



# National Parliament Portfolio Committee on Environment

Air Quality

Tuesday, 28<sup>th</sup> October 2014

# Focus on two reports

- The Health Impact of Coal: The responsibility that coal-fired power stations bear for ambient air quality associated health impacts (20 May 2014)
- **SLOW POISON: AIR POLLUTION, PUBLIC HEALTH AND FAILING GOVERNANCE: A story of air pollution and political failure to protect South Africans from pollution (June 2014)**

“This report documents the collapse of air quality regulation in South Africa. It comes out as the country has just gone to the elections, and we hope that the incoming politicians at all levels will understand the urgency of the situation.”

# The Health Impact of Coal

- Reviewed 36 peer studies: “Drawing on available academic peer reviewed literature, government statistics and other reports, this desktop study attempts to understand the contribution that the coal industry and Eskom make to the health risk of the people of the Mpumalanga Highveld”.
- Eskom’s coal-fired electricity generation is responsible for 51% of hospital admissions and 51% of mortalities due to respiratory illnesses caused by outdoor air pollution. This is three times the impact from outdoor pollution due to domestic coal burning.
- 54% of deaths from air pollution-related cardiovascular diseases can be attributed to Eskom’s electricity generation compared to 16% attributed to domestic coal burning.

Pollutant	Total emissions tons/annum	% due to electricity generation, industrial processes and domestic fuel	% due to electricity generation only (Eskom)
PM <sub>10</sub>	98901	81%	65%
SO <sub>2</sub>	2153917	98%	71%
NO <sub>2</sub>	1253229	78%	55%

Figure 2a: increase in NO<sub>2</sub> and SO<sub>2</sub> emissions Eskom 2002-2013

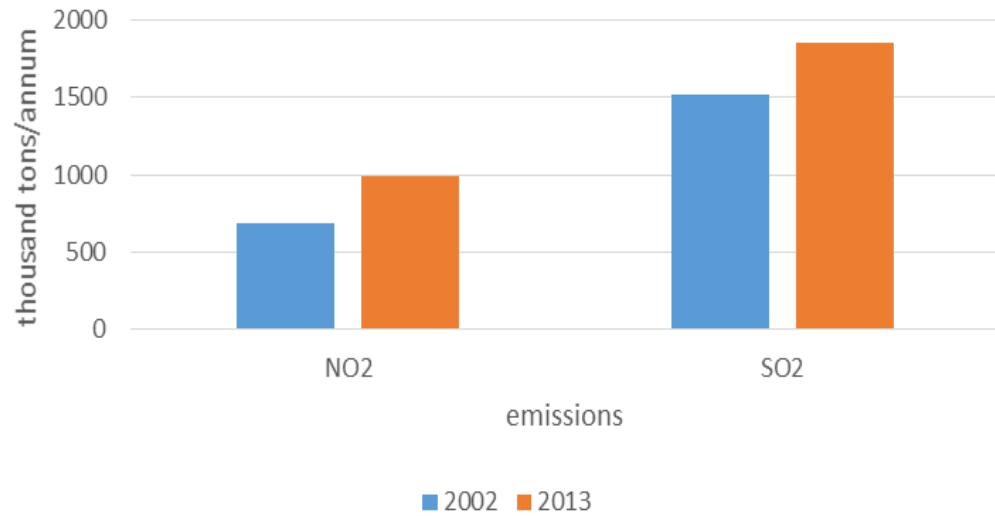
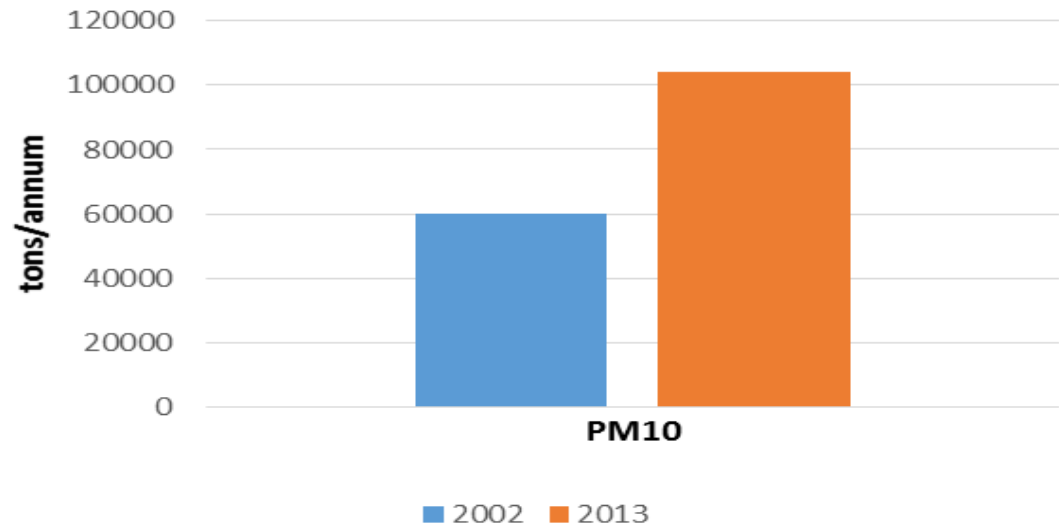


Figure 2b: increase in PM<sub>10</sub> emissions Eskom 2002-2013

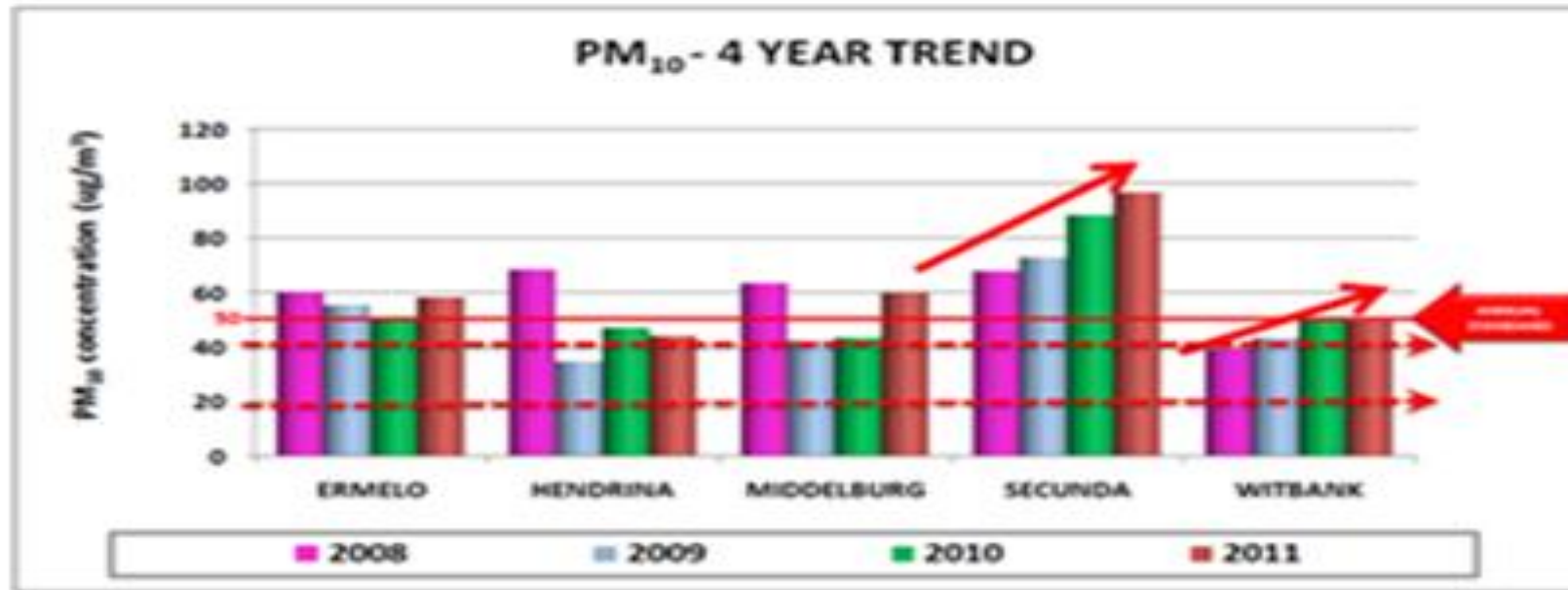


# Slow Poison: Non-compliance of industries (and weak governance)

- “Despite all of the legislation that has been promulgated to protect the environment, and the measures introduced to make it easier to prosecute environmental crime, the environment continues to be degraded at an alarming rate.” (pg 55)
- “Eskom Background Information Document ... power stations emissions do not harm health – a statement which it subsequently withdrew” (pg 57)
- “Sasol’s Secunda plant in Mpumalanga was in ‘significant non-compliance with conditions of numerous authorisations’” (pg 58)
- Other industries of note: Samancor, Highveld Steel, ArcelrMittal, Natal Portland Cement
- “... the low probability of detection, negligible penalties and large financial benefits that flow from non-compliance with environmental legislation results in perverse incentives for regulated industries to float the law.” (pg 61)
- Reasons for non-compliance:
  - Under-staffed and under-funded
  - Criminal justice system is both overburdened and short on environmental expertise
  - Penalties too light

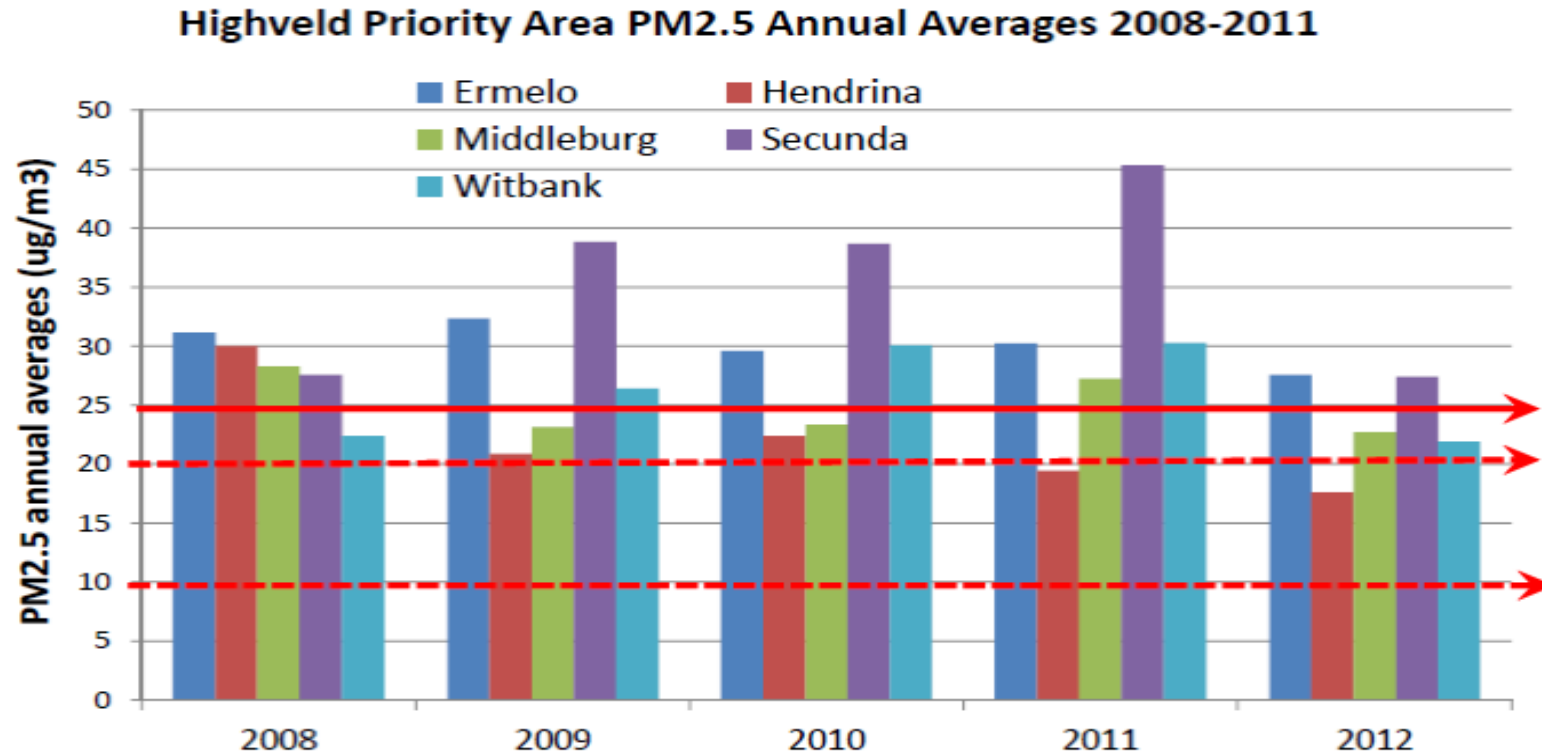
# Slow poison: Increasing pollution

## Highveld Priority Area PM10 Annual Averages 2008-2011



- South African current ambient air quality standard 50ug/m<sup>3</sup> (with no permitted annual exceedance's)
- South African ambient air quality standard (to be revised to 40ug/m<sup>3</sup> by 1<sup>st</sup> Jan 2015)
- WHO (2005) recommended annual ambient standard = 20 ug/m<sup>3</sup>

# Slow poison: Increasing pollution



- **South African** current ambient air quality standard **25ug/m3** (with no permitted annual exceedance's)
- South African ambient air quality standard (to be revised to **20ug/m3** by 1<sup>st</sup> Jan 2016)
- **WHO (2005)** recommended annual ambient standard = **10 ug/m3**

# Slow Poison: Exemption from Minimum Emission Standards (MES) continuing impunity

- 1965 Air Pollution Prevention Act (old British Law of 1905 )was a license to pollute.
- 1995 – Engen and Shell/BP (SAFREF) would only reduce pollution of ambient air quality standards were exceeded.
- 2001 – Oil refinery and chemical industry pushed for voluntary agreements in ‘voluntary approach’ to environmental governance (Environmental Management Cooperation Agreements – section 35 of NEMA)
- 2004 – National Environmental Management Act: Air Quality Bill Feb 2004 had no “mandatory national emission standards aimed at minimising air pollution from industrial sources” (pg 23)
- Air Quality Act (August 2004): Section 7.(1)(c) the Minister must establish “national norms and standards for the control of emissions from point and non-point sources”
- 2013 June Eskom absent from new emission negotiations announced it would seek exemptions from the MES
- “... Eskom’s application has set a precedent for other polluting industry. Sasol, Natref, Anglo, Engen, PPC, and Northern Platinum ... submitted applications for exemptions and/or postponements of compliance with the MES” (Pg 58)



# The Cost of the Health Burden From Use of Coal for Energy Production

- External cost of environmental and public health damage caused during each stage of coal's extraction, transportation, combustion, and disposal
- Studies in USA X 2 & EU



If health and other external costs of coal-fired electricity in the U.S. are included, they triple its cost to consumers

# What is the ask of the Portfolio Committee?

- All listed industries stringent should meet the most stringent emission standards and there should be no exemptions.
- A transparent air quality information regime was promised when the AQA was promulgated and it is required by law. It must be implemented.
- Local ambient air monitoring systems must be developed or restored, together with the regulatory authorities' capacity to operate them and use the data for effective enforcement.
- On this foundation of real knowledge and with the participation of local communities, regulatory authorities must develop and implement credible plans to reduce pollution levels.
- There must be real penalties to deter violations. The DEA should therefore initiate a process to introduce significant civil and administrative penalties, including daily fines for AEL exceedances.
- The Durban health study corroborated community claims and the conclusions of that study must be taken seriously and its recommendations acted on. The lessons from that study are relevant to other pollution hotspots as well as to Durban.