



PROGRAMME

Hosted by the NFTN via Webinar, Tuesday, 3 November 09:00 – 11:00

09:00	Admit guests, welcome and introductions by Programme Director	Julie Wells, CSIR Smart Places Hosted Programmes
09:15	Overview of the Foundry Study	Sandy Majatladi, NFTN
09:30	Feedback on Foundry Study : AEL Compliance	Abulele Adams, CSIR Environmental Services
09:45	Questions and Answers Session	Julie Wells, NCPC-SA
10:15	Way Forward	Sandy Majatladi, NFTN
10:30	Remaining Q&A, closing remarks	Julie Wells

About the NFTN

The NFTN is an initiative of the Department of Trade, Industry and Competition (**the dtic**) hosted by the CSIR.

Mandate

The mandate of the NFTN is to manage, coordinate and facilitate growth and transformation in the casting industry through focused interventions designed to support improved foundry competitiveness, the industrialisation of new technologies and products.

Vision

To increase the global competitiveness of the South African foundry industry through the provision of appropriate services, in order to reduce import leakage, increase local production, and increase investment in the sector.

Mission

The NFTN will manage, coordinate, and facilitate economic development towards a revitalisation of foundry industry through appropriate skills training, knowledge transfer, and diffusion of state of the art technologies

Strategic Objectives (service focus areas)

The mission is achieved through the following four strategic objectives:

- Foundry capacity building
- Technical and Regulatory Support to Industry
- Human Capital Development, Skills, and Knowledge Transfer.
- Stakeholder Relations, Awareness Raising and Communications

NFTN Project Team



Sandy Majatladi
Programme Manager



Isidore Kilongozi
Technical Advisor

Manini Ramagaga
Technical Advisor



NFTN Industry Survey

Sandy Majatladi, NFTN Programme Manager
3 November 2020



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NFTN Industry Survey

Sandy Majatladi, NFTN Programme Manager
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Contents

- Overview and Objectives (Sandy Majatladi)
- Outcomes
 - General Survey
 - Environmental Compliance
- Way forward

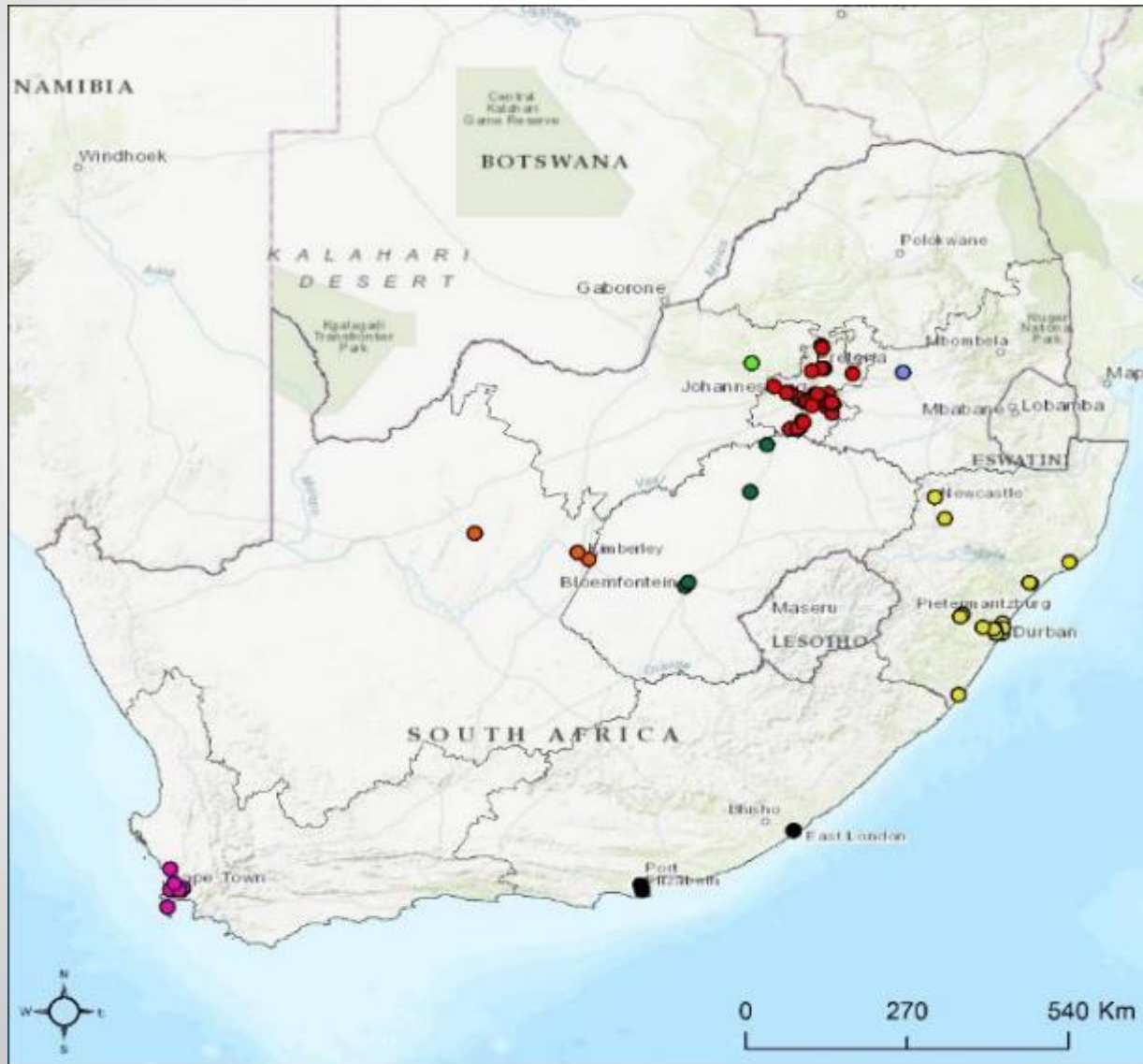
Overview and objective

- NFTN commissioned a study to undertake an **Environmental Compliance and Performance Improvement Study** for the Foundry Industry in South Africa.
- The study was aimed at providing an informed and up-to-date overview of the foundry industry in SA that will enable the NFTN to identify measures for implementation to facilitate the recovery of the industry and assist foundries to become sustainable.

Objectives

- Update the foundry list / database
- Ascertain operational status of foundries
- Establish furnace types and material types
- Note the tonnage produced
- Record employee numbers
- Establish level of environmental compliance
- Measure energy consumption

Geographic location of foundries



Key Findings from the Status Quo Study

- Based on research undertaken:
 - 57 completed survey questionnaires received
 - 80 face-to-face interviews conducted
- The Phase 1 Status Quo Report provides substantive and up-to-date baseline information on the operational status and key characteristics of SA foundries as at June 2020 as follows....

Key Findings (Cont.)

Aspect	Key findings
Number of Foundries	Total of 134 foundries of which only 123 are operational
Types of Foundries	Ferrous foundries (47%); Non-ferrous foundries (32%); and foundries with both Ferrous and Non-ferrous operations (21%)
Foundry Classification	Jobbing and Production (44%); Production (42%) and Jobbing (33%)
Primary Casting Process	Sand Casting (82%); Gravity Die Casting (15%); High Pressure Die Casting (7%); Investment Castings (7%); and Low Pressure Die Casting (5%)
Types of Furnaces	Electrical induction furnaces (75%); Crucible (29%); Combustion-based Heavy Fuel Oil or Natural Gas (14%); and Electric Arc Furnaces (9%)
Feedstock Used	Virgin metals (58% of foundries); Raw scrap metals (56% of foundries); and Cleaned scrap metals (58% of foundries)
Tonnage Produced	Metal type with highest tonnage produced annually is Iron in all its variations
Export Potential	From responses, 48% of foundries export and 52% of foundries do not export
Annual Turnover	>R10m (77%); R5m-R10m (9%); R3m-R5m (6%); R1m-R3m (8%); <R1m (2%)
Employment Status	Total female and male is 5 465 → 89% male and 11% female

Environmental Compliance and Performance Improvement for the Foundry Industry In South Africa – Phase 1: Status Quo Assessment

CSIR Environmental Management Services

Industry Feedback Webinar, 3 November 2020



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Survey Project Team

CSIR Environmental Management Services



Paul Lochner



Abulele Adams



Lizande Kellerman



Rohaida Abed

Atmospheric Emissions Licencing

- **Key Legislation:**

- **Atmospheric Pollution Prevention Act (Act 45 of 1965) (APPA)**

- Foundry operations included in Schedule II as a Scheduled Process → **Registration Certificate** required

- **National Environmental Management: Air Quality Act (Act 39 of 2004, as amended) (NEM: AQA)**

- List of activities which result in atmospheric emissions (S21 of NEM:AQA) → GN 248, GG 33064, 31 March 2010 → amended in **GN 893, GG 37054, 22 November 2013**.

- Foundry operations included as Listed Activity → **Provisional AEL or AEL** required

- Most ferrous foundries: Category 4: Sub-Category 4.10 [“metallurgical industry” and “foundries”].

- APPA was repealed on 31 March 2010 when the NEM: AQA came into full effect.

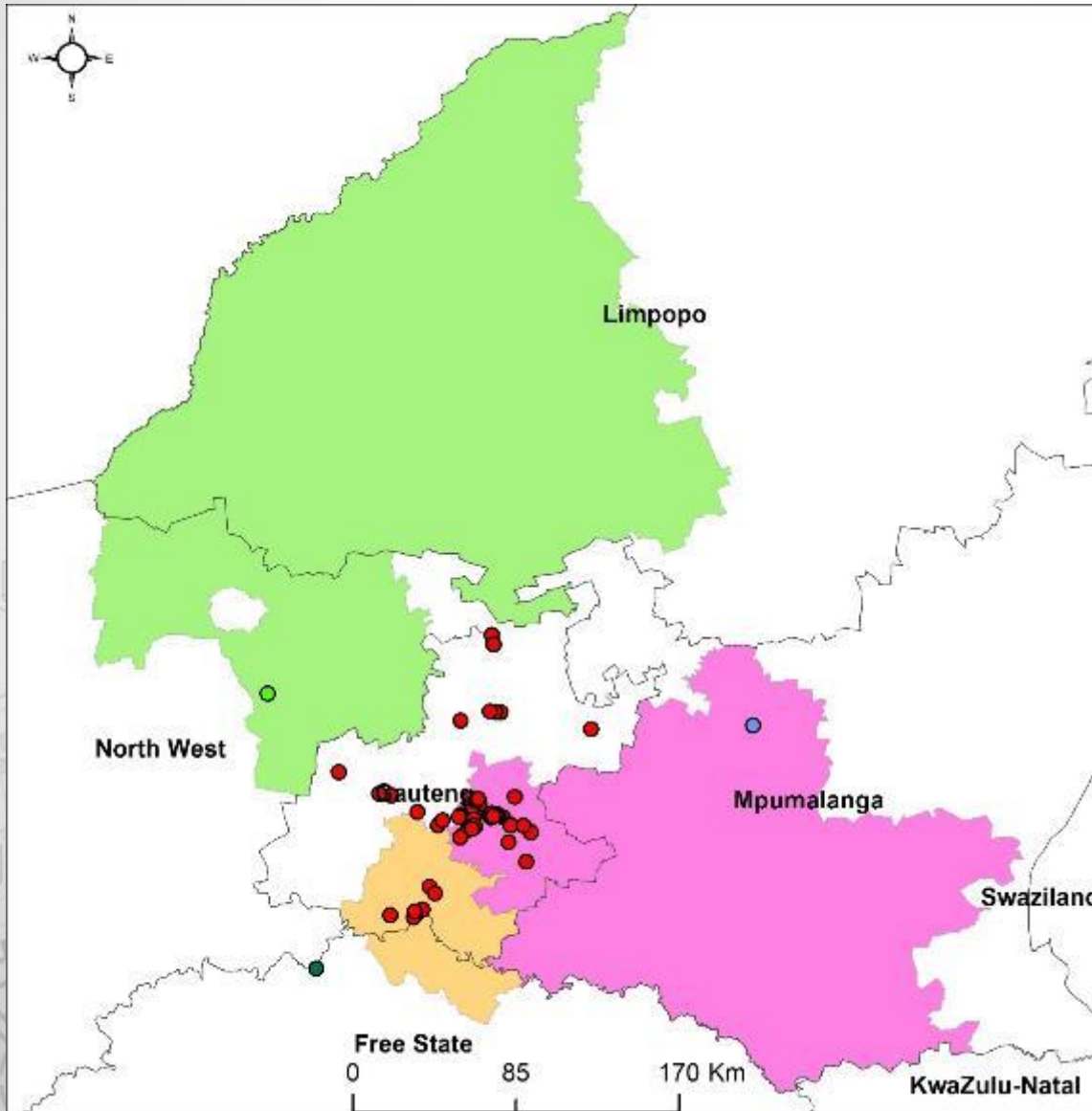
Atmospheric Emissions Licencing

Transitional Arrangements – Section 61 of NEM: AQA:

- Permanent APPA Registration Certificates were valid until **31 March 2014** (i.e. within 4 years of the commencement of NEM: AQA) but must have been renewed before **31 March 2013**.
- Provisional APPA Registration Certificates were valid until **31 March 2012** (i.e. within two years of the commencement of NEM: AQA) but must have been renewed before **31 March 2012**.
- Any foundries operating a scheduled process **without a provisional or permanent APPA registration certificate** at any time < commencement of NEM: AQA → Section 22A process.
- Section 22A NEM: AQA process → undertaking a listed activity in terms of NEM: AQA **without a provisional AEL or AEL**.
- Section 24G NEMA process → undertaking a listed activity relating to air emissions after 7 September 1997 **without an EA**.

Declared Air Quality Priority Areas in South Africa

Date: June 2020



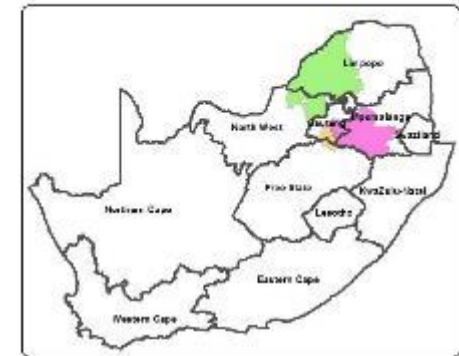
Legend

Foundries per province

- Gauteng
- Free State
- Mpumalanga
- North West

Air Quality Priority Areas

- Highveld Priority Area (47 foundries)
- Waterberg-Bojanala Priority Area (1 foundry)
- Vaal Triangle Airshed Priority Area (8 foundries)



Findings of Study – AEL and EA

Foundries <u>with</u> AEL	38 out of 57 General trends: <ul style="list-style-type: none"> • Only 22 foundries provided copies of their AEL • Gauteng has the highest number of AELs issued • AEL is generally a definite requirement for ferrous and most non-ferrous foundries
Foundries <u>without</u> AEL	19 out of 57
Foundries without AEL but has confirmed an AEL is needed	13 out of 57
Foundries currently following NEM: AQA S22A Process	Provided Completed Survey: 1 Meeting Discussions: 6
Foundries established before 1997	40 out of 57
Foundries established after 1997	17 out of 57
EIA Process Conducted	Yes – 22 of which 15 received Positive EA (Only 2 foundries provided copies of the decision) No – 25
Foundries currently following a S24G NEMA Process	3 out of 57 (These foundries were established in 1999, 2005 and 2011)

Atmospheric Emissions Licencing

Section 22A NEM:AQA Application Process:

- A NEM:AQA Section 22A Application Process is required for **all foundries that are non-compliant** in terms of NEM:AQA or APPA, and do not have an AEL. This process must take place regardless of any current or future changes to air quality legislation.
- All administrative fines issued to foundries **must be paid** before the Section 22A NEM:AQA Application can be processed and an AEL issued:
 - *For a foundry that has been operating illegally = R 200 000 once off*
 - *For each year in which the foundry has been operating without an AEL = R 200 000 per year*
 - *If a foundry has been operating illegally within a declared Air Quality Priority Area = R 1 000 000*

Atmospheric Emissions Licencing

Section 22A NEM:AQA Application Process (cont):

- Reduction of administrative fines is possible on a case by case basis, whereby each foundry must appeal the fine and provide a motivation for reduction.
- Municipalities will remain the licensing authority for AELs.
- Decision-making timeframe to decide on an AEL or Section 22A NEM:AQA Application is 60 days. This timeframe could potentially be reduced depending on discussions with the AELA.

Environmental Authorisation

Section 24G NEMA Application Process:

- Section 24G NEMA process is required for undertaking a listed activity relating to air emissions after 7 September 1997 **without an EA**.
- AEL Listed Activities in the 2014 NEMA EIA Regulations (as amended) do not have an operational phase, and it is of the understanding of the project team that such Section 24G applications cannot be lawfully lodged (i.e. no operational phase). However, the Competent Authority may require other processes, such as a Section 28 Duty of Care, for example. This will be clarified with the DEFF.
- Some foundries may trigger other similarly listed activities of the 2014 NEMA EIA Regulations (as amended), that do have an operational phase (e.g. storage and handling of dangerous goods), and as such a Section 24G NEMA Application will be required.

Environmental Authorisation

Section 24G NEMA Application Process (cont.):

- For Section 24G NEMA Applications, the latest 2014 EIA Regulations (as amended) need to be considered to verify if similarly listed activities are applicable to a particular foundry regardless of when the foundry was established.
- Note that in some cases both a Section 22A NEM:AQA Application and a Section 24G NEMA Application **may be required if a foundry is operational and does not have an AEL.**
- There are no specific timeframes for decision-making on Section 24G NEMA Applications.

Way Forward for Foundry Compliance

Step 1



- Confirm if foundries are going through a S22A NEM: AQA and/or S24G NEMA process (specifically focusing on listed activities that include operational phases).

Step 2



- E.g. Reduction of fines; reduced decision-making timeframes.
- E.g. Potential amendment to the NEM:AQA Listed Activities to not apply to all ferrous foundries but to rather include an informed throughput threshold. Note that this will require evidence and data to inform this decision by the DEFF. However, amendments to air quality legislation could benefit existing foundries, e.g. it could reduce the requirements for annual monitoring at foundries but it will not exempt foundries from the rectification process.

Step 3

- Consult with AEL Authorities in the key municipalities where operational foundries are located to understand the level of compliance at municipal level.

Remember: Questions in the chat stream



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Way Forward

- Latest database on the website
 - Foundries to verify and update details until end of the year
 - Template downloadable from website
- Invite the DEFF to give feedback on the status quo of the foundry industry & lobby for policy changes





For more information

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