

Health and air quality standards in the European Union

What non-governmental (civil society) organisations need to know following the publication of the new WHO air quality guidelines



How is the World Health Organization active for healthy air quality?

There is a huge body of evidence on air pollution and health. Each year, hundreds of studies are being published demonstrating the health harm from poor air quality.

The WHO regularly reviews all available research on air pollutants` impact on people's health. Based on this extensive, in-depth review of the scientific literature, it just published its new guidelines for concentrations for selected air pollutants.

What is the significance of these WHO air quality guidelines?

They are of a high methodological quality and are developed through a transparent, evidence-based review process. WHO guidelines can be considered the gold standard for evidence-based decision-making for health on air quality, as they have health protection at the core, based on the latest science.

Are WHO's science-based guidelines reflected in EU legislation?

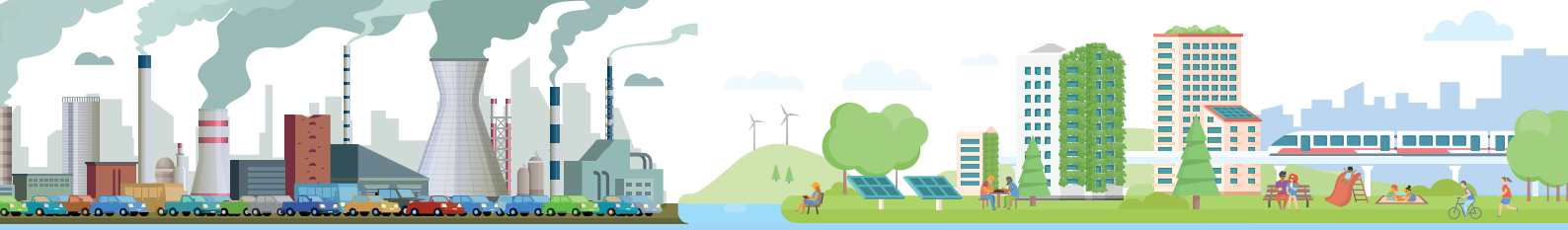
Only partly. The current EU air quality standards are the result of a political compromise, and differ for key pollutants, especially for particulate matter PM_{2.5}. The annual EU legal limit is more than double what WHO recommends.

By how much do EU limits differ from the evidence-based guidelines by WHO?

As an example, the current EU Directive sets the maximum tolerated concentration of fine particulate matter in the air as 25 µg/m³ for the year, while the World Health Organization (WHO) recommended 10 µg/m³. The new guidelines now recommend 5 µg/m³, as evidence on the health harm at low concentration levels has increased.

What is the EU doing to better protect health?

The EU is going to revise the bloc's air quality standards in 2022 (the legislative proposal is expected in autumn 2022). The European Green Deal and the EU Zero Pollution Action Plan include the commitment to align the current EU Air Quality Standards closer with WHO recommendations. Diseases and premature deaths can be significantly reduced only by fully aligning EU standards with the evidence-based WHO values.



What's the role of civil society organisations in advancing healthy air quality?

Clean air is a growing concern across Europe. Many people have started to monitor air quality around their homes and are taking an active role for cleaner air in their communities. Grassroots organisations, health professionals and civil society initiatives have increasingly spoken out on the need to improve air quality. The health burden from air pollution in Europe is unacceptably high, and can be prevented.

Civil society organisations can respond to the many concerns about air pollution by calling for and supporting stricter air quality standards. These standards will protect citizen's health as well as contribute to climate action. NGOs active in the field of air quality can join forces with the call for full alignment and the broadening of the scope of air quality standards.

Why is air pollution a health problem?

Air pollution - especially persistent and long term one - is the second leading cause of death from noncommunicable (non-infectious) diseases (NCDs), according to WHO¹. It increases the risk of ischaemic heart disease, stroke, chronic obstructive pulmonary disease and lung cancer. New studies also link air pollution to a higher risk of diabetes, obesity and dementia. Therefore, air pollution is a factor for all those diseases that cause major suffering and healthcare costs in the EU.

What are the main air pollutants and their health impacts?

The main pollutants include particulate matter (PM), nitrogen dioxide (NO₂), ozone (O₃) and sulphur dioxide (SO₂), coming from among others road traffic, burning of fossil fuels for energy production and heating, biomass burning and agriculture. Short and long-term exposure to these pollutants is linked to causing cardiovascular disease, stroke, COPD (chronic obstructive pulmonary disease), lung cancer, asthma, reduced lung function, impacts on the developing brain and central nervous system, increased risk of preterm birth and reduced birth weight. Of the various pollutants, PM_{2.5} leads to the greatest health burden, as these tiny particles can enter the bloodstream.

How does air pollution affect health in the EU?

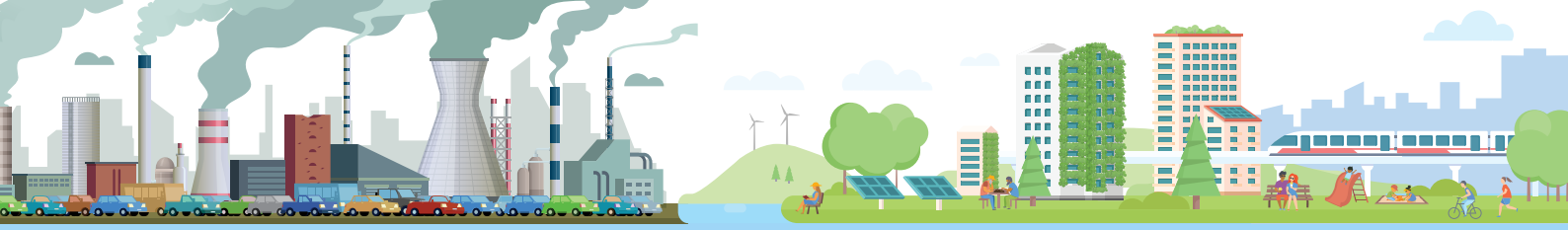
Air pollution is the biggest environmental risk factor for health in the EU, causing 400,000 premature deaths annually. The health costs from air pollution are estimated at up to 940 billion EUR a year². Overall, the health burden from air pollution is higher in Eastern Europe than in Western Europe.

Who is most affected?

Air pollution impacts everybody, but it has a particularly harmful effect on vulnerable groups, such as the elderly and people with pre-existing conditions, children and people living in socio-economically challenging environments.

¹ Noncommunicable diseases and air pollution, WHO European High-Level Conference on Noncommunicable Diseases, 2019. https://www.euro.who.int/_data/assets/pdf_file/0005/397787/Air-Pollution-and-NCDs.pdf

² Air Quality - revision of EU Rules, 2021, -<https://ec.europa.eu/environment/air/quality/documents/Air%20Quality%20Revision%20of%20EU%20Rules%20-%20Status%2010%20May%202021.pdf>



How does air pollution affect children?

In recent years, new evidence has underlined why children are particularly under threat. Exposure to air pollutants can not only increase the risk of a child developing asthma and the number and severity of asthma attacks, but also affect their learning abilities, as well as the child's heart, brain and nervous system development. Even children still in the uterus can be affected: pregnant women breathing unhealthy air can lead to children being born earlier, or with a lower birth weight, which increases the risk of disease decades later.

How does air pollution link to health inequalities?

Numerous European studies have shown that air quality tends to be worse in the areas where the most deprived populations live. This is also reflected by disparities of PM_{2.5} levels across Europe: the most polluted regions have mean concentration levels more than twice as high as the least polluted regions, with significantly higher exposure levels in socially disadvantaged areas.³

How does air pollution link to climate change?

The main driver of climate change is fossil fuel combustion, which is also a major contributor to air pollution; efforts to reduce one can improve the other. According to a recent estimate, fossil fuel burning was responsible for about 8.7 million deaths in 2018.⁴

Why is air pollution a particular problem in cities?

The majority of people in the EU live in urban settings, and their number is expected to increase. According to the European Environment Agency⁵, in 2020, only 127 of 323 cities had acceptable levels of PM_{2.5} (when compared to World Health Organization guidelines): the air pollutant with the highest impact on health in terms of disease and premature death.

³ Environmental health inequalities resource package. A tool for understanding and reducing inequalities in environmental risk. Copenhagen: WHO Regional Office for Europe; 2019.

⁴ Declaration of the Sixth Ministerial Conference on Environment and Health, https://www.euro.who.int/_data/assets/pdf_file/0007/341944/OstravaDeclaration_SIGNED.pdf

⁵ K. Vohra et al., Global mortality from outdoor fine particle pollution generated by fossil fuel combustion, Environmental Research, Volume 195, 2021, <https://doi.org/10.1016/j.envres.2021.110754>

Health and Environment Alliance (HEAL)

Avenue des Arts 7/8

1210 Brussels, Belgium

Phone: +32 (0)2 329 00 80

E-mail: info@env-health.org

Contact:

Vijoleta Gordeljevic,

Health and Climate Change Coordinator

E-mail: vijoleta@env-health.org

 @HealthandEnv

 @healthandenvironmentalliance



HEAL gratefully acknowledges the financial support of the European Union (EU) and the Climate Works Foundation for the production of this publication. The responsibility for the content lies with the authors and the views expressed in this publication do not necessarily reflect the views of the EU institutions and funders. The European Climate, Infrastructure and Environment Executive Agency (CINEA) and the funders are not responsible for any use that may be made of the information contained in this publication.

HEAL EU transparency register number: 00723343929-96

