

Air pollution as a global health danger

Deutscher Bundestag

Ausschuss f. Gesundheit
UA GlobG

Ausschussdrucksache

20(14-1)45

TOP 3 der 14. Sitzung des UA
GlobG am 19.06.2023 Air

19.06.2023

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Session of the Sub-committee Global Health

19 June 2023



AIR POLLUTION – THE SILENT KILLER

Air pollution is a major environmental risk to health.
By reducing air pollution levels, countries can reduce:



Every year, around
7 MILLION DEATHS
are due to exposure
from both outdoor
and household air
pollution.



Stroke



**Heart
disease**



**Lung cancer, chronic
obstructive pulmonary
disease, pneumonia
and asthma**

REGIONAL ESTIMATES ACCORDING TO WHO REGIONAL GROUPINGS:



More than 2 million
in South-East Asia Region

More than 2 million
in Western Pacific Region

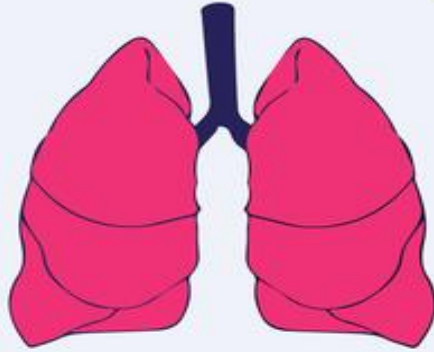
1 million
in Africa Region

500 000
deaths in Eastern Mediterranean Region

500 000
deaths in European Region

More than 300 000
in the Region of the Americas

AIR POLLUTION AFFECTS
**OUR VITAL
ORGANS**



36%
OF DEATHS FROM
LUNG CANCER



34%
OF DEATHS FROM
STROKES



27%
OF DEATHS FROM
HEART DISEASE

IMPACT OF AIR POLLUTION ON CHILDREN'S HEALTH

A child who is exposed to unsafe levels of pollution can face a lifetime of health impacts. Exposure in the womb or in early childhood can lead to:



Stunted lung growth
Reduced lung function
Increased risk of developing asthma
Acute lower respiratory infections



Impaired mental and motor development
Behavioural disorders



Low birth weight
Premature birth
Infant mortality



Childhood cancers



Increased risk of heart disease, diabetes and stroke in adulthood



IN 2016, AMBIENT AND HOUSEHOLD AIR POLLUTION CAUSED

543 000 deaths
in children under 5 years

52 000 deaths
in children aged 5-15 years



Household and ambient air pollution cause more than 50% of acute lower respiratory infection in children under 5 years in low- and middle-income countries.

In a nutshell

Air Pollution Data Portal

Burden of disease

6.7 million

deaths each year from exposure to ambient and household air pollution

Household exposure

2.4 billion

people primarily rely on polluting fuels and technologies for cooking

Ambient exposure

99%

of the world's population live in places where air pollution levels exceed WHO guideline limits



World Health
Organization

European Region

Air pollution and health in Germany



Annual mean levels of fine particulate matter (PM2.5)

Year	Germany		WHO EURO Region (2019)
	(2010)	(2019)	
Total	15.06 [14.81 - 15.33]	10.73 [10.56 - 10.93]	14.88 [14.17 - 15.9]
Urban	15.75 [15.5 - 16.05]	11.15 [10.98 - 11.36]	14.71 [14.07 - 15.52]
Cities	16.88 [16.6 - 17.21]	11.92 [11.73 - 12.15]	14.78 [14.19 - 15.58]
Rural	13.46 [13.19 - 13.72]	9.72 [9.53 - 9.93]	15.17 [14.16 - 16.46]

Ambient air pollution attributable death, year 2019

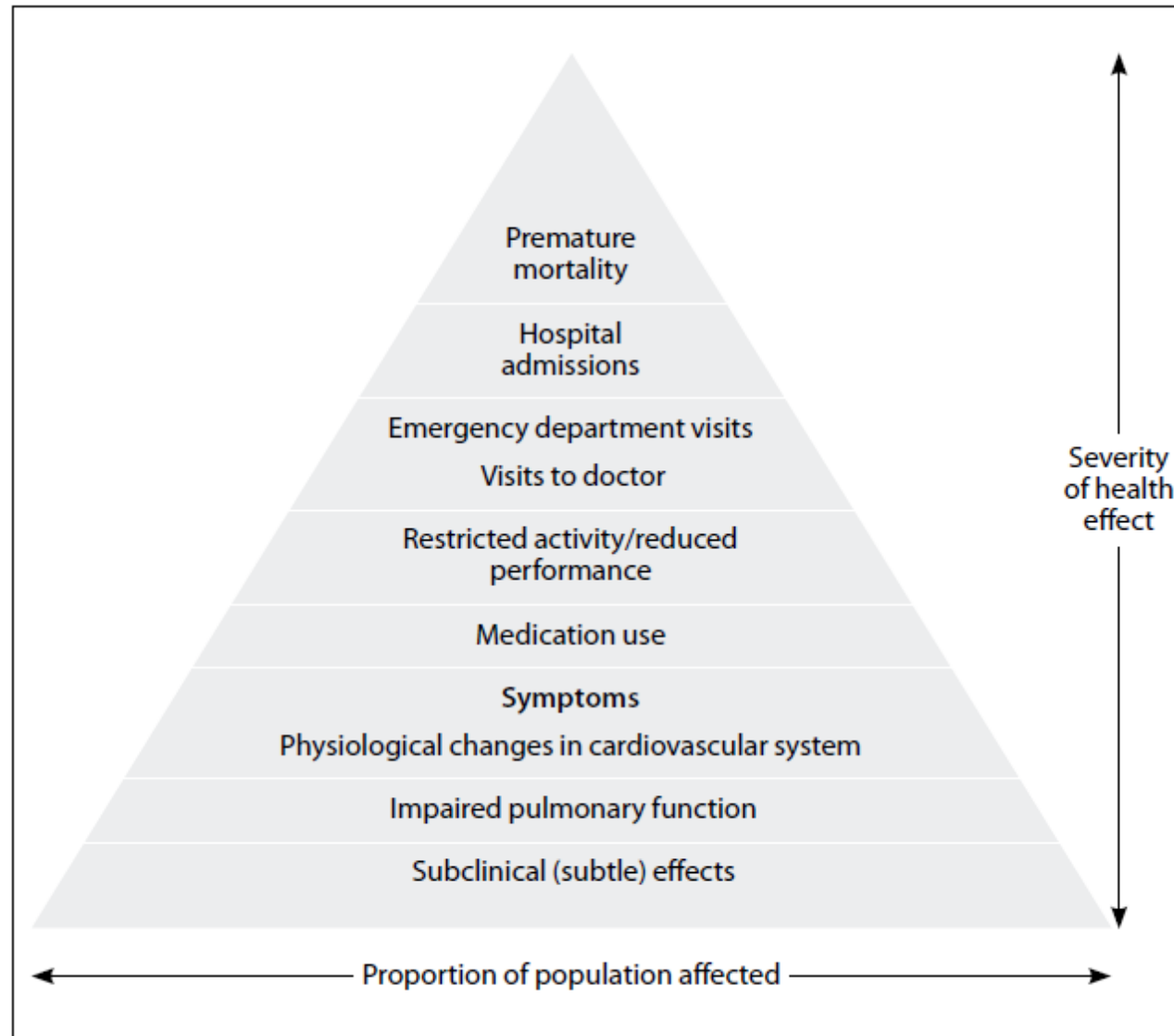
Cause of death	Germany	WHO EURO Region
Total	37 207	568 936
Ischaemic heart disease	24 496	375 233
Stroke	4 482	101 483
COPD	3 649	32 353
Trachea, bronchus, lung cancers	2 207	24 683
Lower respiratory infections	2 374	35 185



World Health Organization

European Region

Air pollution and health - beyond attributable deaths



SOURCES OF AIR POLLUTION ARE A GLOBAL CHALLENGE WE MUST TACKLE TOGETHER

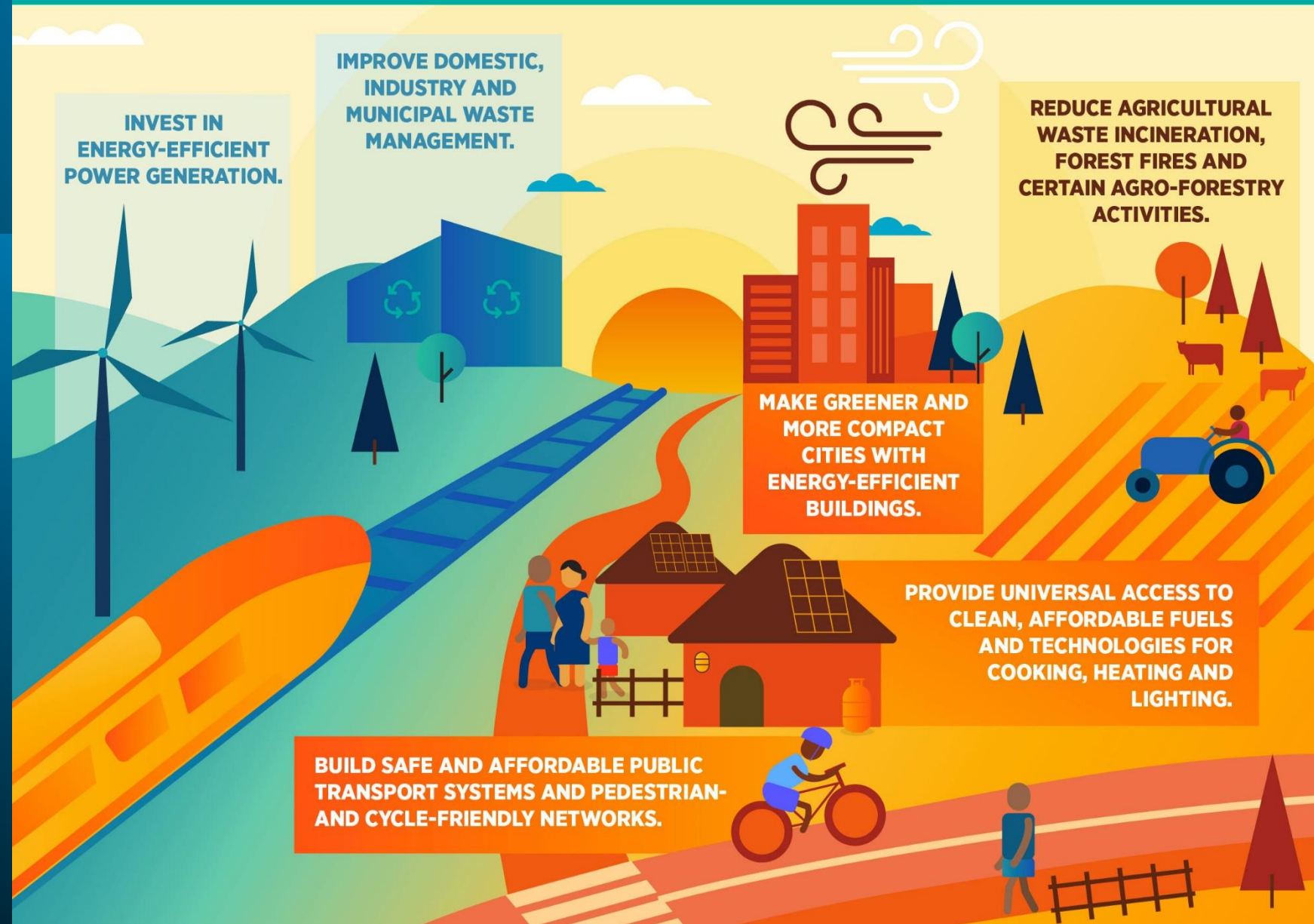


SOLUTIONS

Evidence
Tools

Empowerment
Cooperation

Multilevel action



INVEST IN
ENERGY-EFFICIENT
POWER GENERATION.

IMPROVE DOMESTIC,
INDUSTRY AND
MUNICIPAL WASTE
MANAGEMENT.

REDUCE AGRICULTURAL
WASTE INCINERATION,
FOREST FIRES AND
CERTAIN AGRO-FORESTRY
ACTIVITIES.

MAKE GREENER AND
MORE COMPACT
CITIES WITH
ENERGY-EFFICIENT
BUILDINGS.

PROVIDE UNIVERSAL ACCESS TO
CLEAN, AFFORDABLE FUELS
AND TECHNOLOGIES FOR
COOKING, HEATING AND
LIGHTING.

BUILD SAFE AND AFFORDABLE PUBLIC
TRANSPORT SYSTEMS AND PEDESTRIAN-
AND CYCLE-FRIENDLY NETWORKS.

Air quality and health - WHO milestones

1958

1964

1972

1976-84

WHO technical reports

1987

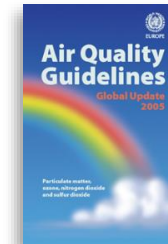
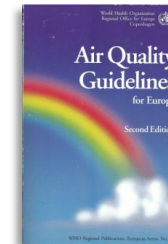
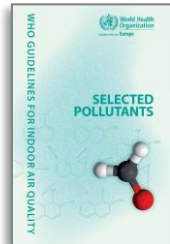
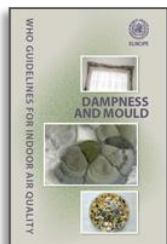
2000

2006

2009

2010

2014



2021

What the WHO global AQG provide

Air quality guideline levels for both long- and short-term exposure in relation to critical health outcomes

Interim targets to guide reduction efforts for the achievement of the air quality guideline levels

Good practice statements on the management of certain types of particulate matter for which evidence is insufficient to derive quantitative air quality guideline levels, but points to their health relevance



European Region



Main uses of the WHO AQG

As an evidence-informed tool

To guide legislation and policies, to reduce levels of air pollutants and decrease the disease burden due to air pollution exposure worldwide



An official website of the European Union How do you know? ▾

European Commission

English

Environment

Home > All Environment Publications > Revision EU ambient air quality legislation

GENERAL PUBLICATIONS

Proposal for a revision of the Ambient Air Quality Directives

Details

Publication date	26 October 2022
Author	Directorate-General for Environment

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To stimulate research

To identify critical data gaps for future research to better protect people from the harmful effects of air pollution

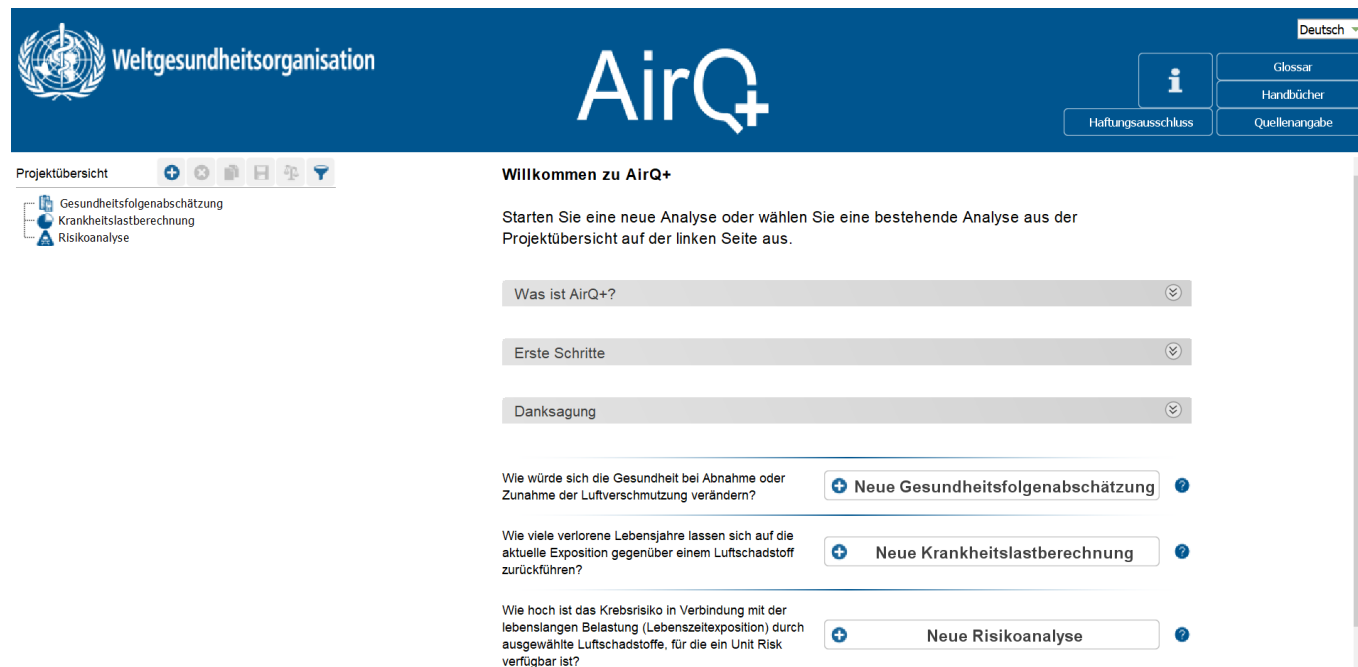


For climate action

Reducing air pollution and mitigating climate change together act to protect health



AirQ+ ein Software-Tool zur Bewertung des Gesundheitsrisikos der Luftverschmutzung



Handbücher

26 January 2021
Abschätzung der Gesundheitsfolgen durch Luftverschmutzung

15 December 2020
Abschätzung der Gesundheitsfolgen durch Luftverschmutzung...

15 December 2020
Abschätzung der Gesundheitsfolgen durch Luftverschmutzung: Handbuch zur...

15 December 2020
Handbuch zur Berechnung der Krankheitslast durch Luftverschmutzung in AirQ+

15 December 2020
AirQ+: Krebserregende Schadstoffe und ihre Risikoanalyse

Die Quantifizierung der Auswirkungen der Luftverschmutzung auf die öffentliche Gesundheit ist zu einem wichtigen Bestandteil der politischen Diskussion geworden. Das Software-Tool AirQ+ des WHO-Regionalbüros für Europa führt Berechnungen durch, die eine Quantifizierung der gesundheitlichen Auswirkungen der Luftverschmutzung, einschließlich Schätzungen der Verringerung der Lebenserwartung, für die wichtigsten Luftschadstoffe ermöglichen. AirQ+ ist in Englisch, Französisch, Deutsch und Russisch verfügbar.



Engagement of the health sector

- gathering evidence
- raising awareness of the health effects of air pollution
- advising the public and patients on how to mitigate the impact of air pollution
- joining advocacy efforts to ensure that the health arguments are heard

Seventh Ministerial Conference on Environment and Health



1989 Frankfurt

1994 Helsinki

1999 London

2004 Budapest

2010 Parma

2017 Ostrava

EUROPEAN ENVIRONMENT AND HEALTH PROCESS

World Health Organization
European Region

UNECE UN

Seventh Ministerial Conference on Environment and Health

5-7 July 2023, Budapest, Hungary

Accelerating action for healthier people, a thriving planet, a sustainable future

The Seventh Ministerial Conference on Environment and Health will define the future environment and health priorities and commitments for the WHO European Region, with a focus on addressing the health dimensions of the triple environmental crisis of climate change, biodiversity loss and environmental pollution.

The Conference will take into account the impact of the COVID-19 pandemic and opportunities for a healthy recovery on the path towards achieving the 2030 Agenda for Sustainable Development. This will be the seventh conference in a series started in 1989 under the framework of the European Environment and Health Process (EHP).

MAGYARORSZÁG KORMÁNYA
THE SEVENTH MINISTERIAL CONFERENCE IS HOSTED BY THE GOVERNMENT OF HUNGARY



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Thank you

Funding and in-kind support for AQGs provided by: European Commission, Swiss Federal Office for the Environment, German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection, German Federal Ministry of Health, United States Environmental Protection Agency, Government of the Republic of Korea



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