, counties with more than a 25% Hispanic/Latinx residents experienced 13 days very hot days a year, rising to 49 by mid-century if greenhouse gas emissions are not curtailed.

"The significantly higher exposure to extreme heat is an artefact of where black people tend to live in the US which is a legacy of slavery," said senior climate scientist Kristina Dahl, who conducted the county divide analysis for the Guardian.

The findings come as the Guardian launches a series this week, Climate countdown, on the implications of Donald Trump's decision to take the US out of the Paris climate accord on 4 November, one day after the presidential election.

Dahl added: "Even if rapid action is taken to limit the future temperature rise to 2C, the US can expect a significant increase in the frequency of extreme heat which will affect people of colour most severely as a result of systemic racism. If we blow past that target, the increase and the disparities will be enormous. Extreme heat is a climate justice issue."

Paris matters

Official figures show that this year is on track to be at least the second hottest on record, though some scientists warn that 2020 could even beat 2016.

Meanwhile coronavirus cases are soaring in much of the country amid sweltering temperatures that make life-saving protective face masks and stay-at-home orders difficult to comply with, and life-saving heat mitigation measures like public cooling centres and swimming pools difficult to provide.

Trump's decision to withdraw from the Paris agreement triggered widespread international condemnation because failing to reduce greenhouse gasses will have devastating consequences on every aspect of life including our ability to work, study and play.

By mid-century, a third of America's 481 largest cities will endure temperatures above 105F (40.5C) on at least 30 days a year - a rise from just three cities historically (El Centro and Indio, California, and Yuma,



Tucson, Arizona at sunset on 26 August 2019. Photograph: Cassidy Araiza/The Guardian

By the end of this century, this would rise to 60% of cities, which is the equivalent of 180 million Americans at risk of potentially fatal complications caused by heatstroke and heat exhaustion. In this scenario, children wouldn't be able to play outside and farmers would struggle to get crops to market.

Agriculture, an industry which depends on cheap migrant labour, many workers, especially undocumented migrants, already often lack access to crucial mitigation measures such as regular breaks, shade, medical services, adequate clean water and health insurance.

The Covid-19 pandemic is hitting people of color and native communities hardest, and Dahl's new analysis adds to a growing body of evidence linking systemic racism to the disproportionate impact of the climate crisis, including extreme heat.

Heat islands

In US cities nationwide, heatwaves disproportionately affect underserved neighbourhoods thanks to the legacy of discriminatory housing policies denying home ownership and basic public services to people of colour, according to research published in *Climate* earlier this year.

This is the result of streets where people of colour lived being graded as "hazardous" starting in the 1930s - otherwise known as redlining - which were then denied a whole range of public and private services including banking, healthcare and parks, while being earmarked for environmentally toxic projects such as landfills and chemical plants.

Urban heat islands - characterised by abundant heat-trapping structures such as housing projects and asphalt car parks, and inadequate vegetation - are up to 12.6F hotter than non-redlined neighborhoods in the same city.

In Minneapolis, where the police killing of George Floyd triggered nationwide anti-racism protests, the average daytime summer temperature has risen 2.3F since the 1970s; at night it's up by 4.3F, according to Climate Central. The number of above-average hot days is up by 25% over the same period.

As with police brutality, racism also dictates exposure to deadly heat. In Minneapolis, former redlined neighbourhoods, where mostly low-income people and people of colour still live, are almost 11F hotter - the third-largest temperature disparity after Denver and Portland.



Protesters march towards the barricade of the George Floyd Memorial in Minneapolis, Minnesota after marching 8 miles over 5 hours in 95F (35C) heat. Photograph: Chris Juhn/Zuma Wire/Rex/Shutterstock

It's not just the lack of trees and parks, access to economic resources to mitigate the harmful, potentially fatal impact of extreme heat such as air conditioning, cinema tickets, and even bus fare to reach a mall, is also inequitable, studies show.

In 2016, the net worth of a typical white family was \$171,000 - almost 10 times greater than that of a black family, according to the Brookings Institution.

Meanwhile, underlying health and environmental hazards which more commonly affect people of colour such as air pollution, diabetes, obesity and high blood pressure, also increase the risk of heat-related illnesses.

School performance

On very hot days, students struggle to learn as a result of heat-induced physiological changes. As the temperature climbs, children in schools without adequate air conditioning perform worse in tests.

In one recent nationwide study, using data from over 12,000 schools and 10 million middle- and high-school students, researchers found that a 1F hotter-than-average academic year reduces learning by about 1%.

But the effects of heat on learning are more pronounced for black and brown students and those living in poorer neighborhoods, because air conditioning - like other essential school infrastructure - is locally

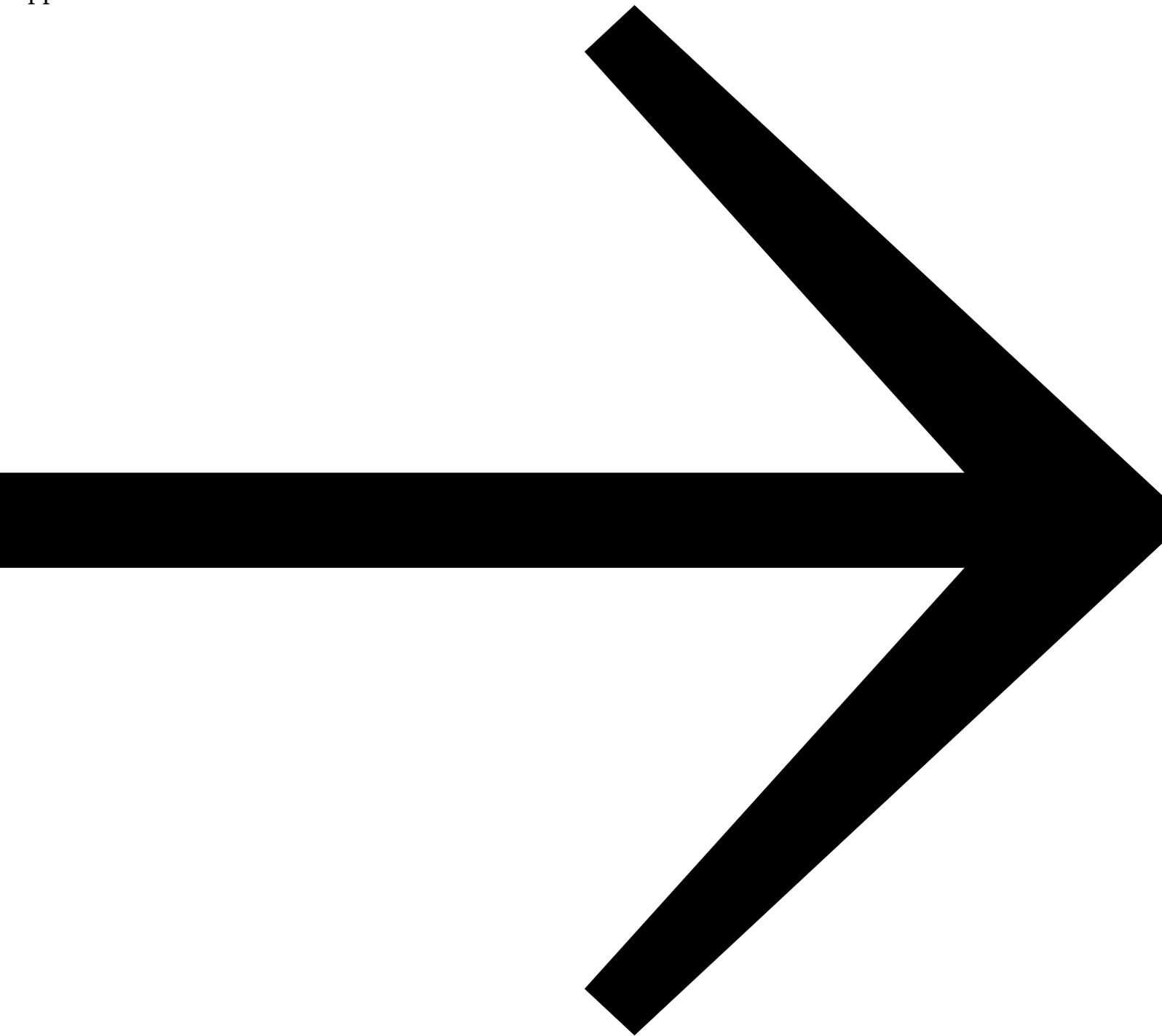
... the US withdraws from the Paris climate accord, on 4 November. Five years ago nearly 200 countries committed to a collective global response to tackle the climate crisis. But when Donald Trump took office he announced that the US would leave the Paris agreement. On the one issue that demands a worldwide response to help safeguard the Earth for future generations, the US has chosen to walk away. The president is playing politics with the climate crisis - the most defining issue of our time.

The stakes could scarcely be higher and with your help we can put this issue at the center of our 2020 election coverage. The election will be a referendum on the future of democracy, racial justice, the supreme court and so much more. But hovering over all of these is whether the US will play its role in helping take collective responsibility for the future of the planet.

The period since the Paris agreement was signed has seen the five hottest years on record. If carbon emissions continue substantial climate change is unavoidable. The most impacted communities will also be the most vulnerable. Instead of helping lead this discussion the White House prefers to roll back environmental protections to placate the fossil fuel industry.

High-quality journalism that is grounded in science will be critical for raising awareness of these dangers and driving change. Because we believe every one of us deserves equal access to fact-based news and analysis, we've decided to keep Guardian journalism free for all readers, regardless of where they live or what they can afford to pay. This is made possible thanks to the support we receive from readers across America in all 50 states. **If you can, support the Guardian from as little as \$1 - and it only takes a minute. Thank you.**





Remind me in September



Remind me in September

Email address

We will be in touch to invite you to contribute. Look out for a message in your inbox in September 2020.
If you have any questions about contributing, please contact us here.

Topics



- US news
- Climate countdown
- Race
- Inequality
- news