Episode 56DN through 56DT
Episode 56DN
April 27, 2023. The "Wood stove ban in Lombardy, Italy and wood stove exchanges in Bakersfield, California for Heat Pumps and in The Netherlands for cash or an LED fireplace" Issue
Residents Against Wood Smoke Emission Particulates (see RAWSEPresidents.wordpress.com and Scroll Down for PDFs of articles with U R L's to search on, and on the website are links to 10 minute Tiktok and Youtube videos and 30 minute podcasts on Spotify, Podbean, podcasts.google.com, Amazon Music Prime (free for Prime subscribers), Cast Box, and Pocket Cast (Pocket Cast is only free on the phone App)
Ep 56DN NASA and Denmark Air Pollution Scenarios 1 of 2 **Ep 56DO** NASA and Denmark Air Pollution Scenarios 2 of 2, Bakersfield CA & Rochester MN **Ep 56DP** Niagara Falls NY, U K Leicester 1 of 2 **Ep 56DQ** U K Leicester 2 of 2, Lombardy, Italy 1 of 2 **Ep 56DR** Lombardy, Italy 2 of 2, Latvia, The Netherlands **Ep 56DS** Slovakia monitoring of PM2.5 **Ep 56DT** Africa, Asia, Health effects of PM2.5

The United States and Germany

Residents Against Wood Smoke Emission Particulates could end up writing "A Beautiful History of Ugly Things". The Beautiful part of the history could be in the future, when polluting residential wood burning ends.
I draw and keep my drawings. Paper and pencils are of negligible value, but gain value, when a work of art is created. Paper is relatively fragile, and can be easily destroyed, most dramatically by fire. Is building a fire a work of creation? I don't think so. Fire is a work of destruction and can be done by any person, dumbly and fumblingly, so I don't regard it with awe. If a wood burning fire, created for fire's sake, is created by human hand, I have contempt for it as arson. Now homes can be heated by other, better, and most importantly much cleaner methods than wood burning, or even particulate-free methods, such as Heat Pumps which can work at temperatures well below zero Fahrenheit powered by wind, solar or geothermal energy. Fallen wood can be better used to make paper, furniture, and houses. In Germany recently, use of wood for building has been eclipsed by wood destroyed by the German wood burning industry, and German builders are alarmed about their loss. Burning wood creates loss of materials that could be used to create, from drawing paper to timber for housing frames. Destruction of wood by fire produces drama through remembered fear of smoke and death by immolation in a house fire, but wood burning itself produces dumb, mute drama. Wood burning does not produce the type of real human drama created by works of art anchored by wood, such as drawings, paintings on wood frames, and wooden stage sets.
An interesting book about the consequences of creating beautiful objects was reviewed in the New York Times. The book was called "The Ugly History of Beautiful Things". Anything taken to an extreme can be bad, and excessive, conspicuous consumption, even too much consumption of what we consider beautiful, can result in bad, usually unintended, consequences. Glassmakers in Venice during the Renaissance often worked with toxic materials like led and mercury, which caused madness and stomach ailments. The book reviewer wrote "In the 1800's, an orchid hunter might have been eaten by a tiger or disappeared forever somewhere in the jungle thicket… By the end of the book, the author comes to a détente with her own yearning. She recognizes that she can appreciate beauty without possessing it: she can take her daughter to the beach and make mandalas out of shell fragments; she can go for a walk and spot a monarch butterfly in a field or a pink orchid in a bog." If we leave nature, in the form of forests, relatively untouched, we can possess beauty, and leave it to future generations also. Today we can create art on the internet, without even the need for paper, to add our creative visions to a permanent memory.

https://www.nytimes.com/2023/04/26/books/review/the-ugly-history-of-beautiful-things-katy-kelleher.html?
Craving Beauty, but at What Cost?
In "The Ugly History of Beautiful Things," Katy Kelleher considers her desire for rare or pretty objects, as both life-affirming and morally problematic.
April 26, 2023
Excerpts edited by RAWSEP for brevity and clarity.
THE UGLY HISTORY OF BEAUTIFUL THINGS.
Activities that we tend to think of as distinctly human often have nothing to do with immediate survival. We brush paint on canvases, we play tunes on instruments, we imagine a world that doesn't exist and read about the fictitious people who live there. But sometimes the human pursuit of joy and pleasure can create destruction. We have a hard time abiding by the concept of enough. We recklessly and relentlessly chase things we want but do not need.

4 helpful Clean Air websites

https://actionnetwork.org/
Action Network Dot Org

https://switchison.org/
The Switch is on.

https://www.facebook.com/cleanaircanberra
Clean Air Canberra (Australia) (on Facebook)

https://cleanairwins.org.uk/
Clean Air Wins Dot Org Dot U K

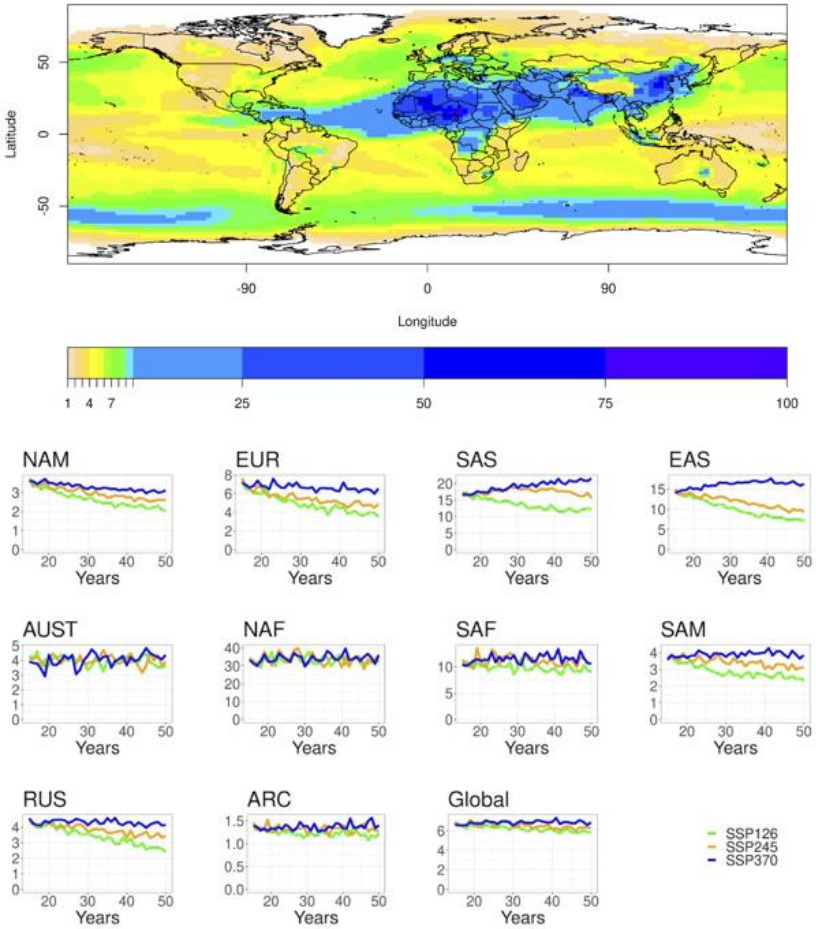
NASA in the United States and Aarhus University (A U) in Denmark
RAWSEP View: SSP1 means taking the Green Road. SSSP5 means Fossil-Fueled Development.
From Wikipedia: Shared Socioeconomic Pathways (SSPs) are scenarios of projected socioeconomic global changes up to 2100. They are used to derive greenhouse gas emissions scenarios with different climate policies. The scenarios are: SSP1: Sustainability (Taking the Green Road) SSP2: Middle of the Road SSP3: Regional Rivalry (A Rocky Road) SSP4: Inequality (A Road divided) SSP5: Fossil-fueled Development (Taking the Highway)
Scenarios SSSP1 through SSSP5 have been used to help produce the IPCC Sixth Assessment Report on climate change, published on 9 August 2021. The SSPs provide narratives describing alternative socio-economic developments. These storylines are a qualitative description of logic relating elements of the narratives to each other. In terms of quantitative elements, they provide data accompanying the scenarios on national population, urbanization and GDP (per capita). The SSPs can be quantified with various Integrated Assessment Models (IAMs), to explore possible future pathways both with regards to socioeconomic and climate pathways.

Simulations Probe the Impacts of Air Pollution on Premature Deaths
NASA Center for Climate Simulation
Future changes in global and regional mortality from exposure to surface particulate matter (PM2.5) and ozone (O3) pollutants under emission ...
Excerpts edited by RAWSEP for brevity and clarity and relationship to PM2.5 pollution. Wood smoke consists of 90% PM2.5, particulate matter of 2.5 micrometer size, the perfect size to infiltrate the human lung, setting off a cascade of human health problems.
The study collaborators are from (left) Aarhus University (AU) in Denmark and (right) the NASA Goddard Institute for Space Studies (GISS) in New York City.
Simulations Probe the Impacts of Air Pollution
on Premature Deaths.
Buildings in New Delhi, India, are barely visible due to thick smog — typically a mixture of surface ozone, particulate matter, and other pollutants.
Models from Aarhus University (AU) in Denmark and the NASA Goddard Institute for Space Studies (GISS) in New York City worked in concert to study the impact of air pollution on premature mortality — both globally and regionally — under several emission and population scenarios.
The World Health Organization has ranked air pollution as the world's largest single environmental health risk. "Our primary goal was to extend our modeling capabilities to better represent highly polluted regions. such as those in Asia and Africa," said Ulas Im, Senior Scientist in AU's Department of Environmental Science. "The study evaluates mortality estimates based on different approaches globally and regionally and attempts to differentiate between the impacts of emissions and population dynamics."
The AU Senior Scientist collaborated with GISS Research Physical Scientist Susanne Bauer, GISS/Columbia University Research Scientist Konstantinos Tsigaridis, and several other AU and GISS scientists on the computational study, which was recently published in the journal Environmental Research.

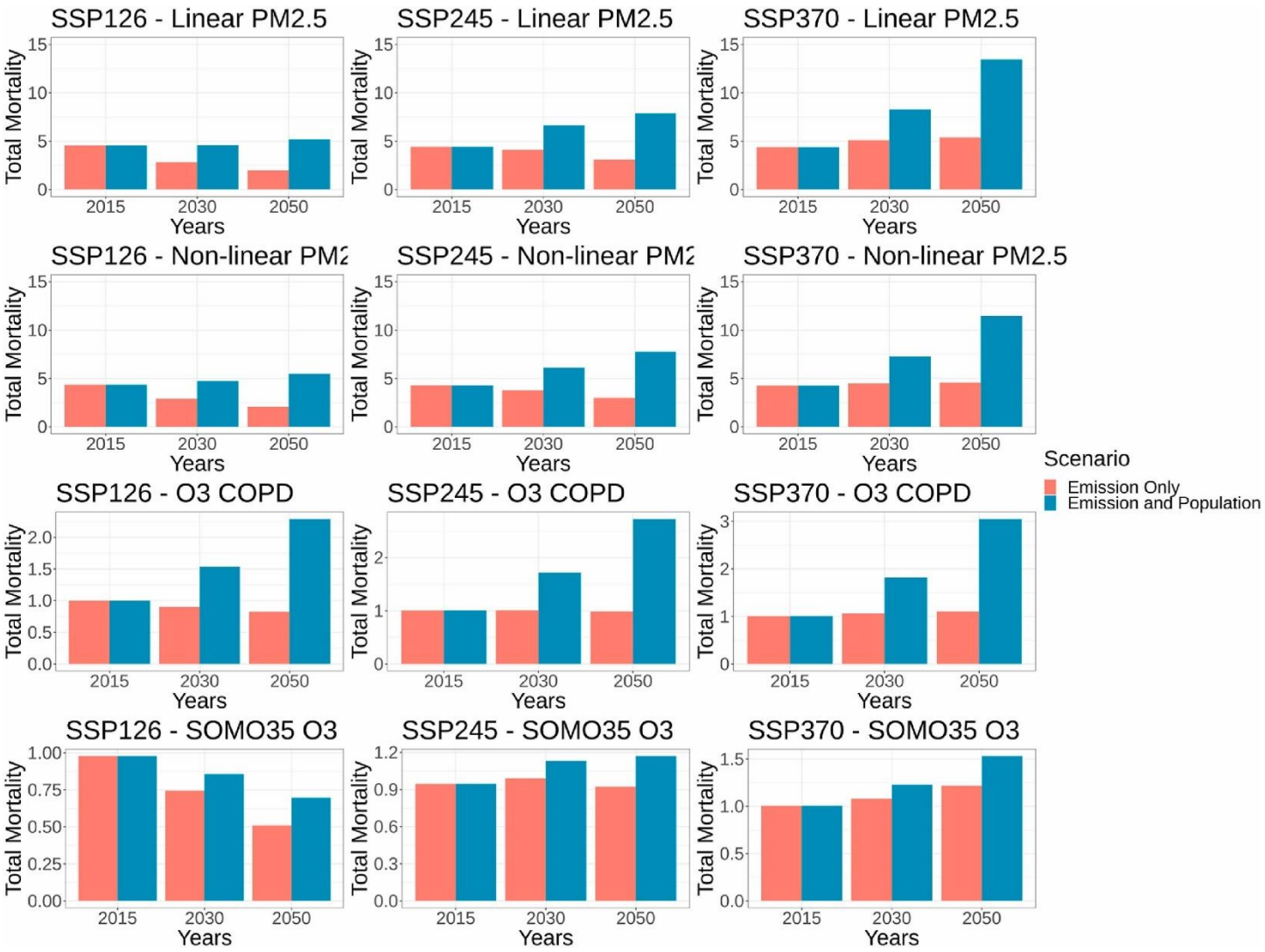
The study combined the GISS ModelE climate model, developed on the NASA Center for Climate Simulation (NCCS) Discover supercomputer, with AU's Economic Valuation of Air Pollution (EVA) model.

Episode 56D O
Continuation of NASA and Denmark Collaboration on Air Pollution Scenarios Study
The researchers used the GISS-E2.1-G model to carry out fully coupled atmosphere-ocean climate simulations for the years 2015–2050 using three different emission scenarios from the Coupled Model Intercomparison Project Phase 6 (CMIP6). Next, surface concentrations from GISS-E2.1-G and population data served as inputs to EVAv6.0 for calculating exposure to air pollution and then mortality rates. The simulations ran on high-performance computing servers in AU's Department of Environmental Science.
Impact: Mitigation of human-made air pollutant emissions can, to a large extent, improve the future mortality burden due to air pollution exposure, but future air quality and public health regulations also should take population dynamics into account.

The simulations focused on estimating:
Future changes in global and regional mortality from exposure to surface particulate matter (PM2.5) and ozone (O3) pollutants under emission scenarios spanning from high to low mitigation, and
The role of population and age distribution changes in premature deaths.



Top: World map showing the global distribution of annual mean surface particulate matter (PM2.5) concentration ratios for the year 2015 in the medium-mitigation emission scenario SSP2-4.5.
Bottom: Graphs showing regional and global changes of PM2.5 surface levels in the future emission projections SSP1-2.6 (high-mitigation), SSP2-4.5, and SSP3-7.0 (low-mitigation). The regions are NAM: North America, EUR: Europe, SAS: Southeast Asia, EAS: East Asia, AUST: Australia, NAF: North Africa, SAF: South Africa, SAM: South America, RUS: Russia, and ARC: Arctic. Figure from Im et al., 2023.



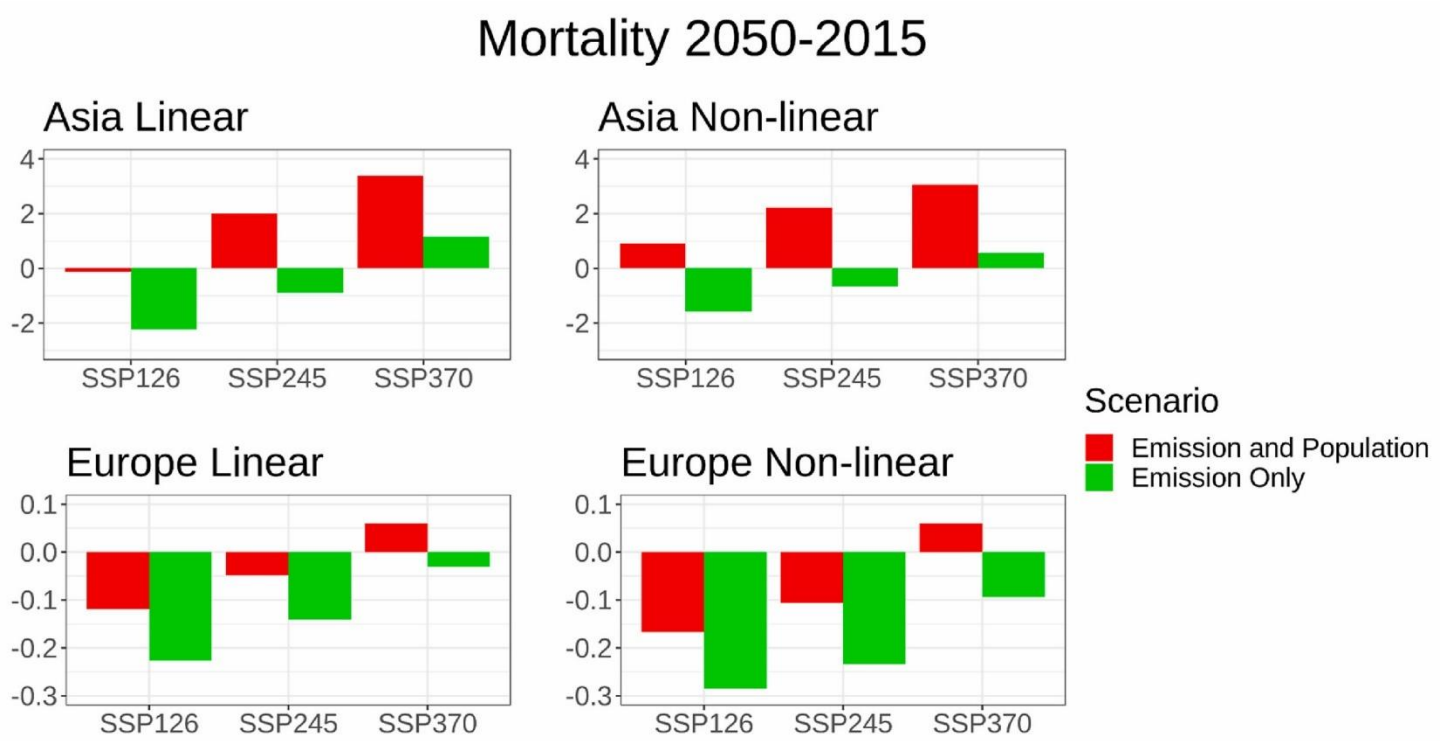
The graphs show present-day (2015) and future (2030 and 2050) global PM2.5 and O3-related premature mortalities across three different emission scenarios (SSP1-2.6, SSP2-4.5, and SSP3-7.0) under fixed 2015 (impact of emission changes only) and changing population (impact of both emission and population changes). Figure from Im et al., 2023.

The simulation results show that surface PM2.5 and O3 pollutants lead to more than 7 million premature deaths globally, with 2/3 originating in Asia. Emissions mitigation can yield up to 70% improvement by 2050 compared to today. However, in some hotspot regions an increasing and aging population can hamper this improvement, leading to an overall increase in mortality even under the most ambitious emission mitigation scenarios.

A doctor treats a young boy suffering from asthma. Air pollution can make asthma symptoms worse or trigger asthma attacks. Other diseases associated with air pollution include cardiovascular diseases such as stroke and ischemic heart disease and respiratory diseases such as chronic obstructive pulmonary disease (COPD) and lower respiratory infection. Photo by Drazen – stock.adobe.com.

“The findings suggest that an increasing and aging population can hamper the efforts to decrease human-made emissions,” Im said. “Therefore, air quality and public health regulations should take this factor into account.”

In follow-up, Im noted that the collaboration between AU and GISS continues along several fronts. These include sometimes running simulations simultaneously on AU and NCCS supercomputers to double the computational resources and speed up the generation of output.



The graph shows the difference in total (PM2.5+O3) premature deaths from the future (2050) compared to the present (2015) due to changes in emissions only (green) and changes in both emissions and population (red) for Asia (top panel) and Europe (lower panel), estimated using linear (left panel) and non-linear (right panel) methods. Figure from Im et al., 2023.

California, Bakersfield

RAWSEP View: Wood stove changeout for replacement by electric Heat Pumps in Bakersfield, California.

Valley Air District gives up to $5,000 for residents upgrading to a heat pump system | KBAK
KBAK
The District's Fireplace & Woodstove Change-Out program provides incentives for residents to lower emissions from their wood burning stove or ...
Excerpt edited by RAWSEP for brevity and clarity.

BAKERSFIELD, Calif. (KBAK/FOX58) — The Valley Air District is giving residents the opportunity to get a $5,000 heat pump system that has both a cooling and heating system.
The District’s Fireplace & Woodstove Change-Out program provides incentives for residents to lower emissions from their wood-burning stoves or fireplaces.
Residents willing to disable their fireplace and install an electric heat pump can qualify for the program.
The Outreach and Communications Manager for the San Joaquin Valley Air Pollution Control District said that this system is much more useful, compared to others.
“it's far more efficient to cool or heat your home, even less than the electricity or the current draw that it would need to power the system you have now. And it doesn’t produce pollution. You are no longer putting wood in a fireplace and combusting that wood to put particles up into the atmosphere that then your neighbors and everyone else breathes in. This instead uses electricity to heat your home”
Installing heat pumps instead of a fossil fuel-based system significantly reduces greenhouse gas emissions.
Heat pumps are energy-efficient and an environmentally friendly alternative when linked with cleaner electricity sources, such as solar.
pollution gets eliminated.
there are two kinds of systems.
The big unit can serve the entire room, and the small unit focuses on serving just one.

“There's the ductless kind that are smaller and a little bit independent, and for people who maybe had an air conditioner in their window, this frees up their window, and gets put up in the corner of their room”
To become eligible for the program and to apply, click here.

Minnesota, Rochester, Mayo Clinic

RAWSEP View: Purpleair monitors are being used in Rochester, Minnesota to monitor PM2.5 pollution.

The City of Rochester, and Mayo Clinic are working to get a clear picture of air pollution.
https://news.yahoo.com/city-mayo-clinic-working-clear-000400448.html
Excerpts edited by RAWSEP for brevity and clarity.
April 8, 2023
ROCHESTER — We're not all breathing the same air, as shown by nearly three years of air quality data collected in Rochester shows public health officials and health care researchers. In 2020, volunteers and city staff installed 13 air sensors at various spots in Rochester. The project was the first phase of an ongoing air quality assessment project that's a collaboration between the City of Rochester; Destination Medical Center; Zumbro Valley Health Center; Olmsted County Public Health; the North Star Chapter of the Sierra Club and Mayo Clinic's Precision Population Science Lab. "One thing we want to explore, especially people with chronic respiratory illness, is what kind of air are they breathing," said a researcher at Mayo Clinic's Precision Population Science Lab. Before the project, Rochester had a single air quality sensor that sat atop Ben Franklin Elementary School. The Mayo Precision Population Science Lab collected about an hour of data from the sensors twice a day. "The first phase explores whether the one sensor at Ben Franklin really represents air quality in Rochester," "We can see now that air quality varies throughout the city." The sensors and air quality samples taken by volunteers from We Bike Rochester show fine particulate matter called PM2.5 varies by time of day and location in the city. PM2.5 is produced by the combustion of wood. Phase two of the project will begin later this month. The sensors will be calibrated. A report released in 2022 estimated pollution was a contributing cause of death for up to 74 people in Rochester in 2015. Statewide, air pollution was estimated to contribute to up to 500 deaths per year.

Episode 56DP

Continuation of PurpleAir PM2.5 monitors being used in Rochester, Minnesota and at the Mayo Clinic

The figures were based on air quality and health data released in a statewide Life and Breath report prepared by the Minnesota Department of Health and Minnesota Pollution Control Agency. Some of the air quality monitors are part of a network that can be viewed live online at www2.purpleair.com Data might be unavailable for part of April and May while researchers calibrate the monitors. After that, another platform that will include data from the Purple Air monitors and other monitors being developed.

New York, Niagara Falls

RAWSEP View: The article below is an editorial about the unfair danger inherent in ringing the wrong doorbell, pulling into the wrong driveway, and pulling the wrong door handle of a car, while being of a minority race in the United States. There have recently been a series of unrelated incidents of young people being attacked after doing those very things, some incidents resulting in the deaths of these young people, and although one of the deaths was of a young white woman, other young people who were attacked were of minority race.
This article was also a google alert for “wood burning”, which brought this article to RAWSEP’s attention.
RAWSEP’s mission is advocacy for Residents Against Wood Smoke Emission Particulates.
Related to the pollution from residential wood burning, wood burning in campsites is also being addressed by the State of Michigan, which will provide alternate camping sites which are wood smoke free in 2024 in some of its Michigan State Parks. RAWSEP celebrated this news about smoke free campsites in Michigan in 2024 when it was announced last week.
The parts of this editorial that directly concern RAWSEP are concern that wood for either campsite wood burning, or indoor residential wood burning is being sold and bought in New York State. The need for this editorial writer’s firepit is not explained, except to say that, after camping in a campsite there was a whim for “evening campfires at home, long

after camp sites closed for the season". This is not a good enough reason, in RAWSEP's view, to pollute the air of a neighborhood, presumably a suburban neighborhood in Niagara Falls, New York. The logistics of obtaining firewood usually make firewood more expensive than other heating sources, in terms of combined time, effort and money. In looking for wood from strangers on a route home from a park where they had camped, the white man of the couple knocked on a door of a home selling firewood. No one answered the door, and the white man took some firewood and put the correct amount of money in the "honor box" in the driveway of the stranger's home. The black woman member of the couple sat in the car of the driveway, located in the countryside of New York State. The editorial by the black woman who sat in the car, concluded "No one shot at us, but that doesn't mean I thought it was not a possibility" because she was black. The editorial was in favor of gun control. RAWSEP is in favor of pollution control, as well as gun control. If the editorial writer considers human health, the health of near neighbors should also be considered. Irresponsible polluting of a neighborhood is not considerate, and hopefully will be soon considered illegal in Niagara Falls, New York. No economic reasons were given for this wood burning. And if economic reasons were given, they could easily be countered by the argument that wood burning for home heating is inefficient, and this article does demonstrate that the logistics of obtaining wood for burning is costly in and of itself.

BAILEY: Ignorance is no defense | Opinion - niagara-gazette.com
niagara-gazette.com
We bought a small wood-burning firepit from Sam's Club and figured we could still enjoy evening campfires at home, long after camp sites closed ...
Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates.
BAILEY: Ignorance is no defense
Apr 25, 2023
I have rung the wrong doorbell, pulled into the wrong driveway, pulled on the door handle of a car that looks just like mine, walked onto a neighbor's lawn to return a ball, child's toy or stray pet. On more than one occasion, I have walked onto my neighbor's porch to retrieve a package addressed to me or given a neighbor misdelivered mail.
Last summer, as we drove home following a camping trip at Four Mile Creek State Park, my partner and I made mental notes of homes selling firewood on Creek Road. We bought a small wood-burning firepit from Sam's Club and figured we could still enjoy evening campfires at home, long after camp sites closed for the season.

Oregon, Lost Village, Ecovillage

Because nothing says "Eco" like the most polluting form of heating known to humanity...
https://www.facebook.com/LostValleyEducationalCenter/

Australia, Victoria, Wangaratta
Wood particle plume prompts shutdown - Wangaratta Chronicle
Wangaratta Chronicle
A CYCLONE silo which suffered a mechanical failure at Alpine MDF yesterday morning sparked concern throughout the community, as wood particles ...
EPA Victoria investigating fibre discharge from Wangaratta's Alpine MDF | The Border Mail
The Border Mail
Wood particles were 10 centimetres deep in some places after they were accidentally released from a hopper by Alpine MDF on April 25.

United Kingdom

U K, Hereford

NEWS | Hereford & Worcester Fire and Rescue Service remind homeowners ... - Your Herefordshire
Your Herefordshire
"We were called out at 9.20am today to a wood burning stove and ... Fire Station attended the heavily smoke-logged property in Bowley Lane.

U K, Leicester

Charity accused of promoting 'polluting' wood burning stoves in £4.5m house raffle
Leicester Mercury
Wood Burning Stoves: Cancer charity Marie Curie is being urged to review their support for an Omaze draw

RAWSEP View: 81% of people in a tabloid poll (U K Leicestershire poll) said they did not want (residential indoor) wood burners banned. This is probably around the same percentage of people who did not want to wear masks when the ramifications, illness, and death, of not wearing masks during the COVID-19 were not fully known. RAWSEP is in favor of government intervention in matters of Public Health, when scientific facts back up the idea of the public good of government mandates, whether they are government mandates to wear protective KN95 masks against COVID 19 or whether they are government mandates to stop PM2.5 pollution from indoor residential wood burning which affects the health and lives of near neighbors of wood burners. PM2.5 is particulate matter of 2.5 micrometer size, the perfect size to infiltrate the human lung, setting off a cascade of human health problems. Wood smoke consists of 90% PM2.5
So, the headline of the article below, the key reason “wood burning stoves won’t be banned in Britain”, has been spoiled by RAWSEP ahead of reading the article, by this spoiler: a majority of as yet not fully informed people want to jeopardize their health to enjoy breathing in the toxic air that they are accustomed to breathing in. This spoiler is like the twist ending to a horror movie: not only are people likely to become sick and die, but 81% still want this illness to continue. Sounds like nicotine addicts clutching their cigarettes or alcoholics clutching their drinkies. But the actual wonderful thing about this addiction to wood smoke is that this is not a physical addiction at all. There is nothing in wood smoke that taps an addiction center in the brain. It is easy to stop burning wood, residentially, indoors, as far as physical addiction goes.
The information about wood smoke’s role in illness and death needs more airing. The wood stove industry has advertised wood burning to death. If people feel uninformed about any downside to wood burning, they should read on, or listen in to this whole podcast.
Unfortunately, the real spoiler is the U K government, which is not fully on board in protecting the health of the people of Britain. “A ban in the UK is not imminent and the recent Government Environmental Improvement Plan confirmed this. Reported in January, the Government quelled fears of a ban coming into action, citing the increased demand that has been driven by the energy crisis. Over 200,000 wood burners are thought be installed annually in Britain and some homeowners have no other means of heating their home, for example, if they live off the grid.”
RAWSEP View: The economic argument for burning wood is weak. If someone lives off the grid, the government should extend the grid to them. The idea for the near future is clean energy based on solar, wind and geothermal powering an electrical grid flowing to residential Heat Pumps which operate at temperatures well below zero degrees Fahrenheit.

Episode 56DQ

Why should the United Kingdom lag behind the United States’ vision and emerging programs to make this achievable? Why should people in rural areas be deprived of clean and cost effective home heating?
The only Scrooges in this futuristic vision are the wood stove manufacturers and sellers, as usual, who seek to limit the opportunities for the average person to obtain this clean, cost effective method of home heating electric Heat Pumps run from a clean energy electrical grid. HETAS, the (indoor residential wood burning) Heating Equipment and Testing Approval Scheme, is against a (indoor residential wood burning) ban and understands that: "In rural areas, there are many people with an increased reliance on solid fuel appliances that need to be considered."
RAWSEP View: UK wood burner ban. There have been a number of increasing calls to limit the use of wood burners in the UK after studies revealed the devastating environmental impact they have. Ecodesign models can emit a staggering 750 times more tiny particle pollution than a modern HGV truck, the European Environmental Bureau says, and also produce 450 times more emissions than gas central heating.

Key reason why wood burning stoves won't be banned in Britain - Leicestershire Live
Leicester Mercury
Excerpts edited by RAWSEP for brevity and clarity.

Wood burning stoves are under increased scrutiny but calls to ban the appliances will not be listened to, according to the latest government report. The devastating environmental impact of wood burners found to emit more pollution than all the cars in the UK put together as groups called for more to be done.
READ MORE UK wood burning stoves ban fears as EU country outlaws appliances

U K, London

RAWSEP View: Lekto, an online wood fuel supply business in the U K, ignores the ill health effects of wood burning in its advertising, as shown in the article below.

Meet the Company Disrupting the UK Wood Fuel Industry - Business Matters
Business Matters
Excerpts edited by RAWSEP for brevity and clarity.
Lekto allows British households to find ultra-efficient, clean burning wood fuels in just a few clicks. Meet the Company Disrupting the UK Wood Fuel Industry. Lekto allows British households to find ultra-efficient, clean burning wood fuels in just a few clicks. Finding good logs and briquettes in the UK can be quite challenging, especially if you live far away from a sawmill. Lekto introduced Night Briquettes, the first wood fuel product on the UK market that could burn for an entire 8-hour night. Its products come only from sustainably-run forests, ensuring that its products have a minimal environmental impact. All of Lekto's briquette products are made from recycled sawmill byproducts, further reducing waste, and contributing to a circular economy. Lekto has partnered with Eden Reforestation Projects, a non-profit organisation dedicated to reforestation efforts. Lekto Woodfuels seeks to become the UK's largest online wood fuel supplier in the coming years. The company aims to set new standards in the wood fuel industry. To learn more about Lekto, visit https://www.lektowoodfuels.co.uk.

U K, Wales

RAWSEP View: PM2.5 monitors were installed in Cardiff, Wales.

New real-time air quality monitors installed in Cardiff - Wales 247
Wales 247
... and very small particles of dust known as Particulate Matter (PM10and PM2.5) – will further improve how Cardiff Council measures air pollution ...

U K, Yorkshire, Selby, DRAX wood burning plant formally shuts down last coal burning unit, but wood burning units remain.

RAWSEP View: Drax says it is now the single largest generator of renewable power in the UK, with it controversially generating fuel using wood pellets imported from North America.

https://www.yorkpress.co.uk/news/23478927.drax-bosses-hail-end-coal-milestone-carbon-negative-future/
drax-bosses-hail-end-coal-milestone-carbon-negative-future
York Press
April 25, 2023
Excerpts edited by RAWSEP for brevity and clarity.
ALMOST 50 years of coal-fired power generation has ended at Drax Power Station. Drax bosses now hail it as a leader in renewables. Following the 1967 discovery of the Selby coalfield, Drax started its first unit in 1974 and with units 2 and 3 in 1975 Drax officially opened. In 1975 Drax powered two million homes and in 1986, power doubled to 4GW. Drax says it is now the single largest generator of renewable power in the UK, with it controversially generating fuel using wood pellets imported from North America. Over the last 10 years four of the power station's six generating units have been converted to use sustainable biomass. Drax ended planned formal closure its two remaining coal-fired generation units in September 2022. However, following Russia's invasion of the Ukraine, and the unreliability of wind and solar to guarantee supplies in cold and still spells, central U K government requested coal stations remained on standby as part of a winter contingency agreement. Fortunately, the weather was not so severe this winter and the National Grid did not

need to call on Drax to fire up its coal generation. Now, Drax says U K central government is confident the country has enough energy supplies so all coal-fired power stations must cease by October 2024. The Drax Group CEO, says. "By converting the plant to use sustainable biomass we have not only continued generating the secure power millions of homes and businesses rely on, but we have also played a significant role in enabling the UK's power system to decarbonize faster than any other in the world." Drax is also negotiating with government over plans for its £2bn BECCS project to use bioenergy to capture and store carbon emissions. Through transforming the plant to use sustainable biomass instead of coal, Drax reduced its Scope 1 and 2 carbon emissions by approximately 99% since 2012, helping the U K meets its targets for reducing such emissions. RAWSEP View: Wood burning is touted by Drax as carbon neutral, and Drax's wood burning carbon emissions (CO2 and PM2.5 particulate matter of 2.5 micron size) are not counted at the stack.
Selby-based firm reveals near-doubling of profits to £731m
https://www.yorkpress.co.uk/news/23341226.drax-credits-profits-growth-controversial-use-pellets/
Drax slammed by National Resources Defense Council in new report
Drax Power Station's £2billion plan to pump captured carbon under sea

Europe

France

RAWSEP: Wild grass, a solid fuel, is polluting when burned, as is wood. It is not climate friendly. Be careful not to click on text versions of this story, as those URLs are spam.

Small French town replaces wood with wild grass | WION Climate Tracker | English News
YouTube
... as a replacement for burning wood as a source of energy. #wildgrass #wood #WION About Channel: WION The World is One News examines global ... A wild grass variant could be the answer to the world's need for climate-friendly fuel alternatives. A small town in north-eastern France is using miscanthus, a wild variety of grass usually found in Asia and Africa, as a replacement for burning wood as a source of energy.

Italy, Lombardy

RAWSEP View: Why does the word "fear" suddenly follow the phrase "banning wood stoves", in these jingoistic tabloid articles? Tabloids stirring up a war on clean air doesn't seem public spirited. The "fear" should be that people are unwittingly, apparently, breathing in toxic wood smoke, when clean alternatives to indoor residential wood burning are, or should be, available. Studies of air pollution caused by wood stoves, are causing scrutiny of wood burning stoves. If the studies prove indoor residential wood burning causes illness and early death, not just to the wood burners, but their near neighbors, and contributes to climate change, shouldn't this lead to more than "scrutiny"? Shouldn't this lead to bans, for the sake of public health? Heat Pumps that can work at temperatures below zero degrees Fahrenheit, are now available as alternatives to indoor residential wood burning. Governments should proceed to develop their clean energy solutions of wind, solar and geothermal powering an electric grid that powers clean residential Heat Pumps.

Episode 56DR

Continuation of RAWSEP View of Lombardy, Italy banning wood stoves.

Idle chatter can delay these necessary developments to attain a cleaner environment, but hopefully articles like these can also inform the people most exposed to the air pollution of wood burning, the near neighbors of indoor residential wood burners. Those neighbors right now have legitimate fear of illness and early death, as co-workers of cigarette smokers used to have fear of illness and early death from secondhand smoke.
This article states that the economic argument for wood burning no longer applies, if it ever did. "The sales of wood burners have boomed in Italy with millions hoping that it would provide a cheaper alternative to gas and electricity

during the ongoing energy crisis. However, as the price of timber and wood pellets have since soared, they have not provided the savings many wanted."
This article lists the areas of Italy that have banned wood stoves. "Some parts of Italy banned wood burning last year. Certain parts of Italy have banned the use of wood burning stoves, sparking fears that similar regulations could arrive in the UK. (There are) varying regional rules to consider which regulate the use of stoves and fireplaces. Last year, five Italian regions – Lombardy, Veneto, Piedmont, Emilia-Romagna and Tuscany had laws banning residents from using low-efficiency wood burners, backed up by fines of up to €5,000. This was backed by a ban on domestic and commercial wood burning fires in the highly populated areas of Milan, Brescia, Bergamo and Como."

Wood burning stoves are coming under increased scrutiny following studies on air pollution.

RAWSEP View: Italy's Lombardy region and wood stoves are banned there, with exceptions if wood is the only form of heating in the house or office, or if the business is a pizzeria.

https://www.leicestermercury.co.uk/news/property/uk-wood-burning-stoves-ban-8369814

21 APR 2023
Excerpts edited by RAWSEP for brevity and clarity.
Some parts of Italy banned wood burning last year.
The Lombardy regional representative for the environment explained that studies show that a domestic wood burning fire pollutes the air 100 times more than a car's diesel engine and 500 times more than a vehicle run on methane or gas. The only exemption from the ban was where a wood burning stove was the only form of heating in a house or office and in a pizzeria.

Latvia

RAWSEP View: DPD, an acronym for Dynamic Parcel Distribution, is **an international parcel delivery service in Europe**. The company covers over 230 countries and territories, making it one of the widest delivery networks in the world. However, it operates directly from about 30 countries across Europe, Asia, South America, and Africa. **Geopost** (formerly **DPDgroup**) is an international parcel delivery service for sorter compatible parcels based in Issy les Moulineaux, France. Until 2015 DPD stood for Dynamic Parcel Distribution. Its brands are DPD, Colissimo, Chronopost, Seur and BRT. The company is based in France and operates mainly in the express road-based market.

DPD Latvia develops air quality monitoring program in Riga
Parcel and Postal Technology International
... parcel machines in Riga to detect air quality levels and measure fine PM 2.5 particles, a dangerous element of air pollution for human health.
Excerpts edited by RAWSEP for brevity and clarity.
DPD Latvia develops air quality monitoring program in Riga.
April 27, 2023
DPD Latvia has launched an air quality monitoring program in Riga, providing real-time data on air pollution levels. DPD's air quality monitoring measurement data is accessible on its website; after entering an address, anyone can view the real-time air quality level at a specific location and read the World Health Organization's explanation of the specific air pollution level and possible risks, as well as recommendations for further action.
In agreement with DPD Latvia, the summary of data analytics and measurement reports on air quality in Riga will also be available to municipal authorities and organizations so that they can plan activities to reduce pollution in the most critical locations. The DPD air quality monitoring project has also just been presented to representatives of Riga city council.
As a part of Geopost's air quality monitoring program, the latest generation of Pollutrack mobile air quality sensors are deployed on DPD Latvia electric delivery vehicles and DPD Pickup parcel machines in Riga to detect air quality levels and measure fine PM 2.5 particles, a dangerous element of air pollution for human health. DPD's air quality monitoring program is part of its strategy to reduce carbon dioxide (CO_2) emissions by ensuring emission-neutral parcel deliveries. The air quality monitoring program of DPD Latvia's parent company Geopost has already been implemented in 28

European cities, where it is used by both city authorities to improve urban air quality. In Lisbon, Portugal, for example, DPD's air quality monitoring data enabled the city to identify specific locations in the urban environment and develop projects to improve air quality. In Dublin, Ireland, DPD air quality monitoring data is used by the Asthma Association of Ireland to provide real-time information on air pollution in specific locations, which is important for asthma patients. "DPD Latvia has assembled the most environmentally friendly fleet of electric delivery vehicles in Latvia and is the first in the Baltics to ensure 100% CO2 compensated deliveries." DPD Latvia is going one step further and enabling everyone to get real-time data and analytics on air quality in Riga to make data-driven decisions on measures to improve air quality in the city." Head of the housing and environment committee of Riga city council, said, "Air pollution is a pressing urban problem and the data will help to measure, analyze and adapt actions already planned to reduce pollution."
To keep up with the latest DPDgroup/Geopost developments, click here.

The Netherlands, Heusden

RAWSEP View: Briefly, in the Netherlands, there is a wood stove or fireplace changeout program in exchange for 1000 euros or a LED fireplace.

Wood stove out the door.
https://heusden.nieuws.nl/gemeente/20230425/houtkachel-de-deur-uit-en-ontvang-1000-subsidie/
RAWSEP translated this article from Heusden, Netherlands from Dutch to English using Google Translate.
RAWSEP View: The municipality of Heusden is the third municipality in the Netherlands to grant a subsidy to remove stoves and fireplaces. The € 1,000 subsidy only applies to wood stoves or wood fires indoors. In unrelated news, but news that may have reinforced the idea that wood heating should be a thing of the past, The Netherlands recently had such a glut of clean energy, including wind energy from windmills, that the cost of home heating became negative on the Netherlands Stock Exchange. As an alternative to removing your wood stove or fireplace in your home, you can also apply for a subsidy for the purchase of an LED fireplace.
Subsidies for removal of your wood stove in Heusden.
Excerpts edited by RAWSEP for brevity and clarity.
Wood stove out the door and receive a € 1,000 subsidy April 25, 2023 Municipality of Heusden. If you remove your wood-burning stove or fireplace from your home, as a resident of Heusden you can now apply for a maximum of € 1,000 subsidy for this via www.heelheusdenduurzaam.nl/houtstook
HeusdenPas Owners with an owner-occupied home can apply for a maximum subsidy of € 1,500. The municipality of Heusden is the third municipality in the Netherlands to grant a subsidy to remove stoves and fireplaces. A wood-burning fireplace or wood-burning stove in the home is cozy for many and attractive to the wallet since the high energy prices. Only the smoke releases harmful substances into the air and that is unhealthy. Because people with respiratory problems experience extra problems, we want to limit emissions from wood burning. As an alternative to removing your wood stove or fireplace in your home, you can also apply for a subsidy for the purchase of an LED fireplace. The subsidy only applies to wood stoves or wood fires indoors, so no gas fires or wood fires in the garden or other fireplaces/stoves. Look here for the conditions. Start the day with the news from your municipality with the free Newsletter. CLICK HERE and sign up. Leader of the local news. < Look here for agenda < Follow HeusdenNews on Facebook as well. Did you know that we send more than 4500 newsletters every morning < Did you know that we have more than 10,000 visitors to our website every day < Advertise on Heusden.Nieuws.nl send an email.

Episode 56DS

Slovakia
RAWSEP View: Briefly, an air quality monitoring program has been set up in Slovakia in response to high levels of pollution from wood burning. One of the objectives is to exchange of inefficient heating sources (boilers) in households. The Total Eligible Budget: 15,000,000 €

Clean air solutions for Slovakia
European Climate, Infrastructure and Environment Executive Agency (CINEA) - European Union
Slovakia has high levels of air pollution due to wood burning, transport, agriculture, and industry. There is an urgent need for cleaner heating, ...

Clean air solutions for Slovakia
Excerpts edited by RAWSEP for brevity and clarity, and relationship to Residents against Wood Smoke Emission Particulates.
A LIFE Integrated Project has set out to improve air quality in the country.
Slovakia has high levels of air pollution due to wood burning, agriculture, and industry. There is an urgent need for cleaner heating, and stricter industrial regulations to enhance air quality, and protect public health
LIFE-IP SK AQ Improvement project
Objectives include improving air quality management, promoting air quality measures and awareness, and accelerating measures to minimize household heating and transport impacts.
To achieve these goals, the teamEN••• aims to enhance the capabilities and competencies of regions and municipalities. They set up a national network of Air Quality Managers who work with municipalities to coordinate and improve air quality management measures.
The project is also increasing the awareness of decision-makers and the public about air quality, introducing air quality monitoring and reporting, and updating Air Quality Management Plans (AQMPs).
Other actions include informing the public about subsidies for replacing old boilers, increasing energy efficiency and using renewable energy sources.
The team also aims to increase funding for air quality measures from EU and national sources.
They recently launched a mobile application to raise public awareness about air quality in Slovakia. The app shows air quality levels in selected locations and recommends limiting outdoor activities if such levels are high. Citizens can report local pollution by filling out a short form with an option to add a photo and description.
The team also created a website that contains information on sources of pollution, the impacts on human health and environment. A dedicated section for teachers and pupils is under development.
With the participation of citizens, partners hope to build a healthier future for Slovakia.
The project supports the 2021 EU Action Plan: Towards a Zero Pollution for Air, Water and SoilEN••• - a key deliverable of the European Green Deal.
Enhancing the implementation of Air Quality Management Plans in Slovakia by strengthening capacities and competencies of regional and local authorities and promoting air quality measures
Reference: LIFE18 IPE/SK/000010 | Acronym: LIFE-IP SK AQ Improvement
PROJECT DESCRIPTION
BACKGROUND
The Slovak Republic and its neighbouring countries, especially Czechia and Poland, are EU Member States facing problems with air quality, which has negative impacts on public health and environment. They are subject to the infringement procedure due to non-compliance with Ambient Air Quality Directive (AAQD) requirements. The main air quality problems in Slovakia are caused by excessive concentrations of suspended Particulate Matter (PM10 and PM2.5) coming mainly from burning solid fuels for household heating. The contribution of agricultural activities (main source of ammonia emission) on the creation of secondary PMs has to be considered as well. In some areas, the air pollution is still caused by local industrial sources.

OBJECTIVES
The main objective of the LIFE-IP SK AQ Improvement project is to support effective air quality management, with the aim to improve air quality and reduce exposure of the Slovakian population to the harmful impacts of air pollutants.
Specific project objectives are:
- enhancing effective air quality management and implementation of Air Quality Management Plans (AQMPs);
- promoting air quality measures and raising awareness of the importance of good air quality;
- accelerating the implementation of measures to minimize negative impacts of household heating and transport on air quality;
- supporting the exchange of inefficient heating sources (boilers) in households; and
- improving air quality monitoring and reporting at regional and local level.

The project directly contributes to implementing the Ambient Air Quality Directive (AAQD) and the national air pollution control program relating to the National Emission Ceilings (NEC) Directive. It contributes to the preparation of the national Air Quality Strategy and strengthens the enforcement of measures included in Air Quality Management Plans.
The project is also relevant to EU policy on promoting renewable energy.

In addition to the IP budget itself, the project will facilitate the coordinated use of over 1 000 million of complementary funding from the EU and domestic funds and programs, mainly from the Operational Program Quality of Environment (OP QE), the Integrated Regional Operational Program (IROP), the Operational Program Integrated Infrastructure (OP II), and the Cross Border Programs (AT-SK).

RESULTS
Expected results:
Linked to direct actions of LIFE IP:
- enhanced capacities and competences of self-governing regions and municipalities for effective implementation of tasks related to AQMP measures through the creation of new Air Quality Manager positions in 6 self-governing regions, and 8 more by the Ministry of Energy (MOE) and the Slovak Environment Agency, in order to improve management of regional and local air quality authorities and coordination from national level (AQ Coordination Unit);
- increased awareness of decision makers (at the level of self-governing regions and municipalities) about the importance of measures to improve air quality, air quality planning and reporting;
- increased public awareness about air quality and its health impacts, and behavioral changes of citizens to improve air quality (household heating, green transport);
- promotion of air quality issues through information campaigns and education programs;
- introduction of regional and local air quality monitoring and reporting;
- collection of statistical data at regional level related to household heating;
- improved air quality modelling and reporting at regional and local level (analytical part of the AQMPs), including the assessment of impacts of measures on the air quality;
- an air quality analysis of local air pollution impacts directly linked to health effects and implied costs; and
- update, revision and development of new AQMPs.

Linked to complementary actions:
- replacement of old/solid-fuel boilers;
- lowered energy need in households after realization of the project by 10% (17.7 kWh/m2/year);
- increased energy efficiency;
- increased use of renewable energy sources;
- reduced emissions of PM2.5 in households after realization of the project based on National Air Pollutants Inventory by 3 515 tons/year (25%); and
- increased amount of funds (both EU and national) allocated for air quality measures.

ADMINISTRATIVE DATA

Reference: LIFE18 IPE/SK/000010
Acronym: LIFE-IP SK AQ Improvement
Start Date: 01/01/2020
End Date: 31/12/2027
Total Eligible Budget: 15,000,000 €
EU Contribution: 9,000,000 €

Coordinating Beneficiary: Ministry of Environment
Legal Status: PUBLIC

ENVIRONMENTAL ISSUES ADDRESSED
THEMES
Air quality monitoring
Environmental training - Capacity building
KEYWORDS
environmental awareness
emission reduction
air quality management
air quality monitoring
energy efficiency

Episode 56DT

Continuation of Slovakian Air Pollution Monitoring Program description

TARGET EU LEGISLATION
Directive 2008/50/EC - Ambient air quality and cleaner air for Europe (21.05.2008)
Directive 2009/28 - Promotion of the use of energy from renewable sources (23.04.2009)
Directive 2001/81- National emissions ceilings for certain atmospheric pollutants (23.10.2001)

Africa

Namibia
Projects Open for Public Comment: 24 April, 2023 - Verra
Verra
... Installation of high efficiency wood burning cookstoves in Namibia – closes 18 May; Feicheng Composting Project – closes 18 May ...

Asia
Indonesia, Jakarta
Greenpeace Underlines Source of Jakarta's Poor Air Quality - Tempo.co English
Tempo.co English
The city's PM 2.5 particulate indicator reached 49,1 µgram/m3. “This means it is crucial to holistically control the source of air pollutants, ...

PM2.5 and disease. Wood smoke is 90% PM2.5

Air pollution and oesophageal cancer risk | Nature Reviews Gastroenterology & Hepatology
Nature

A prospective study of Chinese individuals (n = 510,125) showed that long-term exposure to fine particulate matter (PM2.5) increased the risk of ...

Air Quality Is Improving Nationwide, but One Type of Harmful Pollution Remains a Threat
Verywell Health
... ozone pollution has come from closing coal-fired power plants, reducing tailpipe emissions, ... Are Wood-Burning Stoves Safe for Your Health?