

Worldwide Pollution Control Association

ESKOM Scrubber Seminar
April 12th – 13th, 2007



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AQA IMPLEMENTATION – THE NEW DRIVER FOR CLEANER PRODUCTION



environment & tourism

Department:
Environmental Affairs and Tourism
REPUBLIC OF SOUTH AFRICA

**Presentation to the WPCA/Eskom Scrubbing Seminar,
Protea Hotel Kruger Gate, 12 April 2007**

Compiled and presented by the Chief Directorate: Air Quality Management and
Climate Change, Branch: Environmental Quality & Protection



- The 3 key drivers for cleaner production.
- Ambient air quality management.
- The 3 key AQA implementation interventions likely to drive cleaner production –
 - The APPA Registration Certificate Review Project;
 - The Listed Activities and Minimum Emission Standards Project; and
 - The Vaal Triangle Air-shed and Highveld Priority Area Air Quality Management projects.
- Building governance expertise.



CLEANER PRODUCTION DRIVERS

- **Regulation** – Air quality norms, standards, regulations, command-and-control, etc. and the strict enforcement thereof.
 - Relatively weak to date.
- **Consumer Pressure** – Consumers demanding more environmentally-benign products.
 - South African consumers still motivated, almost exclusively, by price and brand.
- **Internal Environmental Pressure** – Staff demanding more environmentally-benign products, cleaner and safer working conditions and a better standing in the community.
 - ISO 14000 and other voluntary commitments.
 - Trades Unions still motivated, almost exclusively, by wages and job-security, although workplace safety is on the agenda.
 - Response to complaints.
- **International Environmental Pressure**



- The overall driver for **Regulation, Consumer Pressure** and **Internal Environmental Pressure** is awareness, and although it is not discussed further in this presentation, the department has an entire sub-directorate dedicated to raising awareness around air quality.

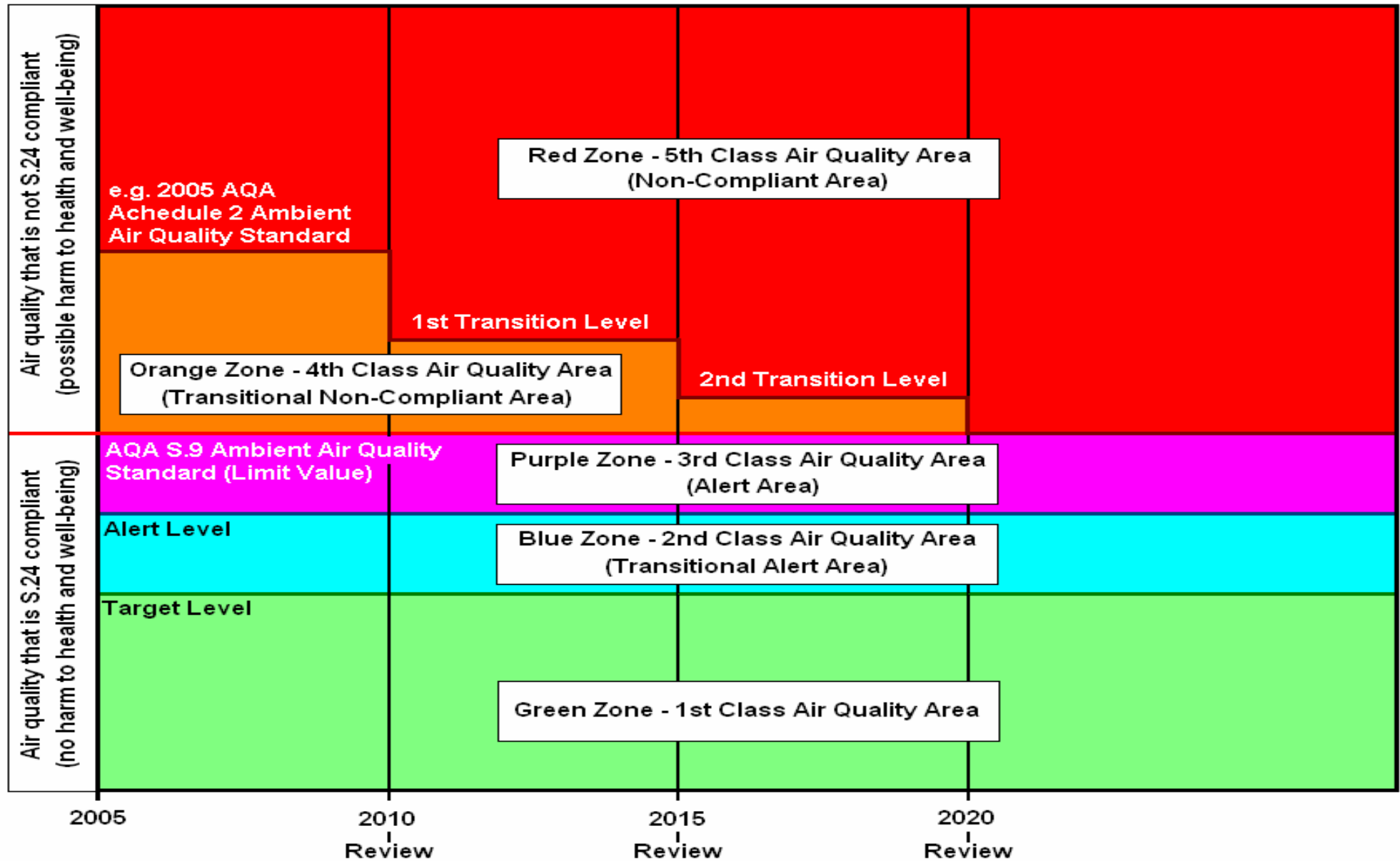


AMBIENT AIR QUALITY MANAGEMENT

- Everyone has a right to breathe air that is not harmful to health and well-being.
- Government must ensure the progressive realisation of this Constitutional Right.
- Ambient air quality standards will define air that is not harmful to health and well-being.
- The priority area management approach is the strategy to be used to ensure the progressive realisation of the right to clean air.



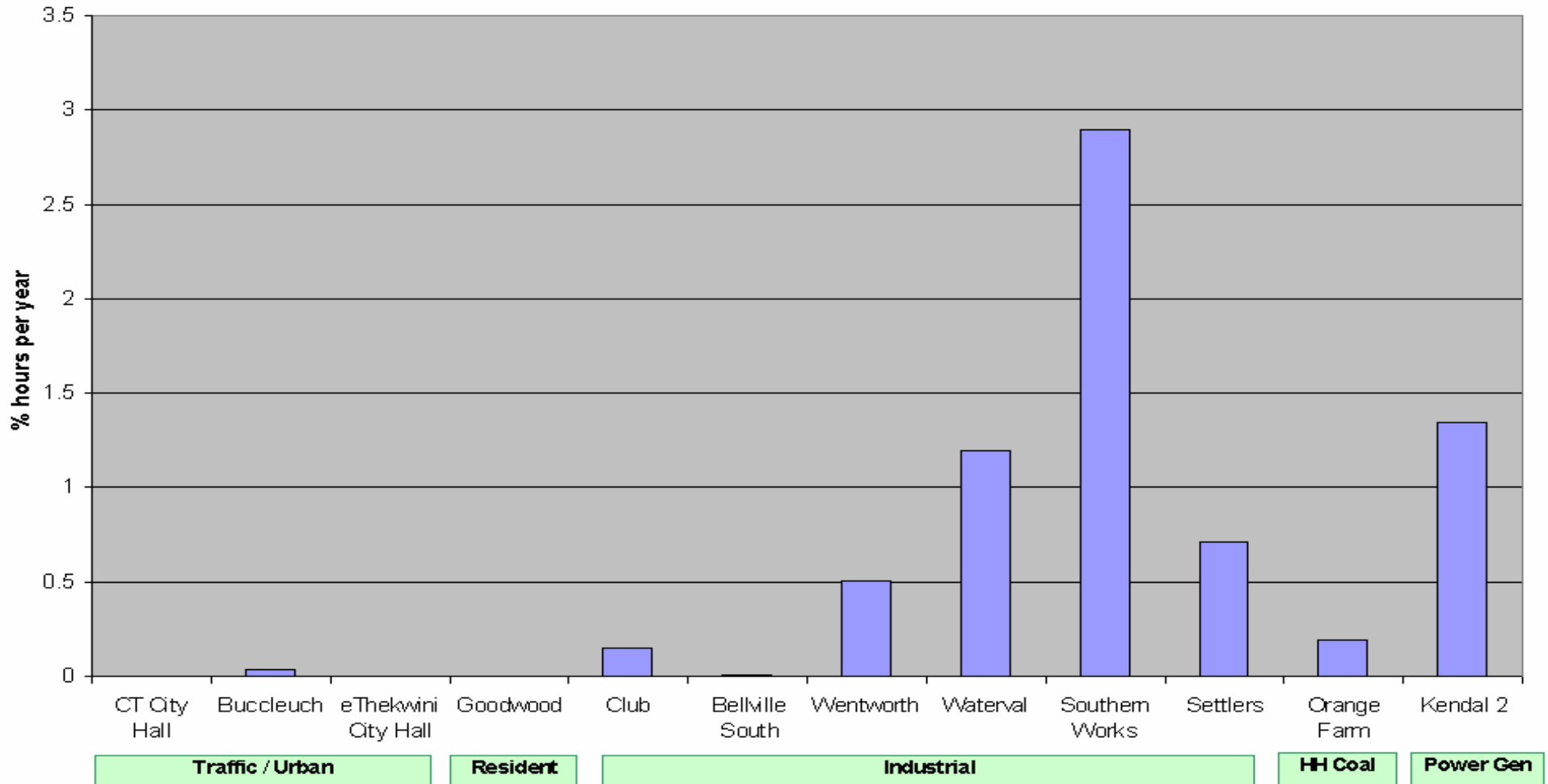
AMBIENT AIR QUALITY MANAGEMENT





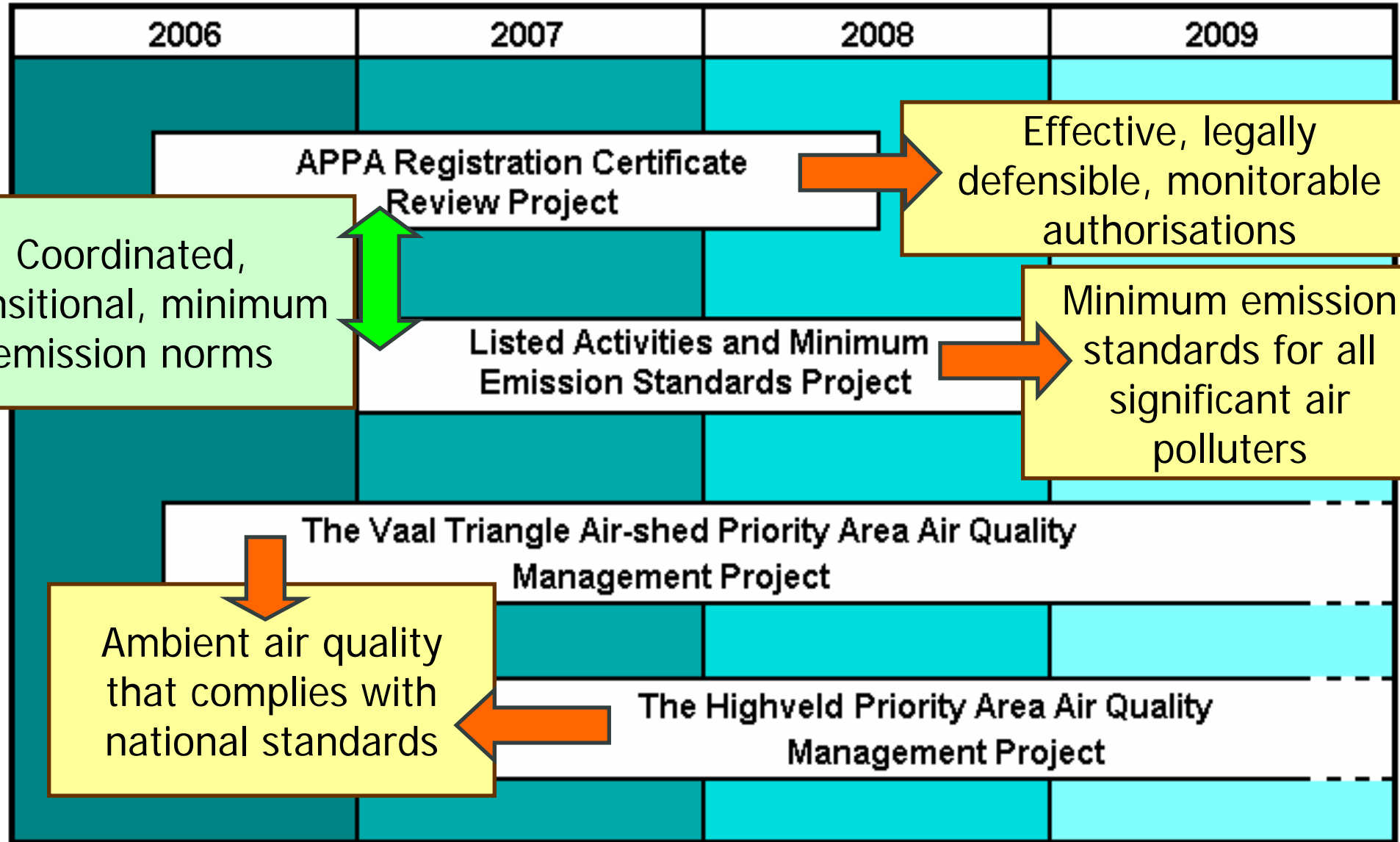
Frequency of exceedance of SO₂ limit of 350 µg/m³ during 2004.

SULPHUR DIOXIDE
FREQUENCY OF AIR QUALITY LIMIT EXCEEDANCES AT SELECTED SITES (2004)





AQA IMPLEMENTATION INTERVENTIONS





THE APPA REGISTRATION CERTIFICATE REVIEW PROJECT

- The overall objective of the project is framed as:
The Registration Certificates for prioritised scheduled activities are reviewed and amended in such a way as to ensure the building of initial air quality management capacity in provinces and affected local authorities as well as ensuring measurable air quality improvements during, and immediately following, the period of transition between APPA and the AQA.



THE APPA REGISTRATION CERTIFICATE REVIEW PROJECT

- **Immediate Objective A:**
The Registration Certificate information objective –
 - *Current, accurate, relevant and complete information on all Registration Certificates is captured, sorted and stored in such a fashion as to efficiently and effectively facilitate:*
 - informed air quality management decision-making;*
 - the sharing of information with relevant provinces and local authorities;* and
 - the speedy conversion of all Registration Certificate's to Atmospheric Emission Licences.*

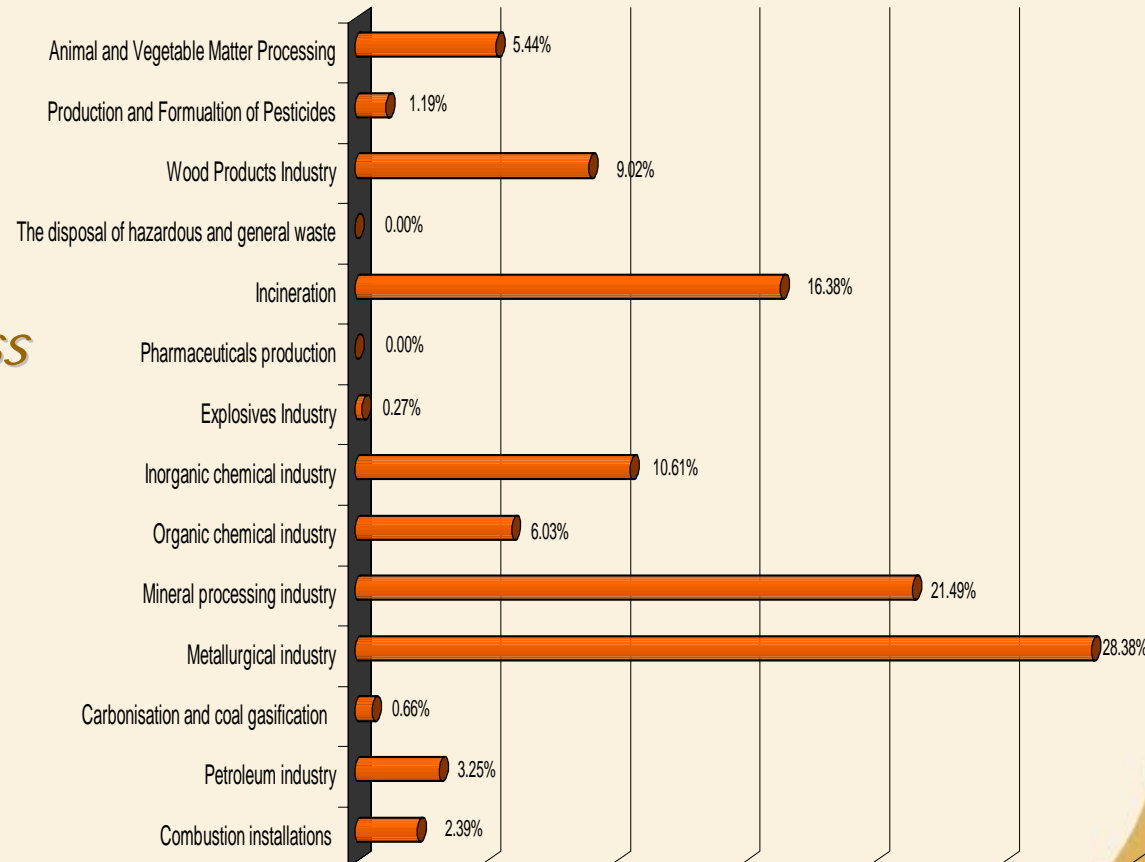
APPA Reg. No.	Company Name	Company Reg. No.	Trading Name	View/Edit	Delete	Print
1375/1	Mondi Timber Products Sabie Sawmill					
1488	Mining Industrial Rubber					
2130	Metrichem Sasol RSA					
2184	Monapo Provincial Hospital					
665	Monoweld Galvanisers (Pty) Ltd					
690	Much Asphalt (Pty) Ltd					
804	Magoong Steengroef					
829	Middelburg Ferrochrome					
860	Middelwit Stene (EDMS) BPK					



THE APPA REGISTRATION CERTIFICATE REVIEW PROJECT

- **Immediate Objective B:**
The review prioritisation objective –

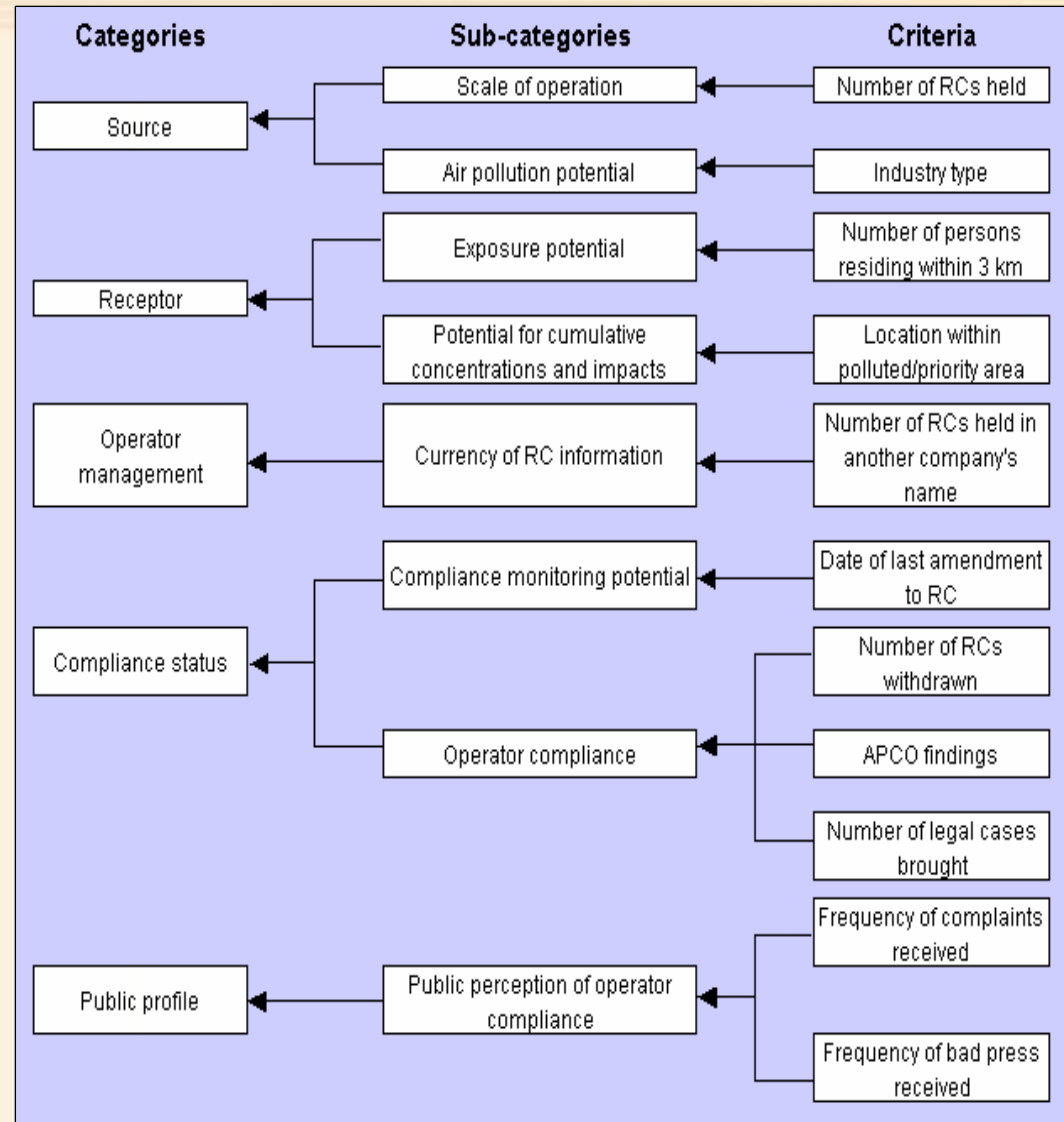
- *An initial list of significant air polluters are prioritised for review in such a way as to ensure that the review process yields initial air quality management capacity in provinces and affected local authorities as well as measurable air quality improvements during, and immediately following, the period of transition between APPA and the AQA.*





THE APPA REGISTRATION CERTIFICATE REVIEW PROJECT

- Following the detailed prioritisation process, the following specific industry types have been selected for review under the project -
 - Petrochemical (7 operations)
 - Primary steel manufacture (9 operations)
 - Primary aluminium production (2 operations)
 - Ferro-alloy industries specifically chromium, vanadium and manganese (ferro-silicon) production (27 - 30 operations)
 - Pulp and paper industries (9 operations)
 - Coal-fired power stations (national grid) (~20 operations)





THE APPA REGISTRATION CERTIFICATE REVIEW PROJECT

- **Immediate Objective C:** The review process objective –
 - *The initial list of prioritised Registration Certificates are reviewed jointly with provinces and affected local authorities and the process provides sufficient information to ensure practical and reasonable amendments of Registration Certificates that will yield measurable air quality improvements during, and immediately following, the period of transition between APPA and the AQA.*
- **Immediate Objective D:** The amendment objective –
 - *The initial list of prioritised Registration Certificates are amended jointly with provinces and affected local authorities and the amended Registration Certificate's reflect the new approach to emission licensing as well as practical and reasonable measures and/or emission limits that will yield measurable air quality improvements during, and immediately following, the period of transition between APPA and the AQA.*



THE APPA REGISTRATION CERTIFICATE REVIEW PROJECT

- **Immediate Objective E:** License fee objective –
 - *A protocol for the calculation and implementation of license fees as contemplated in Chapter 5 of AQA is available to all licensing authorities.*
- **Immediate Objective F:** Capacity development objective –
 - *30 licensing authority staff in each province are trained in the use of the procedures, protocols, standard formats, process steps, process flow-charts, process check-lists, etc. contained in an Atmospheric Emission Licensing Manual.*



THE LISTED ACTIVITIES AND EMISSION STANDARDS PROJECT

- the overall objective of the project is framed as:
 - Section 21 of the AQA is implemented efficiently and effectively
- Immediate Objective A – The participation objective
 - The identification of an initial list of activities and their related minimum emission standards are developed in accordance with the spirit and letter of the cooperative and participatory governance requirements and principles contained in Chapter 3 of the Constitution, the National Environmental Management Act (Act No. 107 of 1989), the Integrated Pollution and Waste Management Policy (2000) and the AQA.



THE LISTED ACTIVITIES AND EMISSION STANDARDS PROJECT

- Immediate Objective B – The review objective
 - Current national and international work related to the identification of activities and their related minimum emission standards is reviewed with a view to informing and fast-tracking the work directed or implied in order to implement S.21 of the AQA efficiently and effectively.
- Immediate Objective C – The S.21 implementation objective
 - All work directed or implied in order to implement S.21 of the AQA efficiently and effectively is carried out to a standard such that the Minister is able to publish the required notice in the *Gazette*.

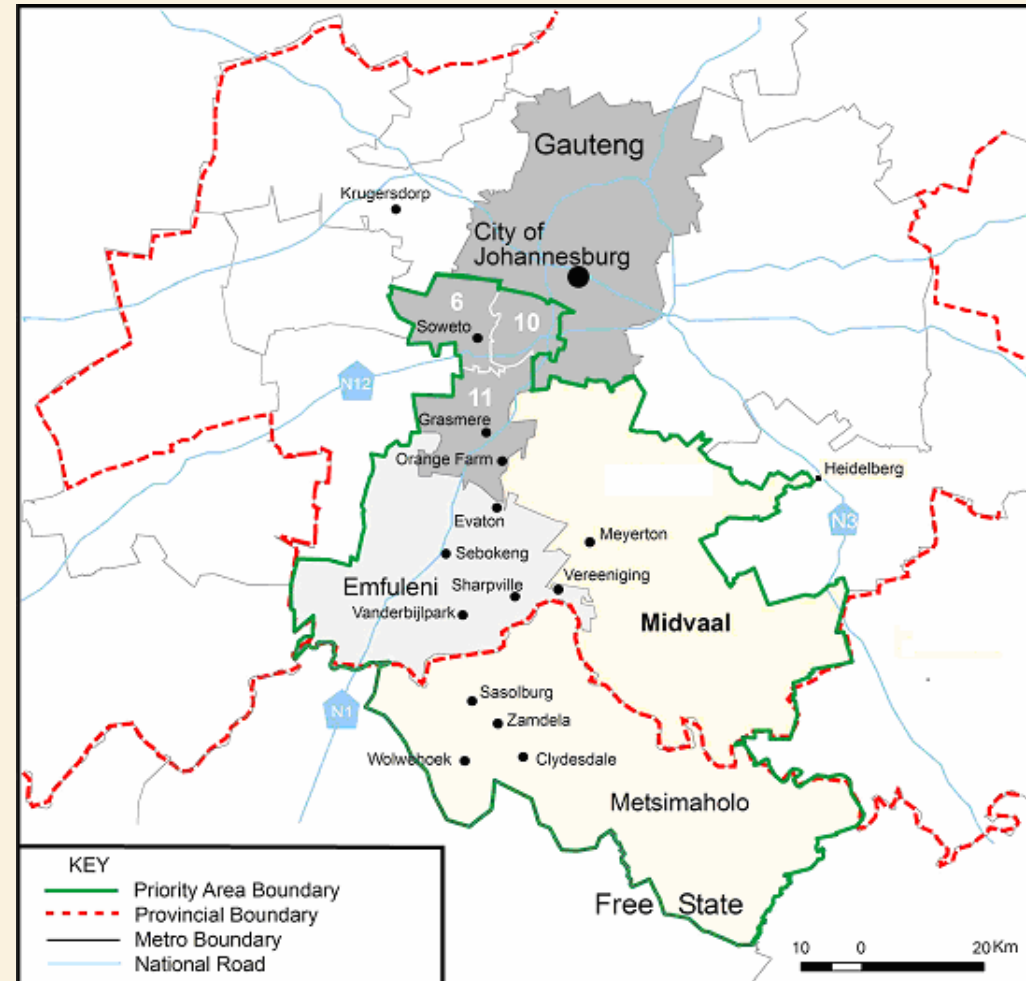


- Immediate Objective D – The capacity development objective
 - The Sub-directorate: Atmospheric Policy, Norms and Standards is provided with initial assistance in the development of the structures, systems, skills, strategies and interrelationships necessary to ensure the continued rollout of the standard-setting process and the increased sophistication of this process over time.



THE VAAL TRIANGLE AIRSHED PRIORITY AREA

- On 21 April 2006, the Vaal Triangle Air-shed was declared as a priority area in terms of Section 18 of the National Environment Management: Air Quality Act 2004 (Act no. 39 of 2004)
- The Vaal Triangle Air-shed Priority Area Air Quality Management Plan must be submitted to the Minister by August 2007





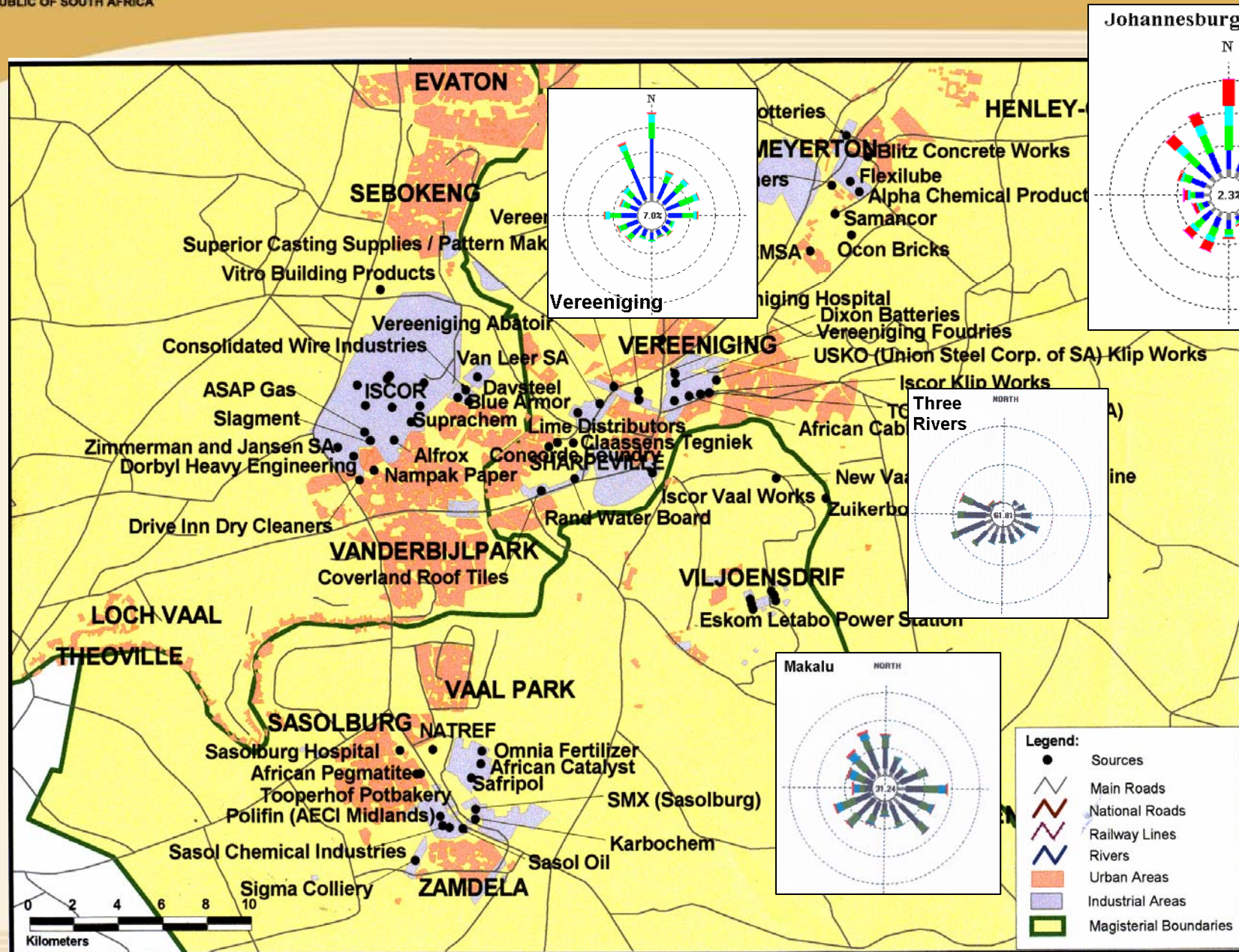
Source Contributions to Total Emissions

Source Grouping	Total Annual Emissions		
	PM10 (tpa)	SO ₂ (tpa)	NO _x (tpa)
Industry, commerce, mining	34907 (a) (77.4%)	78804 (b) (26.0%)	36294 (b) (24.9%)
Electricity generation	8150 (18.1%)	219868 (72.4%)	98457 (67.4%)
Household fuel burning	1260 (2.8%)	2917 (0.96%)	363 (0.25%)
Vehicle exhaust	400 (0.89%)	1904 (0.63%)	10639 (7.3%)
Biomass burning	392 (0.87%)	47 (0.02%)	243 (0.17%)
TOTAL	45109	303540	145996



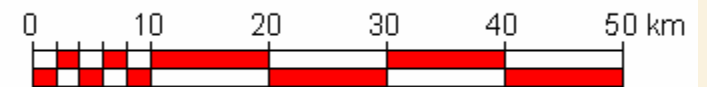
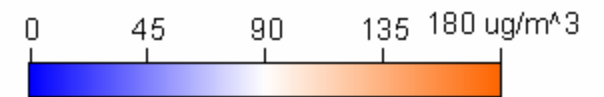
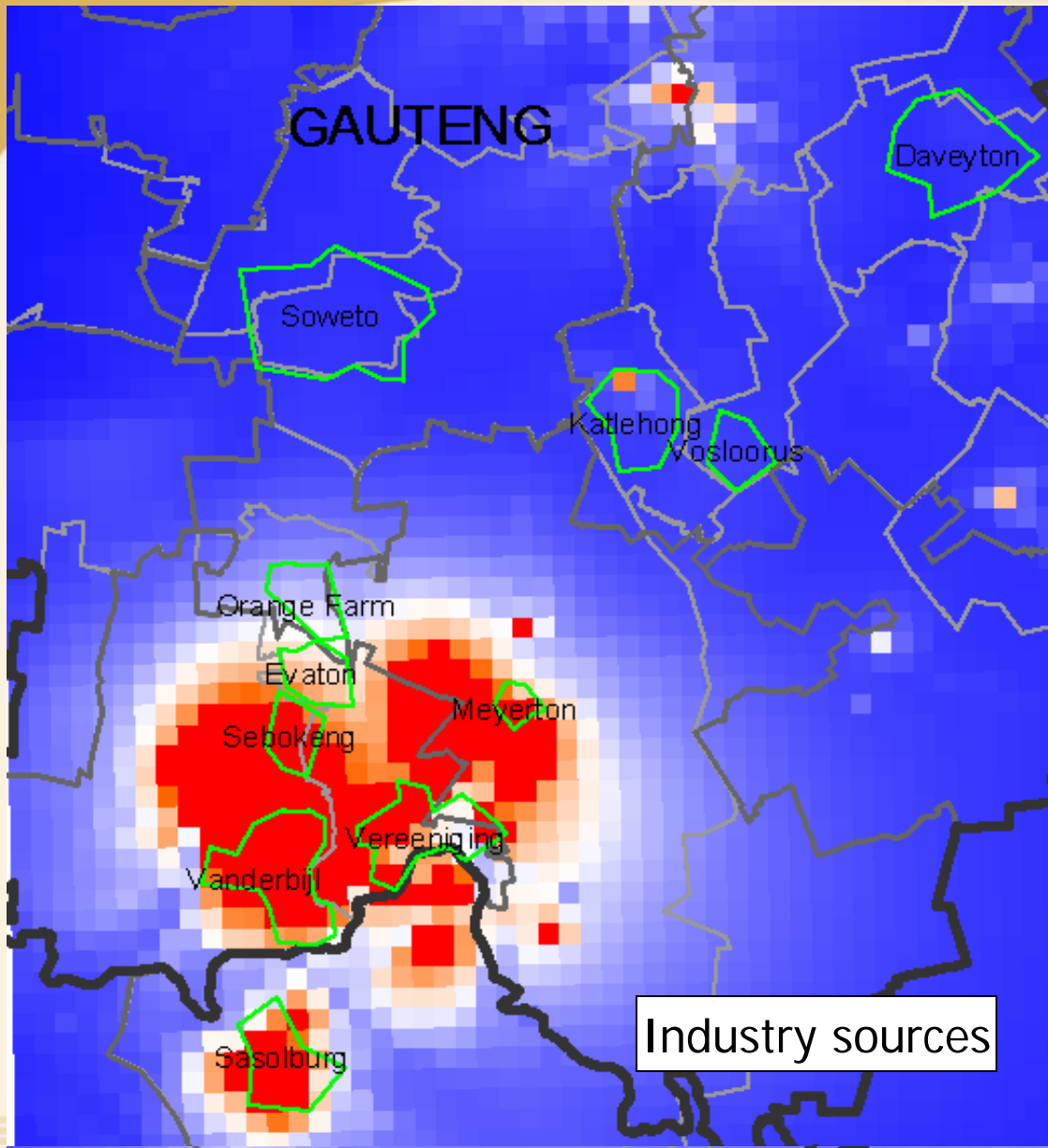
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PM10 ON A BAD DAY





THE HIGHVELD PRIORITY AREA





- The Chief Directorate: Air Quality Management and Climate Change was formally established in its current state in December 2005.
- There are 43 posts organised in three directorates:
 - Directorate: Atmospheric Quality Information
 - Directorate: Atmospheric Policy, Regulation and Planning
 - Directorate: Air Quality Management



PURPOSE

- To ensure that reasonable legislative and other measures are developed, implemented and maintained in such a way as to protect and defend the right of all to air and atmospheric quality that is not harmful to health and well-being.



VISION

- The Chief Directorate is nationally and internationally recognised as a centre of excellence in the field of atmospheric quality management.





MISSION

- The Chief Directorate will continuously strive to provide efficient and effective atmospheric quality services that protect and defend the Constitutional right of all South African's to an environment that is not harmful to health and well-being.

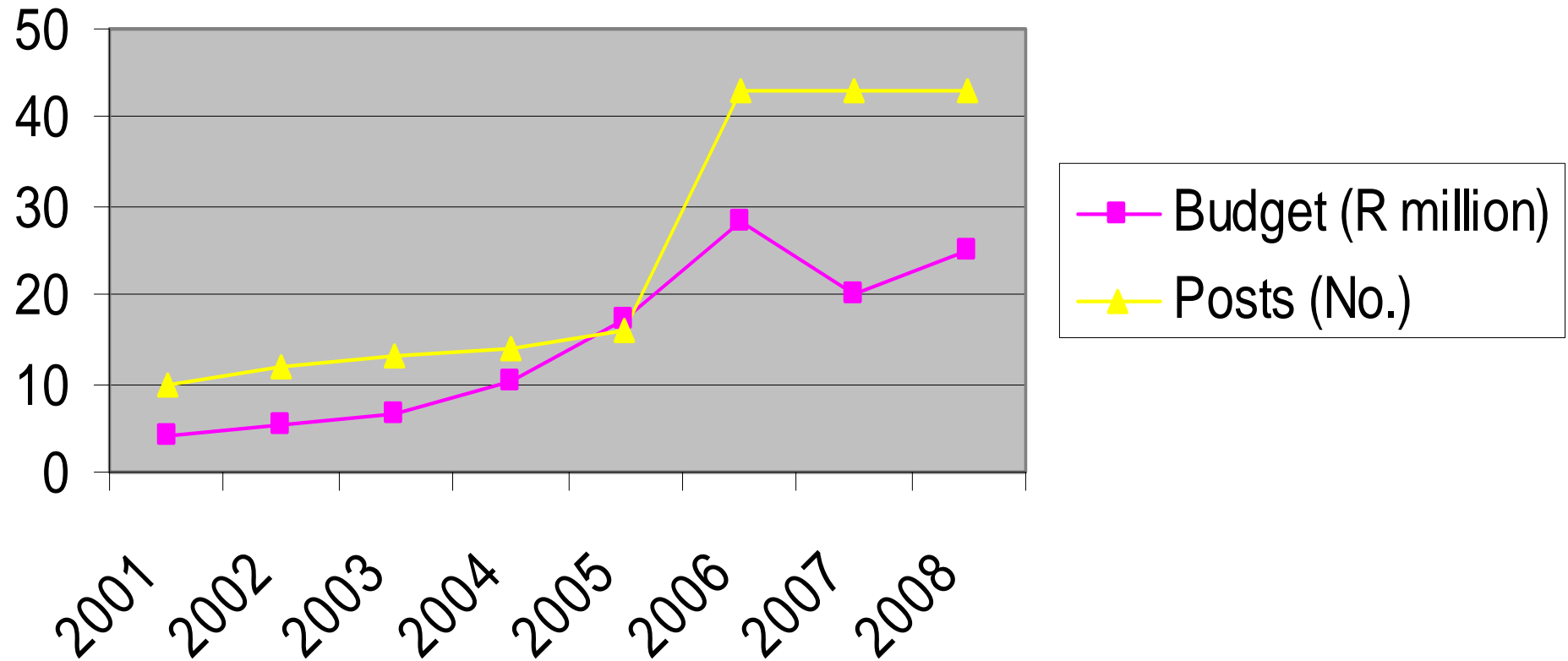


ORGANISATIONAL DEVELOPMENT OBJECTIVE

- By 2007, the chief directorate is adequately funded with adequate numbers of staff in well-defined positions who, with an appropriate reporting structure, are able to efficiently and effectively deliver departmental air and atmospheric quality management services as directed or implied by the National Environment Management: Air Quality Act (Act No. 39 of 2004) and all relevant atmospheric quality related multilateral environmental agreements.



BUDGET AND HR GROWTH





environment & tourism

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The National
Environment
Management: Air
Quality Act (Act
No. 39 of 2004)

Turning the page
on poor air
quality in South
Africa

Thank you
for your kind attention