

Episode 56iZ September 20, 2023. Your story of wood smoke pollution is a gift to the world, “canaries in a coal mine”. One of the stories today is titled [People Who Are Changing the Environment One Community at a Time - Nature](#) Women spend up to 12 hours selling their wares and then head home to cook meals over coal- or wood-burning stoves, their young children with them. Excerpts edited by RAWSEP for brevity and clarity and Relationship to Wood Smoke Emission Particulates.. This Nature article profiles women who are not yet successful in breaking away from the prison on working over a wood burning stove only to provide food for their families. There are four researchers highlighting environmental inequalities and improving the health of their communities. Nature, Innovations In Environmental Health Equity September 20, 2023. People Who Are Changing the Environment One Community at a Time. These four researchers are highlighting environmental inequities and improving the health of their communities. One in four deaths worldwide can be linked to environmental conditions. Heart disease, cancer, chronic respiratory diseases, and more could be alleviated or even prevented by reducing environmental risks. Exposure to polluted water and air, flooding, extreme heat, and other dangers is driven in part by economic and racial discrimination, causing an unequal burden of disease. The political forces that drive this can be sweeping, but these four researchers are making a difference at a local level. They are attacking inequity, fighting historical wrongs, and helping to ensure a more equitable and healthy future.

RAWSEP View: RAWSEP has chosen the first of the 4 stories to excerpt because it is about using low cost hyper-localized PM2.5 monitors to provide data on the levels of air pollution women and children are exposed to by using wood burning stoves to cook food. 1)Kofi Amegah: Revealing air pollution exposure. In 2015 Kofi Amegah traveled from Ghana to Switzerland for a World Health Organization meeting to share his work on how indoor air quality from cooking over polluting wood and other solid fuel fires affects the health of mothers and their children. the University of Cape Coast environmental epidemiologist decided to do something about Africa’s huge gap in air pollution data. Exposure to aerosol particles, of 2.5 micrometers (called PM2.5), increases the risk of heart disease, respiratory disease, and more. The WHO links this air pollution to 6.7 million premature deaths every year, 89 percent of which occur in low- and middle-income countries. Particulate matter in the air is an especially big issue in sub-Saharan African cities. To make a difference in people’s health, Amegah needed local numbers. But air-quality monitors deployed by government-funded environmental agencies cost about \$20,000 or more each, far beyond Amegah’s research budget. Even in rich countries such as the U.S., these high-sensitivity monitors are distributed sparsely, obscuring inequities among neighborhoods. Amegah went to the WHO meeting, when relatively inexpensive air-pollution sensors began to hit the market. At just a few hundred dollars apiece, they are not as reliable as the more expensive regulatory monitors, but when carefully calibrated and combined into networks, they get the job done. Plus, their low cost makes it easier to distribute more of them to gather local data. The Ghana Urban Air Quality Project started with one sensor in Cape Coast in May 2019, which Amegah paid for with his own money. The group he founded added two more in Accra by the end of its first year of operations. Today the team has about 60 air-quality sensors deployed across Ghana in the cities of Accra, Tema, Cape Coast, Takoradi and Kumasi. The project has also integrated 10 donated, regulatory-grade PM2.5 monitors into the network to check the accuracy of the low-cost sensors. Amegah established Breathe Accra last year. The nonprofit aims to identify air-pollution hotspots in Ghana’s capital and to educate policymakers and residents about how to address them: governments can make regulatory interventions, for example, and schools can keep children inside on days when the air quality is bad. Amegah says he hopes Breathe Accra will act as “a blueprint other cities in Africa can follow.” Within this community, he says, “the most vulnerable groups are women and children.” Women head home to cook meals over coal- or wood-burning stoves, their young children with them. And the neighborhoods they live in are “the most polluted in the urban landscape,” Amegah says, the air filled with smoke from burning trash. Today Amegah has sensors mounted in schools, hospitals and traffic hotspots and is connecting the data to health outcomes for street vendors and children. “Kofi’s on the cutting edge of the science,” says an environmental health scientist at the University of Massachusetts Amherst. “He’s got the whole package. He’s got the monitoring expertise, he’s got the chutzpah to set up the monitoring network, and he’s bringing it back to human health.” Nature 621, S35-S37 (2023) doi: <https://doi.org/10.1038/d41586-023-02615-4> This article is part of [Innovations In Environmental Health Equity](#), a supplement, published in Scientific American and Nature produced with the financial support from [Takeda Pharmaceuticals](#). Scientific American and Nature maintain full independence in all editorial decisions related to the content. [About this content](#).

Your story of wood smoke pollution is a gift to the world, “canaries in a coalmine”. You are living through it and surviving so far. If what you say gets us closer to ending wood smoke pollution, because it educates people, changes their minds, and sets the world on a better path, what you have endured gains some meaning, instead of being a total waste of your health, life, and peace of mind. By telling your story you are acknowledging that this is personal. But hopefully, what is personal can become, dare I say, political, in the best sense. It can be seen as a universal problem, air pollution that

eventually seeps into the lives of everyone on the planet, because air moves across borders, air is the sustenance of life and losing the ability to breathe ends life, any life, and cuts across all of our differences.

The story of an indoor residential wood burner is a story of choices. The indoor residential wood burner may revel in being able to make the choice to burn wood in an old fashioned way of heating a home, or more likely, burning wood recreationally and because he or she has purchased at great expense a shiny toy stove, and at great logistical sacrifice obtained increasingly scarce and pricy wood to burn and remove a living tree from the earth with only ashes to show to for it. Wood burning is not a physical addiction, as cigarette smoking can be. There is no nicotine in wood smoke that hits the brain and physically compels an indoor residential wood burner to light up even if the indoor residential wood burner has a habit of burning wood instead of using clean energy to heat their home.

Adults can choose not to burn wood. A responsible adult takes matches away from a child who attempts to set the wall of the garage on fire out of curiosity (true story). A responsible adult looks around occasionally to see what progress has been made in the modern world in the area of home heating. A responsible adult scrimps and saves to attain a clean and non-polluting way of home heating, which in 2023 is the Heat Pump that works at temperatures down to 40 degrees below zero Fahrenheit. A responsible adult who is indigent can ask for help and if that adult does seek financial help in 2023, he or she will find many government programs that provide help with home heating costs, (the pre-existing Low Income Home Energy Assistance Program (LIHEAP) to begin with) and the new tax credits for Heat Pumps, both Geothermal and Air Heat Pumps, with tax credits of up to \$2000 per year and up to 30% of the cost of the Heat Pump. Also provided by the United States government are up to \$1200 per year in certain costs associated with installation of a Heat Pump.

Did a United States adult come up with the Old (traditional) tax credit for a known to be polluting wood burning stove which adds up to an amount exactly equal to what is offered as a New tax credit for a Heat Pump in 2023? Apparently, since children are not of an age to be lawmakers. But what is the impulse to give a tax credit for wood smoke pollution, when scientists have been debunking for decades any claim that wood burning is clean energy? Money explains a lot of what are unfortunately political machinations that have nothing to do with improving air quality. Maybe the wood stove tax credit is on the way out. How can Residents Against Wood Smoke Emission Particulates hurry that cancellation of Indoor Residential Wood Stove purchase tax credits along? Give the tax credit the bum's rush, even though current indoor residential wood stove owners are still oddly inebriated with their own killing wood smoke. Ending those tax credits might seem personal to those who want to continue polluting, but ultimately it will have universal benefits to everyone on the planet. It is more personal to inhale polluting wood smoke as recreation, without thinking of the health implication to near neighbors, and eventually the world through hastening climate change, than it is personal for near neighbors to complain of the threat to their lives and their health. Every complaint about each wood stove smoke pollution event in a neighborhood is a hard step. The near neighbor has to acknowledge their helplessness in the face of unnecessary and cruel infliction of pain, sickness, and some early deaths. Contrary to some perceptions, it is not an easy decision for an adult to have to ask for help from government officials to stop indoor residential wood burning pollution. That the indoor residential wood burner is seemingly unaware of what can be perceived with the four senses by any sentient adult ultimately doesn't matter. Awareness can be imposed on an indoor residential wood burner. And there are many, many carrots offered in 2023 to that wood burner, more carrots than to anyone who dares to complain of wood smoke that threatens their life and the lives of their family.

Germany, Kassel Doctors & Scientists Against Wood Smoke Particulates' Website (DSAWSP), Wood Smoke Stories <https://www.dsawsp.org/personal-stories/wood-boiler-misery-in-kassel?fbclid=> Excerpt edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates. (This entry was written by a near neighbor of a log fueled (residential) central heater 4 houses away). (After describing the health effects of wood burning on this near neighbor the neighbor states) But it gets worse: these (indoor residential wood burning) heating systems are getting grants because our government thinks it's a climate-friendly, sustainable way to heat a home/make warm water.

RAWSEP View: Today and recently the San Francisco Bay Area has been inundated with wildfire smoke. In the midst of the wildfire smoke, indoor residential wood burning has gone on, the indoor residential wood burners seemingly oblivious to the health implications to themselves and their near neighbors. The readings from near neighbor's PurpleAir PM2.5 monitors are the cry for help being used, rather than mere words, which are easier to ignore. Those PurpleAir PM2.5 monitor readings are illustrations for this Episode 56iZ.

California, Berkeley [Wildfire smoke turns Berkeley air unhealthy and obscures the hills - Berkeleyside](#) The burning of wood or other solid fuel is banned while the "Spare the Air" alert is in place, and Bay Area residents are asked to limit driving

California, Palo Alto [Spare the Air alert issued through Thursday due to wildfire smoke | News | Palo Alto Online |](#) burning wood, fire logs or other solid fuel on the days it is in effect. If people smell smoke, they are encouraged to stay inside with windows

California, San Francisco and PurpleAir monitors [Smell smoke? How to track Bay Area air quality using PurpleAir, other tools](#). San Francisco Chronicle However, it adds, sensors on its real-time map now display with a conversion factor for wildfire and wood smoke conditions developed by the EPA

California, San Francisco [Bay Area air quality advisory extended through Thursday - KRON4](#) wood stoves, pellet stoves, outdoor fire pits or any other wood-burning devices,” BAAQMD said. The National Weather Service wrote, “Smoky air wood-burning devices,” BAAQMD said. The National Weather Service wrote Sonoma County officials wrote, “Smoke from wildfires currently burning

[As Smoke Returns, Bay Area Air Quality Expected to Worsen Over Next Few Days | KQED](#) smoke blowing into the region. The alert bans the burning of wood or any solid fuel, both indoors and outdoors. Air quality across most of the Bay [When will Bay Area air quality improve? Here's what meteorologists are saying](#). NBC Bay Area Smoke from wildfires burning in Northern Residents and businesses are banned from burning wood, manufactured fire logs or any other solid fuel.

[Spare the Air alert in effect through Thursday over wildfire smoke - NBC Bay Area](#) While the alert is in effect, it is illegal to burn wood, fire logs or other solid fuel. Get a weekly recap of the latest San Francisco Bay Area

[What to know about the smoke blanketing the SF Bay Area - SFGATE](#) Smoke from wildfires in California and Oregon is impacting air quality in portions of the Bay Area. Wood burning is banned. If you smell smoke [Smoke, air quality alerts descend on San Francisco Bay Area. A study explains why.](#) USA Today According to the Environmental Protection Agency, PM (Particulate Matter) 2.5 describes fine inhalable particles, with diameters that are generally

California, Sonoma County [Sonoma County issues health advisory due to poor air quality](#) County Of Sonoma - CA.gov Smoke from wildfires currently burning in Northern California Avoid adding additional air pollution by curtailing activities such as wood burning

[Air quality advisory issued through Wednesday for Sonoma County, Bay Area](#) The Press Democrat burning in Northern California and Oregon. The air quality – Avoid adding additional air pollution by curtailing activities such as wood burning

Minnesota [Air Quality Alert issued for parts of west central Minnesota through Thursday night - KXRA](#) Reduce or eliminate activities that contribute to air pollution, such as outdoor burning, and use of residential wood burning devices. Reduce

Oregon [Smoky skies from NorCal, Oregon wildfires to linger in Bay Area; Spare the Air alert issued](#) CBS News burning wood, fire logs or other solid fuel on the days it is in effect. Among the wildfires that have smoke drifting south into the Bay Area are

Illinois, Morrison [City Ordinances and Open Burning - Morrison - thecity1](#) wood and branches, smaller than two 2 inches in diameter. Landscape waste does not include noxious weeds or grass clippings. Open burning of any

Wood burning wildfire smoke PM2.5 and Health Effects [Wildfire smoke is reversing years of air pollution progress - The Mercury News](#) It is made up of tiny particles is called PM 2.5 — for particulate matter 2.5 microns or smaller, so small that 30 of them can line up across the

[The contribution of wildfire to PM 2.5 trends in the USA - Nature](#) However, recent trends in ambient concentrations of particulate matter with diameters less than 2.5 µm (PM2.5), a pollutant regulated under the Clean

[Fixing Air Pollution Could Dramatically Improve Health Disparities - Nature](#) The worst threat comes from tiny particles, known as PM2.5, that are 2.5 microns or less in diameter. Once inhaled, they can cause or exacerbate

[Wildfires are worsening air quality in the United States - Nature](#) Average concentrations of fine particulate matter (PM2.5) — inhalable particles below 2.5 micrometres in diameter, which are of particular concern

[The Reach of Wildfire Smoke Is Going Global and Undoing Progress on Clean Air](#) The New York Times Wildfire smoke can contain a variety of pollutants, including fine particulate matter, or PM 2.5, a type of air pollution made up of very small

[Global smoke pollution study raises alarm - Newswise](#) The comprehensive assessment of the global population exposures to fire-sourced PM2.5 and ozone during 2000-2019 was calculated using a machine

[Alarming results from world-first study of two decades of global smoke pollution - Phys.org](#) PM2.5 were particularly high in Central Africa, Southeast Asia, South Average source fine particulate matter 2010-2019.

[Examining how much wildfire smoke influences air quality trends - Phys.org](#) PM2.5 is not declining ('no sig. early decline') or where trends in early and recent periods are not statistically different ('non-sig. change

[Emergency department visits respond nonlinearly to wildfire smoke - PNAS](#) PM2.5 concentrations and quantify how smoke events affect ED visits. Total ED visits respond nonlinearly to smoke concentrations. Relative to a

A letter sent on 8/28/2023 to the Assistant Attorney Generals threatening to sue the EPA over wood stove certification follows. Dear Assistant Attorney General, Attached is a letter that was sent to the National Institute of Allergy and Infectious Diseases (NIAID) Director Dr. Jeanne Marrazzo, former acting NIAID Director Dr. Hugh Auchincloss and National Institutes of Health (NIH) Director Dr. Lawrence Tabak regarding regulation and the ability to shutdown PM2.5 polluting indoor residential wood burners. PM2.5 pollution is known to cause antibiotic resistance making infectious disease pandemics more likely and uncontrollable. The letter asks Dr. Marrazzo to apply a "Parallel Track" to indoor residential wood burning pollution in 2023. This "Parallel Track" would include both EPA wood stove certification and a complaint-based system using PurpleAir PM2.5 monitor data collected from the yards of near neighbors of indoor residential wood burners. This would be a way to address the very real impact of PM2.5 pollution which EPA wood stove certification fails to address. We propose that the use of PurpleAir monitors would provide important data on PM2.5 air pollution that is currently missing in the EPA wood stove certification. This proposal is modeled on the approach Dr. Anthony Fauci used in 1989 that allowed a "Parallel Track" of both the Food and Drug Administration (FDA) use of AZT for AIDS that had the unfortunate side effect of blindness along with a second drug, Ganciclovir, that actually cured the blindness. An earlier letter sent to your office asked that you include a complaint-based system of regulating indoor residential wood burning using PurpleAir PM2.5 data in your suit against the EPA. Indoor residential wood burners are already ineffectively certified by the EPA. This violates the EPA's own National Ambient Air Quality Standards (NAAQS) emission limits of 35 micrograms per cubic meter in a 24-hour period. Using data from PurpleAir PM2.5 monitors in the yards of near neighbors who complain of PM2.5 from hyper-localized indoor residential wood burners would provide the missing and important evidence of this type of air pollution. Currently if a near neighbor's complaint is made to a local health department, a complaint using federal NAAQS exceedance data is not considered as a basis for a complaint against neighboring indoor residential wood burning. It is also not considered as a basis for shutting down the wood burning appliance when the indoor residential wood stove has been federally EPA certified. Lawsuits for nuisance are expensive and beyond the means of the average American and are not considered precedents in courts generally. Contacting state agencies to shut down polluting wood stove use that affects the health and lives of near neighbors has been unproductive because decisions made by the EPA determine the decisions made by state agencies. Although the scope of your lawsuit seems confined to asking the EPA to continue their wood stove certification program as is, albeit at a faster pace, we ask that you consider the intent behind asking the EPA to tighten their standards for wood stove certification on a regular basis. The intent of an Environmental Protection Agency is to protect the environment. This has perhaps been narrowly construed to be protecting air, water and ground from contamination from industries only. But United States citizens should actually benefit from this environmental protection as well. Tightening wood stove standards on a regular basis should result in protecting the environment as well as protecting United States citizens from harm from the air, water, and ground. We believe that the EPA's responsibilities are inextricably connected with public health responsibilities of other government agencies such as NIAID. Please try to accomplish something meaningful for the American people with this lawsuit by considering using a Parallel Track to include PM2.5 data in future decisions about air quality standards. Although I am not your constituent, by commencing to sue a federal agency you are representing me as a citizen of the United States and in that sense as your constituent. Thank you, Sent to

cody.doig@alaska.gov Alaska Senior Assistant Attorney General Cody Doig Jason.james@ilag.gov Illinois Assistant Attorney General Jason James Sgoldstein@oag.state.md.us Maryland Special Assistant Attorney General Steven Goldstein Turner.Smith@mass.gov Massachusetts Assistant Attorney General Turner Smith Peter.Surdo@ag.state.mn.us Minnesota Special Assistant Attorney General Peter Surdo Lisa.Morelli@law.njoag.gov New Jersey Deputy Attorney General Lisa Morelli Nicholas.Buttino@ag.ny.gov New York Assistant Attorney General Nicholas Buttino Paul.Garrahan@doj.state.or.us Oregon Attorney-in-Charge Paul Garrahan Steve.Novick@doj.state.or.us Oregon Special Assistant Attorney General Steve Novick Nick.persampieri@vermont.gov Vermont Assistant Attorney General Nick Persampieri Caroline.cress@atg.wa.gov Washington Assistant Attorney General Caroline Cress Chris.reitz@atg.wa.gov Washington Assistant Attorney General Chris Reitz Jenniferd@psccleanair.gov General Counsel, Puget Sound Clean Air Agency Jennifer A. Dold Jeanne.marrazzo@nih.gov Director of National Institute of Allergy and Infectious Diseases Jeanne Marrazzo Hugh.Auchincloss@nih.gov January to July 2023 acting Director of National Institute of Allergy and Infectious Diseases Hugh Auchincloss Lawrence.Tabak@nih.gov Director of the National Institutes of Health Lawrence Tabak

<https://rawsepresidents.wordpress.com/1-please-attach-pdf-letter-to-niaid-director-dr-jeanne-marrazzo-to-an-email-from-you-to-jeanne-marrazonih-gov/> Episode 56GF July 19, 2023. The Ask: Request a complaint-based system from 10 Attorney Generals suing the E P A to give wood stove users “certainty”. The Ask: Emails of 3 NIH officials jeanne.marrazzo@nih.gov; hugh.auchincloss@nih.gov; Lawrence.tabak@nih.gov Emails of 13 Assistant Attorney Generals, Deputy Attorney Generals and General Counsel preparing to sue the EPA to provide clarity for indoor residential wood stove manufacturers, vendors, and users. Instead, the assistant attorneys general should ask for a PM2.5 pollution complaint based system in place of the failed wood stove certification program. The states involved are Alaska, Illinois, Maryland, Massachusetts, Minnesota, New Jersey, New York, Oregon, Vermont, and Washington, as well as the Puget Sound Clean Air Agency. A new icon has been added to the RAWSEPresidents Website, which is now the nearest right icon. The icon is an ask that has already been described in Episode 56G B (description of the parties who should be at the table when deciding on “safe” wood stove emission limits and fence line measurements, rather than wood stove certification) and (emails to contact 10 Deputy or Assistant Attorney Generals and one General Counsel) (those PDFs are included at the icon link). Residents Against Wood Smoke Emission Particulates, see <https://rawsepresidents.wordpress.com> and click on the nearest right icon for The Ask: 1)Email PDF letters to 3 officials of the National Institutes of Health (NIH) and NIAID <https://rawsepresidents.wordpress.com/1-please-attach-pdf-letter-to-niaid-director-dr-jeanne-marrazzo-to-an-email-from-you-to-jeanne-marrazonih-gov/> The Ask 2)Email PDF letters to 13 Assistant Attorneys Generals, Deputy Attorney Generals and General Counsel <https://rawsepresidents.wordpress.com/1-please-contact-10-attorneys-general-about-august-2023-suit-versus-e-p-a-asking-for-certainty-for-wood-stove-users-rawsep-asks-for-complaint-based-sytem-based-on-pm2-5-monitor-data-exceeding-e-p/> To the right of that 3)“Barbie Goes To The Dating Game” <https://rawsepresidents.wordpress.com/1-barbie-goes-to-the-dating-game/> To the right of that 4)“Cookies that may contain Rocks are recalled” <https://rawsepresidents.wordpress.com/cookies-that-may-contain-rocks-are-recalled/> to the right of that 5)“The Fox Owns the Forest” card game <https://rawsepresidents.wordpress.com/the-fox-owns-the-forest-card-game-tba/> then to the right of that, the latest months, 6)September & 7)August & 8)July 2023, of PDFs of articles with U R L’s to search on <https://rawsepresidents.wordpress.com/1-september-2023-pdfs-of-urls/> <https://rawsepresidents.wordpress.com/1-august-2023-pdfs-of-urls/> and <https://rawsepresidents.wordpress.com/1-july-2023-pdfs-of-urls/> To the right of that, 9)Stickers to handout for RAWSEP, 10) Flyers to handout for RAWSEP, Games such as 11)Bingo for RAWSEP, 12)Crosswords for RAWSEP 13)PM2.5JeopardyFree game <https://youtu.be/Lnsg32pYDnc> 14)PM2.5FreeMonopoly <https://youtu.be/cUCK1pscQnQ> & EndWoodSmokeMonopoly 9e)“Vending Machines for PM2.5 monitors”, and 15)icon links to 30 minute Youtube videos and Spotify podcasts as well as podcasts.google.com, Castbox and PocketCast. PocketCast is only Free on the phone App. Pocket Cast works on Apple phones) and, below those icons, icon links to monthly URL’s of PDFs from June 2023 to May 2022.