

# Science-policy dialogue

## Air quality and health



World Health  
Organization

European Region

Bishkek, Kyrgyzstan, 14–15 December 2022

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### Objectives

- Raise awareness of the health impacts of air pollution in Kyrgyzstan.
- Present WHO guidance and relevant instruments, in particular, the new *WHO global air quality guidelines*, and health risk and impact assessment tools on air quality, climate change mitigation, and green spaces and health; and demonstrate how these documents and tools can be used effectively at national level.
- Identify and exchange country-specific information on air pollution and consider country-specific population health needs to guide policy-making.
- Facilitate interactions between stakeholders, including policy-makers, researchers, health professionals and civil society representatives in Kyrgyzstan.

### Engagement of partners and stakeholders

- The dialogue was organized by the WHO Country Office for Kyrgyzstan and the WHO European Centre for Environment and Health.
- The event was opened by Joana Madureira Lima (WHO Country Office for Kyrgyzstan), followed by welcome addresses by Bubujan Arykbaeva (Ministry of Health for Kyrgyzstan), Aidai Kurmanova (United Nations Environment Programme's Central Asia Office) and Dorota Jarosińska (WHO European Centre for Environment and Health).
- The dialogue was attended by a wide range of experts and stakeholders on air pollution and health who represent different sectors, including the Ministry of Health; the Ministry of Natural Resources, Environment and Technical Supervision; Bishkek municipality; Kyrgyz academia and civil society; the United Nations Environment Programme's Central Asia Office; the United States Embassy in Kyrgyzstan; and representatives of the press.

### Key achievements

- Over 30 participants representing several sectors joined the meeting in person. They acknowledged that air pollution is an urgent public health issue to be addressed to protect the health of citizens and reduce the level of ambient air pollution in Kyrgyzstan.
- Experts presented an overview of WHO activities and Government of Kyrgyzstan activities on air pollution and health, and highlights of the United Nations Environment Programme/United Nations Development Programme *Air quality in Bishkek* report. The *WHO global air quality guidelines*, the Joint Task Force on the Health Aspects of Air Pollution, and WHO tools were introduced to the audience by WHO experts, followed by specific presentations on AirQ+, CLIMAQ-H (previously called CaRBonH – Carbon Reduction Benefits on Health), the Health Economic Assessment Tool for walking and cycling, GreenUr, and the Benefits of Action to Reduce Household Air Pollution tool. WHO also presented information on risk communication on air quality and health, including air quality indexes.
- Between the expert presentations, participants shared their own experiences on air pollution policies in Kyrgyzstan.

### Lessons learned

- To take urgent measures to protect the health of citizens and reduce air pollution, the Government of Kyrgyzstan has recently started strengthening policy-making on air quality and health.
- Following the Order of the Cabinet of Ministers of the Government of Kyrgyzstan dated 17 November 2021, an extraordinary interdepartmental commission (chaired by the mayor of Bishkek) was established with the goals to (i) conduct a study on the impact of air pollutants on population health; (ii) develop actions for the prevention of disease in the population; (iii) develop an air quality index to help to communicate the impact of air pollutants on public health; (iv) carry out a comprehensive assessment of air pollution problems; (v) identify the main sources of air pollution; (vi) develop a step-by-step plan and measures to improve environmental conditions in Bishkek; and (vii) provide residents with reliable information on environmental conditions and on factors that contribute to maintaining or harming health.
- The Ministry of Health created an intersectoral working group in December 2021, but this has encountered problems, including (i) lack of compliance of accounting and reporting forms on population morbidity with modern requirements; (ii) lack of skilled personnel; (iii) insufficient funding; (iv) time constraints and the short deadline for completing the task; and (v) the length of time needed for data collection.
- Gaps between the existing air quality policies in Kyrgyzstan and the country's clean air targets were identified during discussions between participants. Follow-up actions relate to expanding the availability of skilled personnel; providing training in the use of up-to-date methods of research, data collection and processing; and conducting an assessment of the ambient air quality and its health impacts.
- In-depth collaboration between the Ministry of Health and WHO is urgently needed to improve activities to reduce the adverse impact of air pollutants on public health. The dialogue was expected to lead to cooperation between the WHO European Centre for Environment and Health and the Government of Kyrgyzstan from 2023 onwards to promote air quality management for public health in Kyrgyzstan. The WHO European Centre for Environment and Health will continue to collaborate with the governments of Kyrgyzstan and other central Asian countries to improve air quality.

### 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.

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

Climate Change Mitigation, Air Quality and Health (CLIMAQ-H)[website]. WHO Regional Office for Europe; 2023.

Health economic assessment tool (HEAT) for walking and cycling [website]. WHO Regional Office for Europe; 2025.

GreenUr: tool for quantifying the impacts of green space on health [website]. WHO Regional Office for Europe; 2025.

Benefits of action to reduce household air pollution (BAR-HAP) tool [website]. World Health Organization; 2025.

Strengthening capacities in assessing health risks of air pollution in Kyrgyzstan and Kazakhstan: WHO training workshop [website]. WHO Regional Office for Europe; 1 February 2024.

Air quality in Bishkek: assessment of emission sources and road map for supporting air quality management. United Nations Development Programme in the Kyrgyz Republic and United Nations Environment Programme: Bishkek and Nairobi; 2022.

### Next steps

As a follow-up to the science-policy dialogue and the identified need for capacity-building, WHO held a training workshop in Bishkek on 4–8 December 2023. This in-person training course was attended by 30 environmental and public health experts from Kazakhstan and Kyrgyzstan with the aim to increase their awareness and knowledge of the adverse health effects of air pollution and improve their skills in assessing related health risks. Participants learned about the practical use of methods, models and concepts in air pollution and health through utilizing local health and air quality data and the WHO Regional Office for Europe's AirQ+ software tool. Other issues discussed included data availability and quality, estimation of the long- and short-term health effects of air pollution, and the *WHO global air quality guidelines*. The training workshop was expected to stimulate and support the development of public policies to reduce the health burden of air pollution in Kazakhstan and Kyrgyzstan.

### Acknowledgements

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