EU Healthy
Air Coalition

Policy Outlook: Strengthening Disease Prevention Through Clean Air Measures

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Strengthening disease prevention through clean air measures

28 January 2025

12:00 - 14:00 CET

European Parliament,
Room SPAAK 7C50

Hosted by **MEP Javi Lopez**

The EUHAC secretariat is hosted by the Health and Environment Alliance (HEAL).

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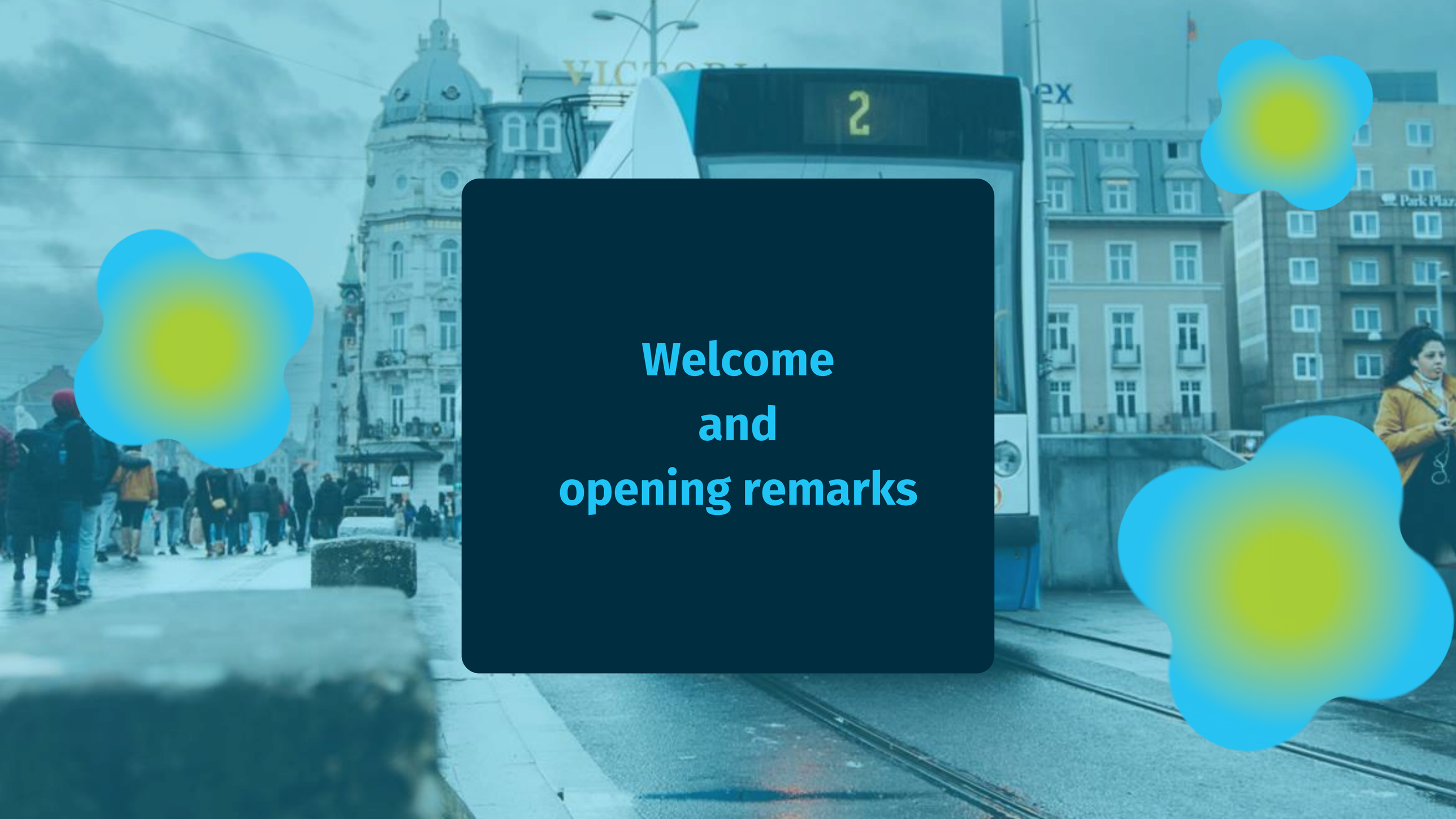
The EU Healthy Air Coalition is an initiative supported by the Clean Air Fund (CAF).

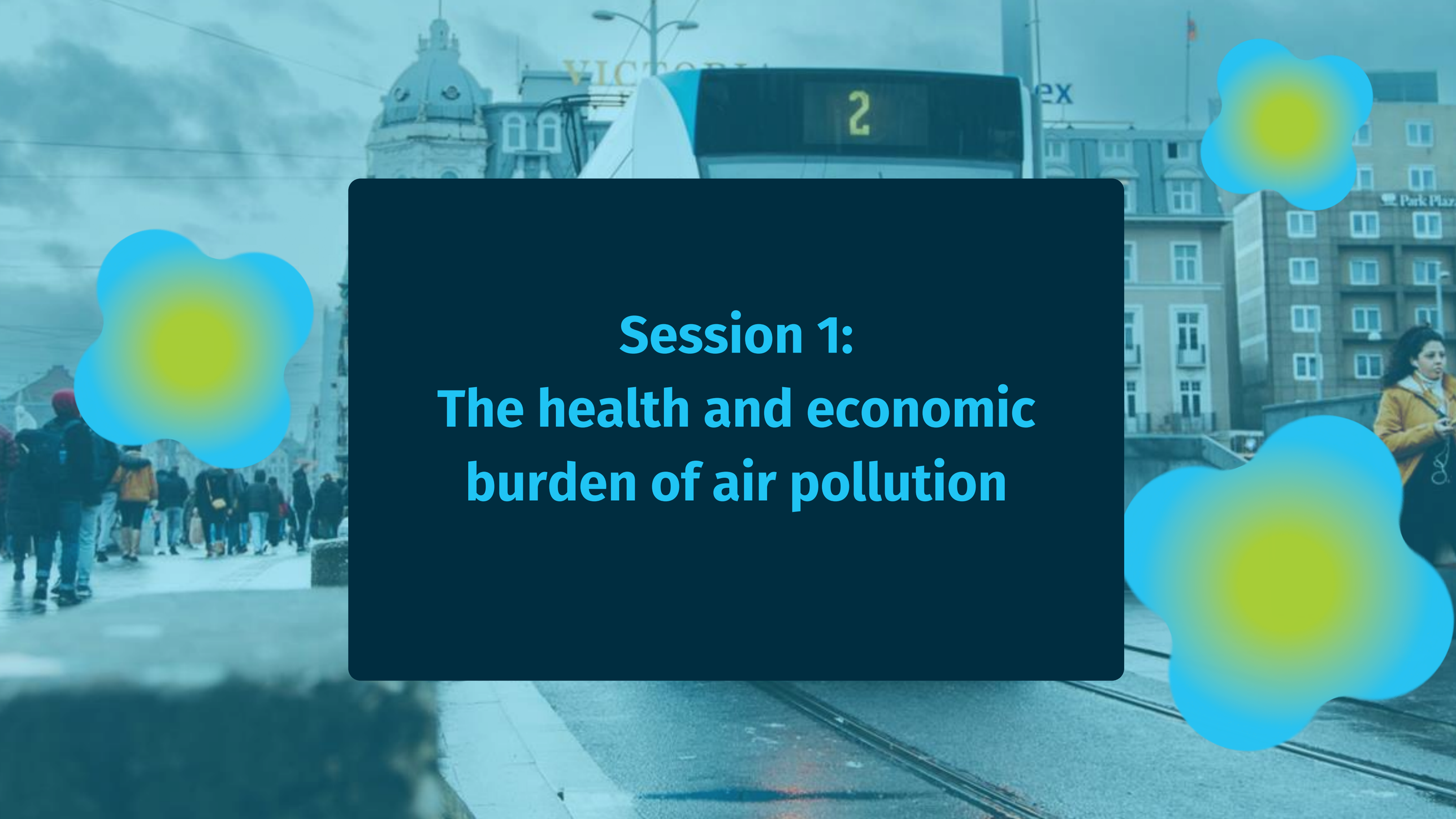
S&D

United
for science-based policies
to prevent air pollution



Welcome and opening remarks

Keynote



Session 1:
The health and economic burden of air pollution

onafhankelijke ziekenfondsen / mutualités libres

Impact of air pollution on public health, public finances, and inequalities

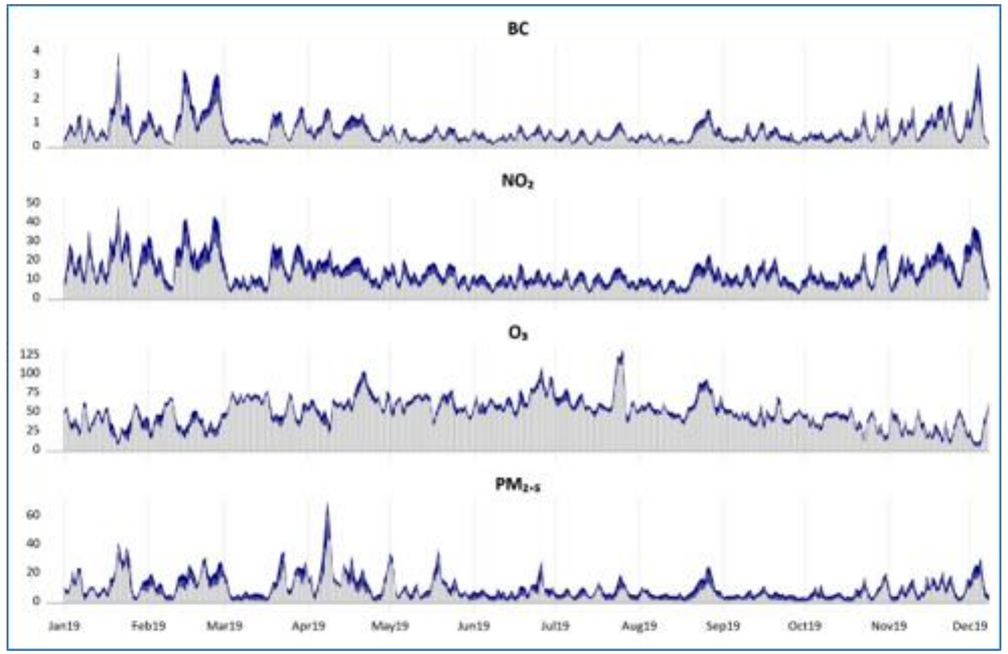
Ludo VANDENTHOREN

Expert in economic and scientific matters, REPRESENTATION AND STUDIES

Agenda

- **Study 1** – Impact of air pollution on work incapacity
- **Study 2** – Impact of air pollution on healthcare use
- **Study 3** – Impact low emission zones on socio-economic inequalities
- **Key messages**

Short-term exposure to ambient air pollution and onset of work incapacity related to mental health conditions



Pollution peaks contribute to an increase in the number of people recognized in work incapacity or who are absent from work for a long period of time due to mental disorders:

- An increase of 5 micrograms of nitrogen dioxide (NO_2) per cubic meter of air increases the risk of work incapacity by 4.2%.
- An increase of 0.5 micrograms of black carbon (BC) per cubic meter increases the risk of work incapacity by 3.2%.

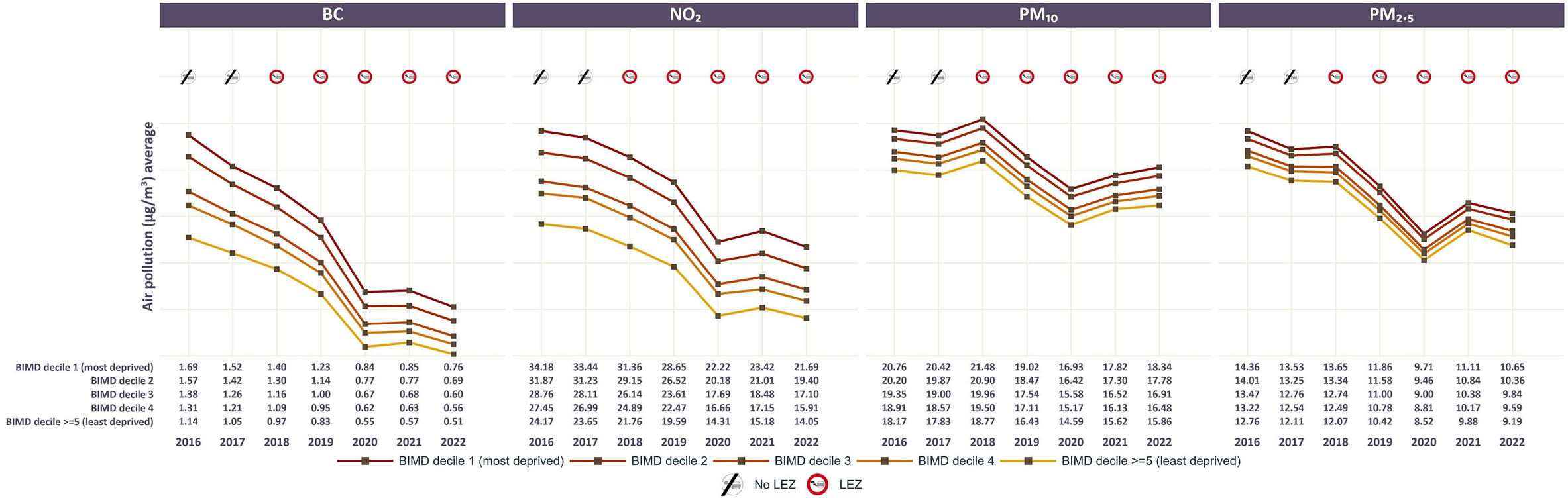
Association of air pollution and green space with all-cause general practitioner and emergency room visits: A cross-sectional study of young people and adults living in Belgium

$PM_{2.5}$	Average GP visits	Avoidable GP visits if $PM_{2.5}$ between 4.91 and 7.49 µg/m³
4,91-7,49 µg/m³	2,96	
7,50-9,99 µg/m³	3,10	33.744
10,00-11,99 µg/m³	3,20	64.988
12,00-14,64 µg/m³	3,30	97.233

€ 43 million

Annually potentially avoidable cost of visit to the general practitioner and emergency room with around 37 million euros borne by health insurance funds and 6 million euros out-of-pocket payments.

Positive impact of the introduction of low-emission zones in Antwerp and Brussels on air quality, socio-economic disparities and health: A quasi-experimental study



•Controlling for the pre-LEZ value (in 2017), there is a **STATISTICALLY SIGNIFICANT DIFFERENCE IN THE CHANGE IN BLACK CARBON (BC) AND NITROGEN DIOXIDE (NO2)** over time across BIMD deciles | for BC there is a systematically slower decrease with lesser deprivation | for NO2 there is a slower decrease for BIMD decile ≥5 | **MORE DEPRIVATION = MORE RAPID DECREASE**

•Controlling for the pre-LEZ value (in 2017) there is **NO STATISTICALLY SIGNIFICANT DIFFERENCE IN THE CHANGE IN PARTICULATE MATTER 10 (PM10) AND PARTICULATE MATTER 2.5 (PM2.5)** over time across BIMD deciles

Key messages

- Air pollution is a risk for public health in Europe with an impact on our physical health, mental health, and work incapacity
- Reducing air pollution is protecting the financial sustainability of the social security system
- Policy on air quality needs a social and socio-economic dimension to tackle health inequalities

Link to our studies

Thank you!

Additional questions? Contact me at ludo.vandenthoren@mloz.be

MEDECINS EUROPEENS
EUROPEAN DOCTORS

- **In addition to premature mortality, the impacts from living with air pollution related diseases are significant in Europe**
- **Doctors are more and more involved in air quality measures**
- **They still need more information and training to be able to inform their patients of the negative health impacts of air pollution but also of the health benefits of air quality measures**
- **CPME and national medical associations are also active**

Dr Ina Kelly, Chair of CPME Working Group on Environmental Health & Climate Change
European Parliament, Brussels – 28 January 2025

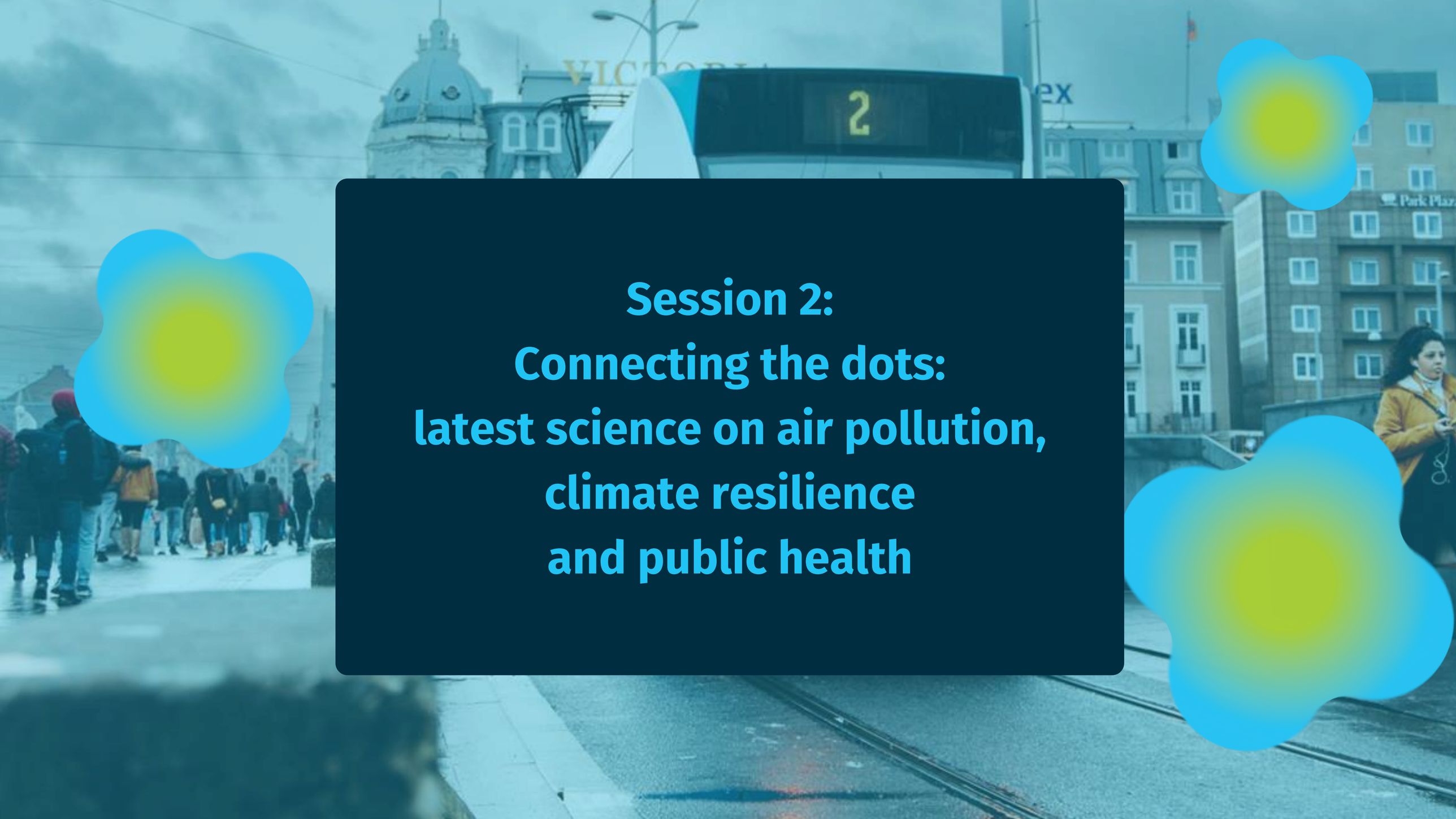
MEDECINS EUROPEENS
EUROPEAN DOCTORS

- **Air pollution and climate change are inseparable issues**

- **European doctors have published policies and recommendations, e.g. on air quality, climate change, and commercial determinants of health**

- **We contribute to the EU clean air policy, e.g. by**
  - **providing policy briefs**
  - **participating in legislative processes (e.g. AAQD & NECD revisions)**
  - **informing and mobilising our member organisations**
  - **working with the other EU Healthy Air Coalition members**

Dr Ina Kelly, Chair of CPME Working Group on Environmental Health & Climate Change
European Parliament, Brussels – 28 January 2025



Session 2:
Connecting the dots:
latest science on air pollution, climate resilience and public health

Scientific Evidence on Health Impacts of Air Pollution

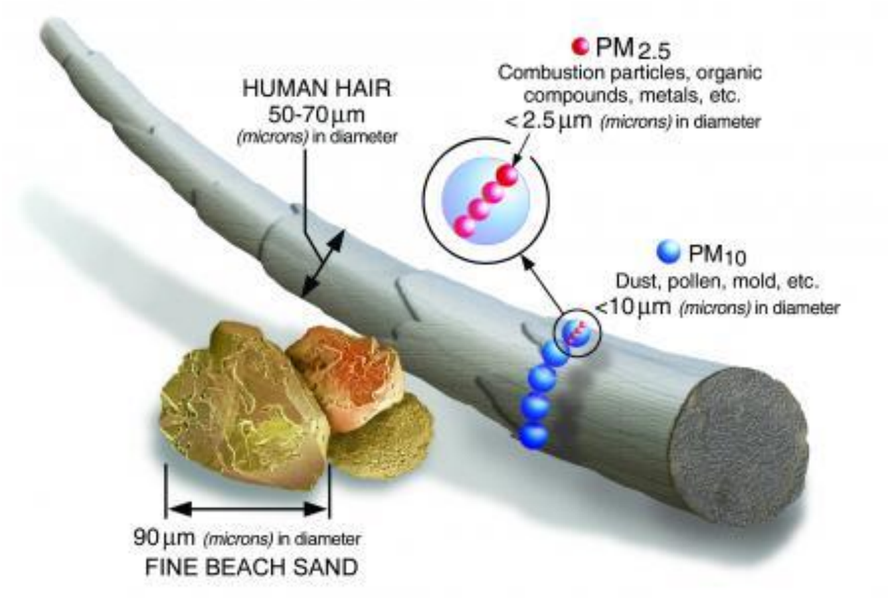
Why we need to act for clean air now

Dr. Ulrike Gehring

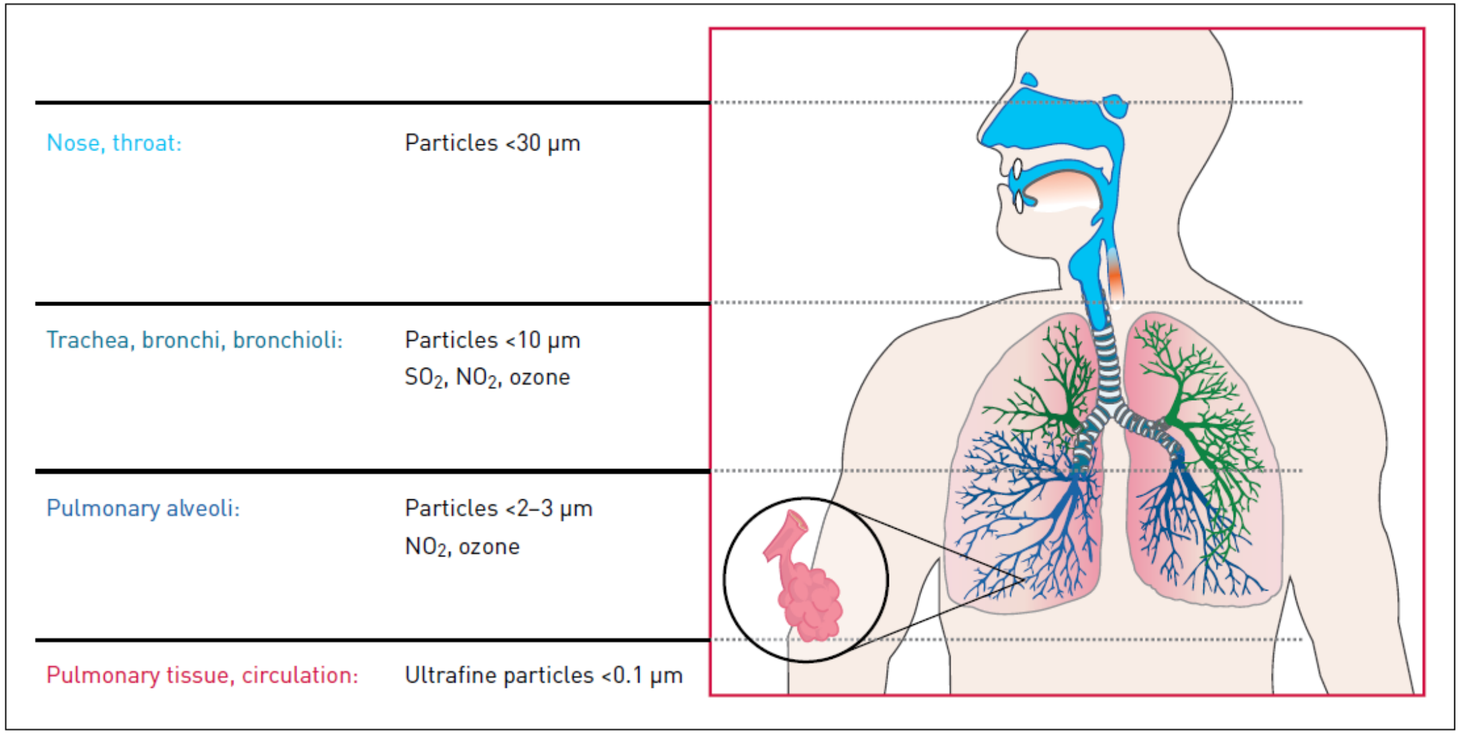
Utrecht University, The Netherlands

Chair of the ERS Environment & Health Committee

With every breath we inhale millions of particles that can penetrate deeply into our lungs



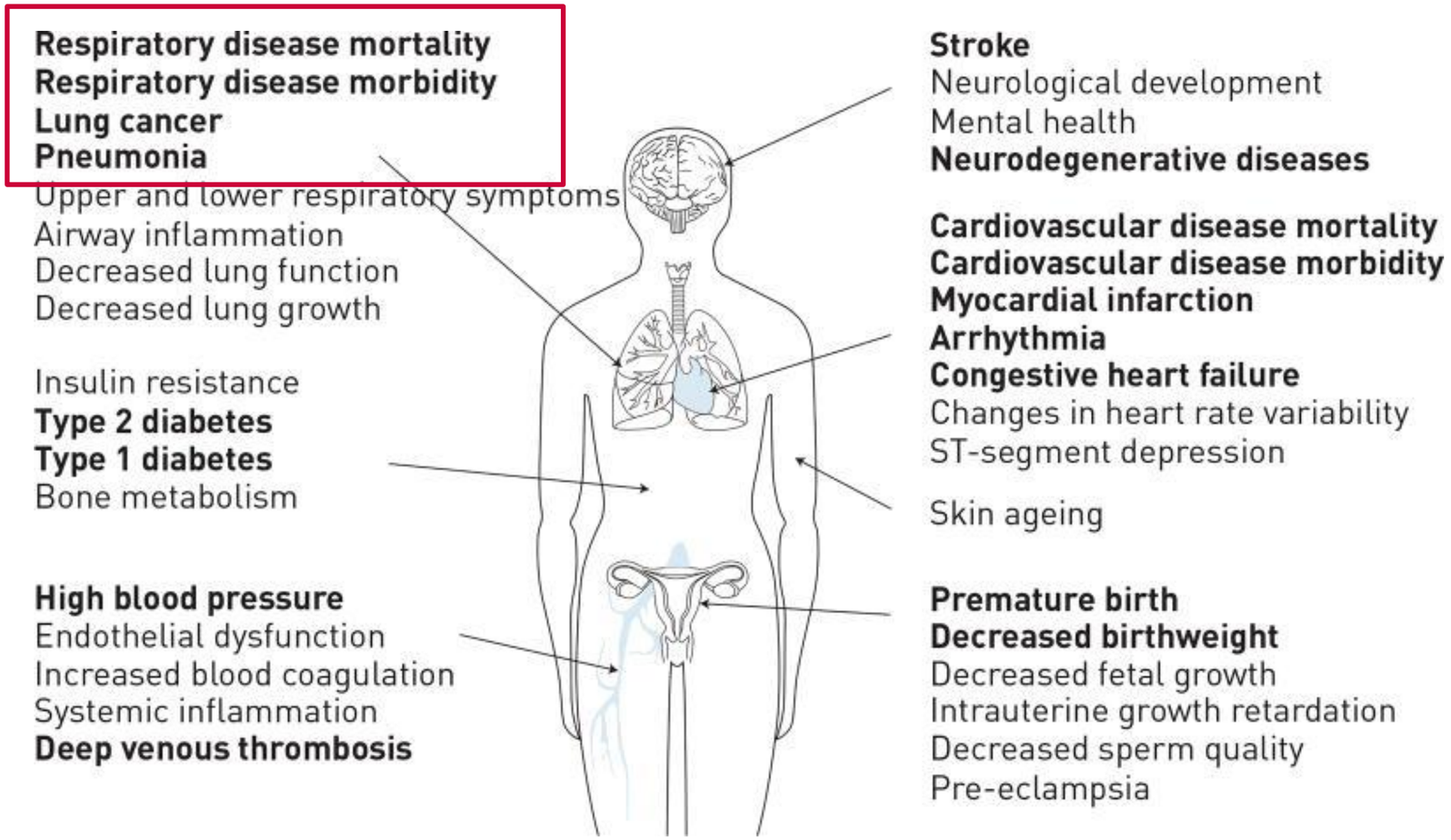
https://www.epa.gov/pm-pollution/particulate-matter-pm-basics



ERS. Air quality and health 2010

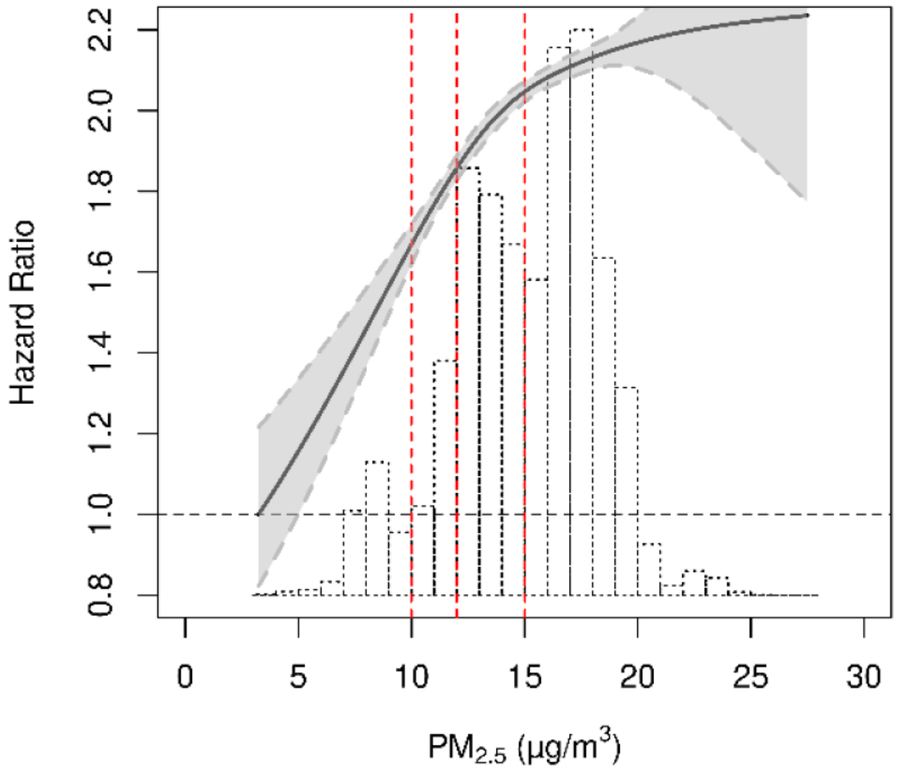
Air pollution affects not only the lungs, but nearly all organ systems

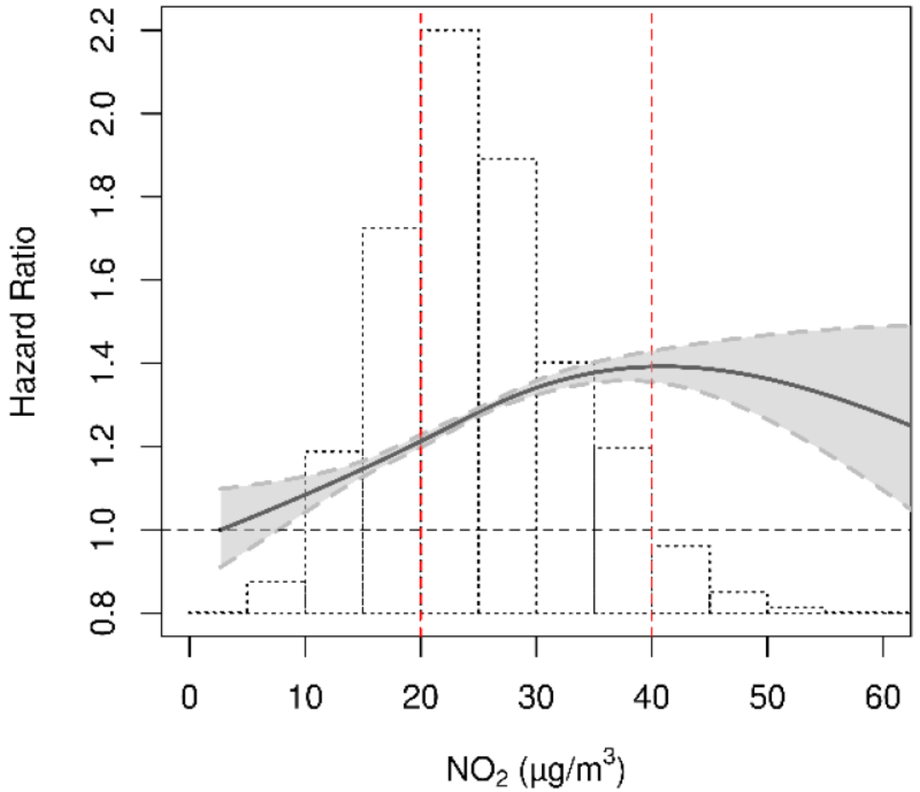
1. **Onset** of respiratory diseases
2. **Exacerbations** of existing respiratory diseases
3. **Increased susceptibility** of respiratory patients to development of other diseases



Thurston et al. Eur Respir J 2017

There is no safe threshold below which no health effects occur



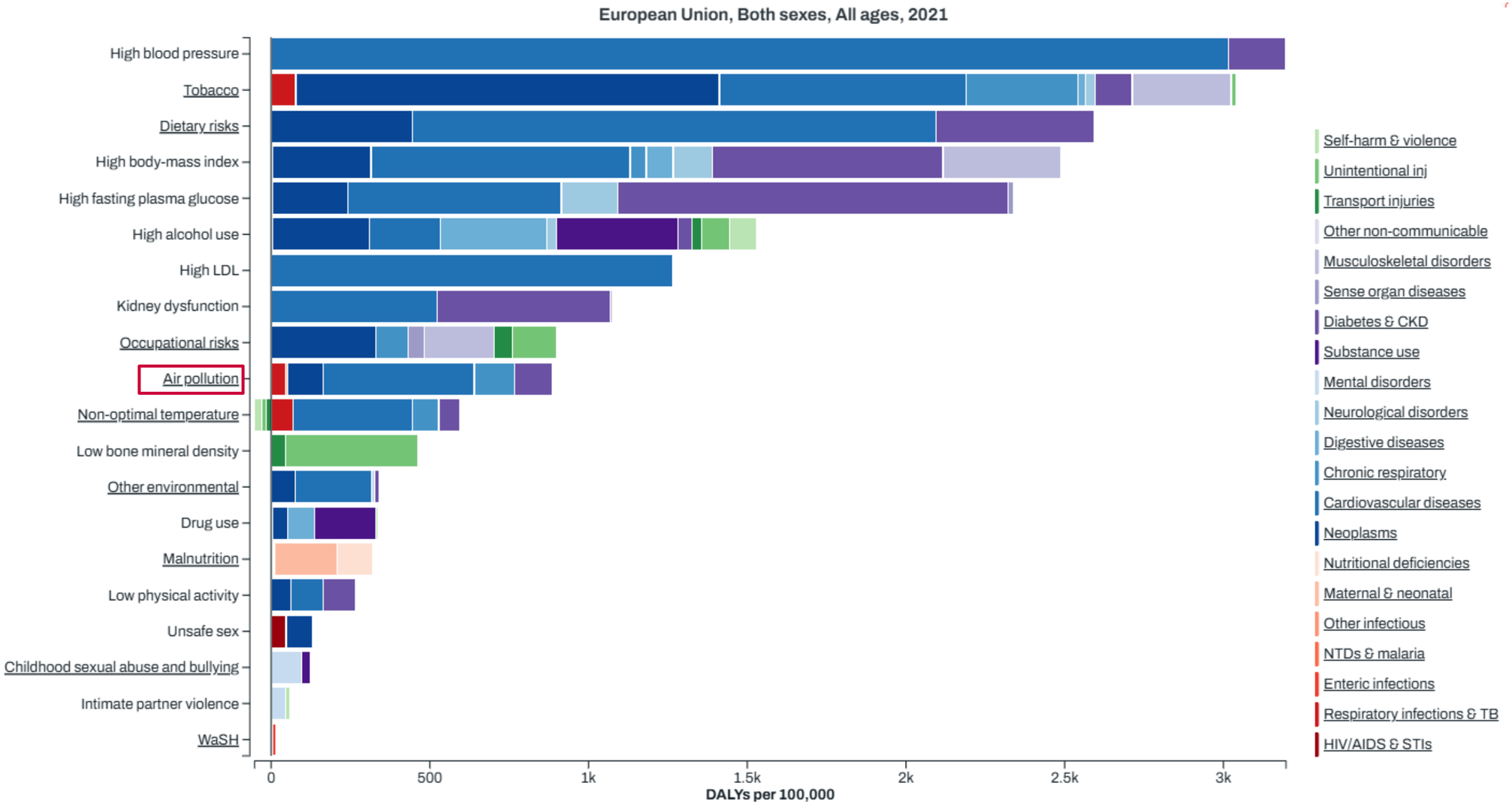


ELAPSE

Long-term effects on natural cause mortality

Strak et al., BMJ 2021

Air pollution is a major risk factor to public health



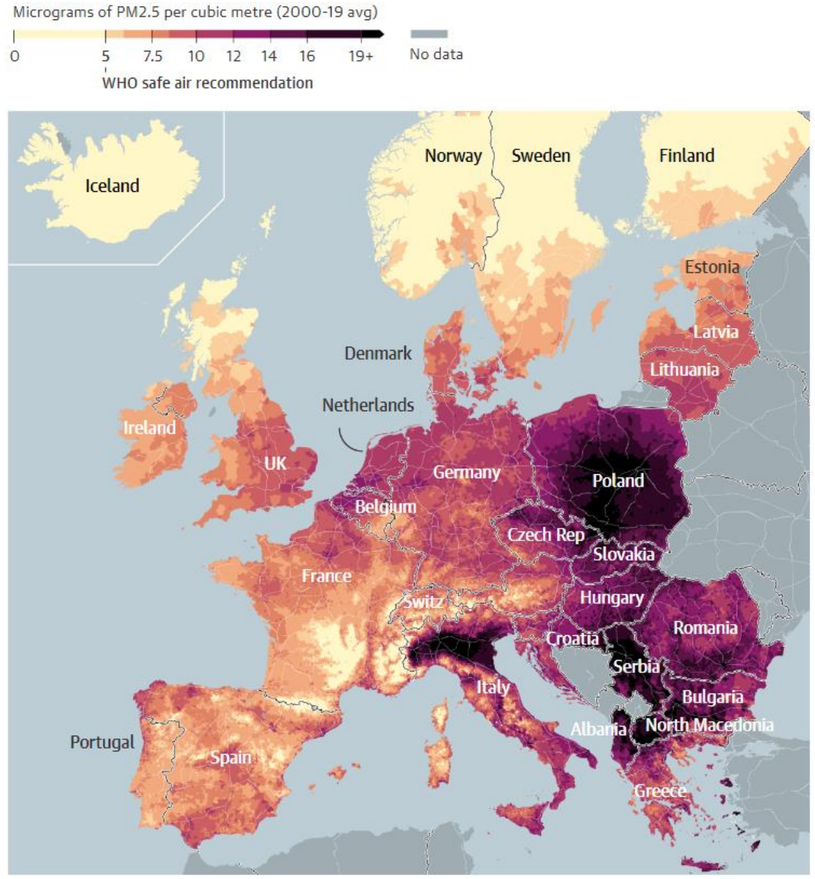
https://vizhub.healthdata.org/gbd-compare/

What the science tells us

Pollutants*	2021 WHO Guidelines	EU old limit values	EU new limit values
$PM_{2.5}$ (year)	5 µg/m^3	25 µg/m^3	10 µg/m^3
NO_2 (year)	10 µg/m^3	40 µg/m^3	20 µg/m^3

Above these levels serious health effects beyond reasonable doubt!

In Europe, 98% of people live in areas with $PM_{2.5}$ concentrations that exceed the WHO guidelines!



Guardian graphic. Source: Expanse project; Guardian analysis

Conclusions

- Air pollution causes a very large disease burden in Europe
- To protect the health of European citizens, air pollution levels need to be reduced to the WHO Air Quality Guideline values as soon as possible
- Air pollution reduction comes with large co-benefits for climate, economy and quality of life

- We need to act now!

ERS

Thank you!

Air Pollution, Climate and Health – EEA Perspective

Dr. Ian Marnane

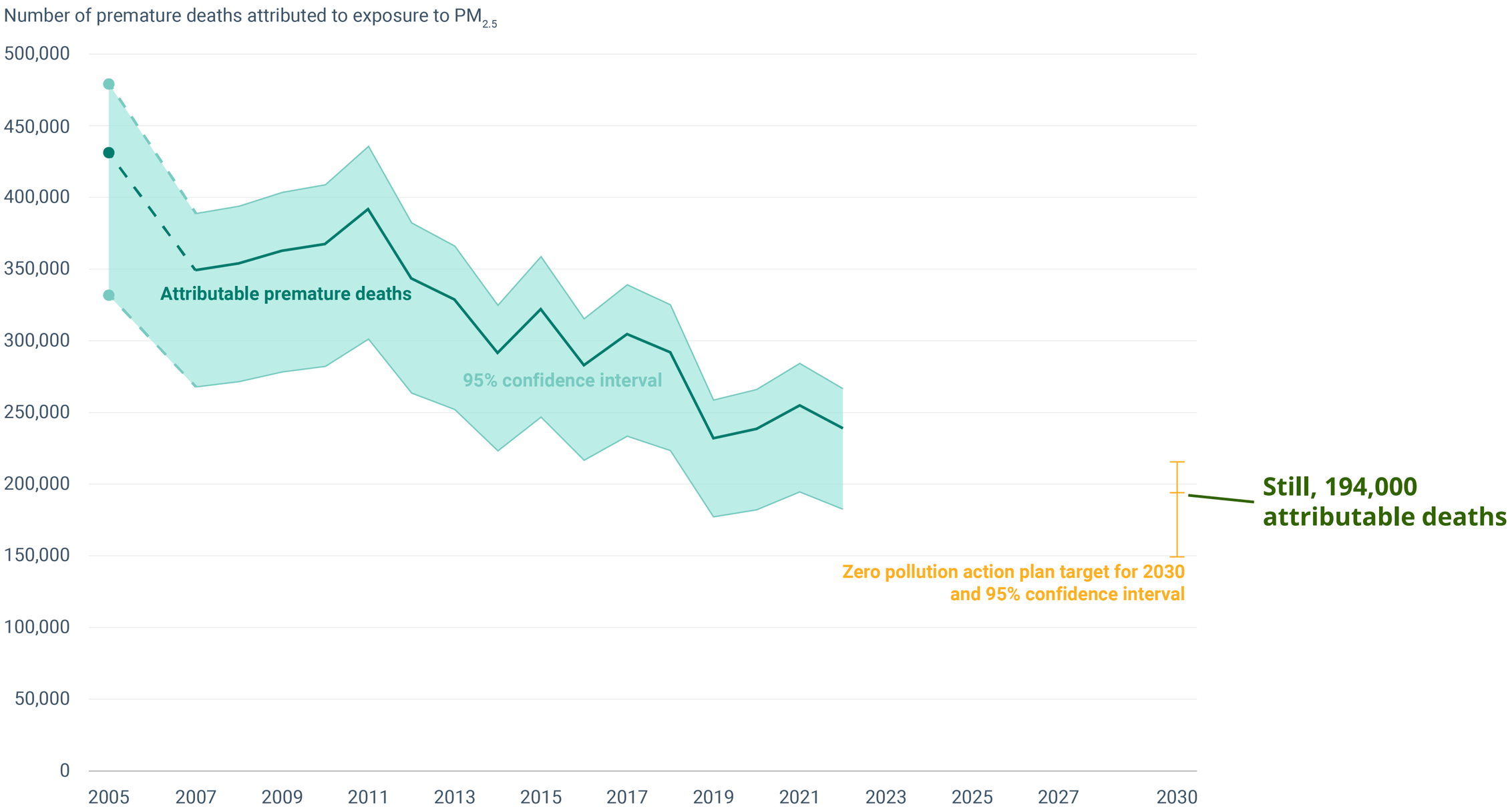
January 28th, 2025

European Environment Agency

Air Quality – current status and burden of disease

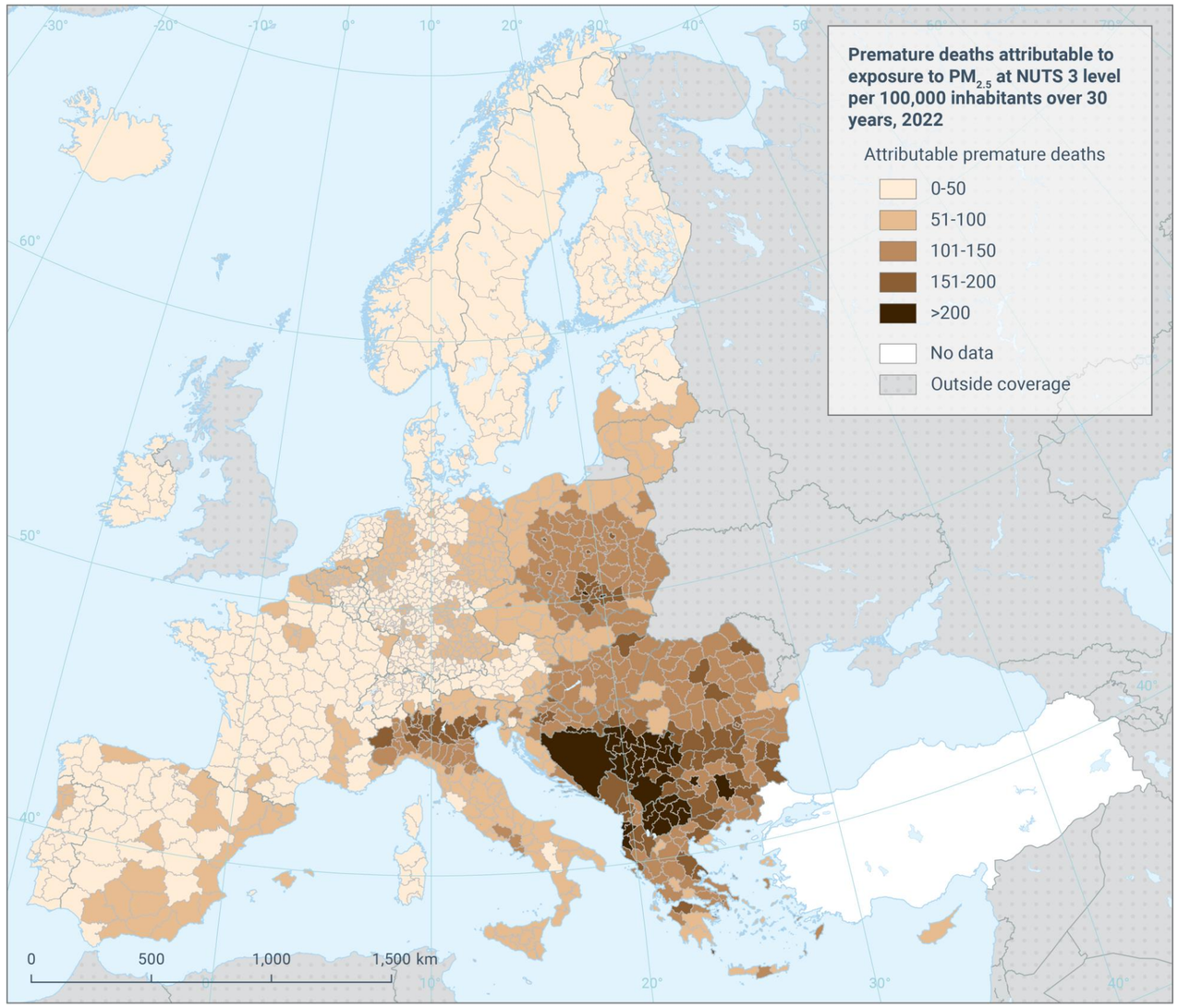
European Environment Agency

On track to reach the ZPAP objective for 2030, but....



… we also need to close the inequality gap

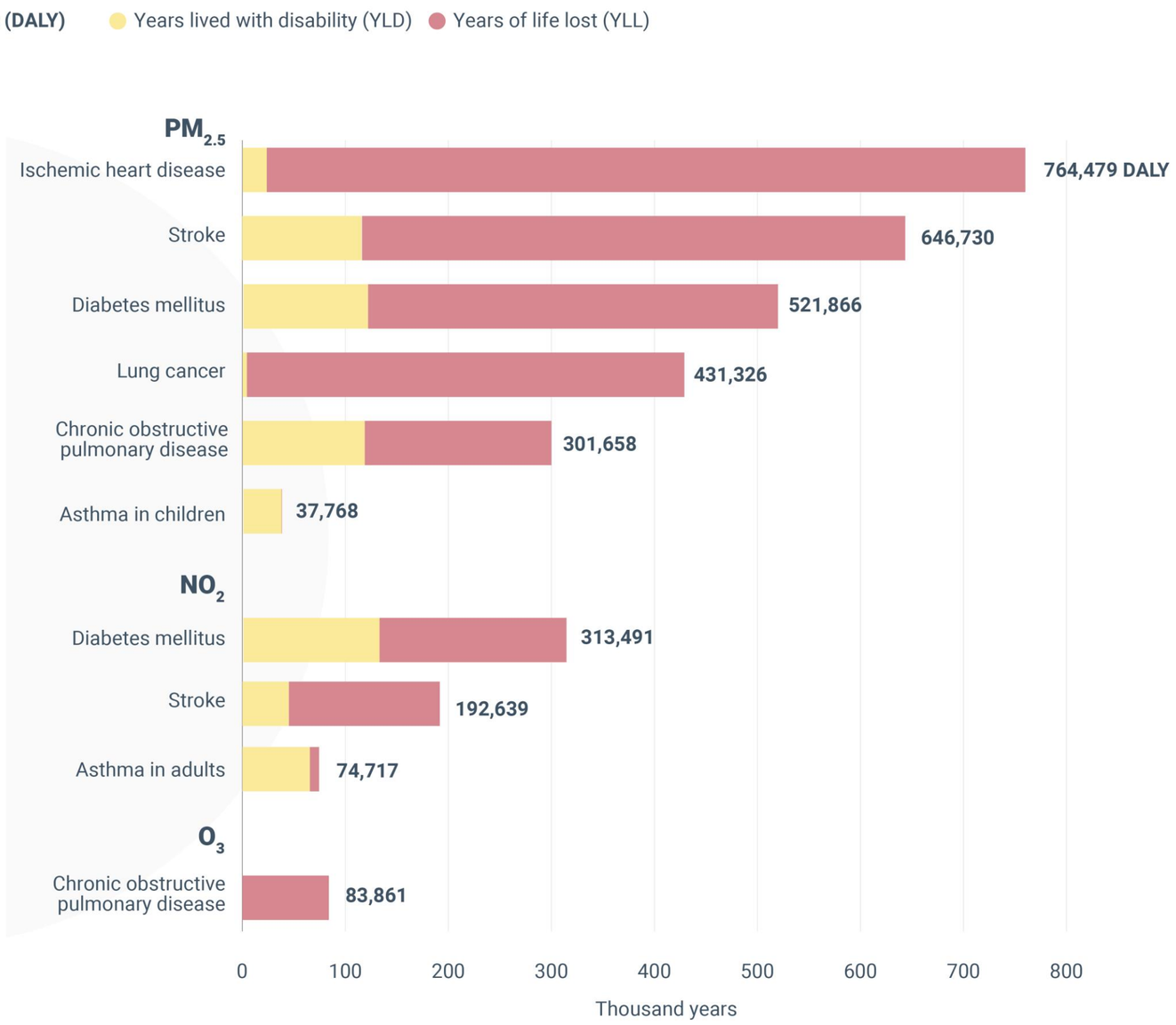
- Inequalities in exposure
- Inequalities in impact
- Socioeconomic inequalities
- Small children and elderly are the main impacted groups
- Also increased risk from exposure to other environmental stressors



Reference data: © EuroGeographics, © FAO (UN), © TurkStat Source: European Commision – Eurostat/GISCO

And it’s not only about premature deaths

- Morbidity contribute to the burden of disease
- Reduced quality of life
- Increased healthcare costs
- Reduces resilience to other health risks



How does climate change influence the health impacts of air pollution?

EUCRA – Assessment of major climate health risks

Key issues related to air pollution:

- Combined impacts of heat and air pollution
- Air quality impacts of wildfires
- Impact on the healthcare system
- Increasing risk of ozone

Table ES.3 Assessment of major risks

Climate risks for 'Health' cluster	Urgency to act	Risk severity		
		Current	Mid-century	Late century (low/high warming scenario)
Heat stress – general population		+++	+++	+++
Population/built environment due to wildfires (hotspot region: southern Europe)		+++	+++	+++ / +++
Population/built environment due to wildfires		+++	++	++ / ++
Wellbeing due to non-adapted buildings (*)		++	++	++ / ++
Heat stress – outdoor workers (hotspot region: southern Europe)		+++	+++	+++ / +++
Heat stress – outdoor workers		+++	+++	+++ / +++
Pathogens in coastal waters		+	+	+ / +
Health systems and infrastructure		+++	++	++ / ++
Infectious diseases		+++	++	++ / ++

Legends and notes

Urgency to act
- Urgent action needed
- More action needed
- Further investigation
- Sustain current action
- Watching brief

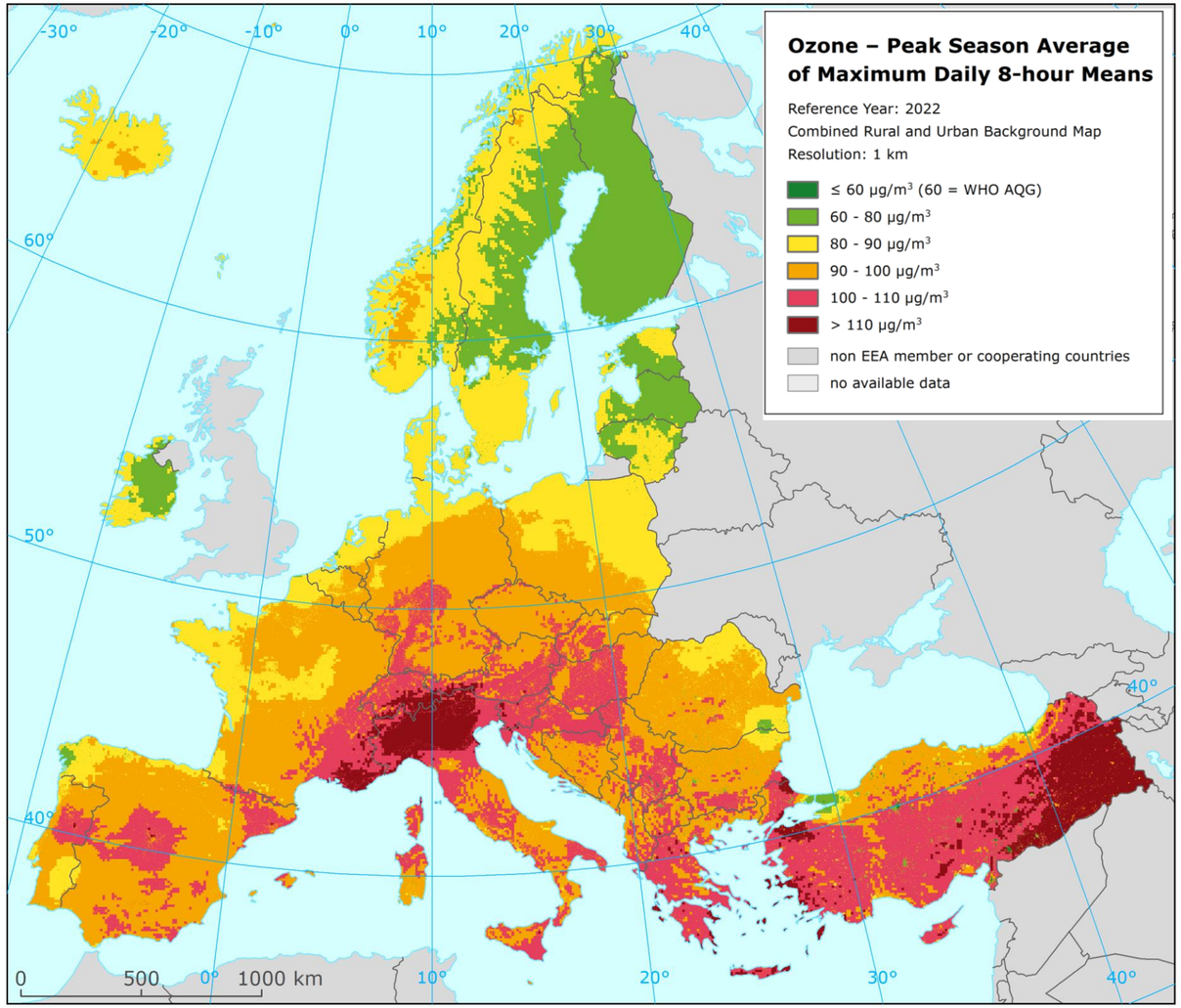
Risk severity
- Catastrophic
- Critical
- Substantial
- Limited

Confidence
Low: +
Medium: ++
High: +++

(*) Urgency based on high warming sc

Ground level ozone impacts

- First time the impact of long-term ozone exposure calculated
- 70,000 deaths attributable to ozone > WHO guideline
- Ozone concentrations will be influenced by climate (heat)
- Southern Europe particularly impacted




Thanks!
European Environment Agency

PUBLIC HEALTH PERSPECTIVE ON CLEAN AIR AND HEALTH EQUITY

"For a stronger Europe, we need to work together to reduce air pollution and tackle the health inequities it fuels."

Raymond Gemen, Head of Policy
raymond.gemen@epha.org

WHO ARE WE?

We *advocate* for better health

We *convene* public health voices in Europe

We *focus on legislative action* to create living environments for people to flourish

Air pollution impacts us **all**, but **not** ***equally***

- Pregnant women
- Children
- The elderly
- Low-income families
- People living in poorer regions

OUR APPEAL: KEEP CLEAN AIR AMBITION HIGH!

- It’s the right thing to do
- It’s a health and economic investment
- It strengthens our societies
- It reduces health inequities and healthcare costs
- It safeguards the health and productivity of Europe’s workforce, ensuring a strong and prosperous Europe

Thank you for your attention.

Contact:
Raymond Gemen, Head of Policy
raymond.gemen@epha.org

Stay updated on our latest activities.

Follow our social media channels:

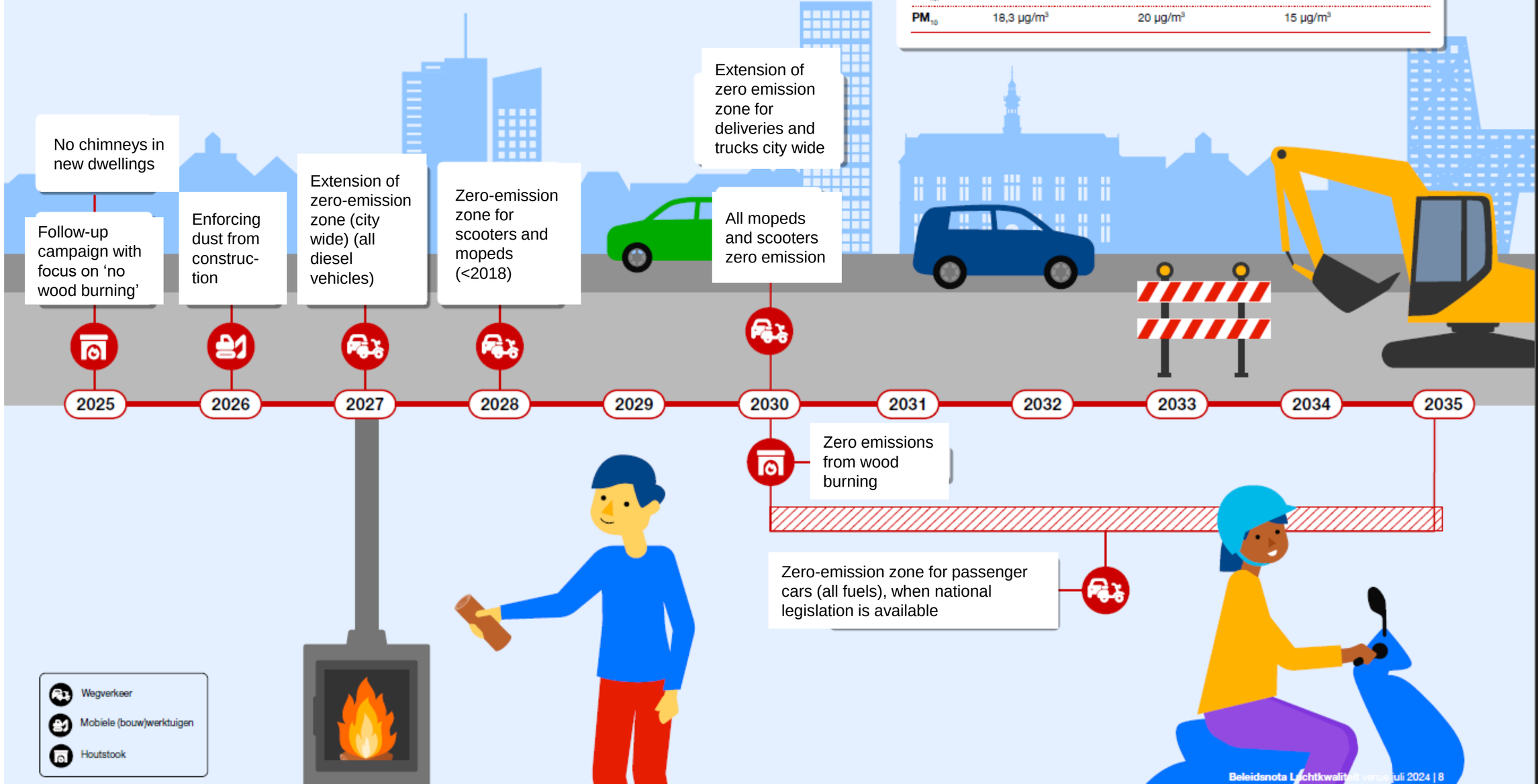
@EPHA_EU European Public Health Alliance

Session 3:
Discussion on the way forward for policies in the EU

Utrecht ambition: Zero emission city

Our goal: healthy air that meets WHO guideline values of 2021

Stof	Luchtvervuiling Utrecht 2022	EU-grenswaarden	WHO-advieswaarden 2021 (ons doel)
NO_2	22,1 µg/m³	20 µg/m³	10 µg/m³
$PM_{2,5}$	10,3 µg/m³	10 µg/m³	5 µg/m³
PM_{10}	18,3 µg/m³	20 µg/m³	15 µg/m³



Gemeente Utrecht

Find out more

Healthy Air for Healthy People

healthyaircoalition.eu

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