

July 8, 2022, RAWSEP news paraphrased

## 1.U.S. Midwest

## 2.U.S. Northeast

## 3.U.S. West Coast

Arizona

### [Ozone High Pollution Advisory issued for Thursday, July 07](#)

Arizona Emergency Information Network - az.gov

Wood burning in residential fireplaces, chimeneas, outdoor fire pits, ... This includes individuals and businesses which have burn permits for ...

RAWSEP View: Wood burning in residential fireplaces, chimeneas, outdoor fire pits, and similar outdoor fires is prohibited in Maricopa County. This includes individuals and businesses which have burn permits for open burning.

California, Palo Alto

### [Exposures and behavioural responses to wildfire smoke - Nature](#)

Nature

During smoke events, indoor particulate matter (**PM2.5**) concentrations often remain 3–4× above health-based guidelines and vary by 20× between ...

### [US isn't ready for the next wildfire smoke wave. Here's what needs to change](#)

Stanford News - Stanford University

Indoor PM 2.5 concentrations in the San Francisco Bay Area during the unprecedented wildfire smoke event of August-September 2020.

RAWSEP View: One conclusion of this research is to recommend use of **PurpleAir** PM 2.5 monitors, and distribute free air purifiers. This research is about wildfire smoke, but residential wood burning smoke is 90% PM 2.5. In the absence of systematic support at the federal level, a patchwork of local and state mitigation efforts has emerged. Oregon's environmental agency, for example, has provided a grant for the city of Ashland to set up a free **air purifier distribution program** for vulnerable residents. In California, where more than half the population experienced a month of wildfire smoke levels in the range of unhealthy to hazardous during the 2020 fire season, the state has launched a **\$5 million pilot program** providing grants for smoke shelters. Overall, concerning wildfire smoke, the authors found indoor concentrations of the deadliest type of particle pollution, known as PM 2.5, often remain three to four times higher than public health guidelines, and can vary by a factor of 20 between neighboring households during heavy smoke days. "To be able to intervene appropriately, we have to be able to **measure** things, including what people are exposed to in their home and how they're behaving," said Burke. That ability is rapidly expanding, thanks to the growing number of people buying relatively low-cost but reliable air quality monitors from **PurpleAir**, a private company, and agreeing to have the data put on a public website – although households who own the monitors, for now, are overwhelmingly Californian and higher income. Researchers led by **Marshall Burke**, an associate professor of Earth system science, analyzed data from consumer-grade air pollution sensors in 1,520 single-family homes across the U.S., as well as nearby outdoor air pollution monitors, cell phones, social media posts, and Google searches in English and Spanish between 2016 and 2020. The results, **published** July 7 in *Nature Human Behaviour*, show that better education and information about health hazards from wildfire smoke are not enough to protect people from the health harms of wildfire smoke exposure. Most government policies for mitigating public health risks from wildfire smoke aim to educate citizens to protect themselves by staying indoors, closing windows, and using air filters. Stanford research shows why that approach fails for Americans across all income groups and points to solutions. "People seem to know they're being exposed. We see a lot of behaviors change even at pretty low levels of smoke exposure, although those responses differ by socioeconomic status," said Burke. Short-term solutions include establishing clean air shelters and providing public subsidies for lower-income households to filter indoor air. "If people can't maintain good air quality in their homes, they need a place to go where they can breathe clean air,"

## 4.Canada

Canada, Ontario, Kitchener, a mid-size city

### [Opinion: Healthy cities start with chemistry - C&EN - American Chemical Society](#)

C&EN - American Chemical Society

Our first publication measured elevated NO<sub>2</sub> and **PM<sub>2.5</sub>** from the 2021 summer wildfires and identified a hotspot downwind of a highway with **PM<sub>2.5</sub>** ...

RAWSEP View: This study of PM 2.5 pollution in a mid-size city does not address residential wood burning as a source of particulates, but does address the health and climate change aspects of PM 2.5 pollution. The study stated that The World Health Organization [recognizes air pollution as an “invisible killer”](#)—a major ongoing public health issue and contributor to climate change. Cities are critically important for understanding air pollution: [their CO<sub>2</sub> emissions account for more than 70% of global emissions](#). Extensive [data analyses by organizations](#) such as the Intergovernmental Panel on Climate Change (IPCC) have focused only on relatively large metropolitan centers and megacities. Midsize cities—those with populations of 1 million people and below—outnumber large metropolitan centers, yet [little to no information exists on their air quality and carbon footprint](#). The absence of data for midsize cities hinders efforts to assess the public’s response and engagement with information about air quality and climate change. To address this need, my group launched a pilot air quality monitoring project in 2020 in Kitchener, Ontario. The **region has only one air quality monitoring station—located in a Kitchener city park**—which measures nitrogen oxides, ozone, and **fine particulate matter (PM<sub>2.5</sub>)**. Data collected by the station are used to calculate the region’s air quality health index. But traffic and other sources of pollution disproportionately impact different sites throughout the region, made it difficult to quantify the impact of population growth and fast development on urban air quality and greenhouse gas emissions. We installed a network of **five multi-sensor air quality monitoring** pods near schools in Kitchener that fall within areas of high industrial and traffic emission sources. Also, outreach presentations to over 350 students at the schools close to our monitoring network. These presentations encouraged teachers to enhance the air quality content in their science lesson plans. This outreach was intended to highlight to school children how a fundamental understanding of chemistry helps university researchers design and execute projects that benefit society.

### 5.Australia

### 6.New Zealand

### 7.U.K.

U.K., Scotland, Fife, University of St. Andrews

### [Long-Term Air Pollution Exposure Tied to Multimorbidity Clusters - Physician's Weekly](#)

Physician's Weekly

For each 1 µg/m<sup>3</sup> increase in cumulative exposure to PM<sub>2.5</sub>, there was a higher likelihood of belonging to respiratory (2.4 percent), musculoskeletal ( ...

RAWSEP View: Kai Hu, from the University of St. Andrews in Fife, Scotland, and colleagues examined associations between PM<sub>2.5</sub> exposure and multimorbidity disease clusters and then estimated the associations between PM<sub>2.5</sub> exposure and the development of multimorbidity longitudinally using growth curve modeling for adults aged 45 to 85 years in China.

### 8.Germany in the European Union, & Europe

<https://theworld.org/stories/2022-06-02/biomass-energy-may-soon-lose-its-green-label-eu>

Biomass energy may soon lose its green label in the EU The World GBH Public Radio June 2, 2022

RAWSEP View: The European Union Parliament voted in May 2022 to stop calling biomass burning “carbon neutral. This article goes into the difficulty of implementing this change in the European Union. RAWSEP recommends you click on the URL and read the entire article, for its insights into the climate-denying tactics of the wood burning industry worldwide. This article from a Public Radio station quotes [Dutch member of parliament, Rob Rooker](#), spoke at a biomass protest in November. He said that burning wood to generate energy was a ridiculous idea. “At the moment, more than 50% of all wood being cut in Europe is being burned. It’s a scam. We should stop with biomass. It’s that easy.” Rob Rooker, Dutch member of parliament. But it may not be as easy as he's implied. The European Parliament’s

environment committee did vote this month to [scrap the renewables designation for biomass](#). But the entire parliament and every EU member state must ratify the change for it to become law. If that happens, instead of being subsidized, pellets could face an emissions tax, making them more expensive. Ecologists hope that that will lower demand, reducing deforestation in the Baltic states and elsewhere. In Europe, wood pellets fire power plants and home furnaces in what's become a multibillion-dollar-a-year industry. It's expanded because the European Union labels pellets as renewable. But environmentalists say that the label is misguided. They say that biomass burning is not "carbon neutral" and the European Union has agreed.

## 9.Nigeria in Africa

## 10.India in Asia

India

### [India's air pollution crosses critical levels - Mint](#)

Mint

Air pollution measured by **PM 2.5** and PM 10 levels during the summer months breached the annual safe limits of 40 ug/m<sup>3</sup> and 60 ug/m<sup>3</sup>, ...

RAWSEP View: Air pollution measured by PM 2.5 and PM 10 levels during the summer months breached the annual safe limits of 40 ug/m<sup>3</sup> and 60 ug/m<sup>3</sup>, respectively across 10 cities, data from the Central Pollution Control Board for the National Clean Air Program (NCAP) showed.

## 10.5 Research Papers & Technology

## 11.The Future