

In Episode 57DHH 1 Iowa Idaho Montana and Minnesota State Legislatures considering bills that would restrict or even criminalize mRNA vaccines 3 United States Top 10 Cities Most Polluted by Air Pollution 4 United States Heat Pumps 6 California 7 Colorado 8 Illinois 9 Maine 10 Massachusetts 11 Michigan 12 New Jersey 13 North Carolina 14 Ohio 15 Vermont 16A United Kingdom Rural areas Wood burning stoves will not be banned 16B United Kingdom The BBC is utterly beholden to the right Why else would it fear a podcast about heat pumps? 16C United Kingdom Rural Areas Rise in percentage of homes with wood burners since 2022 analysis finds 16D United Kingdom England Okehampton Government gives green light for wood burners 16E United Kingdom Wales Cymru Wood burning stoves worse than second hand cigarette smoke A Welsh lung health charity has called for tighter regulations on wood burning stoves 17A China Tourist dies from smoke after house bus wood burner door left open 18 India Kolkata Air Quality PM 2 POINT 5 Toxicity Surges on 75% of Winter Days 19 Japan Fujitsu launches residential cold climate heat pump with split design 20 South Korea Impact of Biomass Burning on Organic Carbon and PM2 point 5 Concentrations in South Korea 21 PM 2 POINT 5 and human health Main Content

1 Iowa Idaho Montana and Minnesota State Legislatures considering bills that would restrict or even criminalize mRNA vaccines **Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates a 501c3 nonprofit organization** Substack Your Local Epidemiologist May 6 2025 State legislation targeting mRNA vaccines Falsehoods can turn into policy changes Several states are considering bills that would restrict or even criminalize mRNA vaccines Iowa Providers could face fines of up to \$500 for administering mRNA vaccines approved by a Senate subcommittee Idaho Would ban mRNA vaccines for ten years six counties already restrict the health department from distributing Covid vaccines Montana Considered a similar action but was defeated in the House Minnesota A bill to label mRNA vaccines weapons of mass destruction unlikely to pass These bills build upon false claims that mRNA technology is gene editing and or gene based a falsehood we debunked as early as 2020 Why would this be bad? Beyond Covid 19 mRNA technology is revolutionizing treatments for cancer and other diseases Early clinical trials show dramatic survival improvements in pancreatic cancer overall survival which was previously 10% has increased to 50% in a Phase 1 clinical trial and kidney cancer in a Phase 1 trial the vaccine appeared to be essentially curative with the potential to transform outcomes for some of the hardest to treat illnesses Cutting off this technology would be devastating for patients and medical progress

Headlines Google Alerts May 6 2025

2 World Heat Pumps Industry Analysis and Forecast to 2030 Featuring GlobeNewswire The global market for heat pumps is estimated to increase from \$884 billion in 2024 to reach \$1348 billion by 2030 at a compound annual growth rate

3 United States Top 10 Cities Most Polluted by Air Pollution Cleaning & Maintenance Management Fine particulate matter air pollution also known as PM 2 POINT 5 particle pollution or soot comes from wildfires wood burning stoves coal fired power **Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates a 501c3 nonprofit organization** By Year Round Particle Pollution Number1 Bakersfield Delano CA Number2 Visalia CA Number3 Fresno Hanford Corcoran CA Number4 Eugene Springfield OR Number5 Los Angeles Long Beach CA Number6 Detroit Warren Ann Arbor



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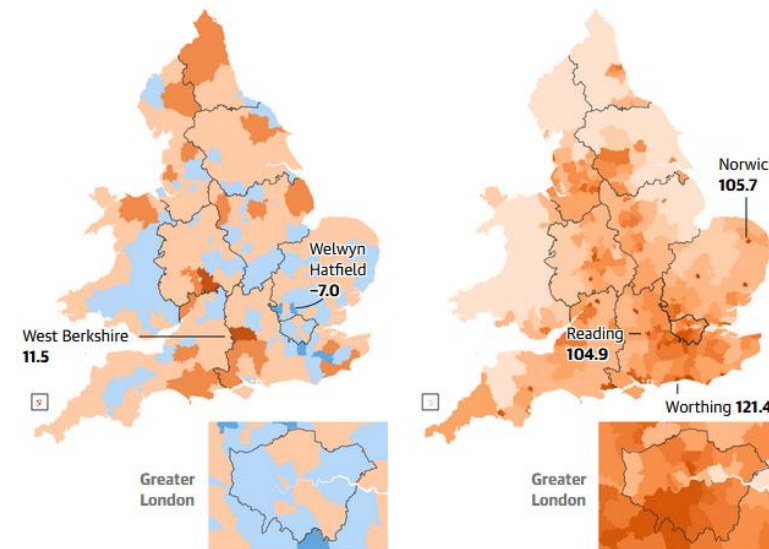


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Woodburning stoves in England and Wales



Guardian graphic. Source: University College London, Apr 2025. Note: maps show the estimated prevalence change or density based on energy performance certificates for homes in each DNS local authority area

MI Number6 San Jose San Francisco Oakland CA Number8 Houston Pasadena TX Number9 Cleveland Akron Canton OH Number10 Fairbanks College AK from The American Lung Association State of the Air 2025

4 United States Heat Pumps The Benefits of Dual Fuel A Balanced Approach to Heating and Cooling Contracting Business In heating mode the heat pump extracts heat from the outdoor air and transfers it inside to warm the home However as temperatures fall and United States Heat Pumps Homeowner searches for unfiltered advice after receiving alarming installation quote for next The Cool Down rebates and long term savings Save thousands with a heat pump A heat pump can save you thousands of dollars in heating and cooling costs but Since heat pumps combine heating and cooling functions they replace two of the biggest electricity users in your home with one highly efficient United States You can grab around \$1500 from the government to upgrade your water heater The Cool Down rebates to incentivize homeowners to install heat pump systems I have an early 1990s heat pump with propane backup one user commented BEST United States SEC consumer pilot expanded Energy Magazine The digital planner will also calculate discounts and rebates for eligible households Eligible households can get a \$1000 rebate on their heat pump United States Heat Pumps WEB Results For Press Release Heat Pump Technologies Heat Pump Technologies The first Heat Pump Day will be launched to raise awareness and knowledge 14 Oct 2024 Heat Pump Technologies the new event on heat pumps and United States Lower Bills Cleaner Air Heat Pump Benefits for Homes Relying on Delivered Fuels RMI Four reasons why it makes sense for homes still heating with oil or propane to switch to heat pumps and how policymakers can help make it happen United States Mining of Bitcoin and its Outsized Impact on the US Grid IEEE Spectrum Explore the environmental impact of Bitcoin mining in the US its energy consumption pollution hotspots and potential health risks United States The Best Batteries To Buy With Rebate for Labor And What You will Save SolarQuotes Using SolarQuotes Federal Government Battery Rebate Calculator here is the estimated rough discount Heat Pump STC Calculator EV Chargers United States HVAC expert addresses common concerns with next gen heat pumps surging in popularity Yahoo heat pumps The expert posted to the r heatpumps subreddit saying Ask me your heat pump questions! What are my theoretical savings for

5 United States This Historic Alternative Fuel is Still Used Today Yahoo! Autos The wood is partially burned in a gasifier to produce a hot mixture of carbon monoxide hydrogen and methane The gas is then cooled through filters RAWSEP View There is no reason to celebrate that wood is still burned for energy when clean alternatives like Heat Pumps that work down to 40 degrees below zero and lower monthly heating bills immediately are now available with Rebates of up to \$8000 in many US states in 2025

6 California Heat Pumps Researchers Pioneer Heat Pumping Material for Localized Cooling Berkeley Lab News Center Lawrence Berkeley National Laboratory Thin stacked polymer layers move toward and away from each other transferring heat from layer to layer The heat pump does not require

7 Colorado How to Use Geothermal Energy to Unlock EnergyStar Certification phcp dot pros For example Colorado offers a state tax credit of \$3000 per home statewide Utility company Xcel offers \$3300 per heating ton for geothermal heat

8 Illinois woman slashes heat bill got back \$12K with popular tax credit Yahoo Finance heat pump water boilers Fortunately a federal tax credit might help offset those expenses Do not miss I am 49 years old and have nothing saved



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Image: Fujitsu General

9 Maine You can grab around \$1500 from the government to upgrade your water heater MSN rebates to incentivize homeowners to install heat pump systems Home I had a \$750 rebate from Maine and another rebate from federal

10 Massachusetts Utility companies target heat pump incentives for cuts to pare back Mass Save budget Commonwealth Beacon The new plan cuts \$220 million from heat pump rebates and a loan program that offers zero percent financing for qualifying energy efficiency upgrades The utility companies presented their compliance plan with cuts on Monday to the council The new plan cuts \$220 million from heat pump rebates and a

11 Michigan Grand Rapids issues no burn alert due to high wildfire risk Mlivecom fire pits or wood stoves The Michigan The recreational fire ordinance of Grand Rapids requires a permit for any recreational wood burning fire

12 New Jersey 2nd person arrested in connection with Jones Road Wildfire in Ocean County NJ 6ABC Friends told investigators that when Kling and friends left the pit of burning pallets in the woods they were still glowing fire is 80% contained New Jersey Pine Barrens Second person charged with arson in New Jersey Pine Barrens fire Midland Daily News Prosecutors say Joseph Kling set wood pallets on fire and left the area On Friday prosecutors said Kling and a few other people took the pallets

13 North Carolina Boiling Spring Lakes We was really hoping to be home tonight Boiling Spring Lakes woods fire reignites on Saturday WECT A large woods fire continues to burn in Boiling Spring Lakes on Saturday The massive fire reignited in the morning after windy

14 Ohio Strongsville Lighting a fire in your back yard? There are new rules in Strongsville Cleveland dot com The new ordinance adds to the fire code of Strongsville gas fired It is also important to burn only clean dry and seasoned wood Draves said

15 Vermont NVDA NEK Energy Network Mtg + Public EV Charging Grants + Wheelock Energy Fair Vermont Business Magazine heat pumps water heaters and advanced wood heating systems WRAP does not run credit checks to verify eligibility Tax Credit Season Rewiring Vermont VGS heat pump programs provide options for cost effective heating and cooling Vermont Business Magazine heat pump solutions including ductless mini split heat pumps centrally ducted heat pumps and heat pump water heaters Heat pumps are well

16A United Kingdom Rural areas Wood burning stoves will not be banned creditoncourier dot co dot uk Crediton Courier THERE is good news for many particularly in rural areas after the Government confirmed that it will not ban wood burning stoves Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates a 501c3 nonprofit organization A joint letter co ordinated by the Stove Industry Association SIA from a range of organisations representing more than 1500 businesses and woodland owners has led to the government confirming that wood burning stoves will be permitted in new homes in the future ending ongoing speculation that these appliances

16B United Kingdom The BBC is utterly beholden to the right Why else would it fear a podcast about heat pumps? The Guardian But his claims were indisputably matters of public controversy So why shut down the Davis non political podcast on heat pumps but not the podcast of Webb Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates a 501c3 nonprofit organization The BBC presenter Evan Davis has been told he can no longer host a podcast about heat pumps

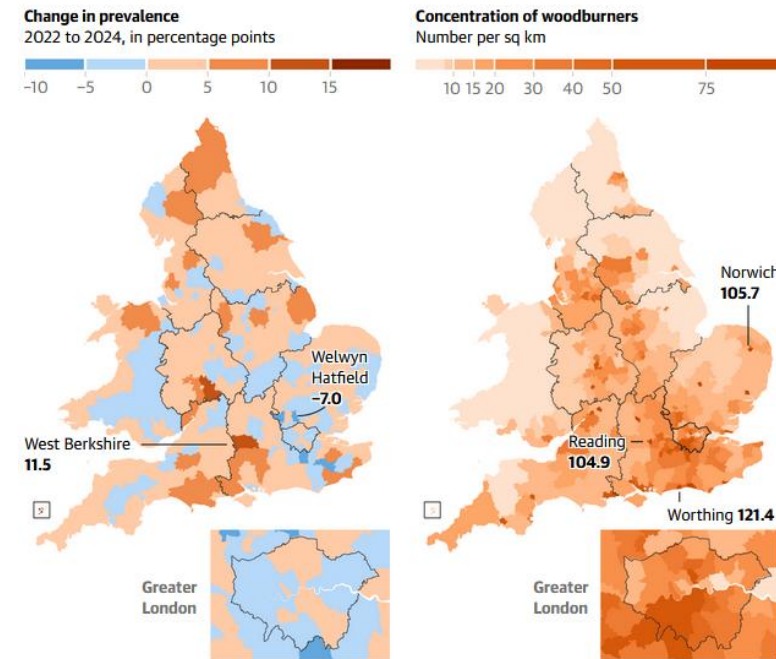


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Woodburning stoves in England and Wales



Guardian graphic. Source: University College London, Apr 2025. Note: maps show the estimated prevalence change or density based on energy performance certificates for homes in each DNS local authority area

due to BBC concerns that discussing the technology risks treading on areas of public controversy. The presenter of BBC Radio 4 PM programme had hosted 20 episodes of **the Happy Heat Pump Podcast which launched in 2024**. It has covered issues around installing the technology, the cost, noise levels and the alternatives for people replacing their gas boilers. However, despite initially being given approval to go ahead with the non-BBC project, bosses told Davis the **podcast risked exposing him to accusations of political bias**. As the series has gone on, in fact, as the world has progressed over the last few months, they have become concerned that anything like this **trying to inform people about heat pumps can be interpreted rightly or wrongly as somehow treading on areas of public controversy**, he told followers of the YouTube channel of the podcast. The widespread installation of heat pumps is seen as necessary to achieve the target of the government of hitting net zero carbon emissions by 2050. Last month, the Conservative leader Kemi Badenoch dropped Conservative support for the target. Davis said he believed the decision to stop him appearing on the podcast had been taken because of a link between heat pumps and the net zero target. Bean Bealand, a director at the Heat Pump Federation and the co-presenter of Davis on the podcast, described the decision as quite extraordinary. Douglas Parr, Greenpeace policy director for the UK, said: "As an impartial broadcaster, the BBC should not be pandering to attempts from the right to turn the most efficient home heating system in the world into a culture war issue. What is next, cancelling Gardeners World because of the support of Monty Don for peat-free compost?" Davis said he received no remuneration at all for the podcast and had personally paid its small costs for music dissemination and microphone equipment. He said there was no link with the HPF other than the fact it employed his co-host. The BBC has received criticism over its handling of environmental issues. In 2018, the broadcaster said it would stop both sides of the climate crisis, admitting that it got some of its coverage wrong by setting up debates with those who deny climate science. However, more recently, the broadcaster has given a platform to some who call for reduced action on the climate breakdown. The BBC stated that the podcast by Davis only explored and promoted one possible solution.

16C United Kingdom Rural Areas Rise in percentage of homes with wood burners since 2022 analysis finds The Guardian. Greatest growth in rural areas as increase in homes with wood burning stoves contributes to new air pollution hotspots. A woman pokes a fire in a wood burning stove. A UCL analysis found the spatial density of wood burners was related to the amount of air pollution in neighbourhoods on winter evenings. Pollutionwatch. Air pollution Rise in percentage of homes with wood burners since 2022 analysis finds Greatest growth in rural areas as increase in homes with wood burning stoves contributes to new air pollution hotspots. **Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates a 501c3 nonprofit organization**. The Guardian May 2 2025 Growing numbers of UK homes with wood burning stoves are leading to new air pollution hotspots. Analysis by led by University College London UCL found that the spatial density of burners is related to the amount of air pollution that builds up in neighbourhoods on winter evenings. **The greatest density of wood burners was found in urban areas outside major cities**. The list was topped by Worthing Norwich Reading Cambridge and Hastings councils which all had more than 100 wood burners per square kilometre. Although people with stoves tend to burn more frequently than those with fireplaces replacing open fires with newer less polluting stoves should lead to decreases in particle pollution. More homes burning wood or solid fuel could worsen the problem. The analysis of recent energy performance certificates EPCs by UCL shows a rise in the percentage of houses that have wood burners since 2022 from 9 point 4% in 2022 to 10 point 3% in 2024. EPCs are required when homes are on the market for rental or sale. Looking at the 3.2m certificates for 2022 and 2024 **the greatest growth in burners was in mainly rural areas**. Several council areas had growth of more than eight



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Image: Fujitsu General



percentage points. These included West Berkshire Wychavon in Worcestershire and Rother in Kent. There was also growth in the **urban wood burner hotspot of Hastings where new certificates with a wood burner went from 7 point 7% in 2022 to 15 point 3% in 2024**. In **Worthing it went from 12 point 3% to 15 point 5%**. Calum Kennedy from the UCL team also looked at 6 million homes that had more than one EPC between 2009 and 2024. We estimated that 19 point 4% of detached properties with two EPCs had a wood burner at their first certificate and then 24 point 3% at second certificate. We found similar results across the board for every property type: the percentage of properties with a wood burner increased for every subsequent certificate. **The way solid fuel burning is regulated in the UK has been criticised**. Dr James Heydon from the University of Nottingham said **We are still using a regulatory system designed in the 1950s to tackle visible smoke from coal fires** even though the problem of **today is the largely invisible but no less harmful particle pollution from wood burning**. Larissa Lockwood from the charity Global Action Plan said **Based on industry figures we estimate that if trends continue nearly one million wood burning stoves could be installed over the course of the current parliament**. The team of Lockwood worked with a panel of 16 expert advisers to create a policy pathway towards a 2030 phase out of burning in homes that have other sources of heating. The pathway includes information campaigns by local and central government on the impacts of air pollution from solid fuels to dispel the notion that home wood burning is climate neutral and to challenge the marketing of stoves as cosy and aspirational. It also includes changes to building regulations and planning processes towards bans on the installation of new burners as well as health warnings on stoves and a burner alert scheme to discourage people from lighting their fire during times of high air pollution.

16D United Kingdom England Okehampton Government gives green light for wood burners. The Moorlander wood burning stoves as a renewable and efficient secondary heating source. The signatories argued that when used responsibly modern stoves help.

16E United Kingdom Wales Cymru Wood burning stoves worse than second hand cigarette smoke. Yahoo News UK A Welsh lung health charity has called for tighter regulations on wood burning stoves. **Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates a 501c3 nonprofit organization**. A leading Welsh lung health charity has called for tighter regulations on wood burning stoves. Asthma + Lung UK Cymru released a report urging the Welsh Government to raise awareness about the health risks of pollutants from domestic burning. A leading Welsh lung health charity has called for tighter regulations on wood burning stoves. Asthma + Lung UK Cymru released a report urging the Welsh Government to raise awareness about the health risks of pollutants from domestic burning. The poll by the charity of 1000 people in Wales found that more than half 53 point 6 per cent were concerned about air quality in their area but less than half 47 point 2 per cent were worried about wood burning stoves. Joseph Carter head of Asthma + Lung UK Cymru said **It is worrying that although people are concerned about their lung health and air pollution less than half of people questioned in our survey were not aware of the dangers of wood burning stoves**. The idea of a cosy wood burner in our homes might sound appealing but the reality is it could be putting you your family and the lung health of neighbors at risk. The report recommends banning the installation of new stoves in homes phasing out domestic wood burning in urban areas and launching a national campaign on the health impacts of air pollution. Judy a retired asthma sufferer said **If your lungs are sensitive and you inhale wood smoke regularly It is worse than second hand cigarette smoke and recovery is difficult if not impossible**.

17A China Tourist dies from smoke after house bus wood burner door left open. RNZ News A Coroner has found a fatal house bus fire might have been avoided if there were clear instructions on how to use the wood



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burner Chinese **Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates a 501c3 nonprofit organization** Tourist dies from smoke after house bus wood burner door left open A Coroner has found a fatal house bus fire might have been avoided if there were clear instructions on how to use the wood burner Chinese national Jirong Wang 46 died while staying in the holiday rental near Hokitika in February last year

17B China Associations between long term exposure to particulate matter and mortality from multiple ScienceDirectcom PM with a diameter of 2 point 5 μm or less PM2 point 5 and mortality from cardiopulmonary diseases among the oldest old in China from 2013 to 2018 A 18 India Kolkata Air Quality PM 2 POINT 5 Toxicity Surges on 75% of Winter Days Down To Earth A new study by Kolkata based Bose Institute found that the toxicity of PM 2 point 5 ultrafine particulate matter rose sharply when pollution levels

19 Japan Fujitsu launches residential cold climate heat pump with split design PV Magazine The Japanese manufacturer said its new heat pump system features a coefficient of up to 542 and a seasonal energy efficiency ratio of up to 332 **Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates a 501c3 nonprofit organization** May 2 2025 Fujitsu launches residential cold climate heat pump with split design The Japanese manufacturer said its new heat pump system features a coefficient of up to 5 point 42 and a seasonal energy efficiency ratio of up to 33 point 2 Japanese industrial conglomerate Fujitsu has unveiled a residential split type heat pump system that is claimed to be an ideal replacement for packaged terminal air conditioners PTACs The Fujitsu Airstage Orion XLTH+ Series stands out as a brilliant star for heating performance even in the harshest climates the manufacturer said in a statement The system is available in three versions with a cooling capacity of 9 Btu per hour 12 Btu per hour and 14 point 5 Btu per hour respectively and with heating capacities of 12 Btu per hour 15 point 3 Btu per hour and 17 point 4 Btu per hour at 8 Centigrade The smallest system features a coefficient of performance COP of 5 point 42 while the middle sized and the largest products have a COP of 4 point 88 and 4 point 72 respectively The seasonal energy efficiency ratio SEER2 is rated between 33 point 5 and 28 point 7 and the heating seasonal performance factor HSPF2 ranges from 14 point 0 to 13 point 0 The indoor unit measures 360 mm \times 990 mm \times 370 mm and weighs 40 kg for all systems while the outdoor unit has a size ranging from 692 mm \times 940 mm \times 375 mm to 776 mm \times 961 m \times 450 mm and a weight spanning from 95 kg to 108 kg Sound levels for all products are reportedly as low as 23 decibels A 20 South Korea Impact of Biomass Burning on Organic Carbon and PM2 point 5 Concentrations in South Korea ACS Publications American Chemical Society However its contribution to atmospheric particulate matter PM2 point 5 and organic carbon OC has rarely been studied Atmospheric PM2 point 5 samples were 21A PM2 point 5 and climate change Anthropogenic climate change contributes to wildfire particulate matter and related mortality Nature Although the connection between anthropogenic PM2 point 5 exposure and mortality is well documented our understanding of the health impacts of wildfire PM 21B PM2 point 5 and Flu Interactions for exposure to fine particulate matter and multiple time period cold spells on influenza ScienceDirectcom Co exposure to higher PM 2 POINT 5 and cold spell could interact synergistically trigger influenza epidemic Abstract With the increasing twin threats of 21C PM 2 POINT 5 and hospitalization Wildfire Smoke Exposure and Cause Specific Hospitalization in Older Adults JAMA Network To characterize the association between each cause of hospitalization and smoke PM 2 POINT 5 distributed lag models were fitted with hospitalization rates 21D PM 2 POINT 5 and indoor exposure Evaluating the representativeness of atmospheric PM 2 point 5 data for indoor exposure ScienceDirectcom In conclusion atmospheric PM 2 POINT 5 can be used to estimate PM 2 POINT 5 exposure and element concentrations from industrial or traffic emissions in indoors

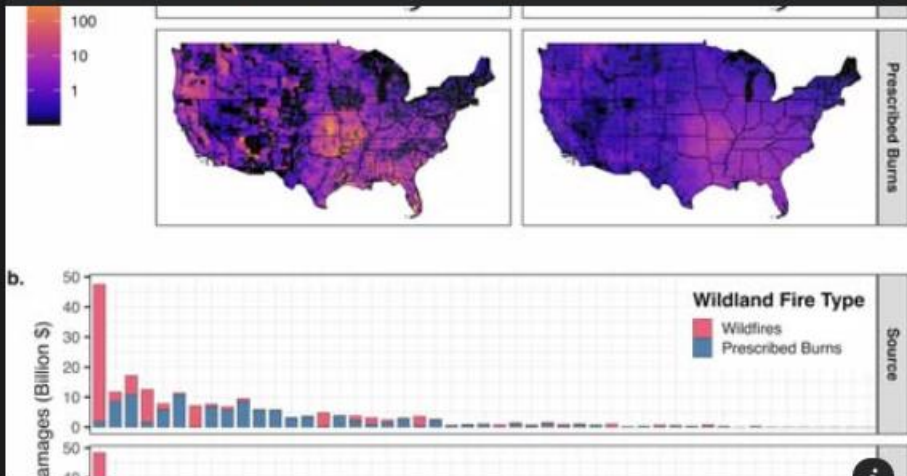


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<https://www.nature.com/articles/s43247-025-02100-y>



NATURE.COM
Socially vulnerable communities face disproportionate exposure and susceptibility to U.S. wildfire and prescribed burn smoke - Communications Earth &...