

NKANGALA District Municipality



Air Quality Lekgotla 2017
Presenter: Mahlangu VM
02 October 2017

TABLE OF CONTENT

- 1) Overview of Nkangala District Municipality
- 2) Overview of the declaration of the Highveld HPA
- 3) Overview of the HPA Structures (ITT, Authorities Meetings & MSRG) and their roles and responsibilities;
- 4) NDM Air Quality Management Plan (AQMP)
- 5) Processes in terms of the development of Annual Implementation Plans;
- 6) **NDM Air Quality Management Capacity**
- 7) Implementation (AEL Application Processing, Awareness Campaigns, Compliance Monitoring, Emissions Reduction Plans, SA Atmospheric Emissions Licensing & Inventory Portal (SAAELIP) Activities,
- 8) Other Emerging Environmental Issues
- 9) Lessons learned & challenges

Overview of Nkangala District Municipality

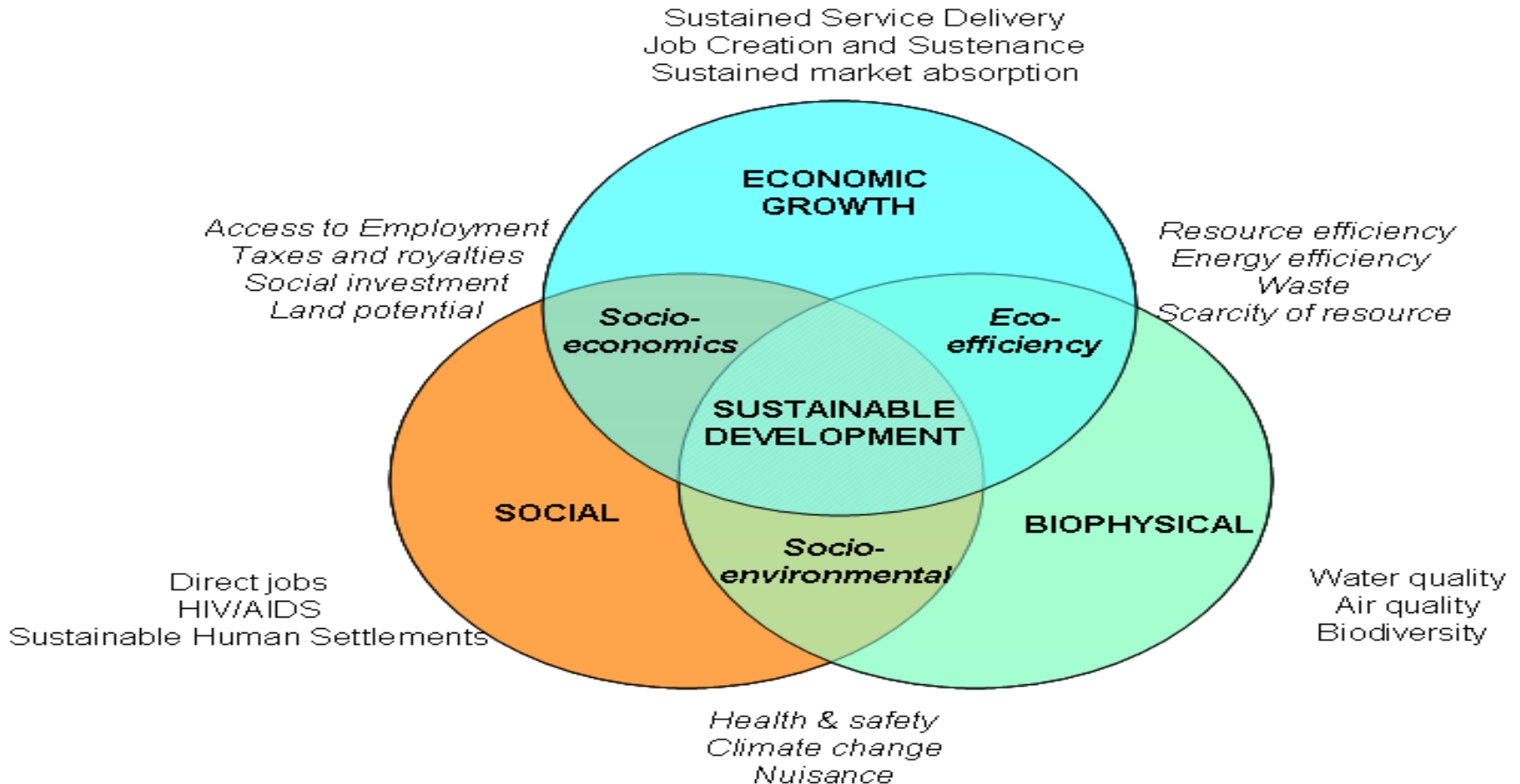
The Nkangala District Municipality (DC31) is one of the three (3) District Municipalities in Mpumalanga Province. The headquarters of Nkangala District Municipality are in Middelburg (Steve Tshwete Local Municipality).

The District is composed of six (6) Local Municipalities: namely; Victor Khanye Local Municipality (MP 311), Emalahleni Local Municipality (MP 312) Steve Tshwete Local Municipality (MP 313), Emakhazeni Local Municipality (MP 314), Thembisile Hani Local Municipality (MP 315) and Dr J S Moroka Local Municipality (MP 316) (see figure 7). The area of the District covers a total area of approximately 16,892 square kilometres with a **population of 1 308 129** constituting approximately **32.38%** of Mpumalanga's population.

- ▶ Nkangala District Municipality is regarded to have a high eco-tourism potential, which requires the protection, rehabilitation and enhancement of its attractive natural resources. The area has however extremely high mining potential that attracts mining activities (i.e. sporadic urban settlement patterns). In contrast, the mining potential on the other hand is detrimental to the valuable biophysical elements of the environment.

Overview of Nkangala District Municipality

- ▶ The District Municipality moves from the premise that, although the primary objective is to achieve environmental sustainability, it is also important to ensure that other dimensions of sustainable development are addressed. These are outlined in the **Figure below** outlining Sustainable Development Dimension below:



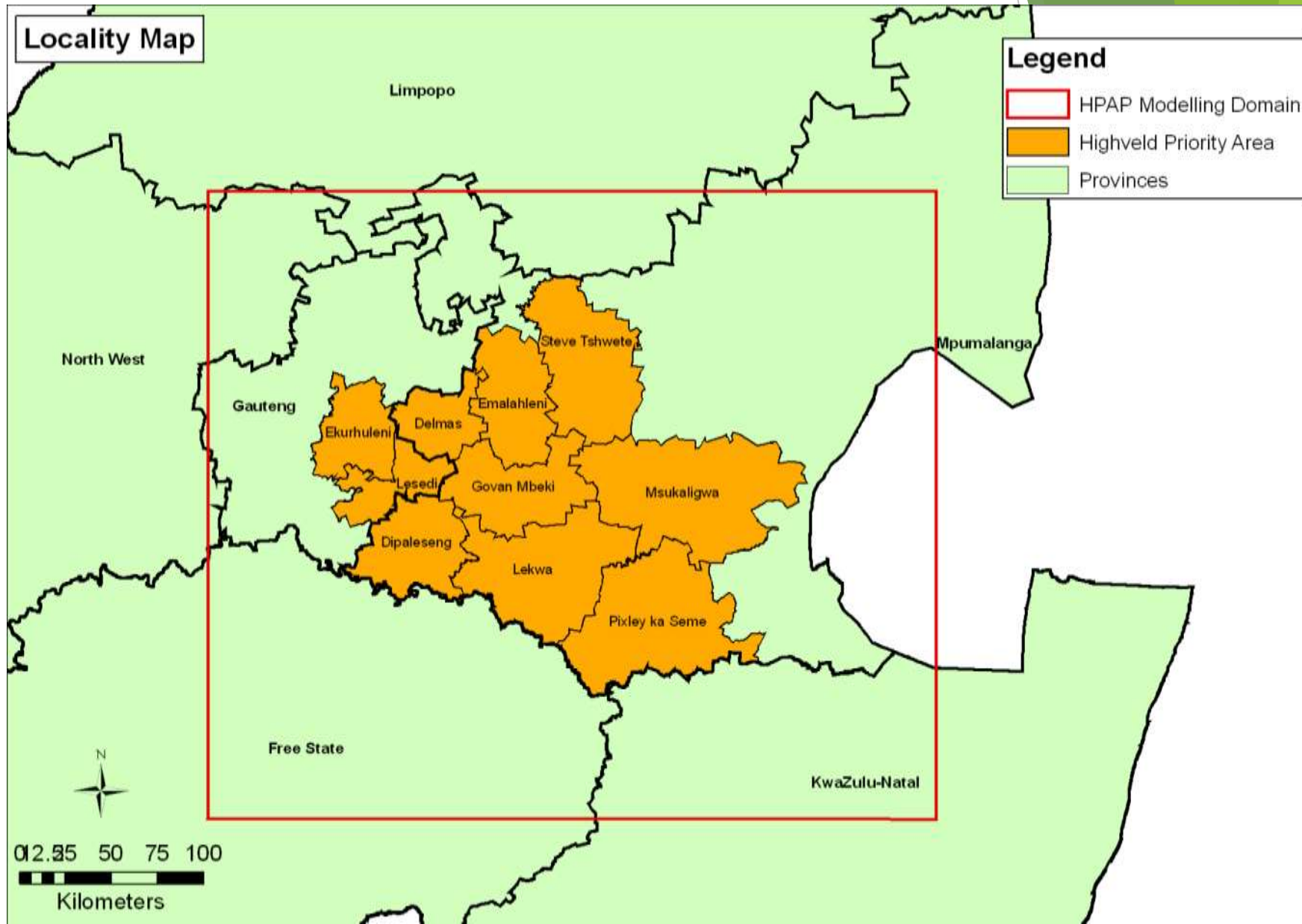
Overview of the declaration of the Highveld Priority Area (HPA)

- ▶ The Highveld Priority Area was declared in terms of **section 18** of the National Environmental Management: Air Quality Act 39 of 2004 by the then Minister of Environmental Affairs in terms of Government Notice No1123 dated 13 November 2007.
- ▶ The Minister declares an area a “Priority Area” under the believe that the ambient air quality standards are being, or may be exceeded in the area, or any other situation exists which is causing, or may be cause, a significant negative impact on the air quality in the area; and the area requires specific air quality management action to rectify the situation;
- ▶ The Highveld Priority Area so declared involves:
 - Ekurhuleni Metro, Lesedi LM(Sedibeng DM) in Gauteng Province;
 - Govan Mbeki LM, Dipaleseng LM, Lekwa LM, Msukalekwa LM and PRIXLY ka Seme LM in Gert Sibande DM.
 - Victor Khanye LM, Emalahleni LM & Steve Tshwete LM in Nkangala DM.

Extent of the Highveld Priority Area

	Province	Metro/District	Local Municipality
NATIONAL GOVERNMENT:A PRIORITY AREA IMPLIMENTATION	Gauteng	Ekurhuleni Metro	
		Sedibeng DM	Lesedi
	Mpumalanga	Gert Sibande DM	Goven Mbeki
			Dipaleseng
			Lekwa
			Msukalekwa
			Pixly Ka Seme
		Nkangala DM	Victor Khanye
			Emalahleni
			Steve Tshwete

Extent of the Highveld Priority Area



OVERVIEW OF THE HPA IMPLEMENTATION STRUCTURES

- ▶ Section 19 of NEMAQA provides that, once the Minister has gazetted the declaration of the Priority Area, the National Air Quality Officer must in consultation with the affected provincial and local government Air Quality Officers, prepare a **Priority Area Air Quality Management Plan (PA:AQMP)** for the priority area.
- ▶ Section 19© of NEMAQA further provides for the establishment of the committee representing relevant role-players, from local to national level as follows:
 - **Nkangala District Municipality Highveld Priority Area - Implementation Task Team (NDM HPA-ITT),**
 - **National Authorities Meeting and**
 - **National Multi-Stakeholder Reference Group Meeting.**

Nkangala District Municipality Highveld Priority Area - Implementation Task Team (NDM HPA-ITT)

The NDM HPA-ITT was established in 2013/14 Financial Year soon after the Atmospheric Emission Licensing function was resumed by the NDM on the 1st July 2013 after it was delegated to the then Provincial Department of Environmental Affairs. The following are some of the key stakeholders:

- ▶ NDM, Victor Khanye, Emalahleni and Steve Tshwete local municipalities;
- ▶ Industry, that includes NEMAQA section 21 listed activities such as power generation(eight [8] of ESKOM power stations falls within the NDM);
- ▶ National and Provincial Government Departments, such as DEA, DARDLEA, Department of Health and the elusive Department of Mineral and Energy; Coal Mining; Primary & Secondary Metallurgical Operations; Brick Manufacturers; Petrochemical Industry
- ▶ South African Weather Services (SAWS);
- ▶ Community Based Organisations and Non Governmental Organisations that include CER, Highveld Environmental Justice Network (HEJN), a network of 14 community-based organisations(that includes the Movement Environmental Defense; Earthnogenesis; Greater Middleburg Residents Association; Guqa Environmental Community Service; Mpumalanga Youth Against Climate Change; Outrageous Courage Youth; Ekurhuleni Environmental Organisation; SANCO Tokologo; SANCO Emalahleni; Khutala Environmental Care; Schoongesicht Residents Committee; Caroline Environmental Crisis Committee; Guide the People and Wonderfontein Resettlement Forum

The NDM HPA AQMP-ITT

- Four (4) HPA-ITT' meetings are held annually, just before the MSRGR meetings are held
- Chair =Mr Mahlangu VM (Nkangala District Municipality)
- Mr Erald Nkabinde for Emalahleni and Mr Eric Ratshibvumo for Steve Tshwete Local LM) and Mr Jacob Nkabinde
- Ms.Ravhadala Lufuno; Mr. Khomola Thivhionali (DEA);Ms. Nembilwi M (NDM); Mr.Mofore S (NDM);
- Nkangala District Municipality HPA-ITT' composed of the Victor Khanye, Emalahleni and Steve Tshwete Local Municipalities;
- Other stakeholders in the ITT includes DARDLEA,SAWS,NGO,s and the affected Industry;

Nkangala DM HPA-ITT: Roles and Responsibilities

- ▶ Coordinate efforts, programmes and initiatives within the priority area
- ▶ Identify and submit for discussion any issue that falls within the Priority Area hotspot that may have an impact on the objectives of the ITT;
- ▶ Consider any other matters, including regulatory issues relating to the implementation and enforcement of the HPA AQMP, which the National Air Quality Officer may specifically request;
- ▶ Oversee, advise and assist in monitoring progress on implementation of interventions ;
- ▶ Review progress assessment reports; and advise on possible new interventions in the priority areas hotspot;
- ▶ Inform the National Air Quality Officer of the views of stakeholders regarding the proposed ways and means to bring air quality into compliance with the proposed national ambient air quality standards;
- ▶ Identify and promote areas of bilateral, multilateral, and private sector collaboration on air quality implementation in the Highveld;
- ▶ Advise the National Air Quality Officer on any matter concerning air quality management and governance and specifically the setting and achievement of objectives and priorities for air quality governance;

Nkangala DM HPA-ITT: Roles and Responsibilities Cont..

- ▶ Identify cost-effective opportunities to reduce emissions and potential financing mechanisms to encourage investment within the priority area;
- ▶ Identify and address barriers to project implementation and advise on further technical work that DEA should undertake to support the programme;
- ▶ Advise the National Air Quality Officer on appropriate methods of monitoring compliance with the proposed plan;
- ▶ Undertake other tasks as necessary and reasonably practicable between meetings and during the implementation of this programme;
- ▶ Read all, and gain the necessary mandates for positions in respect of, documentation circulated with the meeting agenda;
- ▶ Prepare recommendations and consider the opinions and concerns expressed by other stakeholders;
- ▶ Identify and resolve the differing views on any areas of disagreement and issues which need to be resolved;

National Multi-Stakeholder Reference Group (MSRG)

The formation of a Priority Area Air Quality Multi-stakeholder Reference Group (HPA: MSRG) is established in terms of section 56(1) (a) of the NEM:AQA 2004 in accordance with the principles of co-operative governance as set out in Chapter 3 of the constitution.

MEMBERSHIP

Membership includes stakeholders that are familiar with air quality issues, have a scientific background and experience, represent broad organisations and have experience in participating on behalf of their organisations in multi stakeholder discussions. :

- ▶ Government Authorities
- ▶ Business and industry representatives
- ▶ Community Based Organisations/Non Governmental Organisations
- ▶ Academia and Labour
- ▶ Other air quality specialist may be invited by DEA to attend as expert advisors.

ROLES AND RESPONSIBILITIES

Members of the Reference Group are expected to make every effort to ensure that their views reflect the objectives of the programme not only personal views or those of their organization and also communicate the fact of their participation and the positions they will be taking on various issues in this programme.

Nation MSRG Roles & Responsibilities Cont.....

- ▶ Identify and submit for **discussion any issue** that falls within the focus of the Reference Group that may have an impact on the objectives of the Reference Group;
- ▶ Inform the National Air Quality Officer of the views of stakeholders regarding the **proposed ways and means to bring air quality into compliance** with the proposed national ambient air quality standards;
- ▶ Advise the National Air Quality Officer on any matter concerning air quality management and governance and specifically the **setting and achievement of objectives and priorities for air quality governance**;
- ▶ Advise the National Air Quality Officer on appropriate methods of monitoring compliance with the proposed plan
- ▶ Undertake other tasks as necessary and reasonably practicable between meetings and during the implementation of this programme;
- ▶ Prepare recommendations and **consider the opinions and concerns** expressed by other stakeholders;
- ▶ Advise on further technical work that DEA should undertake to support the programme;
- ▶ Provide a **communications link between DEA and organisations** they represent in respect of this matter.

NDM AIR QUALITY MANAGEMENT PLAN (AQMP)

- ▶ The NDM in partnership and consultation with DEA, DARDLEA and its HPA-ITT partners developed and adopted an Air Quality Management Plan (AQMP) in June 2015.
- ▶ The main elements of the NDM AQMP includes:
 - **Local Government Capacity Goal:** By 2017-18 NDM undertake organisational capacity review and developed Air Quality Management structures, have provided adequate budgets and human resources and a measurable increase in awareness and knowledge of air quality exists;
 - **Industrial Emission Reduction Goals** that includes meeting Minimum Emission Standards, the emissions standards for controlled emitters, Ferroalloy sector , Clay Brick sector, Power generation sector, and any emissions standards;
 - **Household Fuel Combustion Emission Reduction Goal:** By 2018 fuel usage by households have been quantified, local emission factors determined and impact to air quality assessed; undertaken of household emission reduction options and Health risk assessments conducted;
 - **Mining Emission Reduction Goal:** By 2018 emissions from open cast and underground mining operations as well as underground fires and burning of discard coal have been quantified and impact to air quality assessed;
 - **Transport Emission Reduction Goal:** By 2017 all local authorities undertake vehicle emissions testing, developed public transport plans and integrate into IDPs
 - **Veld Burning Emission Reduction Goal:** By 2018 veld burning emissions have been quantified spatially and temporally to allow impact to air quality assessed and veld burning emission reduction action plans developed.

AQMP INTEGRATION INTO THE NDM ANNUAL IMPLEMENTATION PLANS



NDM Service Delivery & Budget Implementation Plan: Environmental Management

Strategic Goal	Priority Issue	KPI	IDP Link	Budget R 000's	Baseline 2014/15	Target	Actual
						2016/17	
Healthy Social Environment	Environmental Management	% of atmospheric emission license applications finalised as compared to application received as per NEM Air Quality Act, 2004 by 30 June 2017	5,6	Opex	70%	75%	
		# of compliance audits conducted with respect to Sec 21 listed activities as per the NEAQ Act by June 2017	5,6	Opex	8	8	
		Environmental Management and Municipal Health Services Education and 12 Awareness Campaigns conducted by 30 June 2016	SDAR 6_150	300,0	12	12	14
		# of Quarterly Reports submitted to Council with respect to Environmental Impact Assessments (EIA) conducted in the District	5,6	Opex	4	4	4
		Two hundred (200) trees procured and distributed to local municipalities.	SDAR 6_151	150,0	200	200	

NDM AIR QUALITY MANAGEMENT CAPACITY

Municipality	Air Quality Officer(Sec 13 NEM:AQA)	Environmental Management Officials	EMI Qualified	EMI Designated (Sec 31c NEMA)	Environmental Health Officers
Nkangala DM	1	2	4	3	1
Emalahleni	1 (EMLM)	5	4	3	7 (NDM)
Victor Khanye	0	1	2	0	3(NDM)
Emakhazeni	0	0	2	0	3(NDM)
Steve Tshwete	0	3	1	0	5(NDM)
Thembisile Hani	0	1	2	0	9(NDM)
Dr JS Moroka	0	1	2	0	8(NDM)
TOTAL	2	13	17	6	32

Practically the NDM Air Quality Management Unit is only having two (2)

ATMOSPHERIC EMISSION LICENSING APPLICATIONS PROCESSED

No.	Received	LAEL Application Local Municipality	Process Description	AEL Processing Status
1.	Silicon Smelters	Emalaheni	Establishment of Modular Briquetting Plant	PAEL Issued
2.	Samancor Ferrometals	Emalaheni	Plant Decommissioning: Metallurgical Process	Awaiting the EA
3.	Anglo Coal Goedehoop	Steve Tshwete	Storage and Handling of ore and coal	AEL issued
4.	Shell SA	Emalaheni	Storage and Handling of Petroleum Products	AEL Issued

ATMOSPHERIC EMISSION LICENSING APPLICATIONS PROCESSED CONT.....

No.	Received	LAEL Application Local Municipality	Process Description	AEL Processing Status
5.	Engen SA (PTY)LTD AEL renewal	Emalahleni	Storage and handling of petroleum products	Issued
6.	Makoya Supply Chain Holdings	Steve Tshwete	Storage and handling of ore and coal	Renewal of AEL issued
7.	Road span surface	Emalahleni	Asphalt Production	AEL issued

ATMOSPHERIC EMISSION LICENSING APPLICATIONS PROCESSED CONT.....

No.	Received	LAEL Application Local Municipality	Process Description	AEL Processing Status
8.	Much Asphalt Plant	Emalahleni	Macadam Preparation process	AEL issued
9.	Sephaku cement	Victor Khanye	Cement production	Variation AEL issued
10.	Evrzhighveld Steel	Emalahleni	Storage and handling of ore and coal	AEL Amendment issued
11.	Engen	Emalahleni	Storage of Petroleum products	AEL issued

ATMOSPHERIC EMISSION LICENSING APPLICATIONS PROCESSED CONT.....

No.	Received	LAEL Application Local Municipality	Process Description	AEL Processing Status
12.	Black bond Asphalt plant	Emalahleni	Macadam Preparation process	AEL issued
13.	RST Metals	Steve Tshwete	Smelting plant	AEL issued
14.	ICSA	Steve Tshwete	Crematorium	AEL issued

COMMUNITY INVOLVEMENT & AWARENESS ACTIVITIES Cont...

NDM have conducted **17** Air quality, waste and environmental management awareness campaigns in collaboration with the local municipalities, the Community Based Organizations, DARDLEA and other stakeholders

Municipality	Location	Date
11. Thembisile Hani	Verena Community Hall	22/07/2016
12. Victor Khanye	Botleng	14/10/2016
13. Emalahleni	Klarinet	27/10/2016
14. Dr J.S Moroka	Vaalbank	28/10/2016
15. Thembisile Hani	Kwaggafontein	01/11/2016
16. Emakhazeni	Dullstroom	03/11/2016
17. Steve Tshwete	Dooronkop	08/11/2016

COMMUNITY INVOLVEMENT & AWARENESS ACTIVITIES Cont...

Municipality	Location	Date
1. Victor Khanye	Botleng	20/07/2017
2. Dr JS Moroka	Dr JS Moroka Municipality	28/07/2017
3. Emalahleni	Kwaguqa	22/05/2017
4. Thembisile Hani	Kwaggafontein	02/03/2017
5. Steve Tshwete	Mhluzi	28/02/2017
6. Steve Tshwete	Steve Tshwete Boarding School	15/03/2017
7. Dr. J.S Moroka	Enkosini	27/01/2017
8. Thembisile Hani	Zamani Primary School, Khutalani Primary	10/05/2016

COMPLIANCE MONITORING INSPECTIONS

The following air quality management compliance inspections were conducted some as requested, as complaints and AEL Joint Compliance Promotion.

Name of Facility	Process Description	Purpose of the Inspection	Date of Inspection	Local Municipality
1. Emalahleni Crematorium	Crematoria	AEL Renewal	16/08/2017	Emalahleni
2. Black Bond Asphalt Plant	Asphalt Production	Compliance	16/08/2017	Emalahleni
3. Duvha Power Station	Power Generation	Compliance	21/08/2017	Emalahleni
4. Eagle Creek	Animal Matter Processing	Section 22A Meeting and site visit	25/08/2017	Victor Khanye
5. Eskom Kusile	Power generation	AEL renewal site visit	28/08/2017	Emalahleni

COMPLIANCE MONITORING INSPECTIONS cont.....

The following air quality management compliance inspections were conducted some as requested, compliance, as a result of complaints and AEL Joint Compliance Promotion.

Name of Facility	Process Description	Purpose of the Inspection	Date of Inspection	Local Municipality
6. Middleburg ICSA	Crematoria	AEL renewal	20/02/2017	Steve Tshwete
7. RST Metals	Metallurgical	AEL renewal	25/01/2017	Steve Tshwete
8. Silicon Smelters	Metallurgical	AEL Renewal	10/02/2017	Emalahleni
9. McCain Delmas	Food Processing	Compliance Joint Inspection	07 - 10/02/2017	Victor Khanye
10. Engen Petroleum	Petroleum Products storage	AEL Variation	25/01/2017	Emalahleni
11. Much Asphalt Plant	Asphalt Production	AEL renewal	07/06/2016	Emalahleni

COMPLIANCE MONITORING INSPECTIONS cont.....

The following air quality management compliance inspections were conducted some as requested, as complaints and AEL Joint Compliance Promotion.

Name of Facility	Process Description	Purpose of the Inspection	Date of Inspection	Local Municipality
12. Samancor Middleburg Ferrochrome	Ferrochrome production	A joint site inspection for AEL renewal	28/10/2016	Steve Tshwete
13. Sephaku Cement	Cement production	AEL variation	22/06/2016	Victor Khanye
14. Thomas Char coal	Char coal burning	Compliance	07/06/2016	Steve Tshwete
15. Shell down stream	Storage and handling of petroleum products	AEL renewal	10/06/2016	Emalahleni

COMPLIANCE MONITORING INSPECTIONS cont.....

The following air quality management compliance inspections were conducted some as requested, as complaints and AEL Joint Compliance Promotion.

Name of Facility	Process Description	Purpose of the Inspection	Date of Inspection	Local Municipality
16. Federale Stene	Brick Manufacturing	AEL renewal	26/07/2016	Steve Tshwete
17. Makoya Supply chain holdings	Storage and handling of coal	AEL renewal	02/05/2016	Steve Tshwete
18. Evraz Highveld Steel	Metallurgical	AEL variation	08/09/2016	Emalahleni
19. Samancor Middelburg Ferrochrome	Metallurgical	Compliance Joint Inspection by DEA, DARDLEA, DWS	25-28/10/2016	Steve TShwete
20. Sephaku Cement	Cement Production	AEL Pre-Licensing	04/11/2016	Victor Khanye

Emissions Reduction Plans Presentations

The following are Industries, CBO and Local Municipalities that reported their emission reduction (such as Stack Emission Reports, Fall-Out Dust Monitoring and Continuous Monitoring) and other emission reduction efforts:

- SAWS present on state of air in the HPA
- Emalahleni Local Municipality
- Centre for Environmental Rights (CER)
- NDM report on activities in the district and their functions
- Transalloys
- Valitrade
- Sephaku Cement
- Centre for Environmental Rights
- Samancor Middelburg Ferrochrome

SA Atmospheric Emissions Licensing & Inventory Portal (SAAELIP)

This the Summary of the NDM SAAELIP Facility Auditing Emission Report as of 29 September 2017.

- Only Section 21 facilities Emission Inventory Reports were audited
- Mines and Quarries were not audited due to lack of capacity

El Reports Summary	Number of Reports
Master List	83
Total El Reports Submitted	60
Section 21 Facilities	48
Sec 21 Audit Reports Completed and passed	27
Sec 21 Incomplete Reports (Failed & Audit Revising)	21

SAAELIP Cont...

► Major Types of Section 21 Industries in NDM

Type of Industry	Quantity
Power Generation	8
Asphalt Production	4
Metallurgical	7
Char and Electrode Paste production	8
Waste Incineration	4
Brick Manufacturing	5
Petroleum Storage	4
Cement Production	1
Crematorium	2

OTHER EMERGING ENVIRONMENTAL ISSUES

As part of the implementation of the NEMA: Environmental Impact Assessment (EIA) Regulations 2014, the NDM commented on **thirty (30) development projects** in the region. Amongst others the project the following:

- ▶ Mining and mining prospecting, Construction of power lines, Aluminium and ferrochrome production, Water use licence, Road upgrading, Construction of piggery house, Decommissioning and closure of waste disposal facility, Waste and water licence Resettlement of villages, Construction of two power lines, Upgrading and expansion of the Drakensberg Oil Terminal, Construction of church, Development of Energy Power Station near Kwa-Mhlanga, Construction of school, Construction and operation of Calciner gas, Under ground mining.
- ▶ The main development activities includes;
 - Atmosphere (Air pollution)
 - Water pollution
 - Natural habitat for animals
 - Heritage sites
 - Wetland pollution

LESSONS LEARNED & CHALLENGES

- ▶ Obvious lack of capacity on the part of the Licensing Authority to tackle Air Quality Management Compliance, Monitoring and enforcement activities
- ▶ The value and importance of the CBO's and NGO's participation in keeping industry compliant;
- ▶ Need to distinguish the roles and responsibilities between Local and district municipalities especially in enforcing section 23 listed activities, dust regulations, (Opportunity during the current National Air Quality Management Review process)
- ▶ Contrasting expectations between Air Quality Authorities and the CBO's and NGO's that can cause collapse of the ITT Governance Structure;
- ▶ To that end, the NDM HPA-AQMP ITT actually collapsed during the 2014/15 Financial Year;
- ▶ Lack of participation of certain critical sector departments such as the Department of Mineral and Energy in the HPA -ITT meetings;

LESSONS LEARNED & CHALLENGES Conti...

- ▶ Inconsistence participation and therefore sharing emissions reduction strategies by the industry;
- ▶ Cooperation of most of the facilities on SAAILIP Emission Inventory Reporting is gradually improving.
- ▶ Improvement on processing of the AEL's online
- ▶ Facilities not attaching supporting documents for Emission Inventory Reports on NAEIS causing a lot of Audit failure;
- ▶ Mines and Quarries may start taking Emissions Inventory Reporting lightly as the submitted reports were not audited because of lack of capacity(as a threat);
- ▶ Currently sitting with an appeal against the fine imposed on a facility that contravened section 22A of NEM: AQA 2004 as amended and thus the implementation of the Regulations for the procedure and criteria to be followed in the determination of an administrative fine.

Thank You

**Mahlangu VM
mahlanguvm@nkangaladm.gov.za
013 249 2164**