

European Respiratory Society (ERS) Response to Consultation - EU Ambient Air Quality Directive

The European Respiratory Society (ERS) appreciates the efforts made by the European Commission on the proposal for a revised EU Ambient Air Quality Directive (AAQD). In particular, ERS acknowledges that the proposed new annual limit values of 10 µg/m³ for PM_{2.5} and 20 µg/m³ for NO₂ across the EU by 2030 will provide important benefits to public health.

However, the proposals fails to include a clear path to reducing annual mean concentrations to below 5 µg/m³ for PM_{2.5} and 10 µg/m³ for NO₂, in line with the latest WHO health-based Air Quality Guidelines.

An obligation for a continued improvement in air quality down to, or below, the WHO's air quality guidelines would maximize health benefits to European citizens.

Air pollution causes not only premature deaths but also debilitating diseases, posing a huge financial burden and strains on the healthcare systems across the EU.

In 2020, more than 311.000 premature deaths were caused by exposure to air pollution levels in the EU¹. Exposure to air pollution can lead to a wide range of diseases, including asthma, chronic obstructive pulmonary disease (COPD), and lung cancers². Moreover, studies have shown that pre-natal and early-life exposure to air pollution can lead to severe consequences^{3,4} including but not limited to the development of asthma in children in urban areas when exposed for long term to NO₂.⁵

In addition, emerging evidence reports a likely association of air pollution with diabetes, low birth weight, preterm births, cognitive decline and dementia, Parkinson's Diseases, impaired cognitive development in children, and mental health outcomes throughout lifetime. These associations may lead to sick days, doctor

¹ European Environment Agency, 'Premature deaths due to air pollution continue to fall in the EU, more efforts needed to deliver a toxic-free environment', 2022 <https://www.eea.europa.eu/highlights/premature-deaths-due-to-air>

² World Health Organisation, *Global Air Quality Guidelines*, 2021 <https://www.who.int/publications/i/item/9789240034228>

³ T. To, J. Zhu et al., 'Early life exposure to air pollution and incidence of childhood asthma, allergic rhinitis and eczema', *European Respiratory Journal*, 2020 <https://erj.ersjournals.com/content/55/2/1900913>

⁴ A. Bettioli, E. Gelain et al., 'The first 1000 days of life: traffic-related air pollution and development of wheezing and asthma in childhood. A systematic review of birth cohort studies', *Environmental Health*, 2021 <https://ehjournal.biomedcentral.com/articles/10.1186/s12940-021-00728-9>

⁵ B.Hoffman, B. Brunekreef, Z.J. Andersen, F.Forastiere, H.Boogaard, 'Benefits of future clean air policies in Europe: Proposed analyses of the mortality impacts of Pm_{2.5} and NO₂', *Environmental Epidemiology*, 2022

visits, need for medication and hospital care, and to high costs related to health care, loss in productivity, and reducing quality of life.^{6 7}

An ambitious AAQD should drive and support actions at all levels - EU, national, local - and across all sectors, such as transport, energy, industry, agriculture, and residential heating. The proposed Directive includes important steps to achieve cleaner air, but more ambition is needed to maximize health benefits for all, mitigate climate change crises and the related health effects.

Therefore, the European Respiratory Society would like to highlight the following recommendations for the European Commission:

- Full alignment of EU Air Quality Standards with the WHO Air Quality Guidelines for all major pollutants;
- Create a swift legislative process with clear steps and milestones to enforce the regulation;
- Putting in place binding limit values as the most effective tool to reduce air pollution. This includes establishing limit values also for ozone, typically linked with damages in the airways system and worse asthma symptoms;
- Ensuring a wide and comprehensive measuring network of air pollution;
- Additional studies and analysis should be conducted based on newer European studies, to address the effects of exposure to low level of air pollution⁸;
- A clear path to continue reviewing and updating the guidelines, as new scientific evidence will become available;

⁶ B.Hoffman, B. Brunekreef, Z.J. Andersen, F.Forastiere, H.Boogaard, 'Benefits of future clean air policies in Europe: Proposed analyses of the mortality impacts of Pm2.5 and NO2', *Environmental Epidemiology*, 2022

⁷ Thurston GD, Kipen H, Annesi-Maesano I, Balmes J, Brook RD, Cromar K, et al. A joint ERS/ATS policy statement: what constitutes an adverse health effect of air pollution? An analytical framework. *Eur Respir J*. 2017;49(1)

⁸ B.Hoffman, B. Brunekreef, Z.J. Andersen, F.Forastiere, H.Boogaard, 'Benefits of future clean air policies in Europe: Proposed analyses of the mortality impacts of Pm2.5 and NO2', *Environmental Epidemiology*, 2022

- Ambitious and science-based EU-wide targets will need to be supported by appropriate and effective measures at the national and local level.

The European Union has a unique opportunity to shape the future of air quality and it is now the moment to implement a legal framework that ensures effective monitoring, enables timely public information and supports scientific research to pave the way for a better and longer quality of life for all European citizens, and ultimately to support similar changes across the world.

For further details on the topic, refer to the latest ERS/ISEE joint [publication](#).