

Science-policy dialogue

Air quality and health



World Health
Organization

European Region

Sofia, Bulgaria (online event), 25 February 2022

A photograph of a traffic jam on a city street, with many cars stopped and their headlights on. The image is slightly blurred, emphasizing the density of the traffic.

Improving health through improving air quality and climate action

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Objectives

- Create a platform for Bulgarian and international stakeholders from the science, policy-making and civil society sectors to discuss air pollution and its health impacts and clean air policy.
- Present the *WHO global air quality guidelines* along with the Bulgarian translation of its executive summary, and the *Zero regrets* document on scaling up action on climate change mitigation and adaptation for health in the WHO European Region.
- Present the AirQ+ software tool for quantifying the health impacts of air pollution and discuss its potential application in Bulgaria.
- Give an overview of the adverse health impacts of air pollution in Bulgaria.
- Analyse the barriers to clean air in Bulgaria.
- Showcase solutions for clean air at the municipal, regional and national levels in Bulgaria.

Engagement of partners and stakeholders

- The dialogue was organized jointly by the WHO European Centre for Environment and Health, the WHO Country Office in Bulgaria, and the Bulgarian National Centre of Public Health and Analysis.
- Minister of Health of Bulgaria, Professor Asena Serbezova, opened the event and WHO Regional Director for Europe, Dr Hans Henri P. Kluge, welcomed participants.
- The event was attended by representatives of several sectors and stakeholders, including the Ministry of Health, the Ministry of Environment and Water, the Municipality of Sofia, the Bulgarian Academy of Sciences, the Centre for the Study of Democracy, and the Air for Health Alliance. International partners included representatives of the European Commission and the World Bank.

Key achievements

- More than 70 participants representing different sectors and perspectives contributed to the discussion on air pollution, which is considered the single most important environmental factor that threatens health.
- The new *WHO global air quality guidelines* were presented, including air quality guideline levels for particulate matter (PM_{2.5}, PM₁₀), ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂) and carbon monoxide (CO); interim targets to facilitate implementation; and good practice statements on several types of particulate matter.
- The Bulgarian language versions of the *WHO global air quality guidelines* executive summary and *Zero regrets* were presented, with a view to facilitating their uptake and stimulating action on air quality and climate change in Bulgaria.
- The AirQ+ software tool to quantify the health impacts of air pollution was introduced and key requirements for its use were discussed.
- Concrete examples and concepts for improving air quality in Bulgaria were presented, including the 2021–2030 Plan for Sustainable Energy and Climate of the Municipality of Sofia, and the engagement of civil society and clinicians through the Air for Health Alliance.
- Participants shared their own experiences and real-life examples of the adverse impacts of air pollution and the implementation of clean air policies in Bulgaria.

Lessons learned

- The severe health impacts of air pollution in Bulgaria are illustrated by the latest national evidence, including a study linking air pollution and emergency department visits that showed a 10% increase on highly polluted days.
- As suggested through expert presentations and discussions, the main barriers to clean air in Bulgaria ranged from lack of a sense of personal responsibility among the population to economic barriers and energy poverty (especially in marginalized communities) and deficiencies in urban planning in terms of providing infrastructure that promotes clean air. Lack of political will and insufficient financial investment in air quality monitoring and tackling air pollution were emphasized.
- Good governance and ambitious policy-making are crucial to ensure that existing clean air policies are implemented and new legislation across all sectors brought forward.
- The solutions, plans and tools to overcome these barriers at the municipal, regional and national levels that were presented at the meeting showcased the current level of successful engagement of policy-makers and civil society in advocating for clean air in Bulgaria.
- The conflict in Ukraine poses an additional challenge to environmental protection and clean air in eastern European Member States.

Additional resources¹

WHO global air quality guidelines: particulate matter (PM_{2.5} and PM₁₀), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide. Geneva: World Health Organization; 2021. License: CC BY-NC-SA 3.0 IGO.

WHO global air quality guidelines: particulate matter (PM_{2.5} and PM₁₀), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide: executive summary. Geneva: World Health Organization; 2021. License: CC BY-NC-SA 3.0 IGO (also available in Bulgarian).

Zero regrets: scaling up action on climate change mitigation and adaptation for health in the WHO European Region. Key messages from the Working Group on Health in Climate Change. Copenhagen: WHO Regional Office for Europe; 2021. License: CC BY-NC-SA 3.0 IGO (also available in Bulgarian).

AirQ+: software tool for health risk assessment of air pollution [website]. WHO Regional Office for Europe; 2023.

Acknowledgements

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¹ All references were accessed on 29 January 2025.