

ENVIRONMENT, INFRASTRUCTURE AND SERVICES DEPARTMENT (EISD)



Status and Impact of Air Quality in the City of Johannesburg

Gauteng Legislature Pollution Summit 2026

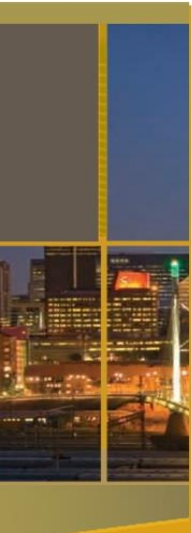
Date: 19&20 September 2026

Venue: Emperors Palace



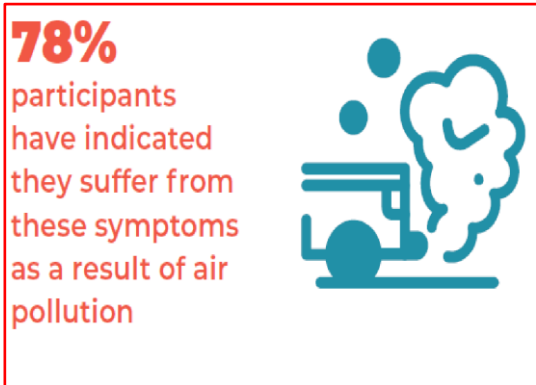
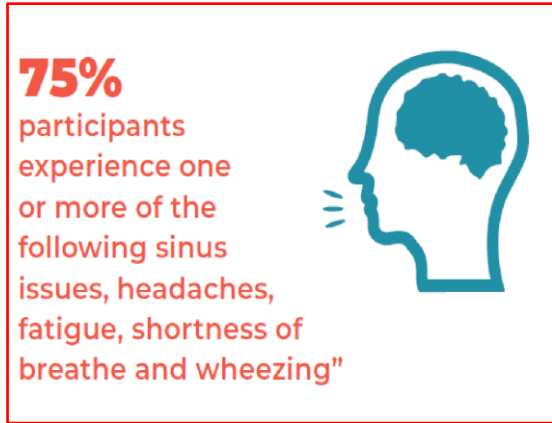
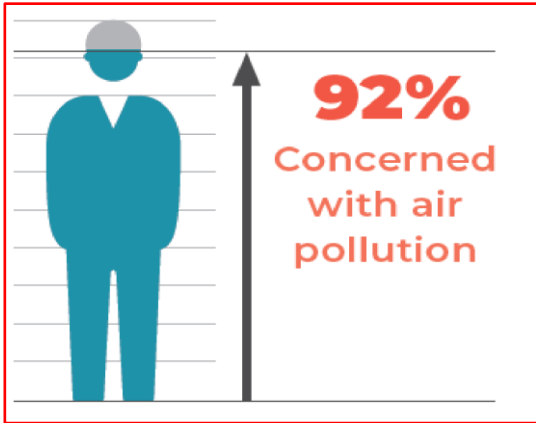
- **Introduction /Background**
- **Emission profile**
- **AQMP & By-laws**
- **Air Quality key function**
- **Air Quality Focused initiatives**
- **Challenges**
- **Conclusion**

- Johannesburg faces increasing air quality challenges.
- Rapid urbanization, transport growth, energy demand, and waste pressures contributes to the challenges
- The Minister of Forestry Fisheries and Environment on the 31 March 2026 declared the whole of City of Johannesburg as part of the Vaal Triangle Airshed Priority Area .
- The declaration signify that the pollution levels within the City and broader priority area are a national concern.
- The pollutants of concern continue to be Particulate Matter, NO₂ and SO₂.
- Air pollution remains one of the most significant environmental health risks facing Johannesburg.
- Approximately 5,300 premature deaths in Johannesburg were attributed to air pollution.
- Major emission sources include transport, industry, mining activities, domestic fuel burning and waste burning.
- The City has been wholly included in the Vaal Triangle Airshed Priority Area (VTAPA) as declared by the Minister of DFFE on the 30 March 2026.
- The City continues to strengthen monitoring, regulation, emissions reduction initiatives and public awareness programmes.
- Through the Breathe Cities Initiative, Johannesburg is implementing new interventions aimed at reducing air pollution and improving public health.

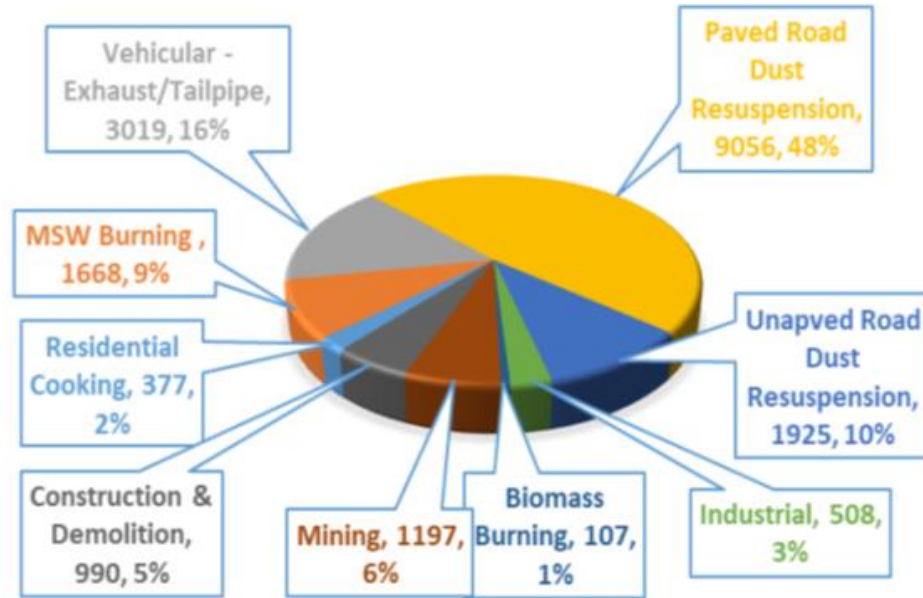


City level Air quality Perceptions

KEY TAKEAWAYS



Finding from Recent Source Apportionment Study



PM₁₀ (18,847 tonnes/year):
Dominated by paved road dust resuspension (48%) and vehicular exhaust (16%).



PM_{2.5} (7,706 tonnes/year): Vehicular exhaust (39%) and paved road dust (30%) are major contributors.



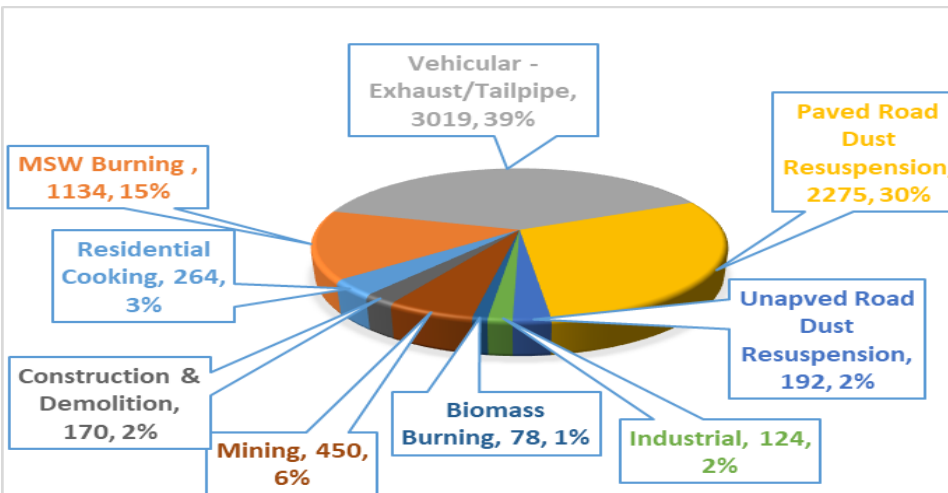
SO₂ (1,131 tonnes/year): Industry (42%) and residential fuels (25%) lead emissions.



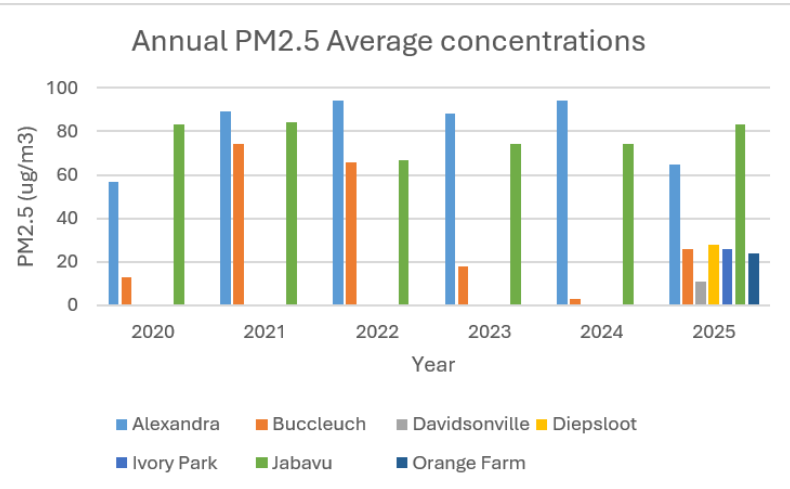
NO_x (74,741 tonnes/year): Over 97% from vehicular exhaust, making transport the critical control sector.



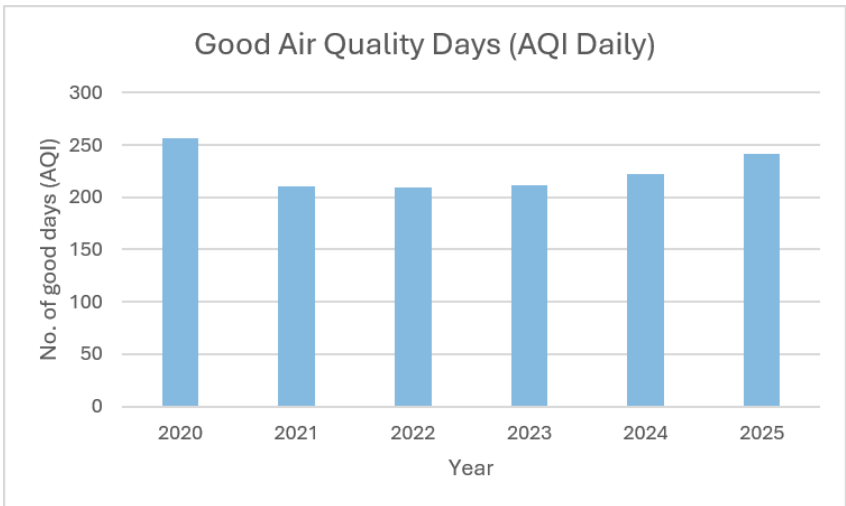
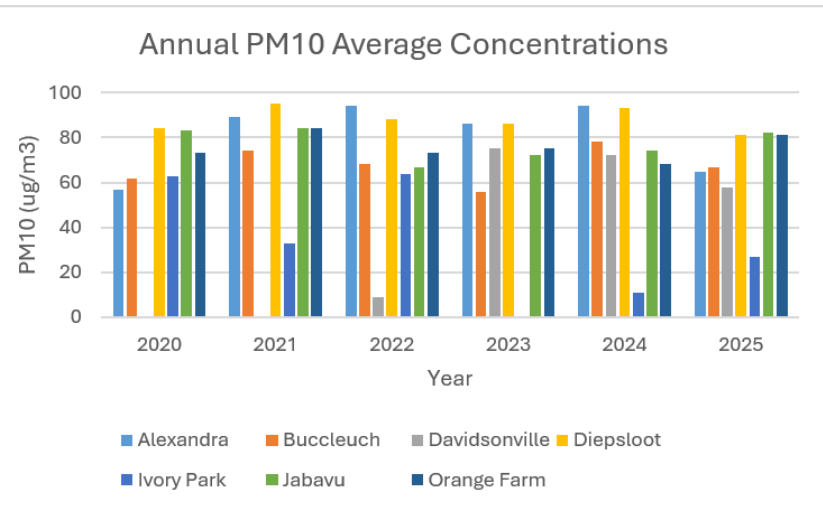
CO (336,189 tonnes/year): Vehicular emissions dominate (96%), with minor input from waste burning and cooking.

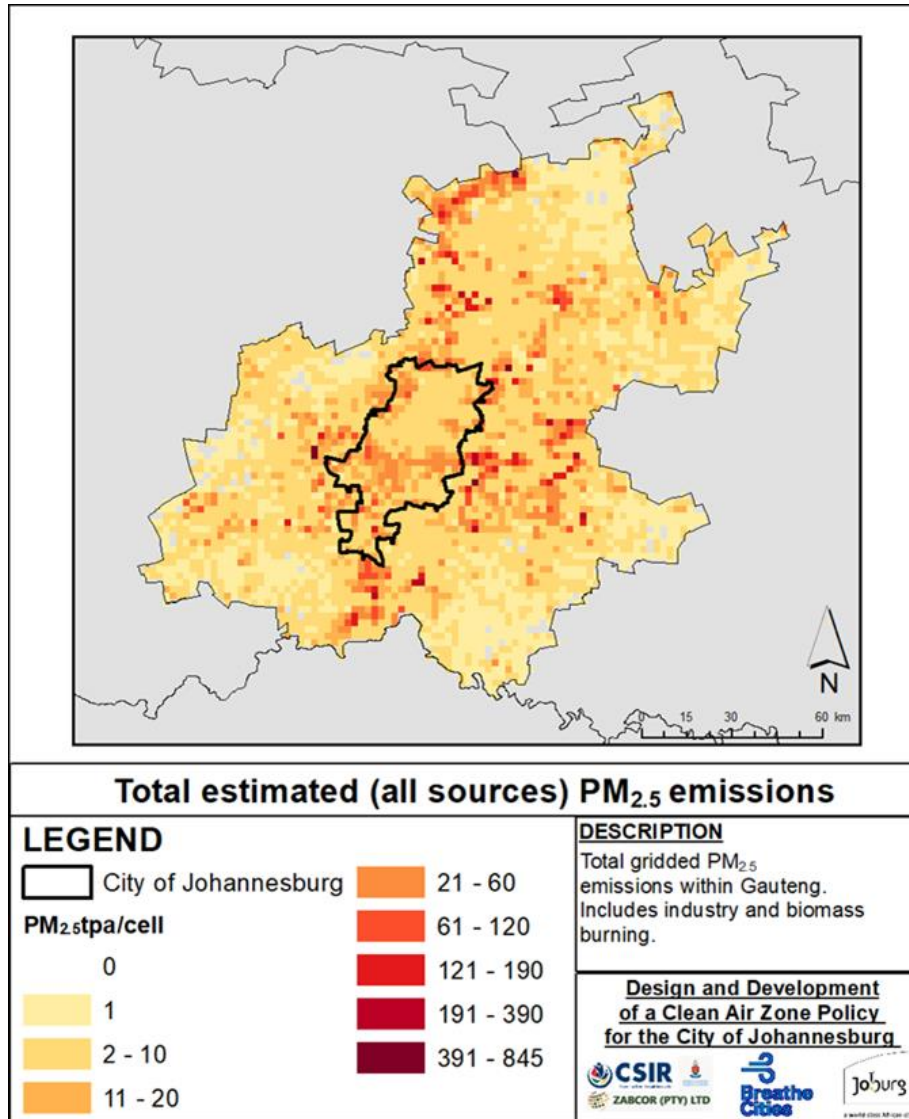


STATE OF AIR QUALITY



The city continues to experience elevated levels of particulate matter (PM10 & PM2.5 and on average 215 Good Air Quality Days





- The City AQMP is due for review in 2026/27 FY
- The Baseline is nearly completed Emissions inventory, Dispersion modelling and source apportionment
- 2021 APC By-laws currently in place and enforceable

- CoJ Air Quality Management sub- unit is functional and driving the two functional areas:
 - Air Quality Regulation and Permitting
 - Air Quality Monitoring ,Modelling and Planning
- The unit currently have 7 officials dedicated for AQM functions.
- We have recruited one intern
- 1 Technical Advisor from C40



AIR QUALITY KEY FUNCTIONS



AQ MONITORING

8 Monitoring station sites.

7 operational

31 analysers

Low cost sensors

41 sensors

6 HST sensors

2 UJ peets sensors

Monitored pollutants

PM10

PM2.5

SO2

NO2

O3

CO

H2S

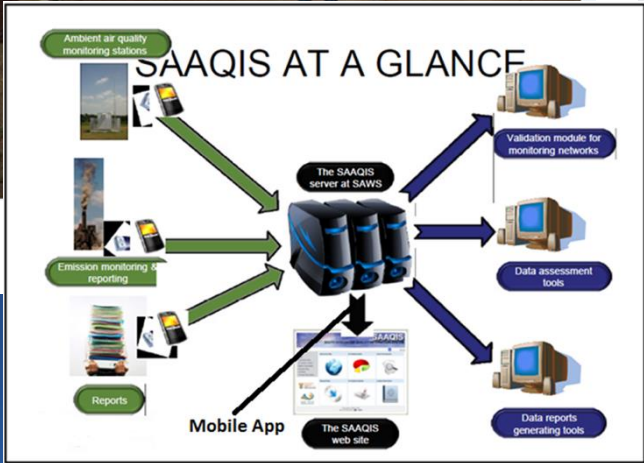
240 days with good air quality

PM10= 65 exceedances

PM2.5 = 66 exceedances

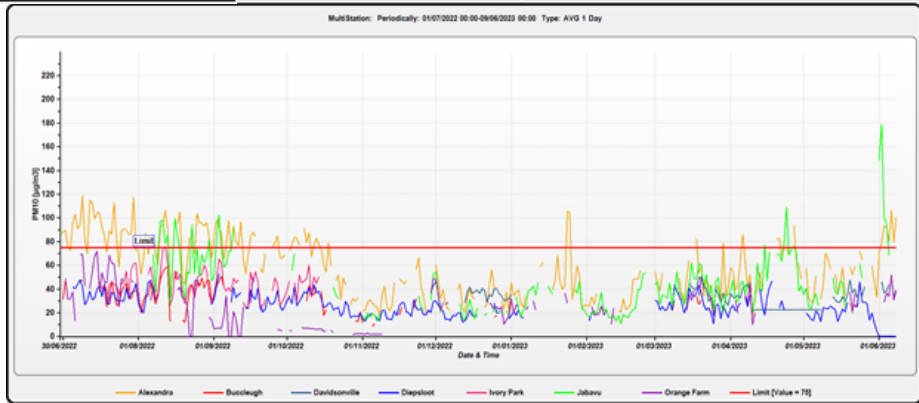
2024/25 FY	2025/26 FY	2026/27 FY
R10 million (CAPEX)	R 7 Million (CAPEX)	0
R750 K (OPEX)	R 1.150 Million (OPEX)	R 2,187 Million(OPEX)

Air Quality Monitoring



8 Air Quality Monitoring stations

7 operational	Buccleuch, Alexandra, Jabavu, Orange Farm, Ivory Park, Diepsloot, Davidsonville (Mobile) Diepkloof
1 non-operational	Delta Park (Security) Planned for relocation to Emmarantia Library
6 Clarity Low-cost sensors	- JHB CBD - Roodeport - Sandton - Braamfontein - Diepkloof - KyaSand + 41 CAF sensors



AEL

- 42 Industrial licenses
- Annual compliance monitoring

PERMITS

- 36 Permits issued to date

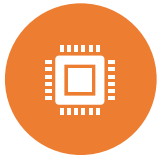
AQM FOCUSED INITIATIVES



Industries –
regulation of
industries through
AEL and compliance
monitoring



Households –
ensuring provision
of sustainable
energy supply that
includes alternative
energy sources



Data improvement –
source
apportionment,
low-cost sensor
network expansion,
modelling capacity



Vehicle emissions-
city is investigating
innovative ideas
that include green
transportation,
CAZ, Vehicle
emission testing etc.



Stakeholders –
ensuring continued
stakeholder
engagement and
awareness



Mining – participate
in the ERGO mining
forum for mine
reclamation



Waste - enforce by-
laws to prevent
waste burning and
improvement of
waste collection
services

BREATHE CITIES SUPPORT

- The City is a member of C40 cities organisation
- Enjoy support through participation in Breathe Cities programme which is funded by Clean Air Fund and Bloomberg Philanthropies
- First phase support was from 2023 -2026
- Currently working on the Phase 2 Strategy for 2026-2029



TRUE emissions testing



Source apportionment study



Air quality perceptions report



Development of Clean Air Zone Policy

AWARENESS & STAKEHOLDER ENGAGEMENT

“ Air pollution is not just a global environmental issue — it’s a public health emergency.

In Johannesburg, we witness its effects most sharply during the winter months, especially in our most vulnerable communities. As Executive Mayor, I am committed to mobilising the full resources of the City to take bold, decisive action that will clean our air, protect our health, and secure a better quality of life for every resident.

”

Cllr Dada Morero,
Executive Mayor, City of Johannesburg



AIR POLLUTION- BURNING WASTE

1. ADOPT GOOD MANAGEMENT PRACTICE, REDUCE, REUSE AND RECYCLE YOUR WASTE. PLACE ALL YOUR WASTE IN THE CORRECT WASTE BIN
2. DON'T DUMP AND BURN WASTE
3. REPORT ALL DUMPING AND BURNING OF WASTE

#CleanAirJozi

Joburg Breathe Cities www.joburg.org.za



CLEANAIRJOZI



CHALLENGES



Technical

Ageing
infrastructure
Power outage
downtime



Financial

Budget constrains
Increasing
operational costs



Institutional

Staff capacity
limitations
Growing
regulatory
responsibilities



Environmental

Vehicle emissions
growth
Illegal waste
burning
Urban expansion



Coordination

Need for stronger
provincial and
national
coordination

CONCLUSION

- Air pollution remains one of Johannesburg's most significant environmental health challenges.
- The City is investing in monitoring, regulation, evidence generation and public awareness.
- The Breathe Cities partnership provides an opportunity to accelerate progress.
- Resources (Budget and Human) remain a challenge
- Success requires coordinated action across all spheres of government and society.





Cleaner Air is a Shared Responsibility!

Thank you

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