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Clean Air and Health: Working on Solution to Address Air Pollution in South Africa

Vumile Senene

Clean Air Day 2025 Webinar

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Background

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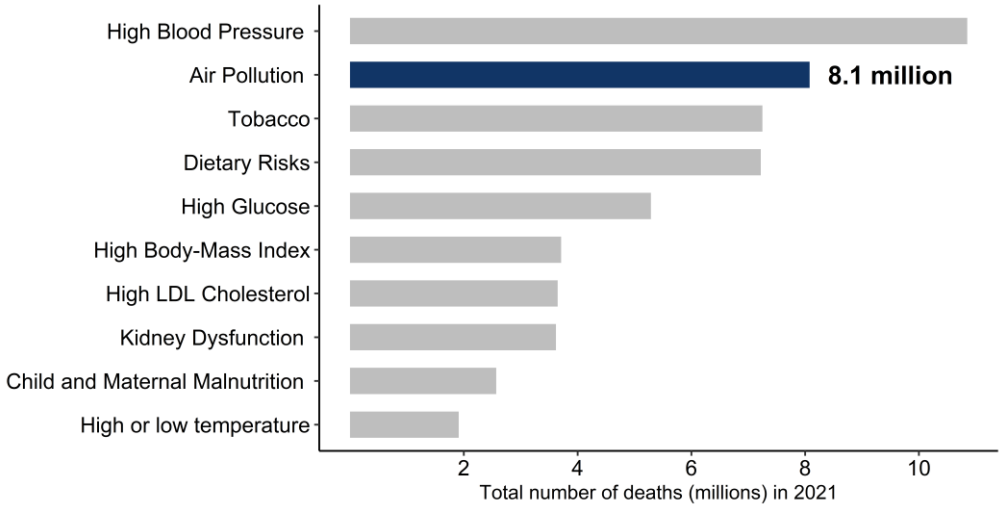
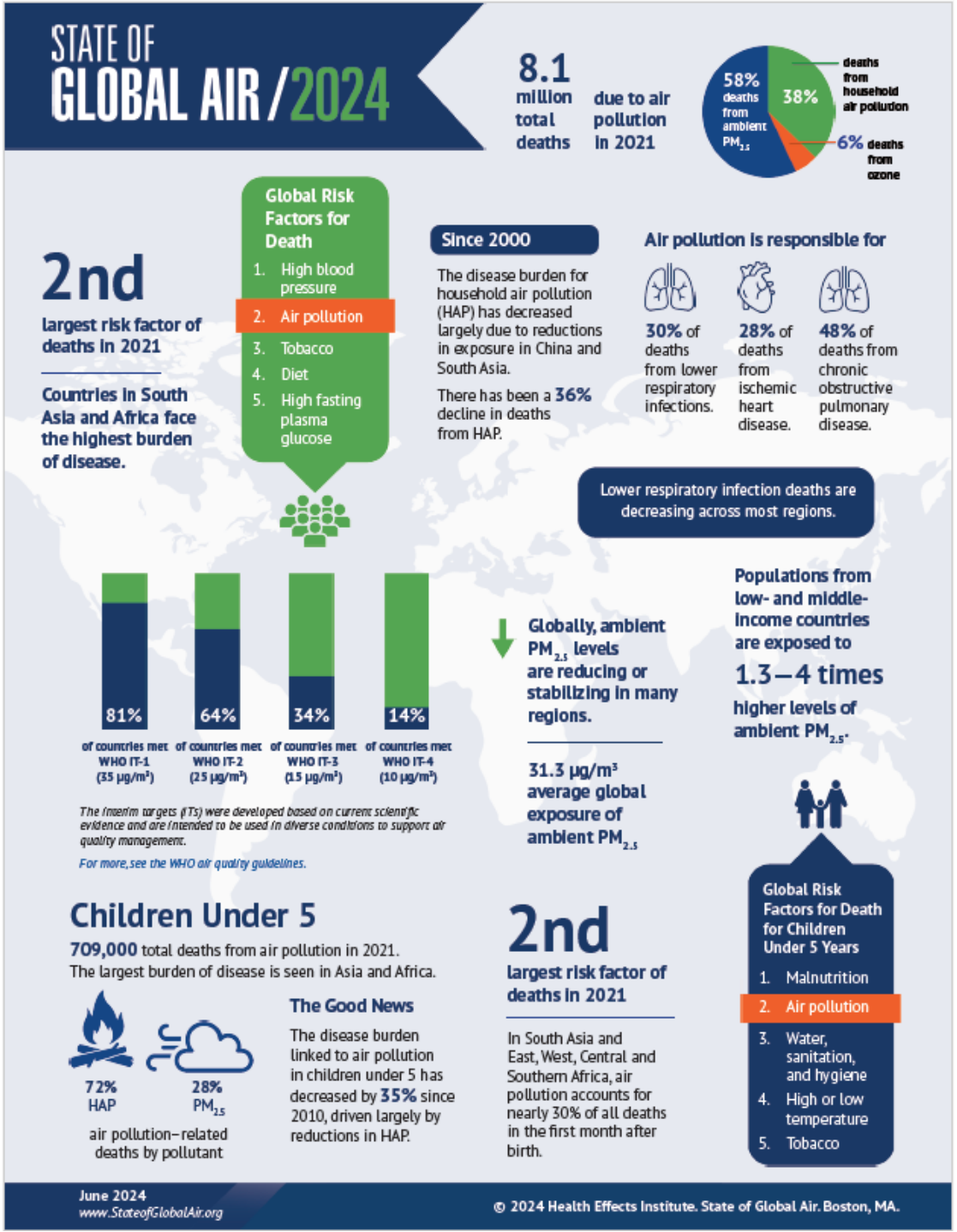
- **99%** of the world's population breathes dangerous, polluted air
- Air pollution responsible for **8.1 million** attributed to air pollution
- **2nd** largest risk factor of deaths

- Health damage from air pollution is equivalent to **USD 8.1 trillion** a year, or **6.1%** of global GDP
- Clean air funding only makes up **1%** of all international development funding.

Air pollution is the second leading risk factor for deaths in 2021, behind high blood pressure and surpassing smoking.

1 in 8 global deaths in 2021 was linked to air pollution.





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South Africa Profile

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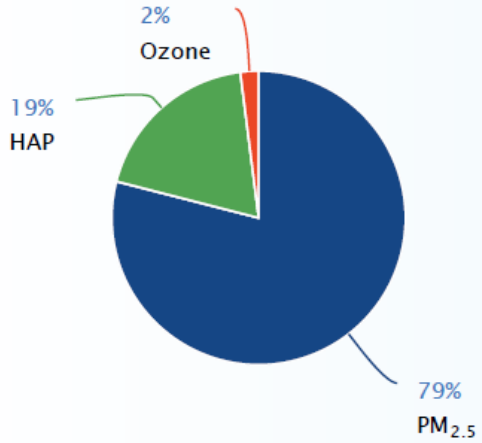
Health Impacts of Air Pollution

Air pollution is among the top 10 risk factors for death in South Africa, with **more than 34 thousand** deaths from air pollution. The top 5 risks in South Africa are: Unsafe sex, High systolic blood pressure, High body-mass index, High fasting plasma glucose, and Dietary risks.

Air pollution deaths by pollutant



60 deaths per 100,000 people are due to air pollution in South Africa. This is lower than the global average.

Percentage of Deaths (by Cause) Due to Air Pollution

20%	18%	24%	29%	16%	22%	17%
of stroke deaths	of diabetes deaths	of ischemic heart disease deaths	of COPD deaths	of lung cancer deaths	of lower-respiratory infection deaths	of neonatal deaths

Top 5 Sources of Outdoor $PM_{2.5}$ and Associated Health Burden

	Residential	Industry	Energy	Anthropogenic Dust	Agriculture
Contribution to total outdoor $PM_{2.5}$	16%	6.8%	22.5%	5.5%	7.5%
Number of $PM_{2.5}$ linked deaths	5,456	2,319	7,672	1,876	2,558

Please note that $PM_{2.5}$ concentrations reported here are estimated using a combination of satellite data, ground air quality monitoring data, and chemical transport models. These estimates can be more uncertain where ground monitoring data are limited or not available.

** Based on data from GBD-MAPS - Global Project. Explore the data for your country. *** Based on the 2022 OpenAQ assessment on air quality monitoring in countries around the world

Turning Point

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The challenge is not unsurmountable

- Air pollution is preventable
- We know the sources, and we know the solutions
- Progress is happening in South Africa and worldwide

Solutions

- Clean energy and sustainable transport
- Better waste management
- Stronger policies and enforcement
- Community-driven action

Our Theory of Change

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CAF's 'what'

Data

Putting compelling evidence in the right hands

Demand

Heightening public awareness and will to create change

Drive

Influencing decision-makers to make clean air the expectation & the norm

Clean Air movement can start from any of the Ds, which amplify each other

Action

Taking action to reduce air pollution

While not in CAF's control, it influences this step

Governments

Cities

Corporates

Reduction in air pollution

Improvements in air pollution related health & climate outcomes

CAF's 'how'

Reinforce – *Building and strengthening the movement at local, national, regional and global levels through:*

- Funding & Partnering
- Connecting & Influencing
- Evaluating & Replicating

Vision: Enhance capacity of all stakeholders to ensure coordinated and effective implementation of air quality strategies, policies and plans to achieve a 40% reduction in particulate emissions in the Priority Areas by 2030

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Objectives

Data

1. Improved air quality and health data for evidence-based decision making by government

Demand

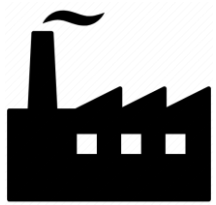
2. Empowering community-based organisations in under-served communities to influence action for clean air

Drive

3. Supporting the enforcement of industrial emissions reporting requirements as per Priority Area Regulations

4. Emission reduction targets set/implementation support for all the three Priority Areas

Prioritised Sectors:



Projects Under Implementation

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Data

- Low-cost sensor deployment in Gauteng
- Localised data on health impacts of air pollution
- Emission reduction target development

Zabcor

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

saMRC advancinglife

CSIR Touching lives through innovation

Demand

- Awareness and community engagement
- Open waste burning project

celebrating 25 years of environmental justice
groundWork

South African Waste-Pickers Association
SAWPA

Drive

- Air quality business working group
- Investment case for improved air quality and health

BUSA
BUSINESS UNITY SOUTH AFRIC

UNDP

Reinforce

Hosting of the Annual Priority Areas Summit

forestry, fisheries & the environment
Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

SOUTH AFRICAN LOCAL GOVERNMENT ASSOCIATION
SALGA
Inspiring service delivery

8

BREATHE JOBURG POLICY OBJECTIVE: Develop a Clean Air Zone (s) policy to reduce transport air pollutants and climate emissions for implementation by 2030.

Stage of Policy at end of Project in June 2026: *Council Approval for the Clean Air Zone Policy*

Approved & In Progress Projects

Data & Research

- Comprehensive source apportionment study for Joburg
- Comprehensive real-world emissions testing, analysis and reporting
- Renewal of low cost sensor licenses for City

Community & stakeholder engagement

- Air Aware: Youth led air pollution awareness campaign
- Defining a Clean Air Zone for Joburg
- Clean Air week and mayoral launch

Technical Policy assistance

- Clean Air Zone (s) policy design and development

Upcoming projects

1. Community-driven assessment of air pollution health impacts in Johannesburg, South Africa: An epidemiological study using mobile sensors and taxi networks
2. Capacity building on AQ data interpretation, analysis, reporting and communication for city staff and grassroots organisations
3. Deployment of low-cost, low- maintenance air quality monitoring devices for a community driven monitoring programme.
4. Comprehensive communications campaign

Breathe Cities

Conclusion

- Air pollution requires collaboration across government, business, civil society, and communities

- The solutions exist – we need to scale them up

- The benefits of clear air touch health, the economy, environment and society

- Clean air is a basic human right, not a privilege or a luxury

- Solutions must be community-driven and must have equity as an integral part

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Thank You