



2011 State of Air Report and National Air Quality Indicator

Session 1.6

Presentation to the Air Quality
Governance Lekgotla
10 October 2011
Premier Hotel Regent: East London

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Department of Environmental Affairs

Objective

- To provide an overview of the 2011 State of Air Quality (2005-2010), focusing on major metropolitans, declared priority areas, Eskom and Sasol stations



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In the past...

- The State of Air was based on, among others, an indicative list of Metropolitan and District Municipalities with air quality rated as being “Poor or Potentially Poor” as listed in Table 24 of the 2007 National Framework.



Rationale behind Table 24

- The recognition of the absence of a comprehensive national ambient air quality monitoring network.
- The assessment was based on readily available information to allow for an indicative assessment.
- However, strides are being made to expand national ambient air quality monitoring network.
- This therefore place Government in a better position to accurately assess the pollution status of each of the areas identified in the original indicative assessment, and beyond.

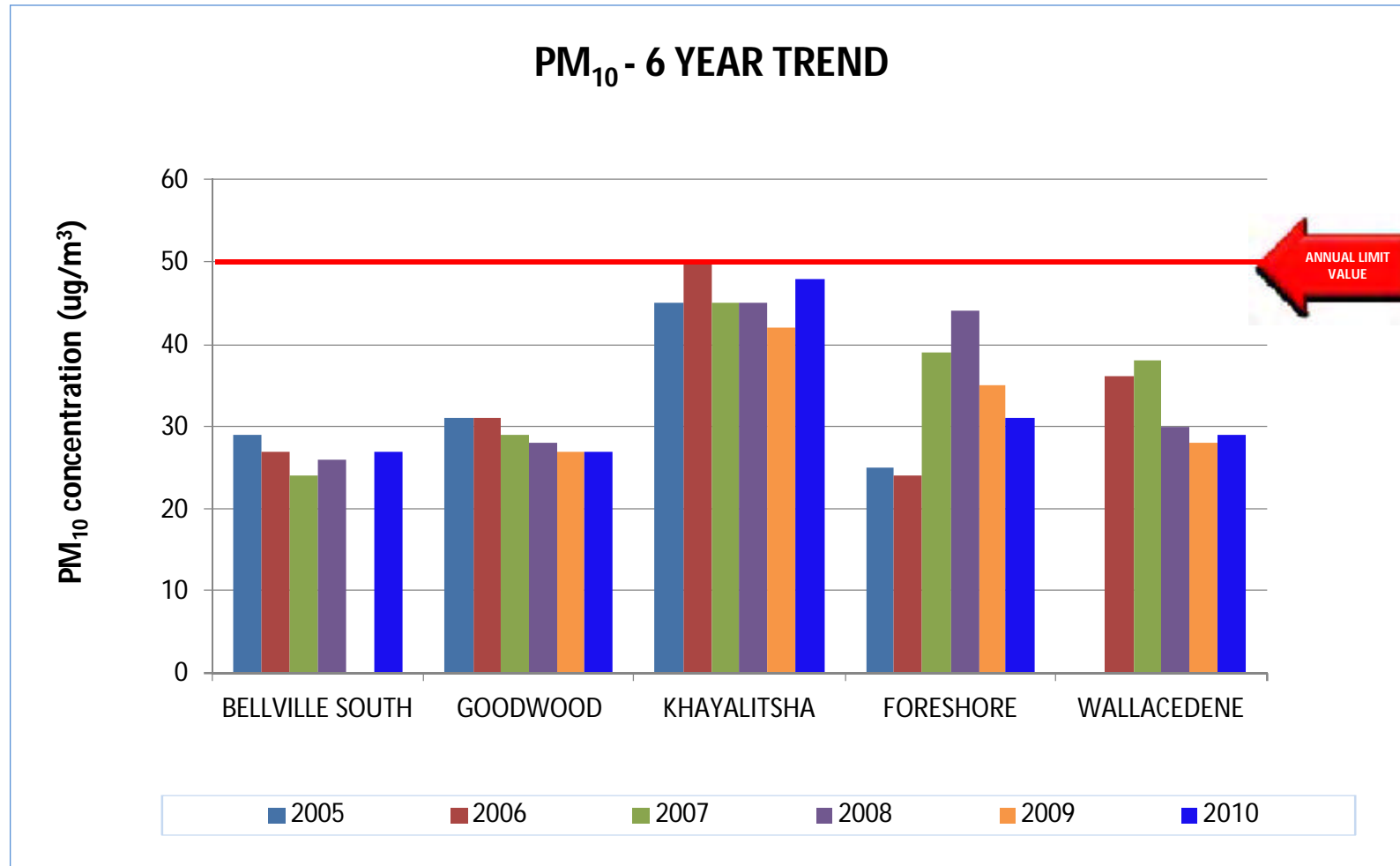


Monitoring networks included

- Cape Town
- Johannesburg
- eThekweni
- Vaal Triangle Priority Area
- Highveld Priority Area
- Eskom (2010)
- Sasol (2010)
- Other stations



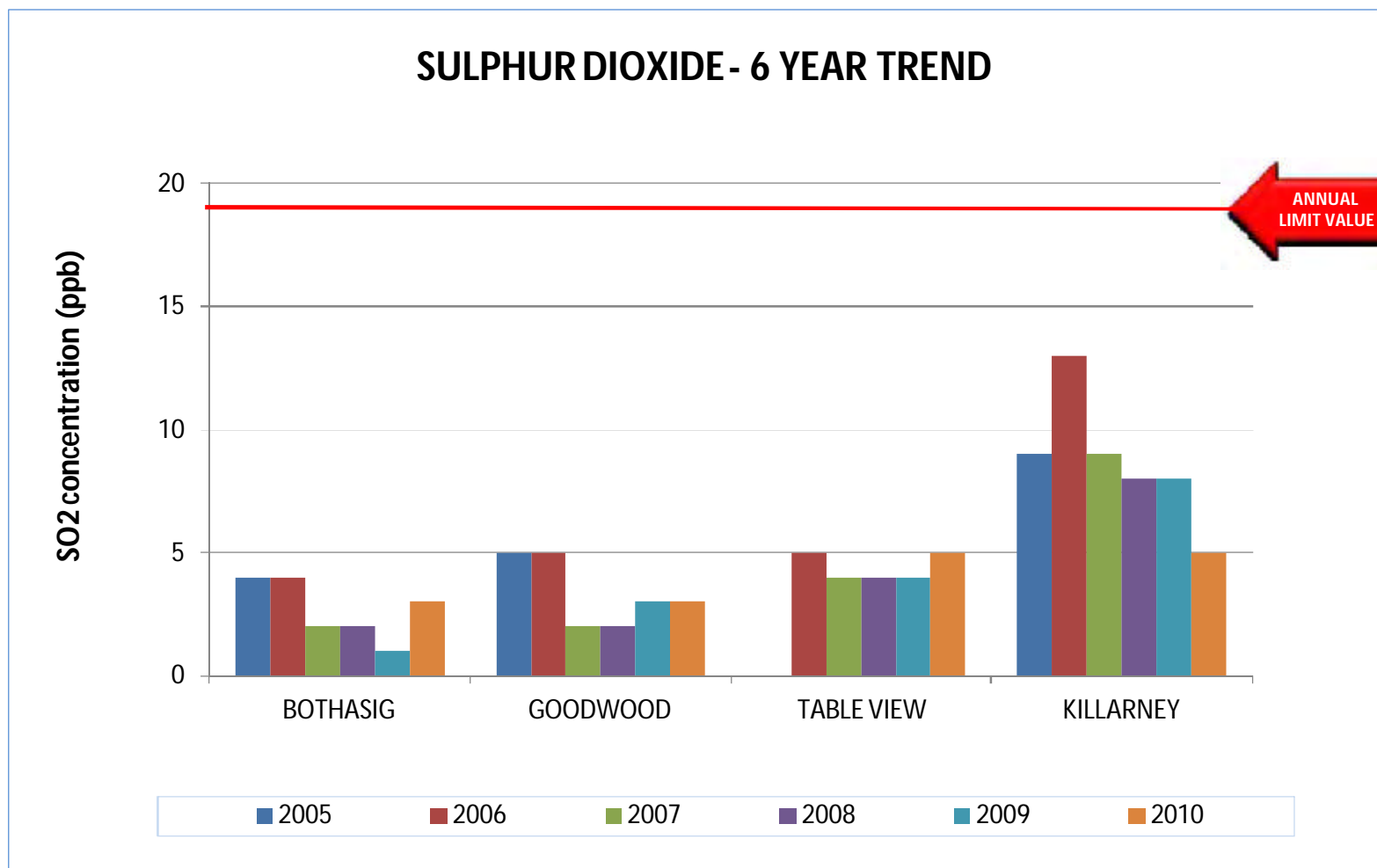
Cape Town



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Cape Town

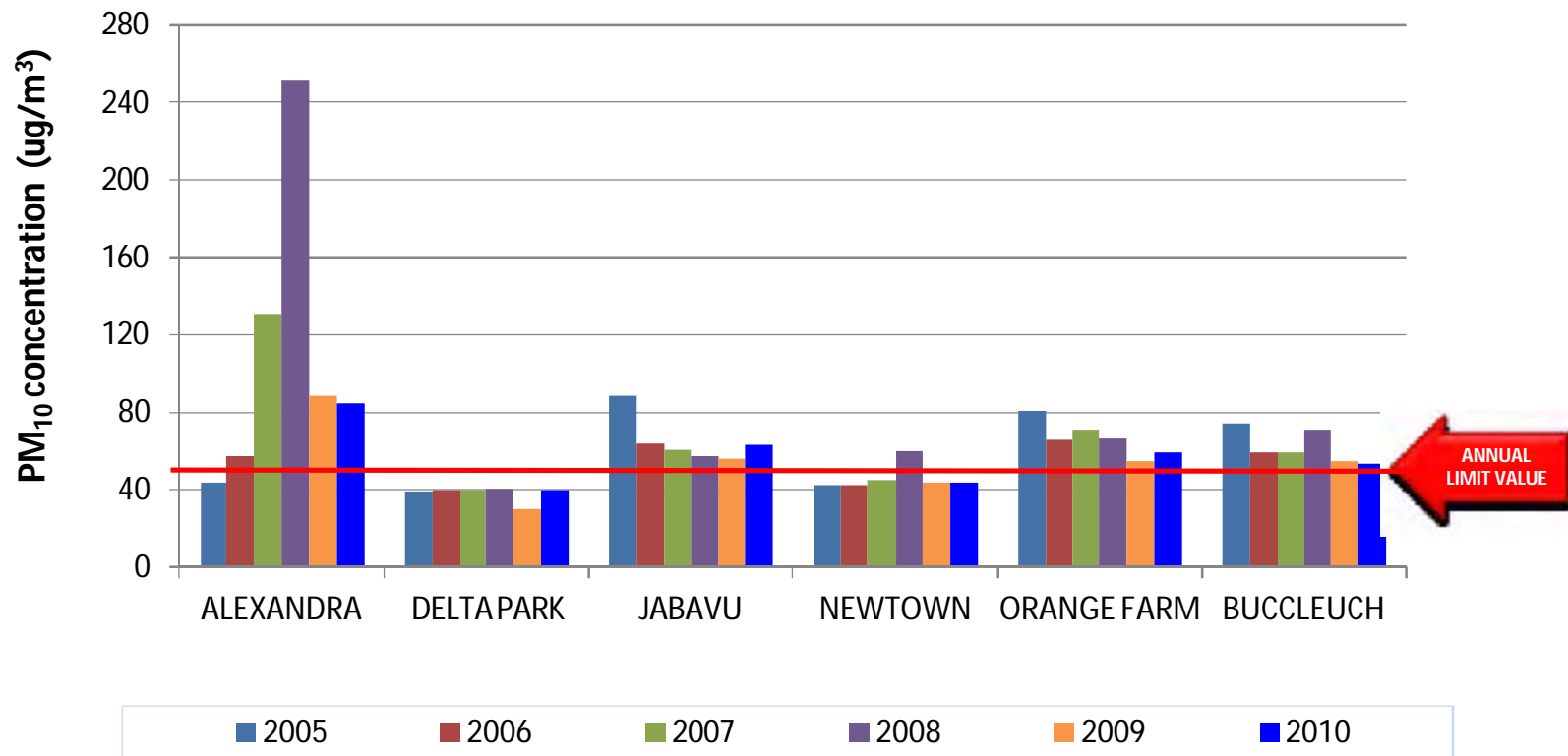


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PM₁₀ - 6 YEAR TREND

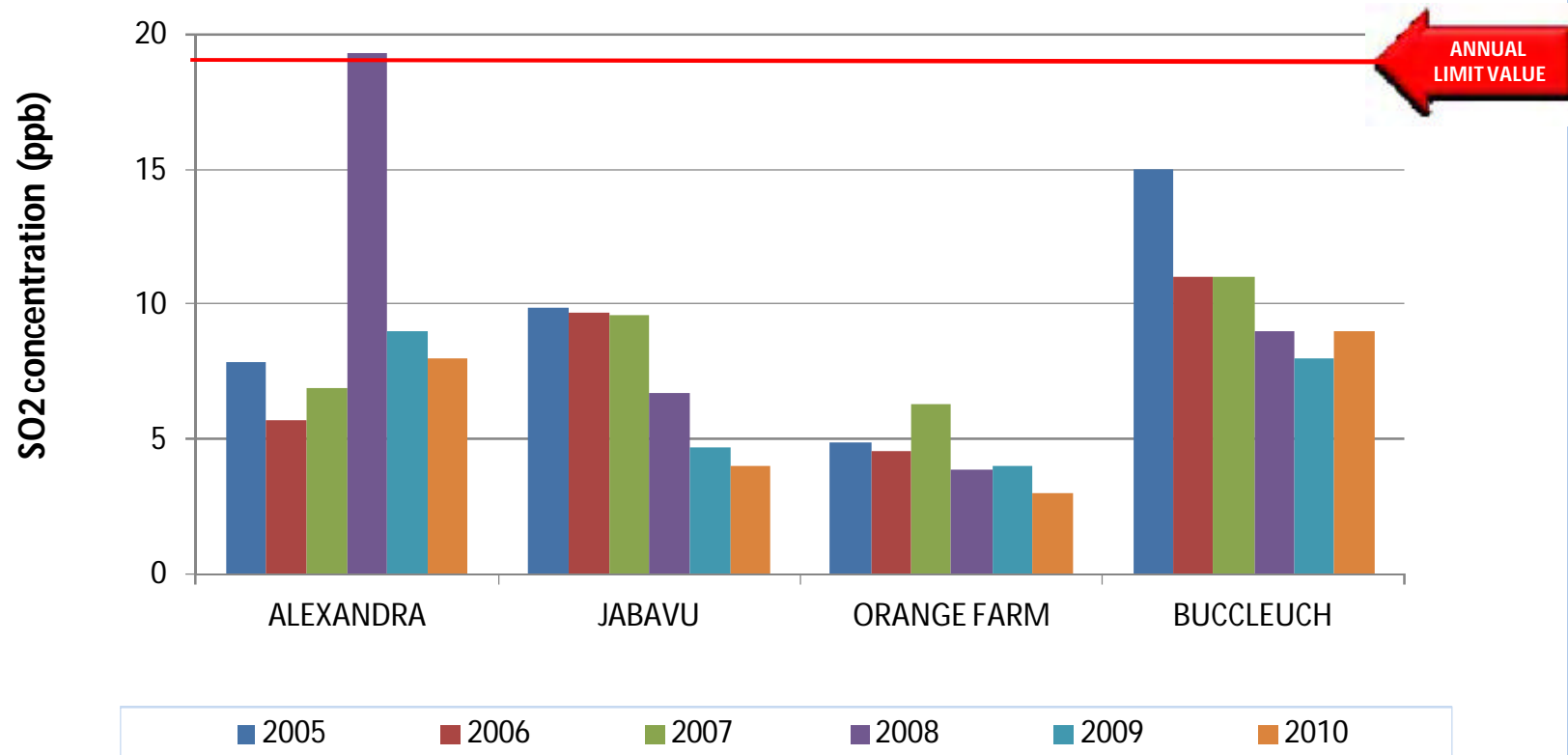


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SULPHUR DIOXIDE - 6 YEAR TREND

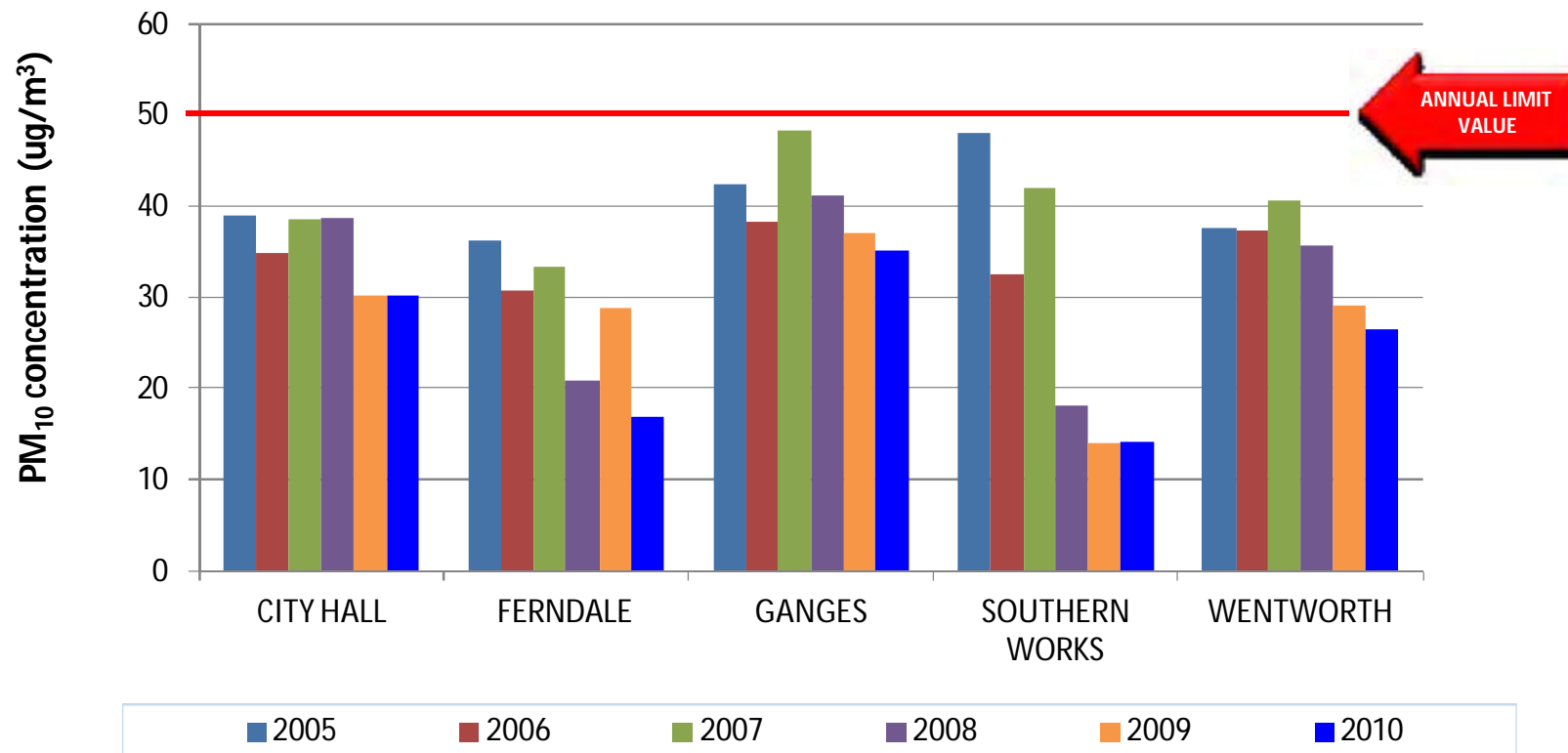


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eThekweni

PM₁₀ - 6 YEAR TREND

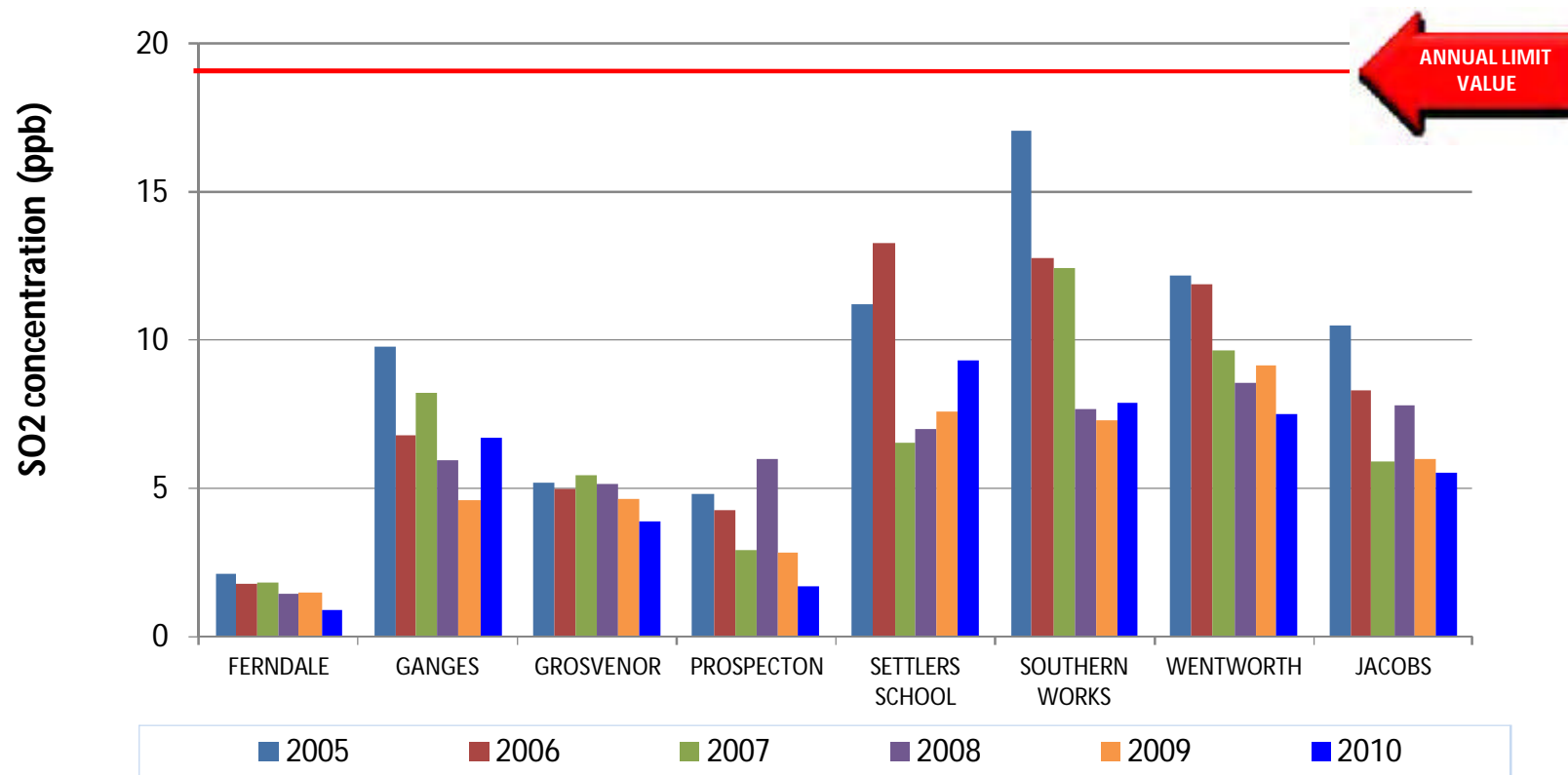


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eThekweni

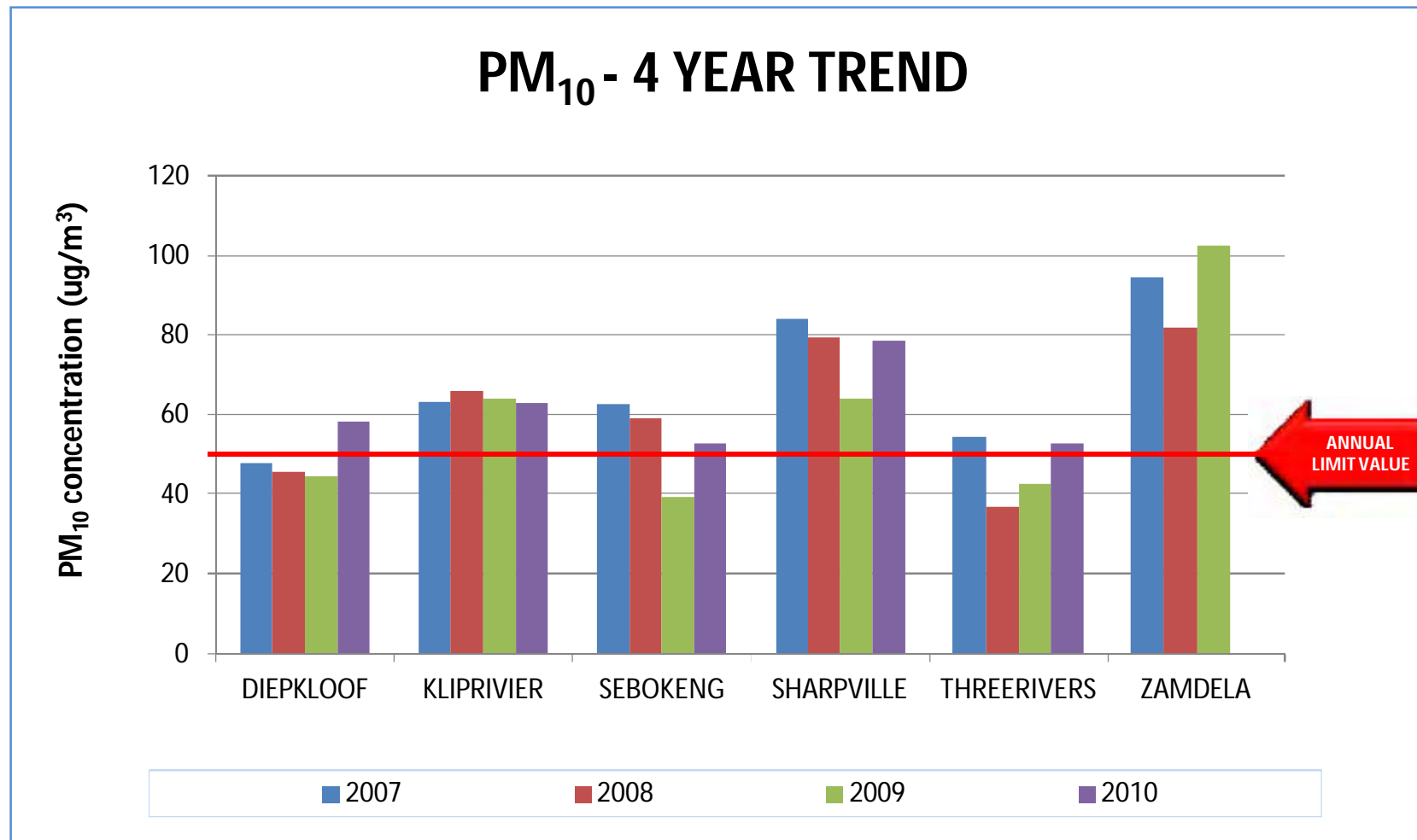
SULPHUR DIOXIDE - 6 YEAR TREND



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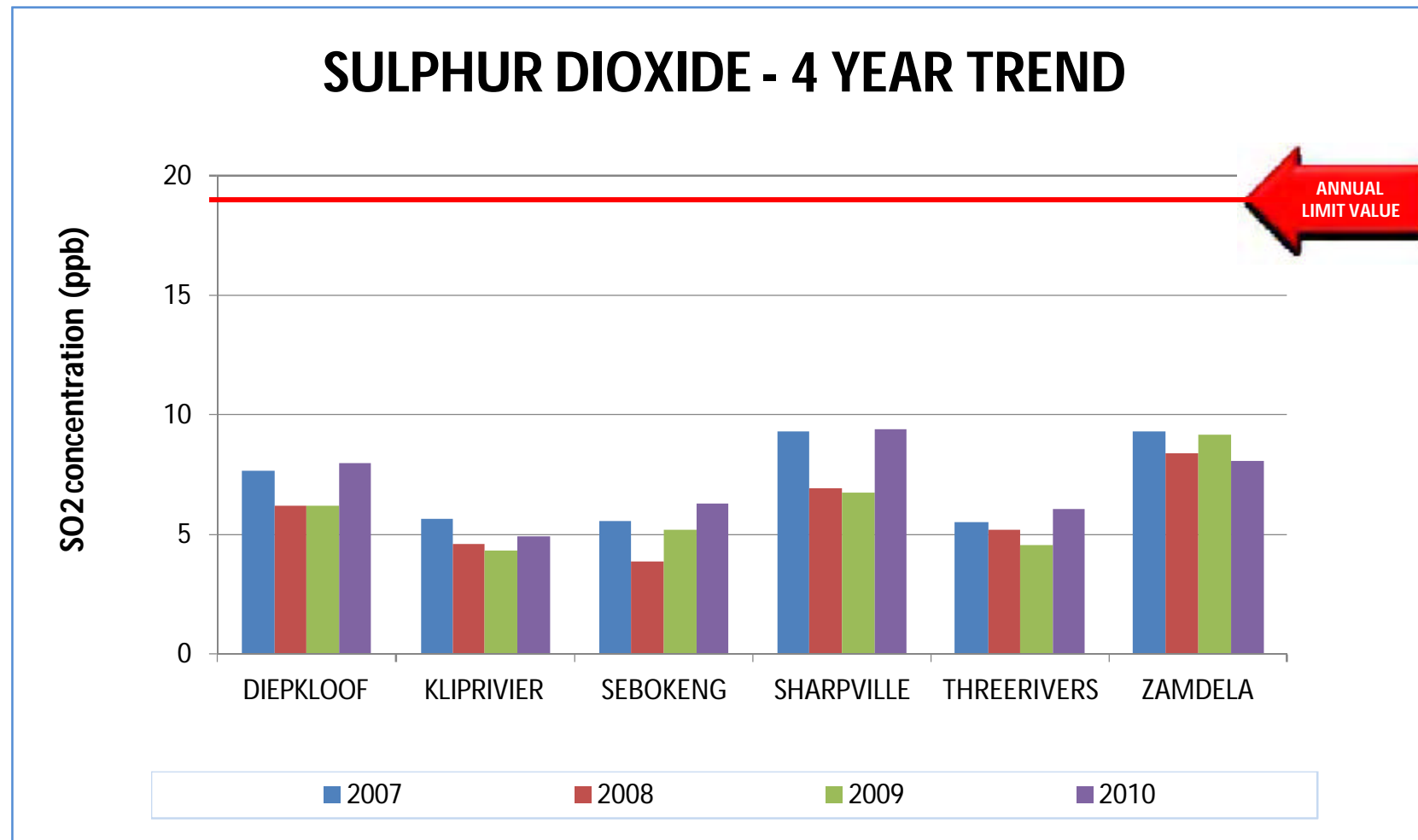
Vaal Triangle Priority Area



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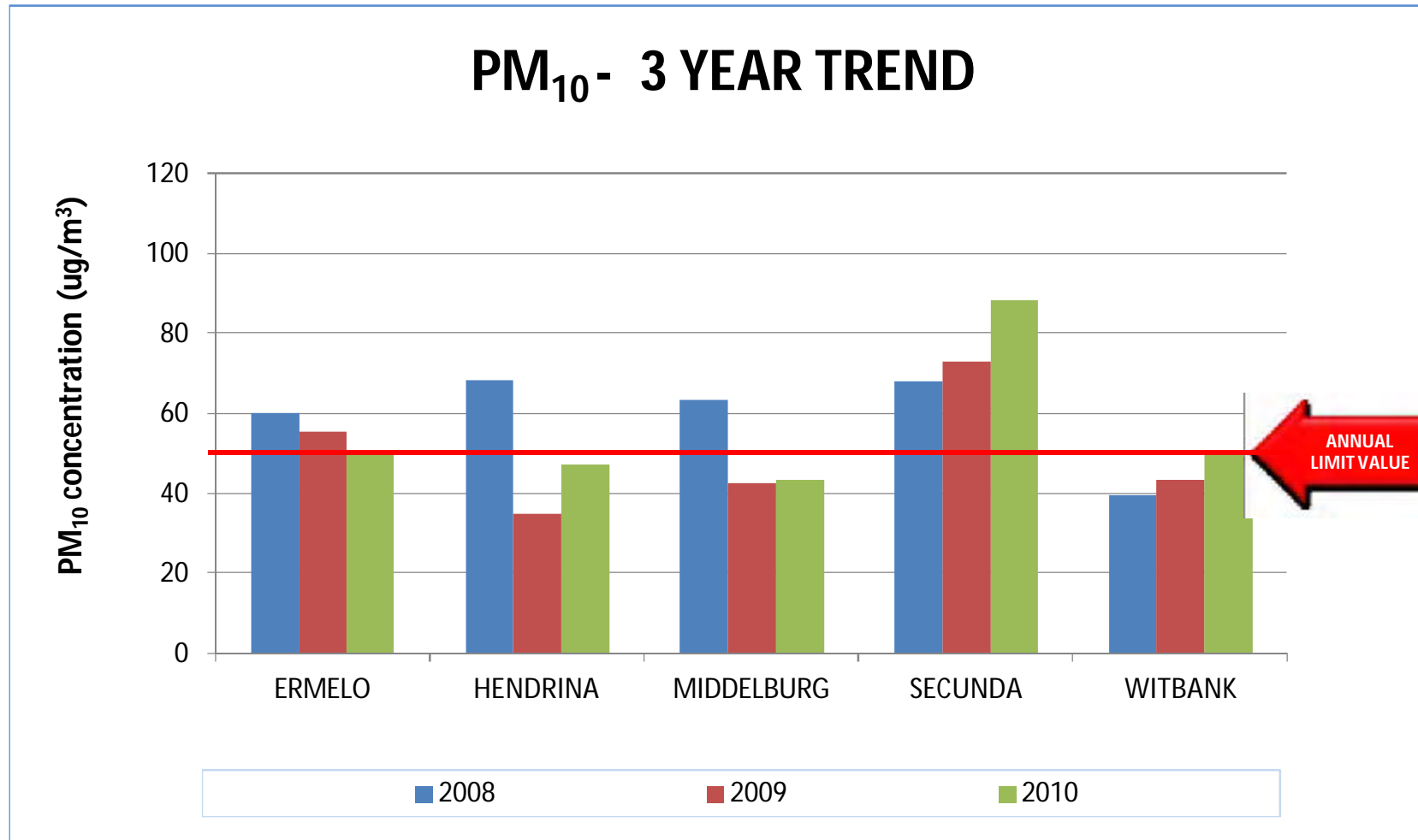
Vaal Triangle Priority Area



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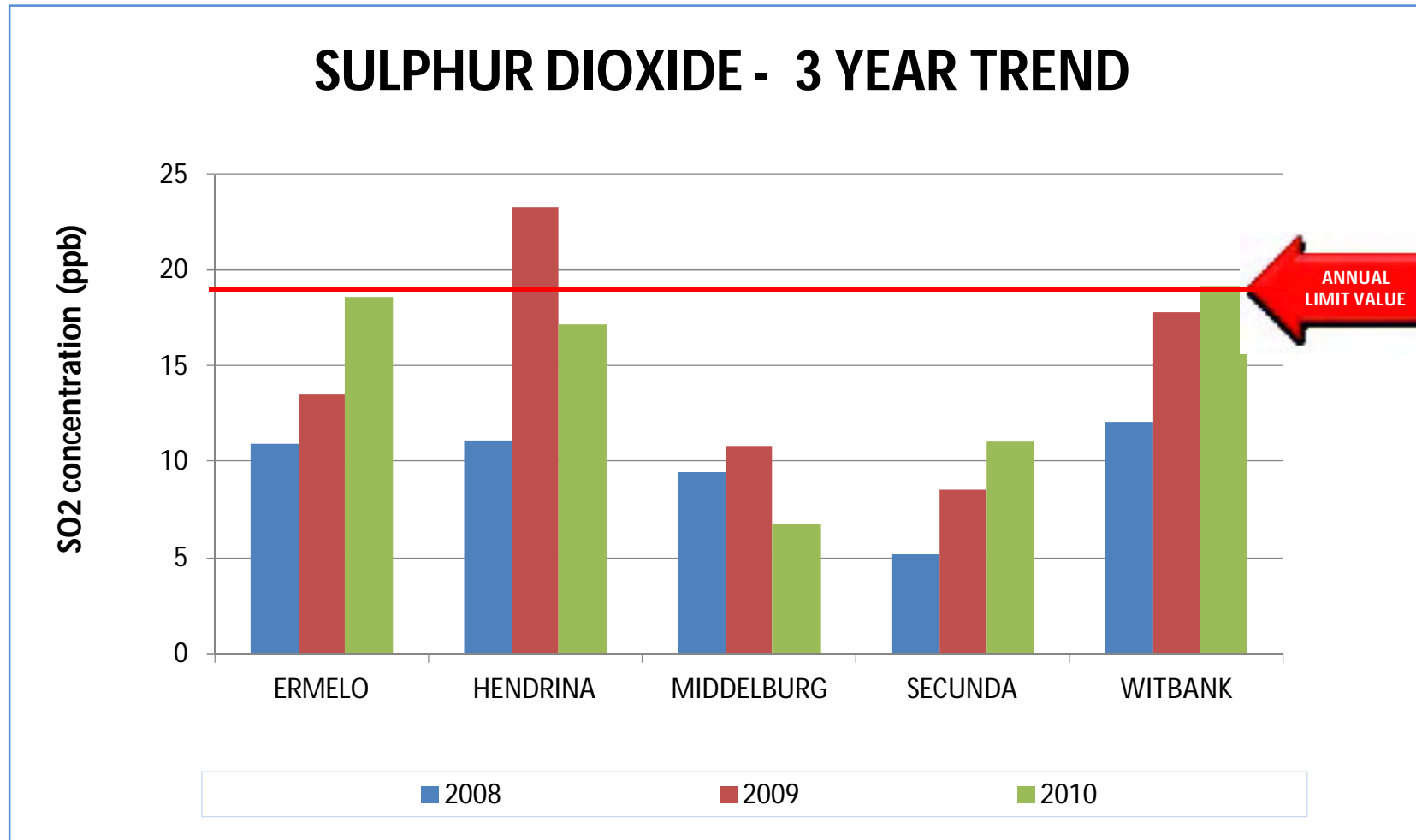
Highveld Priority Area



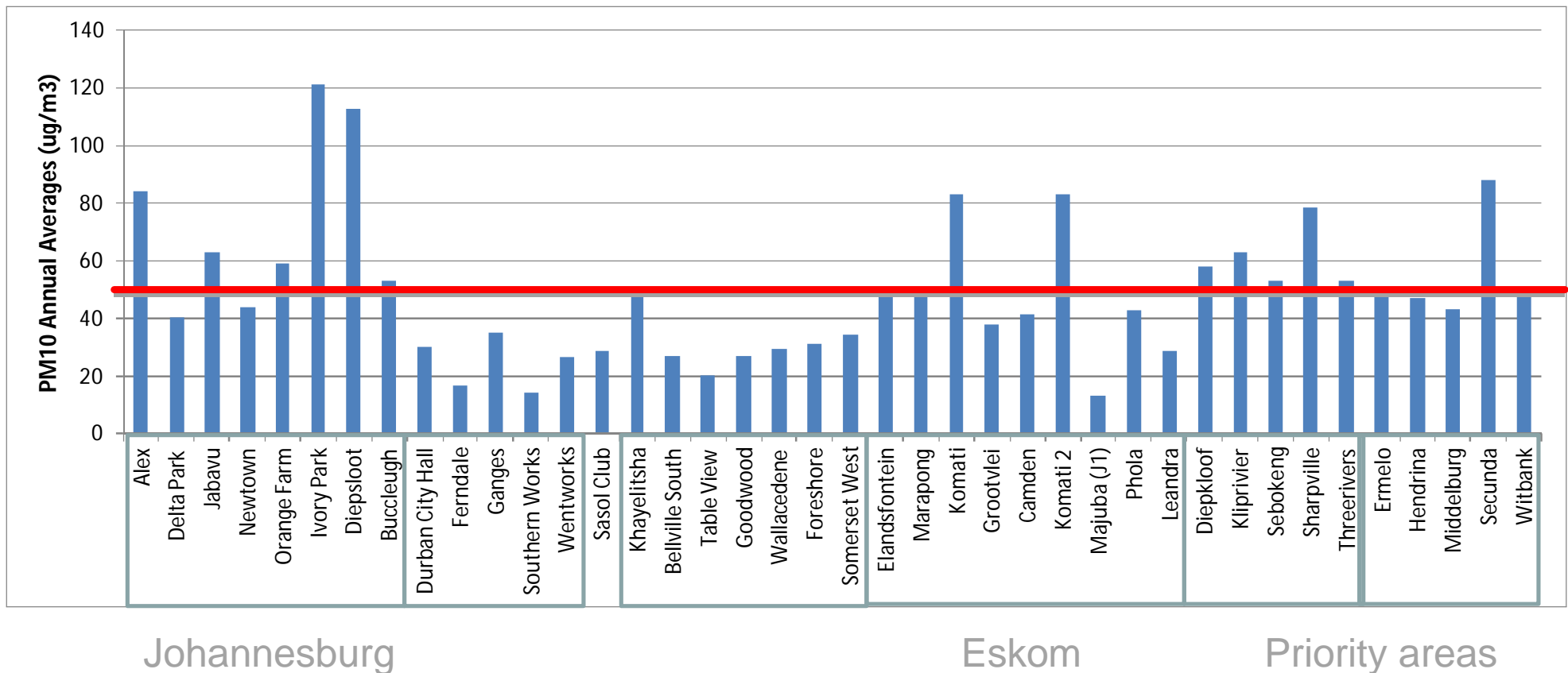
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Highveld Priority Area



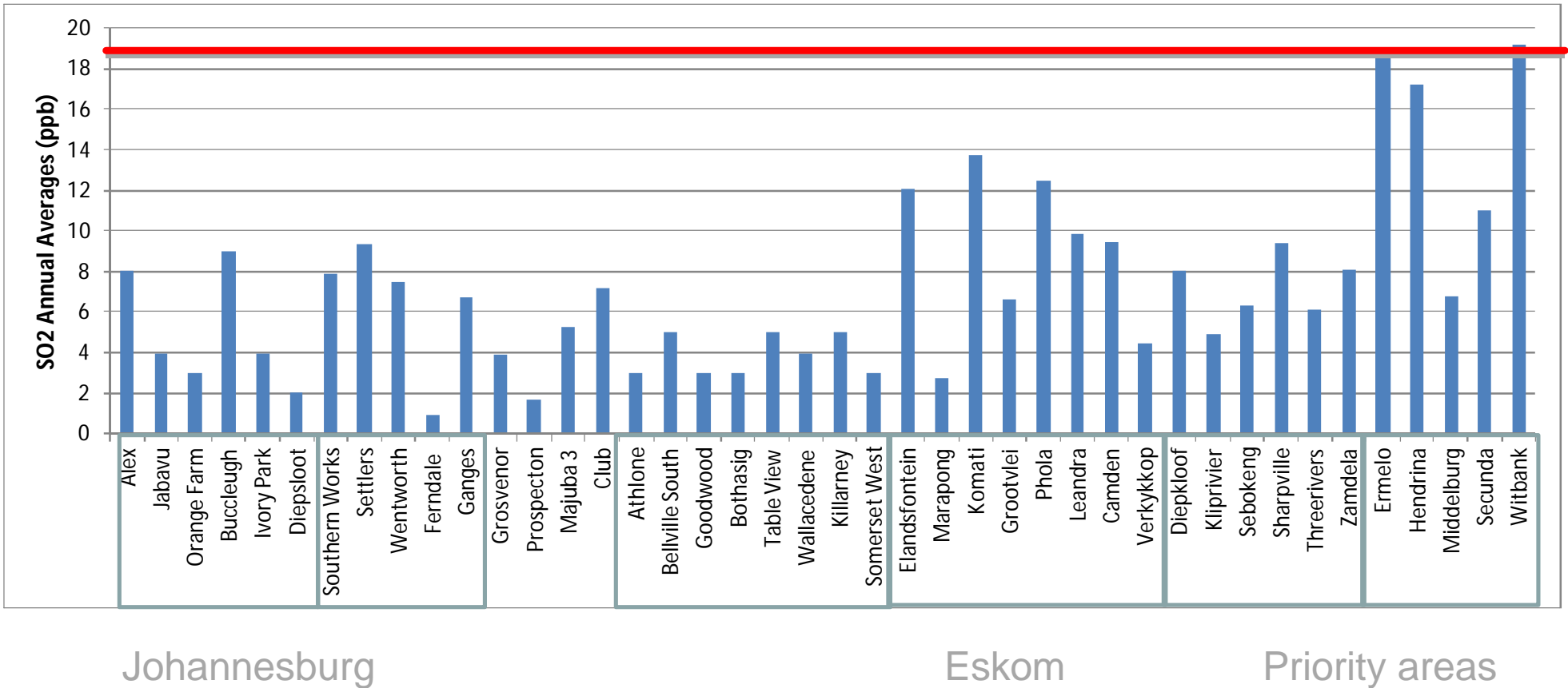
2010: PM₁₀ annual averages



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2010: SO₂ annual averages



National Air Quality Indicator



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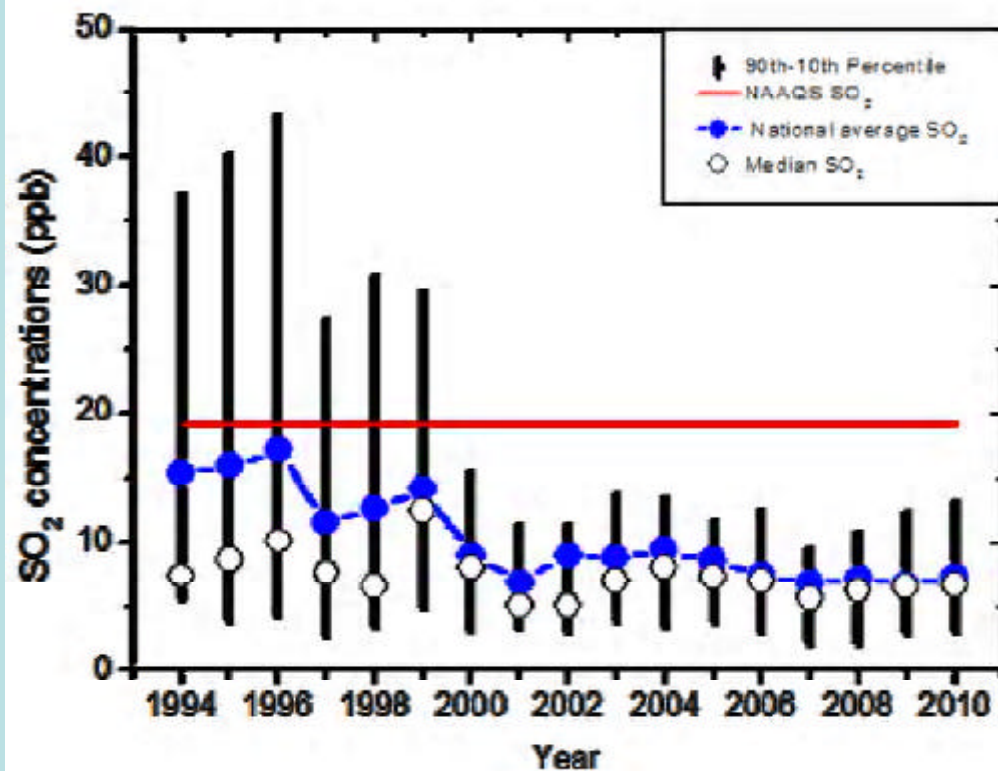
Background: NAQI

- First draft presented at Lekgotla 2009
- Second draft presented at Lekgotla workshop during 2010
- Formally presented during 2011, but still work-in-progress
- **SO₂ and PM₁₀ annual averages**
- Technical document following shortly

Basic principles

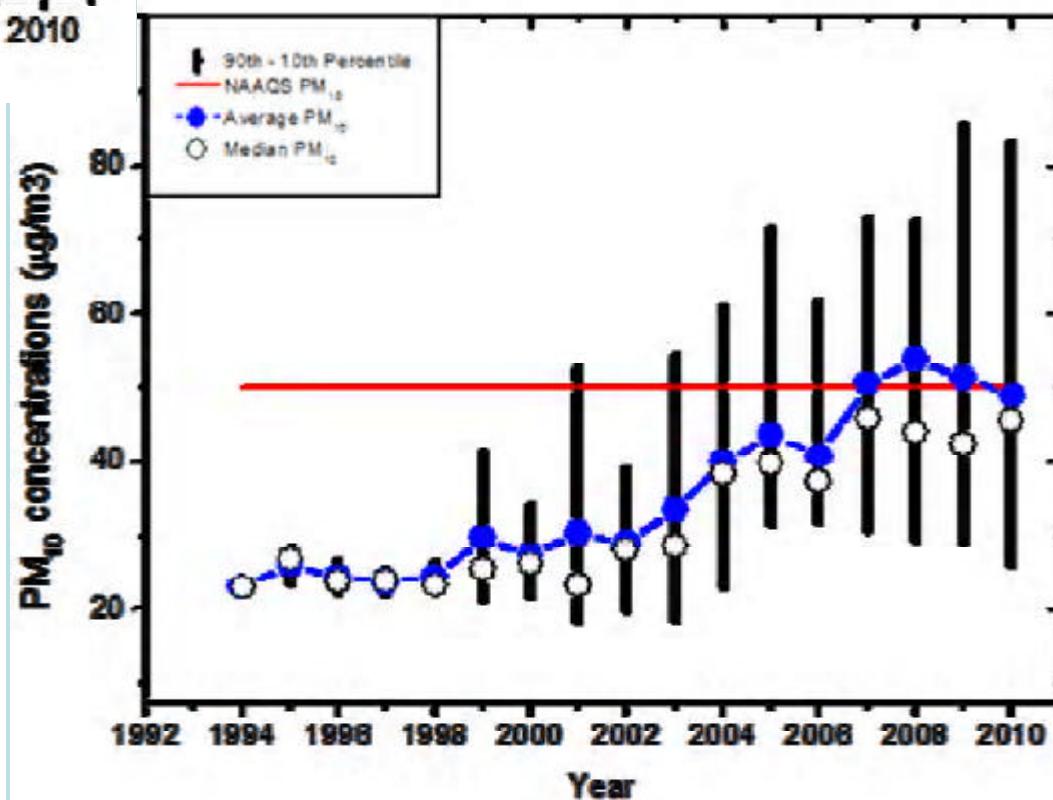
- Simple – understood by public
- Credible
- Transparent
- Consistent
- *Accurate* and reproducible
- Sensitive
- Complete (spatial, temporal)

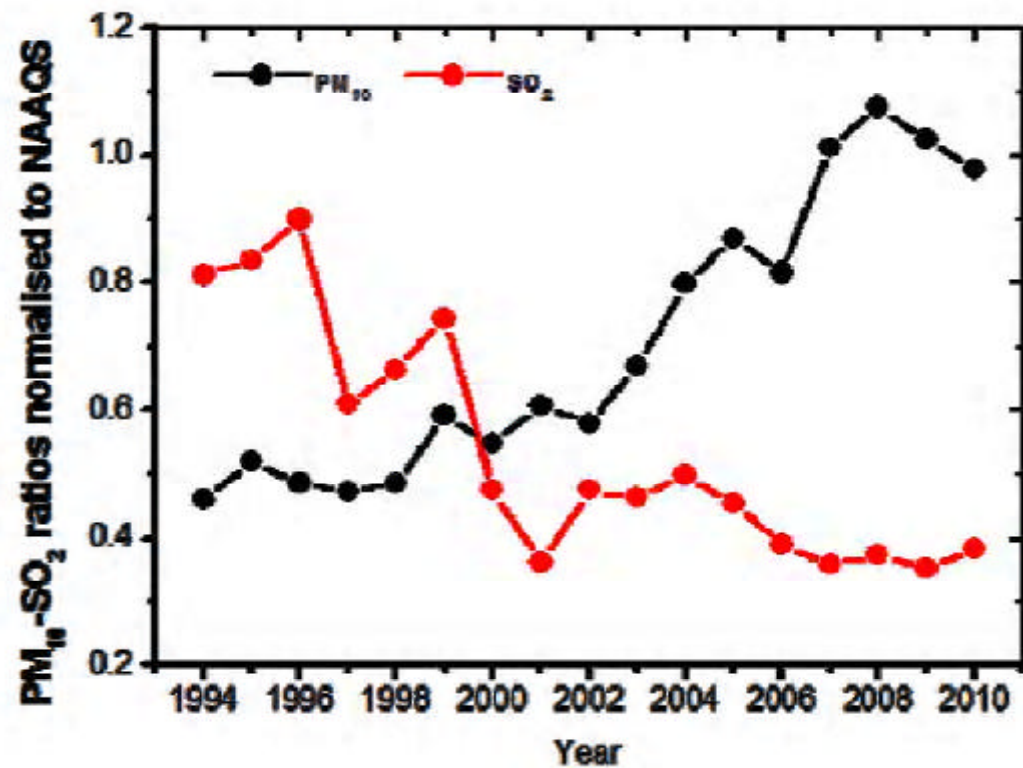




SO₂ national annual averaged

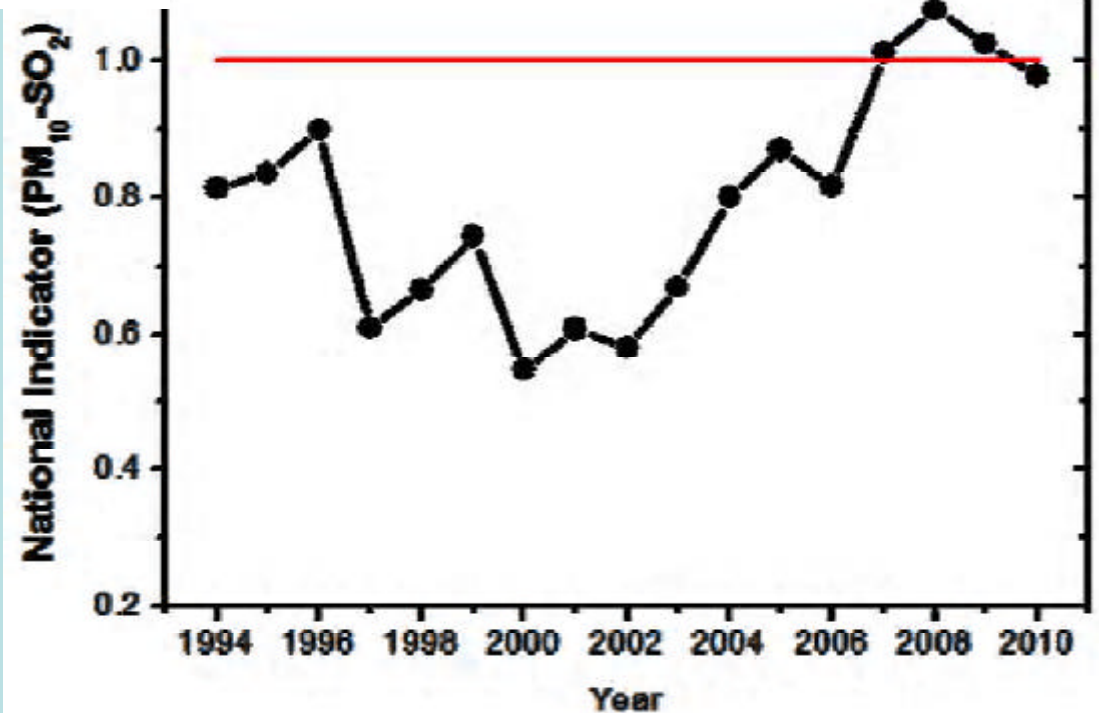
PM₁₀ national annual averaged





SO₂, PM10
NAAQS

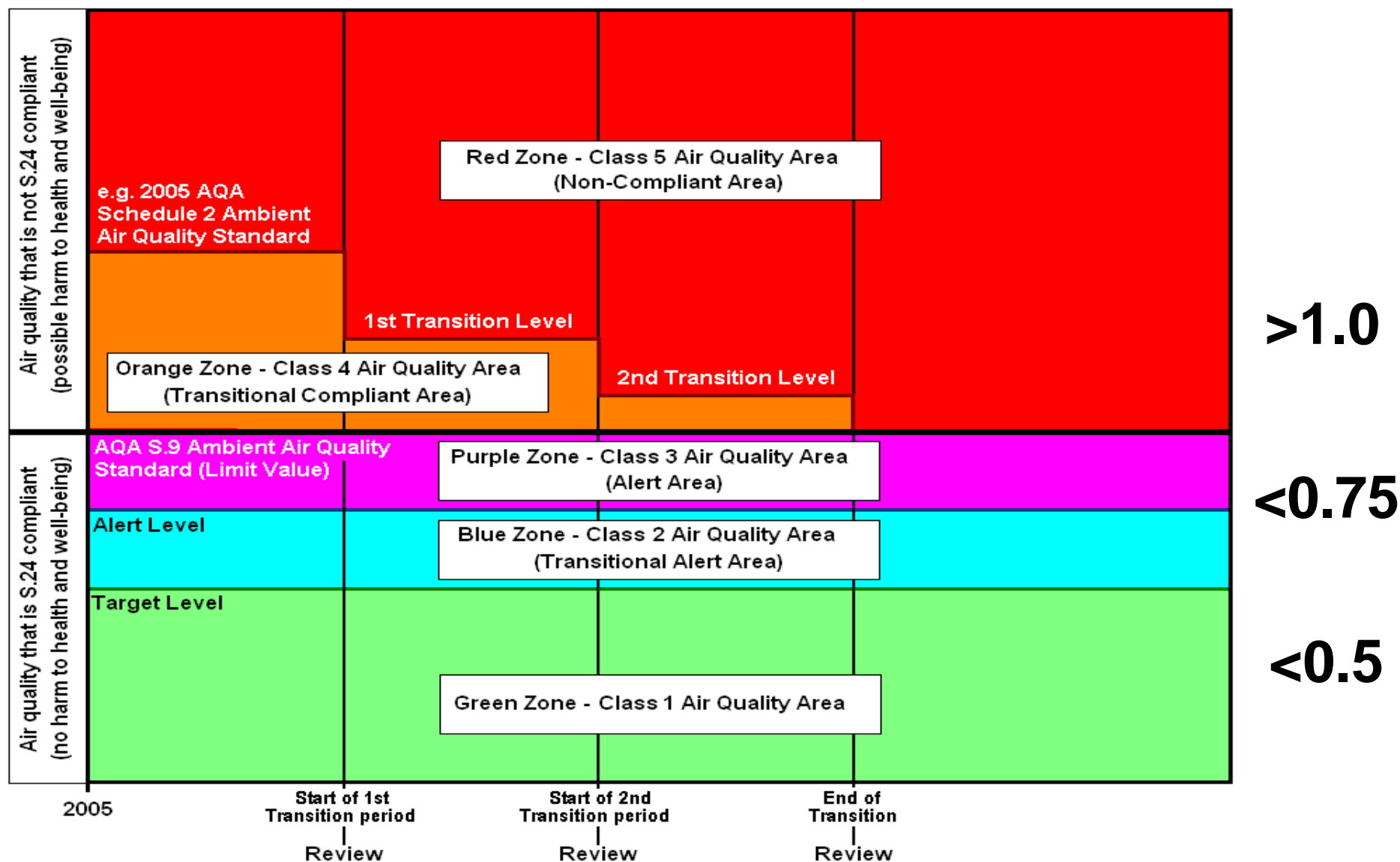
NAQI

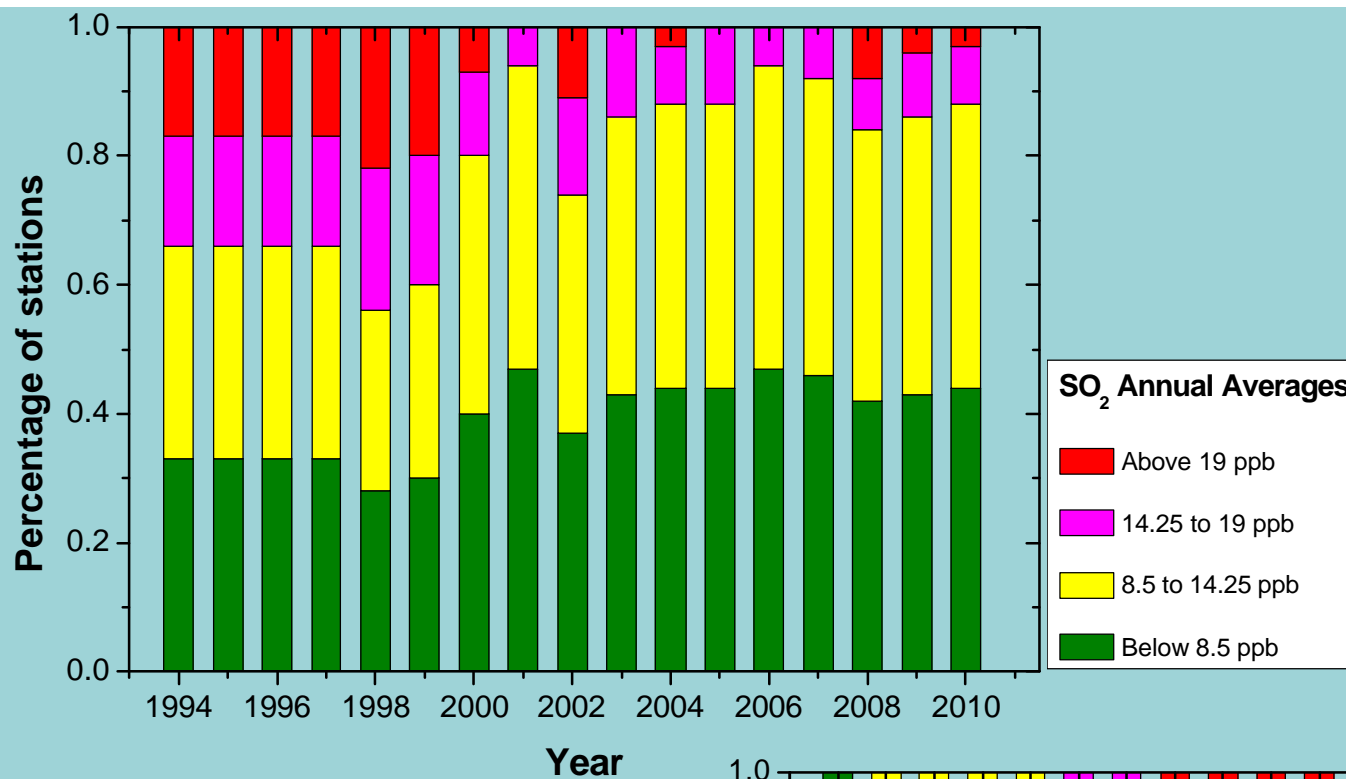


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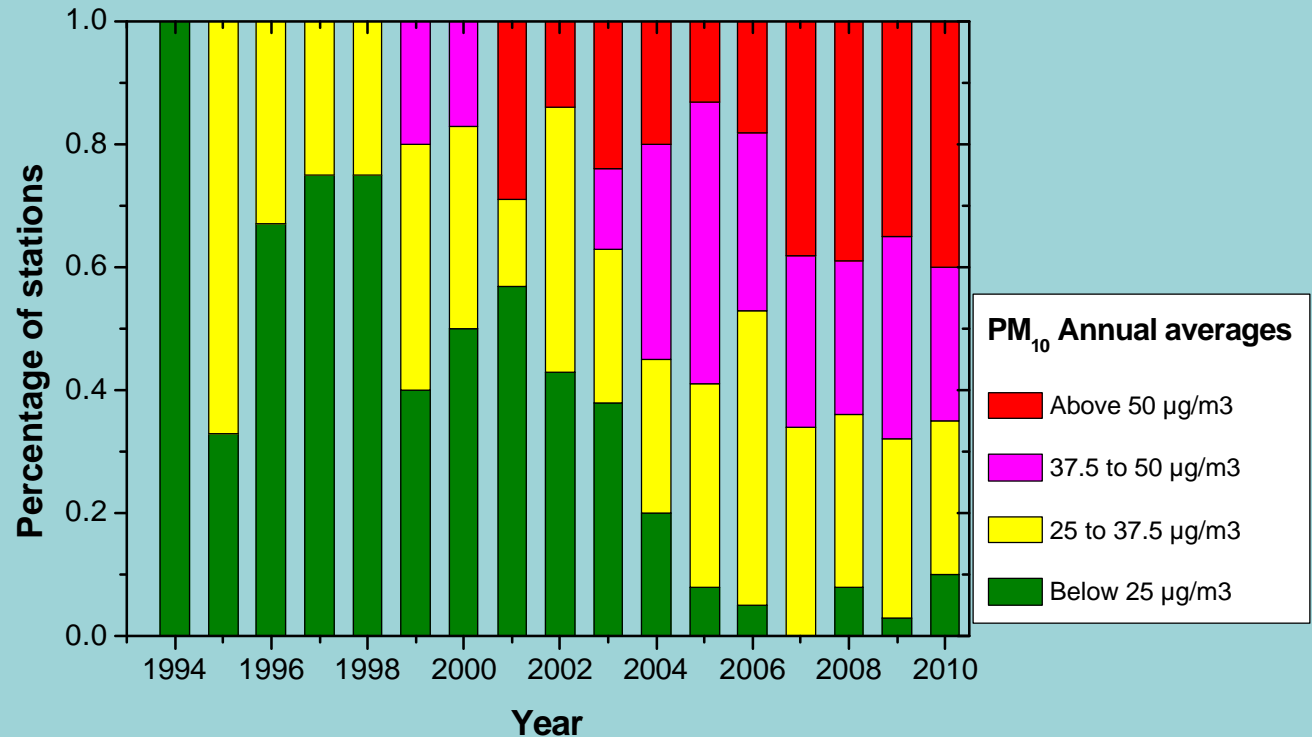
National Framework – Figure 5

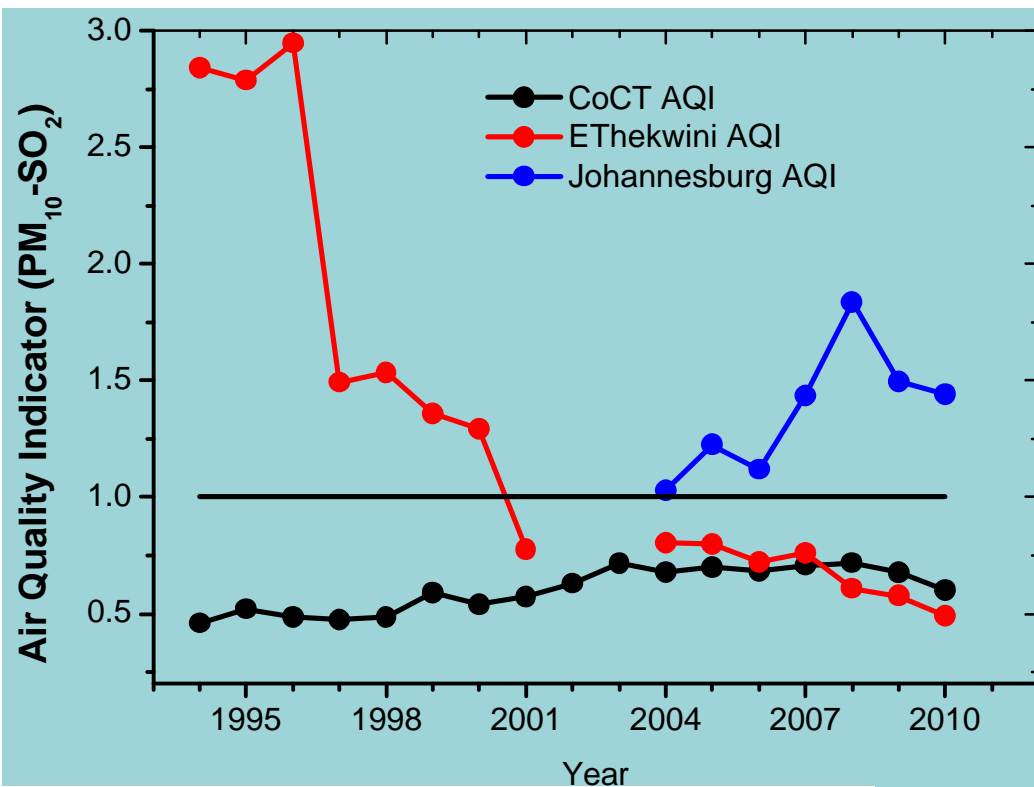




From this graph, more stations are falling in the green zone for SO₂, efforts to reduce SO₂ are improving

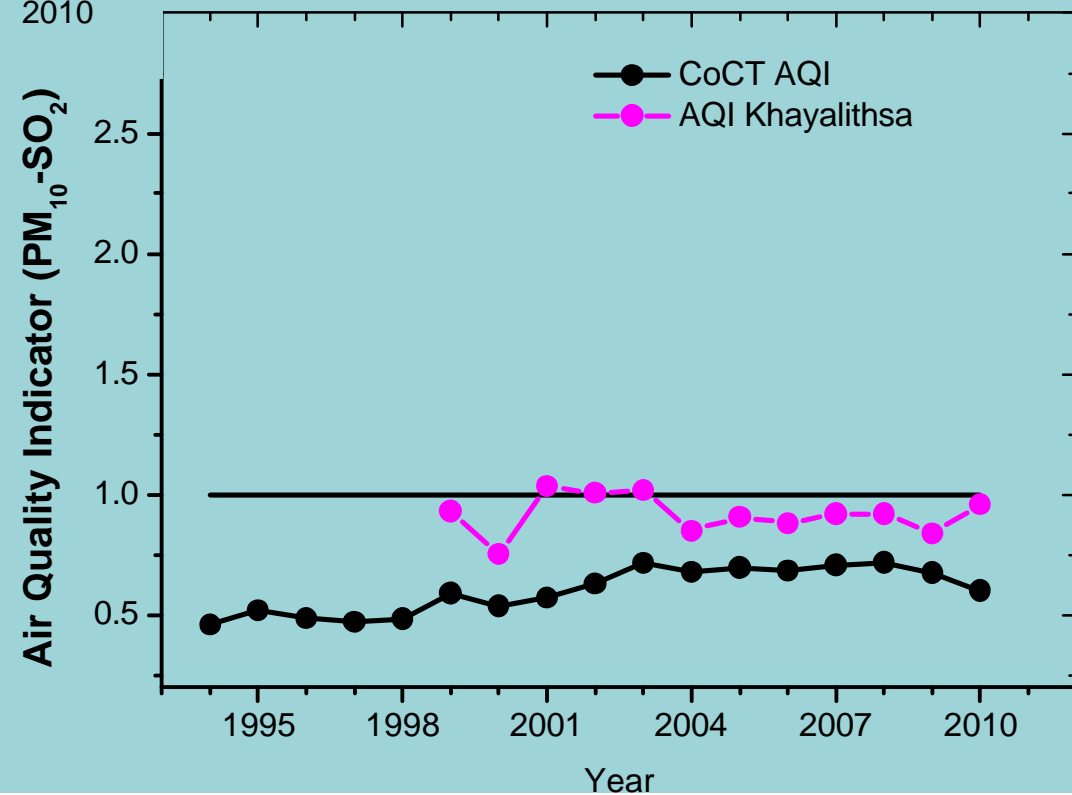
From this graph, less stations are falling in the green zone for PM₁₀, more effort is needed to reduce PM₁₀





AQI: Metro level

AQI: Station level



Conclusions



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Conclusions – 2010 NAQO Report

- From the foregoing, it is clear that PM_{10} is the greatest national cause for concern in terms of air quality.
- It is clear that continued and increased national provincial and local action is required in order to bring particulate concentrations down to acceptable levels.
- It is clear that many South Africans may not be breathing air that is not harmful to their health and well-being



Conclusions – 2010 NAQO Report

- The battle against SO₂ pollution appears to be slowly being won.
- It is clear that continued and increased national, provincial and local action is bearing fruit and, in this, the eThekweni and Cape Town metros should be congratulated on their specific efforts and achievements in this regard.



Way forward

- Continue to report trends annually – SAAQIS
- Monitoring national progress in implementing AQA policy targets based on a commonly agreed National AQ Indicator
- This indicator will act as a support tool for policy-makers to evaluate the efficacy of AQ interventions

Thank you



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