Climate crisis

Trump's 'climate' purge deleted a new extreme weather risk tool. We recreated it

The Guardian has recreated a searchable climate future risk tool developed by Fema but then deleted

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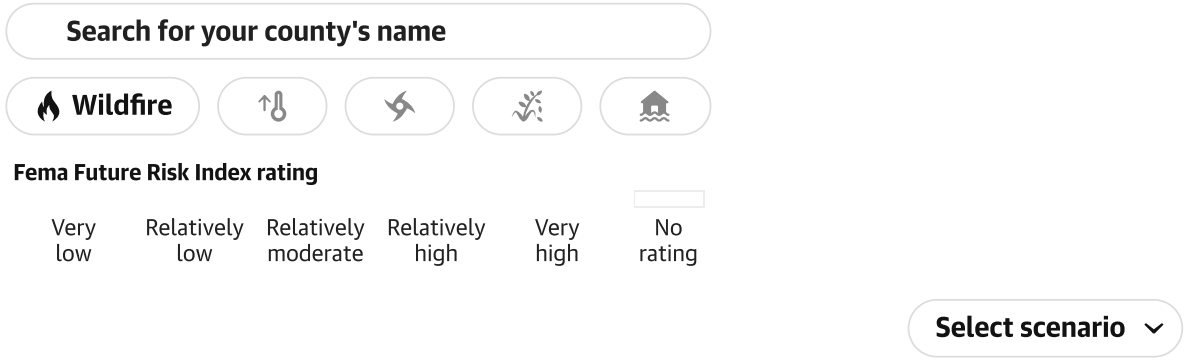
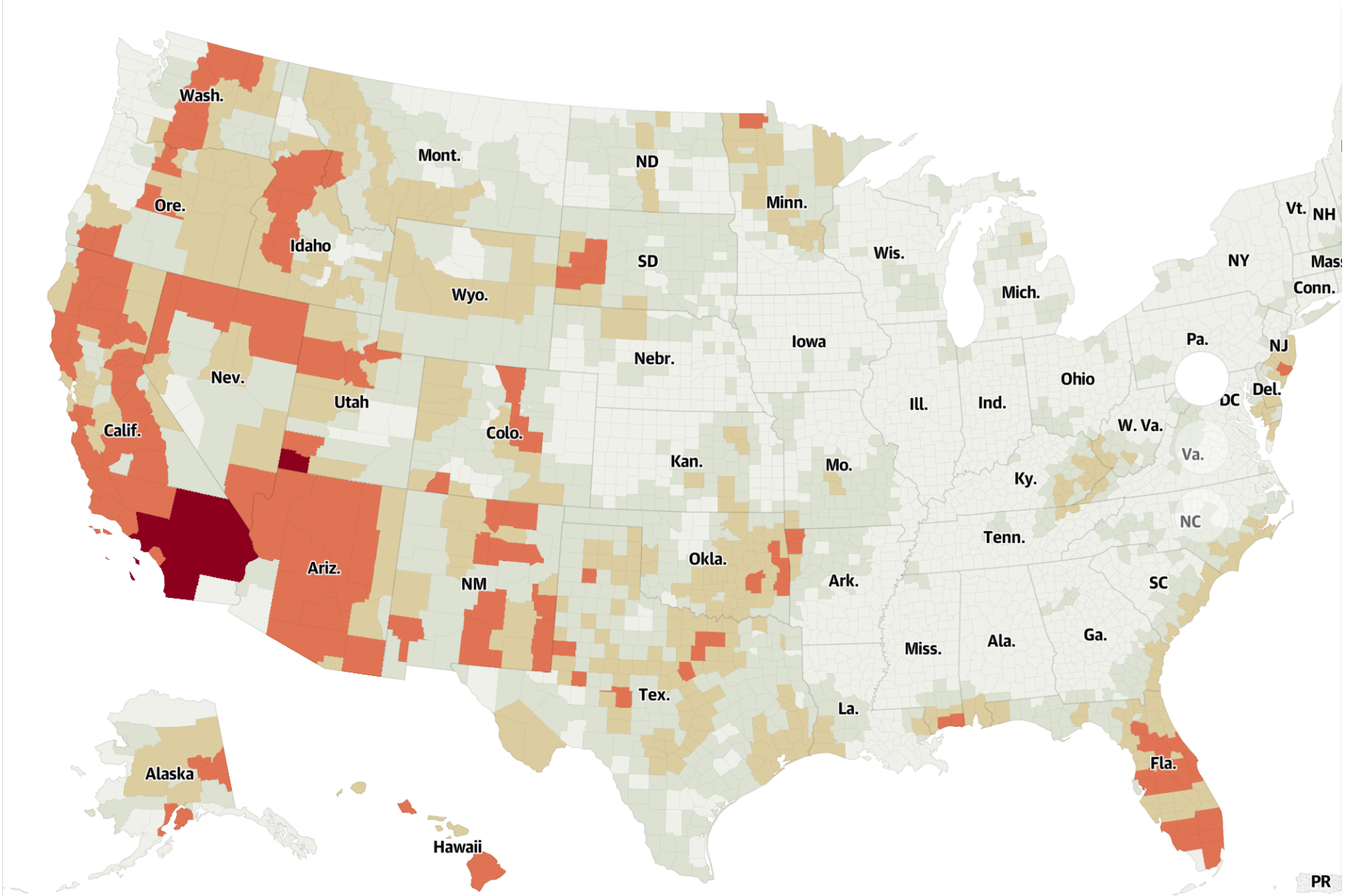




climate crisis and its consequences across multiple government websites, deleted the index last month, dashing several years of work and with it hopes it would help cities, states and businesses across the US prepare for worsening storms, wildfires and floods.

"We changed the name of it, removed mentions of emissions scenarios, tried to not get it any attention," said a source familiar with the Fema project, who asked not to be named. "But it was taken down because there is now a fear of anything climate-related. There is such a culture of fear and uncertainty in Fema, people are worried about getting fired or defunded."

How we recreated the tool

The Guardian is now helping resurrect and display the short-lived tool, which was keenly awaited within Fema as the first free, localized resource showing how much climate change impacts will cost American communities.

Drawing data from across federal government agencies, the index has county-by-county information on projected annual losses this century from threats including extreme heat, coastal flooding , wildfires, hurricanes and drought, all of which are worsened by human-caused global heating. Each county was also given an overall risk rating, which ranked how vulnerable its particular population is to climate shocks.

Such information is crucial for planning by local governments, insurers, utilities and others that look to Fema to help contend with a growing list of disasters now rending American communities, according to Victoria Salinas, who was deputy administrator of resilience at Fema during Joe Biden's administration.

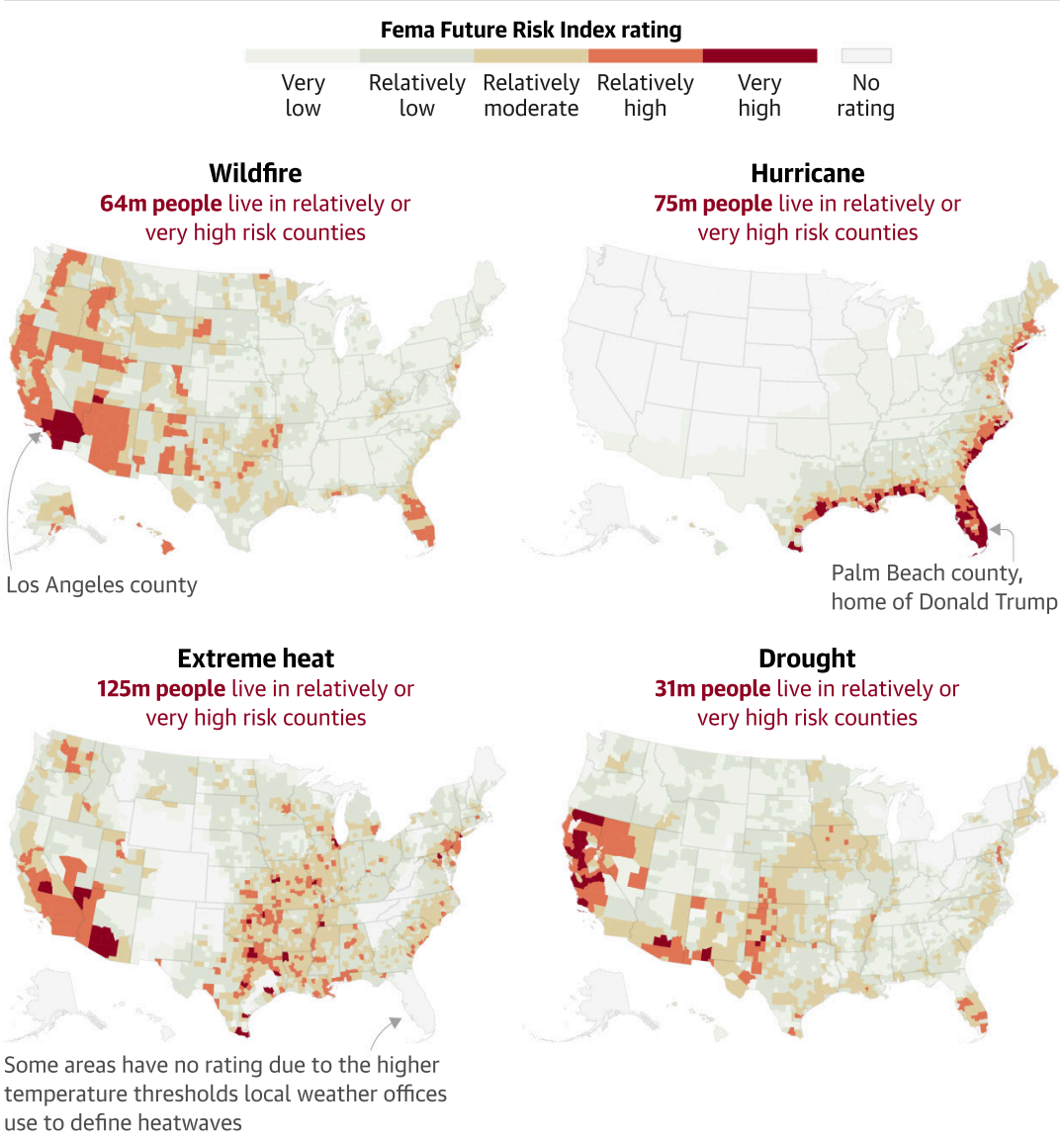
"It doesn't matter if you call it climate change or not, the consequences are getting worse and so we were trying to play catch-up," said Salinas.

"If you're making a decision about rebuilding a school, would you put it in the same place if it will flood again in 15 years? We have forced people to rebuild in the same places until now because we didn't have this sort of data. Taking this information down really erodes the nation's ability to keep communities safe and curtails effective disaster response."

Aside from the Future Risk Index, Trump's Fema has also axed its main climate webpage, which called the climate crisis a "priority for emergency managers", and expunged a page on future conditions that acknowledges the consequences of global heating. The agency does retain the overall National Risk Index, which shows current risk hazards across the US, but has stripped

away anything that might be related to the climate crisis or diversity, equity and inclusion.

"We've seen whole pages taken down that relate to hazard reduction for wildfires, things that shouldn't be politicized, just because they mention climate change," said the current Fema worker. "It's all very intense and chaotic."



Guardian graphic. Sources: Fema, popluation from Census Bureau 2020 American Community Survey. Note: Risk ratings are from the mid-century, lower emissions scenario.

The Future Risk Index was initially restored to public view by Fulton Ring, a software and data company. The company's founders, Rajan Desai and Jeremy Herzog, said they were aghast at the Trump administration's removal of online climate data and didn't want taxpayer-funded work to go to waste.

"We knew this was in the crosshairs because other tools like it have been shut down," said Herzog. "We felt this would be a high-integrity action to take, more impactful than just protesting. People should be asking why these datasets are being taken down for political motivations."

US faces growing impacts of the climate crisis

The sidelining of climate concerns within Fema comes as the agency is increasingly strained by a growing number of catastrophes that are being fueled by rising global temperatures. Last year was the hottest ever recorded in the US and the world. America was hit by 27 disasters costing $1bn or more in damages, including two enormous hurricanes that ravaged large areas of the country's south-east.

Then, shortly before Trump took office in January, entire neighborhoods of Los Angeles were razed by wildfires that scientists said were worsened by the climate crisis. The president, however, has continued to call the climate crisis "a giant hoax" and has even threatened to dismantle Fema and hand over its functions to the states, which experts say could not foot the ballooning costs of disaster response and recovery.

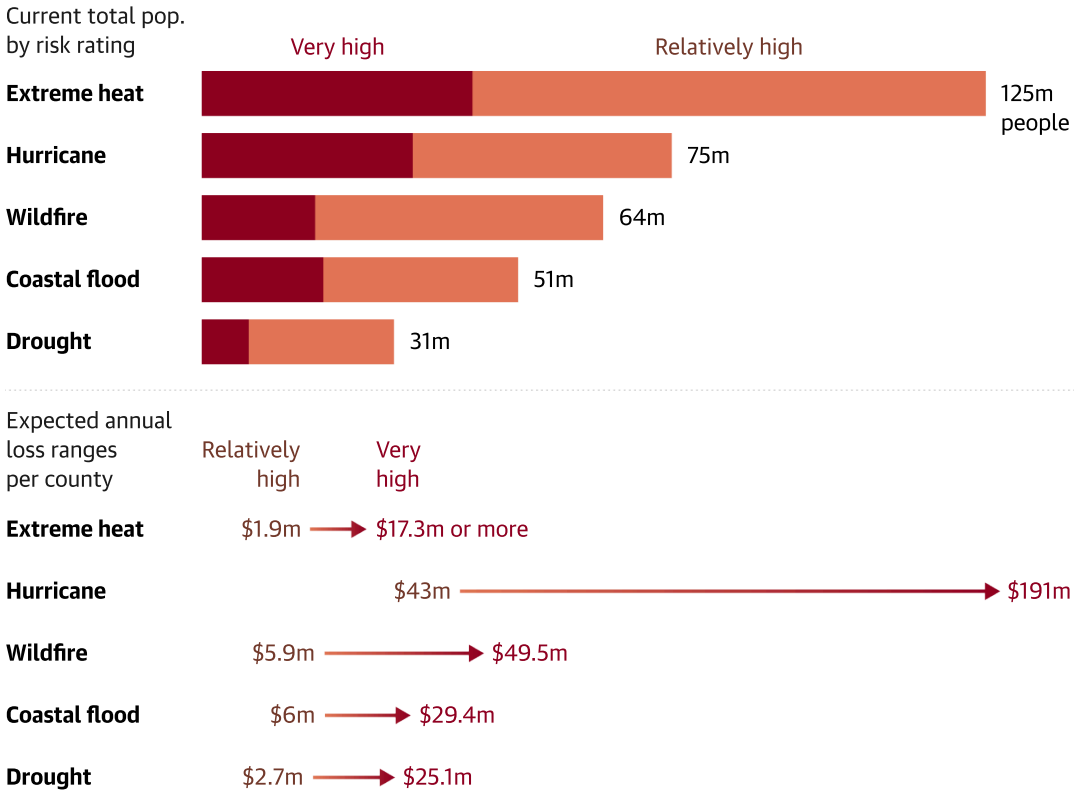
The Future Risk Index shows that such climate-driven impacts will only multiply if planet-heating emissions are not significantly cut. By the 2050s, counties in New Jersey, New York and Texas will be among those at the highest risk from coastal flooding, while the counties that contain Las Vegas, Nevada, Dallas, Texas and St Louis, Missouri, will be most vulnerable to extreme heat.

Los Angeles, a site of January's devastating wildfires, is among four places in California most at risk from fires by mid-century, the others being San Diego, Riverside and San Bernardino. Meanwhile counties in Florida, including Miami-Dade and Palm Beach, home of Trump's Mar-a-Lago estate, dominate the list of the most at-risk places from hurricanes by the mid-part of the century, if emissions are not cut.

The projected losses affecting counties from climate-driven events could reach as much as $191m or more each year by mid-century, depending on a variety of conditions such as the path of hurricanes and wildfires and the

trend of planet-heating emissions. The biggest losses are mostly anticipated in counties with high hurricane risk in states including Texas, Alabama, Florida, South Carolina and Louisiana.

More than a third of the US population has a high risk of extreme heat; hurricanes cause the most economic losses on average



Guardian graphic. Sources: Fema, popluation from Census Bureau 2020 American Community Survey. Note: Risk ratings are from the mid-century, lower emissions scenario. The 'very high' expected annual loss values are all at least that much or more.

The resurrected Future Risk Index provides a snapshot in time of these projected impacts, which will invariably alter as America's population moves, often into harm's way, and demographics evolve. Fema has ended work on updating the index to account for such changes.

But the climate crisis is already being felt by its warping of the US's insurance market, making it difficult or impossible for many homeowners to get

insured and therefore a mortgage, and the increasing drumbeat of disasters that costs the economy about $150bn a year. Rising heat is also imperiling endangered species, prized ecosystems and US food security.

"We need to better understand these risks so that we can plan to save lives and also save dollars," said Michael Coen, a former chief of staff to the Fema administrator. "It's reckless to take down information that can save lives without taking the time to understand the consequences. It makes me very concerned about the next four years."

Fema was approached for comment, but did not respond.

Methodology

The underlying data behind Fema's Future Risk Index, last updated 2 December 2024, was preserved by the data consultancy Fulton Ring. The index uses data from government and private organizations to project the changes in extreme weather events' frequency and intensity across US counties. It calculates the relative risk and economic losses from these events under four climate scenarios.

The losses are categorized in two ways, as projected annual losses and as projected risk ratings. In both cases, each county is sorted into a risk tier relative to other counties (from "very low" to "very high"). Projected annual losses factor in each weather event's frequency and intensity and the number of human lives and physical assets at risk. To help compare areas' future risk with their current risk from Fema's National Risk Index, each counties' average expected annual losses are placed in a static dollar range shared by the two indices. The other measure of losses, projected risk rating, includes the same estimate of economic losses due to extreme weather events' impact on physical assets and loss of human lives, but it then factors in social vulnerability and community resilience. These social factors increase or decrease the estimated economic losses. The risk rating is not presented in dollar amounts because future social conditions are unpredictable and dollar estimates could be misleading.

The climate scenarios include two time ranges, mid-century (2036 to 2065) and late-century (2070 to 2099), and two emission scenarios (lower and higher). The lower emission scenario (known as RCP 4.5) represents the most realistic,

in which emissions peak around 2040 but the Paris agreement climate policies are not met. The higher emissions scenario (known as RCP 8.5) is the "worst-case", in which emissions increase throughout the century.

The risk ratings for counties with no recorded incident of the weather event are categorized as "not applicable". Those with no projected increase in risk, sometimes due to data issues, are categorized as "no rating".

The original index provided four different inputs to calculate risk for extreme heat events. For simplicity we chose to present one: temperatures in the 95th percentile and above using the Localized Constructed Analogs version 2 (LOCA2) data source.

See the Future Risk Index's full technical documentation here.

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