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Climate in the USA

Under the Heat Dome

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The recent heat wave in the Pacific Northwest shattered previous records for high temperatures. By the end of June, Seattle, Washington had hit 104F (40C), Portland Oregon reached 116F (46C), and Lytton, British Columbia, set and broke new records for the highest temperature in all of Canada, peaking at 121F (49C). The event offers another chance to reflect on the condition of our planet and the interconnections of our struggles.

The heat dome occurs because temperatures in the western Pacific Ocean have risen more in recent decades than in the eastern Pacific, creating pressure differences that cause more warm air to rise over the western Pacific, where the jet stream traps it under a high-pressure dome. [1] In case you were wondering-and since reporting may not have made explicit the seemingly obvious connection-Yes, this is an effect of climate change caused by releasing greenhouse gasses into the atmosphere through human actions like the burning of fossil fuels. [2]

Not only were such heat events predicted by climate models, but also scientists have gotten better at linking particular weather events to longer-term climate developments. [3] Our only planet is now trapping twice as much heat as it did 14 years ago. [4] Despite decades of warnings from the National Academy of Sciences, James Hansen, the Intergovernmental Panel on Climate Change, and other experts, we continue to see increases in use of fossil fuels and emissions of carbon dioxide. While heat waves and other variations in temperature have been part of normal weather, they are now hotter, longer-lasting, and occurring more often. In major US cities over the past 40 years, the frequency of heat waves has tripled, and their duration increased by over six weeks. [5] Moreover, the intensity of heat waves has increased by 3-5 degrees. [6]

But No, this is not the new normal, since the frequency and intensity of extreme weather will continue to increase rather than stabilize any time soon. [7] As for whether this heat wave is, as at least one report called it, a thousand-year event? [8] Only if you are looking at the past thousand years instead of the next thousand. [9] We are entering an era of tipping points and vicious cycles. Heat waves increase the likelihood of forest fires, which endanger watersheds as well as destroying trees that sequester carbon, thus releasing more greenhouse gasses. Air conditioners or vehicles used to escape the heat also contribute to warming the planet. [10] And so on.

Of course, like other extreme weather events, heat waves have been happening not just in the US but around the globe. In Siberia, north of the Arctic circle, temperatures recently reached 118F (48C); Jacobabad, Pakistan hit 126F (52C). [11] Those numbers are all the usual dry-bulb temperatures and take no account of humidity. Still more significant are temperatures measured with a wet cloth over the thermometer to take account of heat and humidity: a wet-bulb reading of 95F (35C) can be fatal within a few hours, even for fit, healthy humans, because the body can no longer cool itself by sweating. A recent study found that both Jacobabad and Ras al Khaimah, in the United Arab Emirates, have already had brief periods of reaching that deadly temperature, years ahead of the predictions of climate scientists.

Extreme heat can not only make demands on power grids that cause them to fail-itself potentially fatal to those dependent on machines for breathing or other health needs-but can also damage infrastructure. In Portland, light rail service shut down because of melting equipment. [12] In Washington, sections of the I-5 highway were closed because pavement buckled. [13] Most pressingly, though, heat is a health issue, even when less extreme than the fatal wet-bulb readings. The late-June heat wave in the Pacific Northwest led to hundreds of deaths. [14]

As with other consequences of climate change and other [consequences of capitalism](#), heat is also a matter of inequity and justice: not everyone experiences heat waves in the same ways, and the ill effects of heat impact most

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heavily those in already-disadvantaged groups. [15] Wealthy neighborhoods tend to have more tree cover and thus remain cooler, while those with fewer resources are also less likely to have air conditioning. The history of redlining, moreover, insures that these heat islands disproportionately affect people of color. [16] Similarly, those who are incarcerated and those who are houseless have fewer options for getting away from heat. [17]

Hot weather also has particular impacts for workers in some occupations. Research has confirmed the increasing risk of heat-related illness and death among construction workers. [18] During the June heat wave, Portland closed outdoor public pools after several lifeguards suffered heat illness; at least one farmworker in Oregon died of heat-related illness [19]; and workers in a Portland donut shop took strike action in response to inadequate air conditioning. [20] As the [Northwest Labor Press](#) has noted,

The Occupational Safety and Health Act of 1970 says employers have a "general duty" to provide a place of employment free from recognized hazards that may cause death or serious harm. But federal OSHA has never developed specific workplace protections addressing heat safety, despite the fact that worker safety experts have been pushing since the 1970s for a national rule to protect workers from heat stress.

While a few states have developed guidelines for addressing heat safety, most have not.

But workers and activists are addressing this and other of the related issues illuminated under the heat dome. For instance, the United Farm Workers are pressing for a new national heat regulation bill. [21] Climate [activists continue](#) campaigning for the provisions of a [Green New Deal](#), including the need for [green public housing](#), and continue working to stop fossil fuel infrastructure, including [Portland's Zenith Oil Terminal](#), Enbridge's new [Line 3 in Minnesota](#), and the [Appalachian Mountain Valley Pipeline](#). (Recent victories have included the termination of the [Keystone XL Pipeline](#), defeat of plans for a [massive fracked gas refinery in Kalama](#), Washington, and development of the [Portland Clean Energy Fund](#).) During the latest heat waves, not only local governments and social service agencies but also groups providing [mutual aid set up cooling stations](#). Such [mutual aid](#) groups can not only help ensure what the Black Panther Party called survival pending revolution-what we now might consider survival during climate turmoil-but can also help build organizing skills and community solidarity. We will continue to face increased heat waves-as well as [floods](#), [cold spells](#), and other [extreme weather](#) worsened by climate change, and we need to continue organizing to save each other and to create a more livable world.

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Source [Solidarity webzine](#).

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[1] National Ocean Service "[What is a heat dome?](#)".

[2] *Heated*, 22 June 2021 "[Why won't anyone ask why?](#)".

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- [4] Counterpunch, 28 June 2021 ["Lethal Heat Hits the Planet"](#).
- [5] GlobalChange.gov, ["U.S. heat wave frequency and length are increasing"](#).
- [6] Michael Wehner ["The effect of anthropogenic climate change on heat waves in the United States"](#).
- [7] Fourth National Climate Assessment ["Volume II: Impacts, Risks, and Adaptation in the United States"](#).
- [8] CBS News, 29 June 2021 ["Pacific Northwest bakes under once-in-a-millennium heat dome"](#).
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- [10] *The Guardian*, 29 August 2019 ["The air conditioning trap: how cold air is heating the world"](#).
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- [15] Yale Climate Connections, 29 July 2020 ["What is 'climate justice'?"](#).
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- [18] Wiley Online Library, 22 July 2019 ["Heat-related deaths among construction workers in the United States"](#).
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- [21] United Farmworkers, 1 August 2019 ["National Heat Regs"](#).