# Science-policy dialogue

Air quality and health



WHO Global Air Quality Guidelines:
reinforcing the nexus between
environment and health in the context
of "building forward better"

## **Objectives**

- Discuss opportunities to reinforce the relevance of the air quality and health agenda in the context of "building forward better".
- Explore synergies and highlight knowledge, platforms and resources that are available at international level to support national actions to address the root causes of air pollution and protect population health.
- Provide a stronger health argument for reinforced climate action.

# **Engagement of partners** and stakeholders

- The first of a series of high-level Bonn Dialogues on Environment and Health was organized jointly by the WHO European Centre for Environment and Health and the Government of Germany to give new impetus to the discussion about planning and implementing comprehensive policies and actions to efficiently tackle the air quality challenge in the WHO European Region. The Bonn Dialogues contribute to identifying priorities and formulating possible commitments to be put forward by the 53 Member States of the Region at the Seventh Ministerial Conference on Environment and Health, held on 5–7 July 2023 in Budapest, Hungary.
- WHO Regional Director for Europe, Dr Hans Henri P. Kluge, opened the event and welcomed participants, along with representatives from the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection and the Federal Ministry of Health.
- The event was attended by representatives of several sectors and by stakeholders, including representatives of ministries of health, ministries of the environment, academia, and civil society. International partners included representatives of the European Commission and the United Nations Economic Commission for Europe. The event was live streamed and translated simultaneously into Russian.

### **Key achievements**

- More than 150 participants representing different sectors and perspectives participated in the event that focused on how the new WHO global air quality guidelines could serve as a driver of policies aimed at mitigating the effects of air pollution and climate change.
- The new WHO global air quality guidelines, published in September 2021, were presented to a wide European audience. These include air quality guideline levels for particulate matter (PM<sub>2.5</sub>, PM<sub>10</sub>), ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>) and carbon monoxide (CO); interim targets to facilitate implementation; and good practice statements on several types of particulate matter.
- As part of the European Green Deal, the European Commission undertook a process of revising air quality legislation to align its air quality standards more closely with WHO guidelines, as

- well as working closely with Member States of the European Union to support implementation and monitoring mechanisms to protect citizens from the harmful effects of air pollution. The United Nations Economic Commission for Europe welcomed the new WHO global air quality guidelines as a driver for multilateral cooperation to tackle transboundary air pollution.
- At Member State level, the new guidelines have already had impacts. For example, Hungary has decided that the guidelines will form the basis of a revision of its national air quality index.
- Examples were also shared of furthering the research agenda at country level. For example, France is employing coronavirus disease (COVID-19) recovery plan funds to address environmental challenges, while Hungary continues investing into applied research, including an epidemiological survey on children's respiratory health.

#### **Lessons learned**

- Air pollution is the largest environmental risk factor contributing to the burden of disease.
   Almost 300 000 out of the premature deaths attributed to PM<sub>2.5</sub> would have been avoided if the new air quality guideline levels had been implemented in the WHO European Region in 2016.
- The guidelines provide clear evidence of the damage that air pollution inflicts on human health and recommended new air quality guideline levels to protect the health of the population by reducing levels of key air pollutants, some of which also contribute to climate change.
- The evidence supporting the air quality guideline levels comes from multiple, good quality studies based on millions of people and conducted in various regions of the world. Benefits to health can be achieved by any reduction of air pollutant concentrations towards the air quality guideline levels.

- Multisectoral collaboration is the key to tackling air pollution. National governments, local authorities and civil society organizations play a significant role in advocating the implementation of the WHO global air quality guidelines and air quality standards.
- Air pollution is a transboundary environmental issue and, therefore, international collaboration is a key factor in ensuring the effectiveness of any emission reduction policy.
- Reducing air pollution goes hand in hand with climate action. Almost all efforts to improve air quality can enhance climate change mitigation, and vice versa, to the benefit of public health.
- The WHO global air quality guidelines provide strong support for achieving the commitments of the Ostrava Declaration on Environment and Health.

# Science-policy dialogue

Air quality and health

Bonn, Germany (online event), 14 October 2021

#### Additional resources<sup>1</sup>

WHO global air quality guidelines: particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>), 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<sub>2.5</sub> and PM<sub>10</sub>), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide: executive summary. Geneva: World Health Organization; 2021. License: CC BY-NC-SA 3.0 IGO.

<u>Update of the WHO Global Air Quality Guidelines:</u> systematic reviews. Environ Int. 2022;170.

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.

## **Acknowledgements**

The WHO Regional Office for Europe gratefully acknowledges funding from the European Commission's Directorate-General for Environment; the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection; the German Federal Ministry of Health; and the Government of the Republic of Korea.

WHO European Centre for Environment and Health Platz der Vereinten Nationen 1, D-53113 Bonn, Germany.

<sup>&</sup>lt;sup>1</sup> All references were accessed on 29 January 2025.