

August 13, 2022, RAWSEP news paraphrased

The U.S. Midwest and U.S. South

Popular Mechanics

[Use a DIY Burn Barrel to Get Rid of Brush and Wood Shop Scraps](#)

Popular Mechanics

They're a useful way to get rid of **wood** scraps, brush, or other combustible waste. The problem that arises with burn barrels is that the **smoke** and ...

RAWSEP View: Mary noted that in Popular Mechanics, there was an article on using a Do-It-Yourself (D I Y) Burn Barrel to get rid of brush and wood shop scraps. This simple hack turns a metal drum into a raging incinerator. Mary thought that a simple hack could turn a metal drum into a PM 2.5 pollution device.

North Carolina

[Communities take the lead in monitoring air, which may be threatened by algae blooms](#)

Raleigh News & Observer

The sensor detects airborne particulate matter with diameters of less than 2.5 and 10 micrometers, known as **PM 2.5** and PM 10.

RAWSEP View: Mary noted that an article does not mention PM 2.5 caused by residential wood burning, but mentions PurpleAir which is usually used by neighbors to measure pollution from residential wood burning. In North Carolina, PurpleAir PM 2.5 sensors are being used to measure algae blooms, which are of the particle size 2.5 microns. The airborne particles of algae blooms are so small that they can enter deep into human organs through the respiratory tract. "It doesn't matter what the particle is made of as long as it's clogging up your lungs," the scientific researcher said. Albemarle Sound in North Carolina is where algae blooms have resurfaced after nearly 30 years. The Chowan-Edenton Environmental Group (C E E G), a citizen-run organization, has been working to improve water and air quality that have been threatened by algal blooms in recent years. Many CEEG members are scientists or teachers who work to educate the community about environmental issues. C E E G and researchers will install nearly 20 more sensors in the community's public facilities and private homes in the upcoming months. The Edenton Racial Reconciliation Group of Chowan County and Chowan University of Northampton County are among the candidates for installing air quality sensors, while the researchers are waiting for more facilities and homeowners willing to host sensors. The device detects particulate matter, and the data is displayed on a real-time map maintained by the device manufacturer PurpleAir. The handheld device, manufactured by PurpleAir, resembles a miniature dome with a circular base and stands about 3 inches tall. The sensor comes with easy plug-in instructions and can be powered by household electric outlets.

2.The U.S. Northeast

Massachusetts

[Wood-burning power plants in Mass. won't qualify for renewable energy credits. Local ...](#)

MassLive.com

A new climate law in the state will expand clean energy development and makes **wood-burning** power plants ineligible for renewable energy subsidies, ...

RAWSEP View: Noel noted that an article not specifically about residential wood burning addressed the same PM 2.5 pollution issues caused by residential wood burning. This article was about how Massachusetts successfully ended subsidies for wood-burning power plants in Massachusetts. A new climate law in Massachusetts has given environmental groups cause to celebrate. An Act Driving Clean Energy and Offshore Wind ends renewable energy subsidies for wood-burning power plants, according to Climate Action Now Western Massachusetts. A representative of [Climate Action Now](#) said "Grassroots organizing created positive change and advanced climate justice." Massachusetts removed woody biomass from its Renewable Energy Portfolio Standard (R P S). Only two biomass plants qualified for the state's previous R P S, but climate activists had expected that number to increase dramatically due to proposed changes by the Department of Energy Resources (D O E R). By removing woody

biomass from the R P S program altogether, the new law will prevent D O E R's proposed [rule changes](#) from going into effect. "The science is clear: burning wood for energy is not a climate solution," said a representative of the Pelham, Massachusetts-based [Partnership for Policy Integrity](#). "Massachusetts is leading by removing woody biomass from its definition of renewable energy, and we hope other states and nations will follow." In 2008 western Massachusetts residents organized to oppose several large biomass plants proposed in Springfield, Greenfield and Russell. "Burning trees is harmful to our lungs" said a representative of Greenfield, Massachusetts-based Concerned Citizens of Franklin County, "funding biomass projects is a bad idea." Thousands testified and submitted comments opposing D O E R's plans to [roll back](#) health and environmental requirements for wood-burning power plants which previously were required to qualify for rate-payer subsidies through the R P S. More than one hundred groups, and individuals across Massachusetts called on the [Legislature](#) to change the law and end subsidies for woody biomass energy altogether.

3.The U.S. West Coast

Alaska

[New wood stove rules are bad for the Interior | Community Perspectives | newsminer.com](#)

Fairbanks Daily News-Miner

... particles which are emitted by solid-fuel **burning** sources like **wood** and pellet stoves, but also by vehicles, buildings and more.

RAWSEP View: Wendy noted this a letter to the editor, from a wood burner to the Fairbanks, Alaska, Daily News-Miner newspaper brings attention to the Alaska Department of Environmental Conservation (A D E P)'s announcement to wood stove owners that even what wood burner's consider EPA-certified woodstoves would soon be out of compliance with A D E C's new rules. Wendy learned that the letter from A D E C to the wood burner said "Game Over" in a pixelated video game font. Wendy would like to see this elaborate communication from A D E C to a wood burner in Fairbanks, Alaska, but the gist of the letter seems believable. A D E C is concerned with human health as well as slowing climate change. Wood burning produces 90% PM 2.5, which is a particulate of 2.5 micron size, the perfect size to infiltrate the human lung, causing a cascade of human health problems. There is no safe level of PM 2.5. A cozy wood fire is a hazard to your health. The wood burner's letter to the editor is titled "New wood stove rules are bad for the interior". Wendy was diametrically opposed to the opinion of the letter writer, and believes any new wood stove rules which expect greater compliance to achieve less emissions from wood burning is very good for the interior of Alaska.

[Ozone High Pollution Advisory issued in Maricopa County for August 11 and 12](#)

Arizona Emergency Information Network - az.gov

Wood burning in residential fireplaces, chimeneas, outdoor fire pits, and similar outdoor fires is prohibited in Maricopa County

RAWSEP View: Wendy noted that in Maricopa County, Arizona, the Arizona Department of Environmental Quality (A D E Q) issued an Ozone High Pollution Advisory (H P A) for Maricopa County effective Thursday, August 11 and Friday, August 12. This H P A is due to ozone levels expected to accumulate enough to exceed the federal health standard for ozone.

[Air Quality Hourly Forecast | Tucson | ADEQ Arizona Department of Environmental Quality](#)

Arizona Department of Environmental Quality

Therefore, PM10 and **PM2.5** are forecast to stay in the Good AQI range for the near future. - R. Nicoll ADEQ Meteorologist. What Flag Should I Fly?

RAWSEP View: Wendy noted that in Tucson, Arizona, PM 2.5 will have good air quality of a 24 hour average of 16 micrograms per meter cubed in the near future.

[News Flash • Maricopa County, AZ • CivicEngage](#)

Maricopa County

Ozone High Pollution Advisory issued for Thursday, Aug. 11 - Friday, Aug. 12 · **Wood burning** in residential fireplaces, chimeneas, outdoor fire pits, ...

RAWSEP View: Wendy noted that in Maricopa County, Arizona wood burning in residential fireplaces is restricted

California

[Study links air pollution and COVID-19 deaths in California | The Fresno Bee](#)

The Fresno Bee

The South Coast and San Joaquin Valley air basins have the highest **PM 2.5** concentrations in the state. The tiny droplets and particles that make up PM ...

RAWSEP View: Wendy noted that the article she read did not mention residential wood burning as a source of PM 2.5 pollution. Wendy noted that thousands of COVID-19 deaths could have been prevented statewide if California had lower PM 2.5 levels, a new study finds. An estimated 9% of COVID-19-related deaths statewide, or about 4,250 deaths, could have been avoided between February 2020 and February 2021 if California's levels of fine particulate matter, or PM 2.5, registered within national air quality standards CONSIDERED SAFE, according to researchers from the Public Health Institute and U C San Francisco. The researchers studied neighborhood-level air pollution data, examining over 3 million COVID-19 infections and about 50,000 COVID-19 deaths in the early months of the pandemic. They found that people living in neighborhoods exposed to the highest levels of air pollution had a 20% higher risk of COVID-19 infections, a 51% higher risk of COVID-19 mortality and were likely to be Latino and from low-income communities. The tiny droplets and particles that make up PM 2.5 are so small that they can penetrate deep into the lungs. Since California has not met PM 2.5 national air quality standards, what is left is to protect vulnerable populations, including Latinos, low-income communities and outdoor workers. Essential workers must have paid time off and access to masks during the worst air pollution episodes. People need information regarding the use of home air filters when PM 2.5 spikes. Such steps are a "Band-Aid," but reduce some harm. Valley Air District has a series of active grants and resources that help residents swap the machinery and technology they use at home or in the fields for less polluting options. "The incentive programs are failing," This particulate pollution calls for a different approach, according to an expert interviewed.

[Dennis Mattinson, Weather 08-10-2022 - Sierra Wave](#)

Sierra Wave

He specialized in the monitoring, measurement and movement of **particulate matter 2.5** and 10 microns in size (known as **PM-2.5** and PM-10).

RAWSEP View: Wendy noted that in Mammoth Lakes, California a weather forecaster was an EPA Program Director and an Air Quality Specialist. He specialized in the monitoring, measurement and movement of particulate matter 2.5 and 10 microns in size (known as PM-2.5 and PM-10). He also specializes in weather forecasting of the Owens Valley and Mammoth Lakes, giving him the edge in accurate Eastern Sierra weather.

[Scientific Reports volume 12](#), Article number: 12655 (2022) [Cite this article](#) [Metricsdetails](#)

RAWSEP View: Wendy noted that residential wood burning as a source of PM 2.5 pollution was not mentioned in an article in Scientific Reports about levels of bird detection in areas of PM 2.5 pollution, which used PurpleAir monitor data. Wendy noted that the article in Scientific Reports said that birds living in developed areas contend with stressors, including PM 2.5 air pollution. Researchers launched a community science project in spring 2020 to detect common birds in cities under COVID lockdown in the U.S. Pacific Northwest. Existing PurpleAir PM 2.5 monitor data maps were used to support local monitoring efforts. Some cities under lockdown had temporary reductions in air pollution. Environmental conditions may influence detection of birds; for example, inhalation exposure to air pollution has been linked to adverse health impacts and behavioral changes in birds, likely impacting bird detectability. In spring 2020, researchers launched a community science project using the eBird platform to monitor birds in cities under COVID lockdown in the Pacific Northwest. More than 900 volunteers conducted weekly surveys of birds in their neighborhoods during a 3-month data collection campaign (April 1 to June 30, 2020), which overlapped with shelter-in-place orders and school closures. Environmental data. Researchers used data from ground-based instruments in the Environmental Protection Agency (E P A) Air Quality System (A Q S) to characterize air pollution at monitoring sites, bird feeders, specifically the ambient concentration of PM_{2.5}. PM_{2.5} includes all particles smaller than 2.5 microns diameter. Human activity is an important driver of PM_{2.5} in urban areas, with vehicle traffic accounting for 24% of total PM_{2.5} in U.S. cities. Researchers focused on PM_{2.5}, limiting our analysis to metro- and micropolitan areas. Researchers built three variables: availability of seed or suet feeders, hummingbird feeders, and or bird baths at monitoring sites. During Lockdown, PM_{2.5} concentrations increased in both Washington and Oregon in the spring of 2020. PM_{2.5} ranged between 1 and 11.2 micrograms per meter cubed, with a median value of 3.9 micrograms per meter cubed, which was well below the 24-hour National Ambient Air Quality Standard (NAAQS) of 35 micrograms per meter cubed. Researchers concluded that

even at levels deemed safe for human health, air pollution may be driving species-specific behavioral changes in birds, such as movement and vocalization. Most of the data used in this analysis are publicly available.

<i>Species:</i>	Ψ			p								
	Highly Developed	Natural Areas	% Canopy Cover	Day of Year	Day of Year ²	Weekend	Time of Day	Time of Day ²	Temperature	Precipitation	PM _{2.5}	Human Mobility
American Crow	-	-	-	+	+	-	-	+	+	-	+	-
American Robin	-	-	+	+	-	+	-	+	-	+	+	-
Anna's Hummingbird	+	-	+	+	-	+	-	+	-	-	+	-
Bewick's Wren	-	-	+	-	+	-	-	+	+	+	+	-
Black-capped Chickadee	-	-	+	+	+	-	-	+	-	-	-	-
Brown-headed Cowbird	-	+	-	+	-	+	-	-	-	-	-	-
Bushtit	+	-	+	-	+	+	+	-	+	-	-	-
Dark-eyed Junco	-	-	+	+	+	-	-	+	-	+	+	-
Glaucous-winged Gull	+	+	+	+	+	-	+	-	-	-	+	-
Great Blue Heron	-	+	+	+	-	+	+	-	-	-	-	-
House Finch	+	-	-	+	+	+	-	+	-	-	-	-
Lesser Goldfinch	-	-	-	+	-	+	+	+	-	-	-	-
Northern Flicker	-	-	+	-	+	+	+	+	+	-	-	-
Osprey	-	+	-	+	-	+	+	+	+	-	-	-
Rock Pigeon	+	+	-	+	+	+	-	-	+	-	-	-
Ruby-crowned Kinglet	-	-	+	-	-	-	-	-	-	+	-	-
Steller's Jay	-	-	+	+	+	+	-	-	-	+	+	-
Yellow-rumped Warbler	-	-	-	-	-	-	-	+	-	-	-	-

<i>Species:</i>	Ψ			p								
	Highly Developed	Natural Areas	% Canopy Cover	Day of Year	Day of Year ²	Weekend	Time of Day	Time of Day ²	Temperature	Precipitation	PM _{2.5}	Human Mobility
American Goldfinch	-	+	-	-	+	+	-	-	+	-	-	+
Bald Eagle	-	+	-	-	-	+	+	-	-	-	+	+
Band-tailed Pigeon	-	+	+	+	-	+	-	-	-	+	+	+
Barn Swallow	-	+	-	-	+	+	+	+	+	+	+	+
Black-headed Grosbeak	-	+	+	+	-	+	+	-	+	+	+	+
California Scrub-jay	+	+	-	-	+	+	-	-	-	-	-	+
Canada Goose	-	+	-	-	+	-	+	-	+	-	-	+
Chestnut-backed Chickadee	-	-	+	+	+	+	+	-	-	+	+	+
Downy Woodpecker	-	+	+	-	+	+	+	-	+	+	-	+
Eurasian Collared-Dove	-	+	-	-	+	+	-	-	+	-	-	+
European Starling	+	+	-	-	-	+	-	+	+	+	-	+
Golden-crowned Kinglet	+	-	+	-	-	-	+	-	-	+	+	+
Golden-crowned Sparrow	-	-	-	-	-	+	-	-	-	+	+	+
House Sparrow	+	+	-	-	+	+	+	+	+	-	-	+
Mallard	-	+	-	-	+	+	+	+	+	+	+	+
Mourning Dove	-	+	-	-	+	+	-	-	+	-	-	+
Orange-crowned Warbler	+	-	-	-	-	-	-	+	-	-	-	+
Pine Siskin	-	-	+	-	-	-	+	-	+	+	-	+
Purple Finch	-	+	+	-	-	-	-	+	+	+	+	+
Red-breasted Nuthatch	-	-	+	+	+	-	-	-	+	+	+	+
Red-winged Blackbird	-	+	-	-	-	+	+	-	+	+	+	+
Rufous Hummingbird	-	+	-	+	-	-	+	+	-	-	+	+
Song Sparrow	-	-	+	-	+	+	-	+	-	+	-	+
Spotted Towhee	-	-	+	-	-	-	-	+	-	+	+	+
Tree Swallow	-	+	-	-	+	+	+	+	+	+	-	+
Violet-green Swallow	-	+	+	-	-	-	+	+	-	-	+	+
White-crowned Sparrow	+	+	-	-	+	+	-	-	+	+	-	+
Wilson's Warbler	+	-	+	-	-	+	-	+	-	-	-	+

@theU - The University of Utah ... that poured out of smokestacks and chimneys a century ago when coal and **wood burning** was common and prevalent among homes and businesses.

RAWSEP View: Wendy noted that both residential wood burning pollution and particles were mentioned briefly in an article called "Air you can chew: The history of Utah's air quality". The article chronicled the noxiousness that poured out of smokestacks and chimneys a century ago when coal and wood burning was common and prevalent among homes and businesses. Around the turn of the 20th century, Utahns spoke of the "smoke nuisance" which was also accompanied by soot. Measuring soot pollution was as easy as setting enamel jars outside that collected, in some parts of the city, 1000 tons of soot per square mile over the course of a winter. It's an enormous amount of soot. "That's air that you can chew." Atmospheric scientists tried to learn all they could about the reasons for Utah's air quality challenges. In 1919, a "government smoke expert" flew a biplane through Salt Lake's "smoke bank" and gathered samples to test hypotheses about the temperature inversion phenomenon. More than a century later, Utah atmospheric scientists are using similar methods. In an upcoming project called [AQUARIUS](#), researchers will fly an airplane through the temperature inversion layer, studying the chemistry that forms aerosol particles from atmospheric gases. "The chemistry is not fully understood," Mitchell says. "Somebody had that exact same study design literally a hundred years ago." **Pushback.** Researchers found that throughout Utah's history, business and industry preferred to address air pollution without government intervention. But sometimes when citizens pushed against industry, the industry pushed back. In 1899 the first copper smelter opened in Murray, connected to Utah's mining industry. But the smelter facilities had no pollution controls and emitted sulfur, arsenic, and lead. Farmers near the smelters sued when their crops began to die from the toxic emissions. Smelter owners responded by funding research into farming practices and accusing farmers of "smoke farming," or farmers suing smelters for money instead of tending to their crops. Smelter owners tried to say that farmers who were just bad at farming were trying to pass the blame to smelters, when the real smoke pollution came from farmer's emissions. In 1986 the Geneva Steel plant in Utah County closed down operations for 13 months during a labor strike. The closure provided an opportunity for a natural experiment to compare health outcomes in the area during the closure with times when the plant's smokestacks were in full operation. Studies published in peer-reviewed scientific journals showed that bronchitis and asthma hospital admissions for preschool-age children in Provo were halved during the idle year. But a Geneva Steel-funded rebuttal study, not subjected to peer review before being released to the public, claimed that the difference in hospitalization rates was due to respiratory syncytial virus, or R S V. This claim was false since the original studies had controlled for R S V rates. But "the disinformation effort to create misleading news coverage had the desired effect of creating an artificial controversy that muddled public understanding of the health impacts of air quality in Utah for years." **Environmental stewardship and economic growth.** In 1893, a newspaper article foresaw that Utah's economic and social growth would be closely linked with its air quality. "Factories that blacken the city with smoke can be as much a detriment as they are an advantage," editorialized a newspaper, "persons will select Salt Lake City as their residence on account of its pure air and cleanliness as much as for business reasons" Today, the [OneUtah Roadmap](#) from Governor Spencer Cox continues addressing that Utah's relationship between environment and business. The missing piece that we now have in our hands, the article concluded, is clean energy technology, including zero-emission technology. We're starting to see those technologies become in many cases the best option, the cheapest option. Utah is well-positioned to lead as a conservative state with a sizable technology industry and support from elected officials. The world has sent a signal that it will buy clean energy technology. Will we sell it, or will we watch it be sold? Our moment in time comes with worsening air issues due to climate change, including wildfires.

[Friday fire update: Evacuation notices lifted near Grandview; Wenas Wildlife area reopens](#)

Yakima Herald

Wood and charcoal campfires are banned. Fuel stoves and lanterns can be used, but **wood burning** camp stoves are not allowed

RAWSEP View: Wendy noted that in Yakima, Washington, wood and charcoal campfires are banned. Fuel stoves and lanterns can be used, but **wood burning** camp stoves are not allowed. Wildfires burning north of Naches and south of Grandview were in mop-up status on Friday morning, with the Forest Service tackling several small lightning-caused fires on the Cle Elum Ranger District. Evacuation notices were lifted near Grandview, and the Wenas Wildlife Area has reopened. Canyon Road Fire. The Canyon Road Fire south of Grandview was 2,000 acres and 90% contained as of Thursday night, according to Yakima County Fire District 5. Fire crews were mopping up Friday. The fire started near the 1800 block of Canyon Road at 4:20 p.m. Wednesday, according to Yakima County Fire District 5. Yakima Valley

Emergency Management lifted Level 2 set evacuation notices on Friday morning. The cause of the fire is under investigation. Cow Canyon and Vantage. The Cow Canyon Fire between Naches and Ellensburg was 90% contained on Friday, according to Northwest Incident Command Team 12. The fire began Aug. 3. It burned 5,832 acres and destroyed two homes, one cabin and 11 outbuildings. It started in the Wenas Barbecue Flats area. The Vantage Highway Fire in Kittitas County, which started Aug. 1, was fully contained. Fire activity on both fires was minimal on Thursday, with mop-up underway. Command of the fires transitioned back to a local Department of Natural Resources unit on Friday morning. The cause of both fires was under investigation. The Wenas Wildlife Area reopened Friday, though people are asked to avoid the burned areas and fire crews, according to information from the state Department of Fish and Wildlife. Emergency fire restrictions are in place. Kittitas and Yakima County road closures on North Wenas Road, Sheep Company Road and Cove Road are lifted. The bridge in Yakima Canyon leading to Umtanum Trail is open, the WDFW said. The Quilomene and Whiskey Dick wildlife area units within the L.T. Murray Wildlife Area are temporarily closed. New fire starts. Okanogan-Wenatchee National Forest firefighters have responded to 12 new wildfires on the forest after a recent lightning storm resulted in 2,700 lightning strikes, a news release said. Most of the fires are small, and five are in the Cle Elum Ranger District. The largest of those was 5 acres on Jolly Mountain, which is burning in timber and grass. Initially the response was 11 smokejumpers, a 14-person crew, and two engines but firefighters have spread out to help with the other small fires in the same general area. The other fires, all 2 acres or less, are on Thorp Lookout, Knox Creek, No Name Creek and No Name Ridge, the news release said. The fires are 11 and 13 miles northwest of Cle Elum. New campfire restrictions went into effect Thursday across the Okanogan-Wenatchee National Forest. Wood and charcoal campfires are banned. Fuel stoves and lanterns can be used, but wood-burning camp stoves are not allowed.

4.Canada

[Kaslo council, July 26: Council to send anti-vax mandate letter to Province](#)

Yahoo News Canada

The Community **Wood Smoke** Reduction Program aims to improve air quality and reduce health problems attributable to **wood-burning** stoves in homes.

RAWSEP View: Cameron noted that a community wood smoke reduction program aims to improve air quality and reduce health problems attributable to wood burning stoves in homes.

5.Australia

[How global COVID-19 pandemic restrictions shed light on the relationship between ...](#)

community99.com

Each year, an estimated 4.2 million people die prematurely from exposure to pollutants such as fine particles (**PM2.5**).

[How global COVID-19 pandemic restrictions shed light on the relationship between ... - Phys.org](#)

Phys.org

Every year, an estimated 4.2 million people die prematurely from exposure to pollutants like fine particulate matter (**PM2.5**).

RAWSEP View: Audrey noted that PM 2.5 was mentioned in an article that did not mention residential wood burning as a source of PM 2.5 pollution. Every year, an estimated 4.2 million people die prematurely from exposure to pollutants like fine particulate matter (PM_{2.5}). These are inhalable particles so small they cannot be seen with the naked eye and are emitted from the combustion of fossil fuels. A study showed that cities in China, Europe and India saw large decreases in PM_{2.5}—a pollutants highly associated with burning fossil fuels and car usage—that align with pandemic stringency levels including the reductions in mobility. As researchers' graphs showed, NO₂ levels (and to a lesser extent, PM_{2.5} levels) dropped around February/March 2020. Countries like China and India enjoyed the greatest reductions in ambient particulate matter. This is particularly important as these two countries face some of the most severe health consequences of air pollution—together accounting for more than half of the world's PM_{2.5} exposure-related deaths. New York City and Tokyo saw commensurate drops in pollution as mobility ceased across all types of transport during COVID's first wave. However, when opening up after the first lockdown, New York City's mobility returned largely through private motor vehicle journeys—far exceeding previous baselines, with public transport levels never returning to normal levels. Meanwhile, in Tokyo, both public transport usage and automobile journeys rebounded at more equal rates. Cities like Brussels, Rome and Paris have created a combined 250 kilometers of new cycling paths as part of post-pandemic transportation plans. Australian cities have yet to do the same—there is certainly no shortage of demand for

cycling infrastructure. Post-pandemic, weekly volumes of bikes on cycling paths increased by 140 percent on the South Perth Foreshore, by 165 percent on the Outer Harbour Greenway in Adelaide, and by a whopping 169 percent on the Bay Trail in Brighton in Victoria. Creating cycling lanes, along with providing other forms of transport like ride sharing, gives cities a means of lowering emissions. People who can work from home should do so, eliminating the need for daily commutes to the workplace altogether. The researchers concluded that if governments want to protect their populations from pollution-related illnesses and death, they will need to create alternative transport systems that aren't centered around private car journeys. Only then will our "new normal" allow us to enjoy clear skies and longer lives.

6. New Zealand

[People burning pallets, driftwood to heat homes, says firewood retailer | Stuff.co.nz](#)

Stuff.co.nz

Burning the wrong **wood** can be bad for your health, but as the cost of living bites, people are trying to make savings where they can.

RAWSEP View: Zach noted that in an editorial, the writer wrote “**Burning** the wrong **wood** can be bad for your health, but, as the cost of living bites, people are trying to make savings where they can.” Zach thinks that the short-term possible monetary savings of burning wood are not worth the long-term health costs of burning wood.

[Dangers of burning some wood types - YouTube](#)

YouTube

As the coldest week and cost of living crisis bite, Kiwis are **burning** unsuitable **wood** to stay warm and save cash. But this comes with a serious ...

RAWSEP View: Zach noted that Kiwis are burning unsuitable wood to stay warm and save cash. But an editorial noted that this comes with serious health consequences.

7. The U.K.

[Live: Shenstone farm fire sends smoke billowing into the sky - seen from miles around](#)

Birmingham Live

Smoke can be seen billowing into the sky from Aston Wood Golf Club. See the footage below:.

RAWSEP View: Island noted that near Birmingham, England, a farm fire sent smoke billowing into the sky, seen for miles around. A firefighter said "We were called out to reports of farming equipment on fire. West Midlands Fire Service is currently helping Staffordshire Fire & Rescue Service tackle the blaze. Six appliances are needed, when one would normally be sufficient, because of the warm weather." West Midlands Fire Service said the blaze was 300 by 600 meters in size. A man close to the fire, who didn't want to be named, said the smoke is still "really thick". He added: "It's also making my clothes smell." Thick smoke can be seen as far away as Sutton Coldfield, several miles from the farm fire in Shenstone.

8. Germany in the European Union, and Europe

Denmark

[Air Pollution, Road Traffic Noise Exposure May Be Linked to Heart Failure](#)

Consumer Health News - HealthDay

At participants' residences, the annual mean levels of particulate matter with a diameter <2.5 µm (**PM2.5**) since 1990 and nitrogen dioxide (NO₂) and ...

RAWSEP View:

Gerda noted that, in Denmark, exposure to air pollution and road traffic noise over the course of many years may be associated with an increased risk of developing heart failure, and the correlation appears to be even greater in people who are former smokers or have high blood pressure, according to new research published today in the Journal of the American Heart Association, an open access journal of the American Heart Association. The study group lived in rural, urban, and suburban areas throughout Denmark. To best measure individual exposure to air pollution and road traffic noise, researchers maintained records of each individual's residential addresses, including any moves to new residences

from 1970 and 2014. To determine levels of air pollution, the yearly average concentrations of two components, fine particulate matter (PM_{2.5}) and nitrogen dioxide (NO₂), were measured using a Danish air pollution modeling system. Road traffic noise levels within a three-kilometer radius from the participants' residential addresses were estimated using a validated model system called Nord2000 and measured in decibels (dB), the standard unit for the intensity of sound.

Estonia

<https://www.nytimes.com/2022/08/12/business/economy/estonia-natural-gas-lng.html>

RAWSEP View: Gerda noted that Estonia is importing natural gas. In Paldiski, Estonia, a port city in the northwestern corner of the country is hastily being turned into a bulwark against Russian efforts to politically pressure Europe. Ever since Moscow threatened to [withhold natural gas](#) as retribution for countries opposed to its invasion of Ukraine, workers in Paldiski have been constructing an offshore terminal for non-Russian gas at a round-the-clock pace. The project is one piece of Europe's [strategy](#) to quickly wean itself off the Russian energy that is heating homes and powering factories across the continent.

9. Nigeria in Africa

10. India in Asia

India

[Air Pollution A Silent Killer, Multi-Sectoral Challenge In India: Kerala High Court - Live Law](#)

Live Law

Exposure to **Particulate Matter 2.5** can cause deadly illnesses like ... of a 30% reduction of **PM 2.5** and PM 10 concentration in the ambient air.

RAWSEP View:

Air Pollution A Silent Killer, Multi-Sectoral Challenge In India: Kerala High Court Hannah M Varghese 12 Aug 2022 6:53 AM Air Pollution A Silent

Ishan noted that Exposure to Particulate Matter of 2.5 micron size can cause deadly illness, according to the Kerala High Court in India, and the state Pollution Control Board.

Thailand

[Yong: Thais lost a lot of opportunities in early stages of Covid - Nation Thailand](#)

Nation Thailand

Yong explained that the Covid-19 virus is 120nm, which is 20 times smaller than **PM 2.5** dust particles. The doctor said someone had asked him to test ...

RAWSEP View: Ishan noted that in Thailand, a virologist said Thais lost a lot of opportunities in early stages of Covid. The virologist had to explain that particulate air filters used for particles like PM 2.5, of 2.5 micrometer size, do not filter COVID out of the air, because COVID is of much smaller, nanometer size. He said some people preferred vaccines, but some did not, and they would not listen to reason. Therefore, Thais lost a lot of opportunities, especially in the early stages when vaccines were limited. He noted that the severity of COVID has dropped over time, as most people are now fully vaccinated, even though the virus keeps mutating. Thais are fully capable of creating innovations, the virologist said. Several innovations have proved practical but some have been created without understanding, such as a virus filter. A unit of the virus is measured in nanometers, while PM 2.5 fine dust is measured in micrometers. These two units are different from each other by a thousand times, the virologist said. Yong explained that the Covid-19 virus is 120 nanometers, which is 20 times smaller than PM 2.5 dust particles. The doctor said someone had asked him to test the virus filter with the actual virus, but he said it could not be done and only a simulation could be carried out. He also mentioned that there was a caller who woke him from sleep at 3 or 4am, claiming to have an "amazing herb" that could cure Covid-19. Yong said he did not find that funny.

10.5 Research Papers and Technology

11. The Future