



AUDITOR - GENERAL
SOUTH AFRICA

Follow-up performance audit report on rehabilitation of derelict and ownerless mines at DMRE

Briefing to Portfolio Committee on Mineral Resources and Energy

13 September 2022



Our mission and vision



OUR MISSION

The Auditor-General of South Africa has a constitutional mandate and, as the supreme audit institution of South Africa, it exists to strengthen our country's democracy by enabling oversight, accountability and governance in the public sector through auditing, thereby building public confidence



OUR VISION

To be recognised by all our stakeholders as a relevant supreme audit institution that enhances public sector accountability

Mandate for AGSA and portfolio committees

AGSA mandate

Constitution section 188

The AGSA must audit and report on the accounts, financial statements and financial management of government institutions

Public Audit Act:

Section 20

- The AGSA must prepare an audit report containing an opinion/conclusion on the fair presentation of the financial statements, compliance with applicable legislation and reported performance against predetermined objectives

Section 5(1)(aA)

- The AGSA may perform an appropriate audit of any institution to determine whether appropriate and adequate measures have been implemented to ensure that resources are procured economically and used efficiently and effectively

Section 5(3)

- The AGSA may, in the public interest, report on any matter within the functions of the AGSA and submit such a report to the relevant legislature and to any other organ of state with a direct interest in the matter

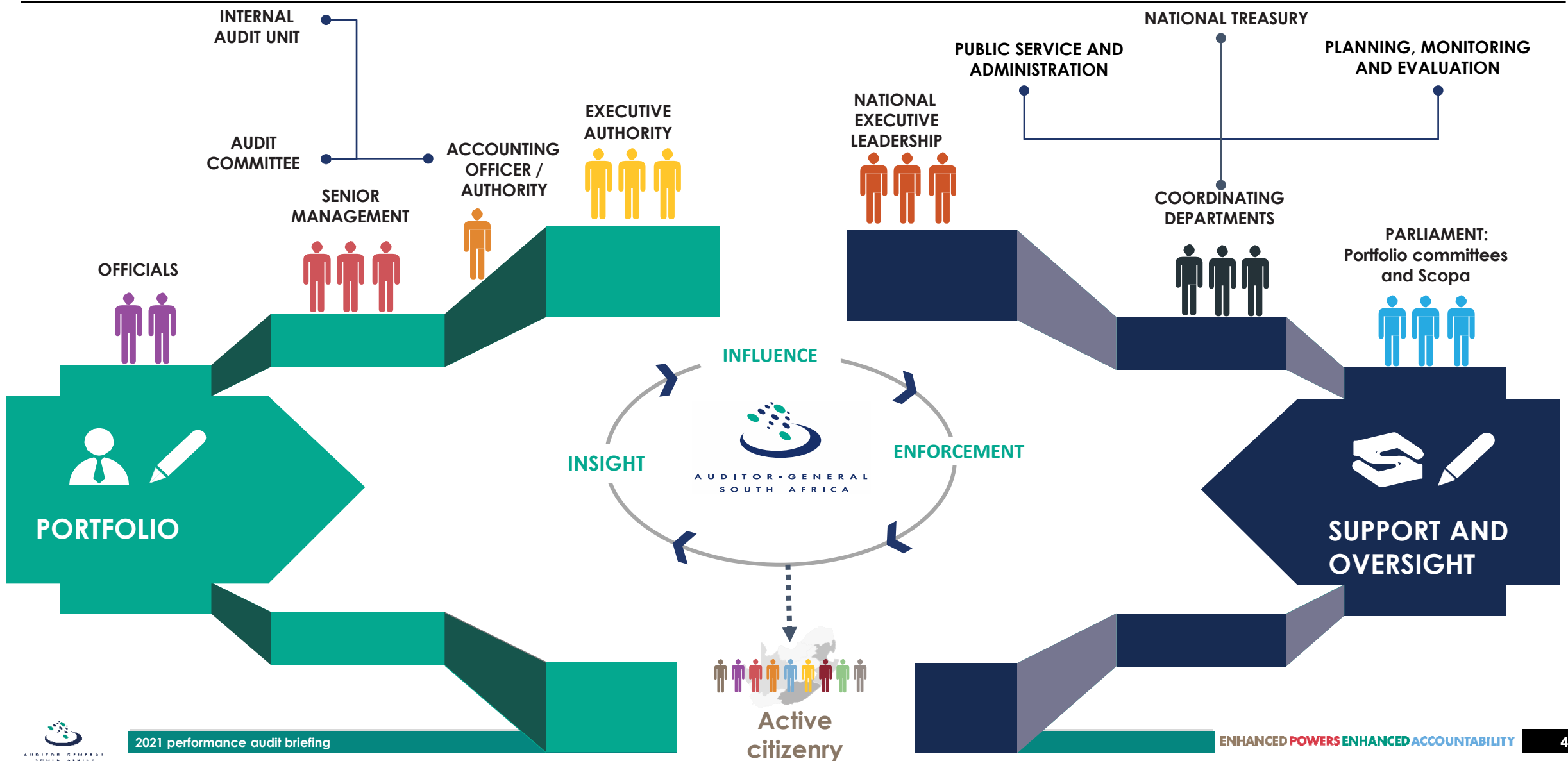
Portfolio committees

National Assembly Rule 227

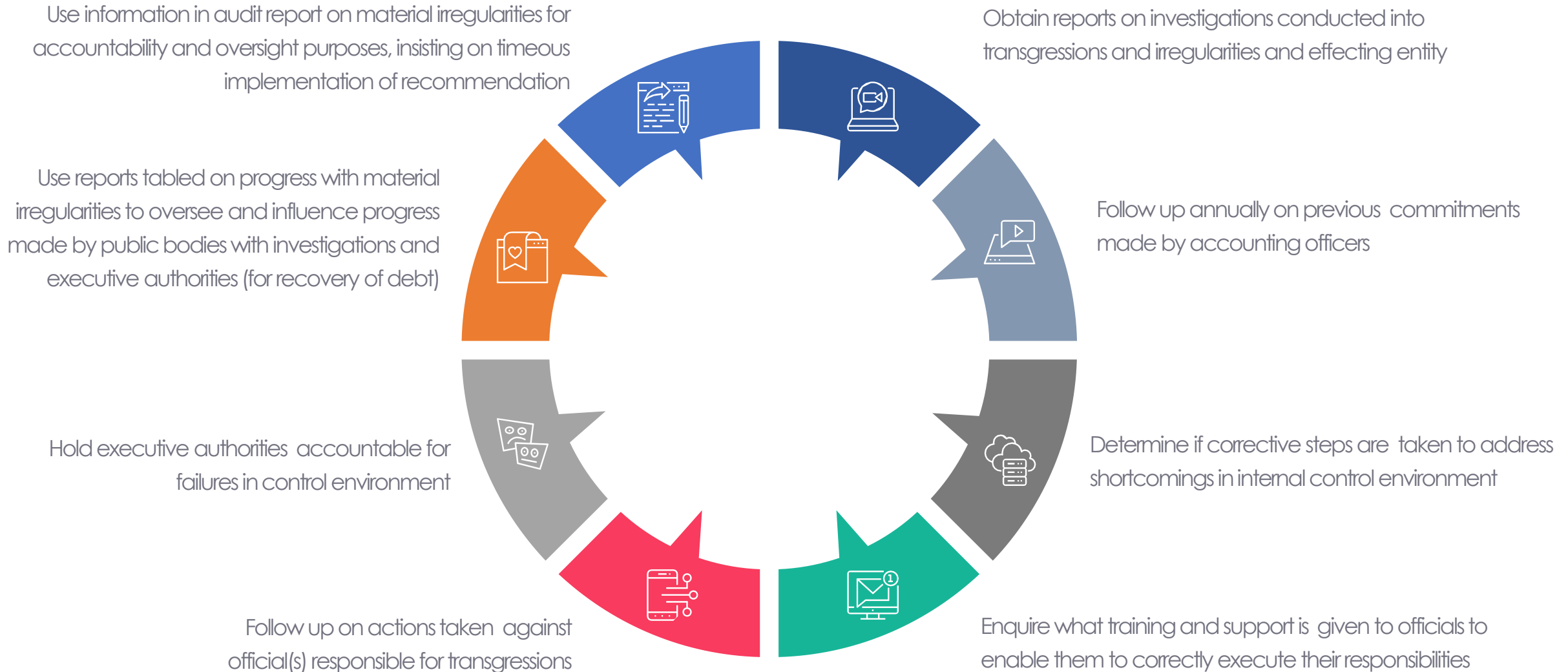
Portfolio committees may, amongst other things, perform the following functions:

- Deal with bills and other matters falling within their portfolio, as referred to them in terms of the Constitution, legislation or rules, or by resolution of the Assembly
- Maintain oversight of their portfolios of national executive authority, including implementation of legislation
- Consult and liaise with any executive organ of state or constitutional institution
- Monitor, investigate, enquire into and make recommendations concerning any such executive organ of state, constitutional institution or other body or institution, including the legislative programme, budget, rationalisation, restructuring, functioning, organisation, structure, staff and policies of such organ of state, institution or other body or institution
- Consult and liaise with any executive organ of state or constitutional institution

All have role to play in national government accountability ecosystem



What we understand as the role of oversight





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Audit background

Audit process

Performance audit

A performance audit evaluates measures instituted by management to ensure that resources have been procured *economically* and are used *efficiently* and *effectively*

Economy – acquisition of resources in right quantity, of right quality, at right time and place, and at lowest possible cost

Efficiency – optimal relationship between output of goods, services or other results and resources used to produce them

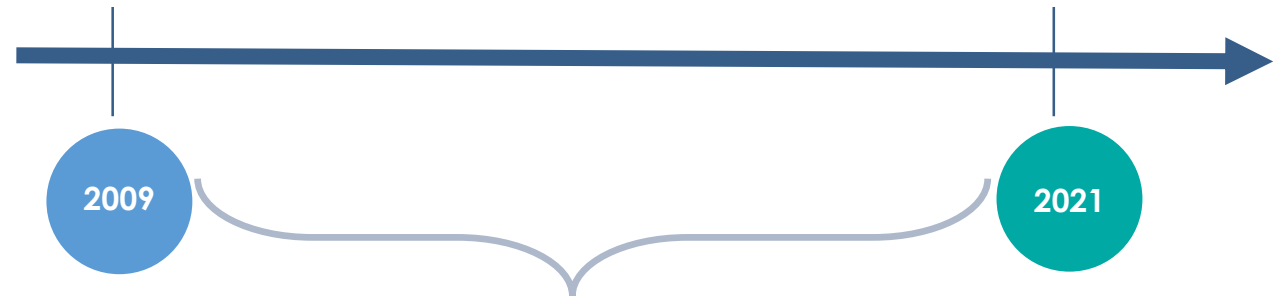
Effectiveness – performance in relation to achievement of policy objectives, operational goals and other intended effects of audited entity



Is the process for identifying and rehabilitating derelict and ownerless mines to minimise their social and environmental impact timely and cost-effective?

Performance audit on rehabilitation of derelict and ownerless (D&O) mines

Follow-up performance audit on rehabilitation of D&O mines



Objective: to evaluate progress made by Department of Mineral Resources and Energy (DMRE) since 2009, focusing on whether findings / situation still exist



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Rehabilitation programme progress 2021



2009 management commitments and progress made

No.	Management commitments	Progress to date
1.	National strategy will be signed off	<ul style="list-style-type: none"> Signed off in December 2009 No subsequent review performed
2.	Serious efforts will be made to implement national strategy effectively and to rehabilitate D&O mines	Implementation plan not costed and did not include all key deliverables as per national strategy (other high-risk commodity mines, different end-land use)
3.	High-risk commodities are identified and listed in national strategy, and ranking process will give guidance for future implementation of rehabilitation projects	Ranking finalised, but: <ul style="list-style-type: none"> implementation plan does not include other high-risk commodity mines (limited to asbestos mines and holings) no risk ranking done for 2 238 of 6 100 mines as DMRE did not confirm liability
4.	DMRE committed to timeously update and integrate D&O database with other databases	<ul style="list-style-type: none"> Database not continuously updated and reviewed (accuracy and completeness) Database not transferred from CGS to enable integration

2009 management commitments and progress made (cont.)

No.	Management commitments	Progress to date
5.	Foreseen expenditure and capacity of mineral regulation branch identified as priority – current human restructuring of branch insufficient	<ul style="list-style-type: none"> Two public entities have been mandated to help manage D&O mines Completeness and effectiveness of rehabilitation not determined
6.	Appropriation of funds for such reprioritisation will be requested	<ul style="list-style-type: none"> Annual appropriation was established for management of D&O mines, including monitoring Current funding levels insufficient
7.	Include standing agenda item for D&O mines at future meetings of Government Task Team for mine closure and water management (GTT)	<p>GTT (coordination):</p> <ul style="list-style-type: none"> Terms of reference (ToR) not approved Standing item not included Infrequent meetings held <p>Rehabilitation Oversight Committee (ROC) (oversight):</p> <ul style="list-style-type: none"> ToR not approved Did not function effectively



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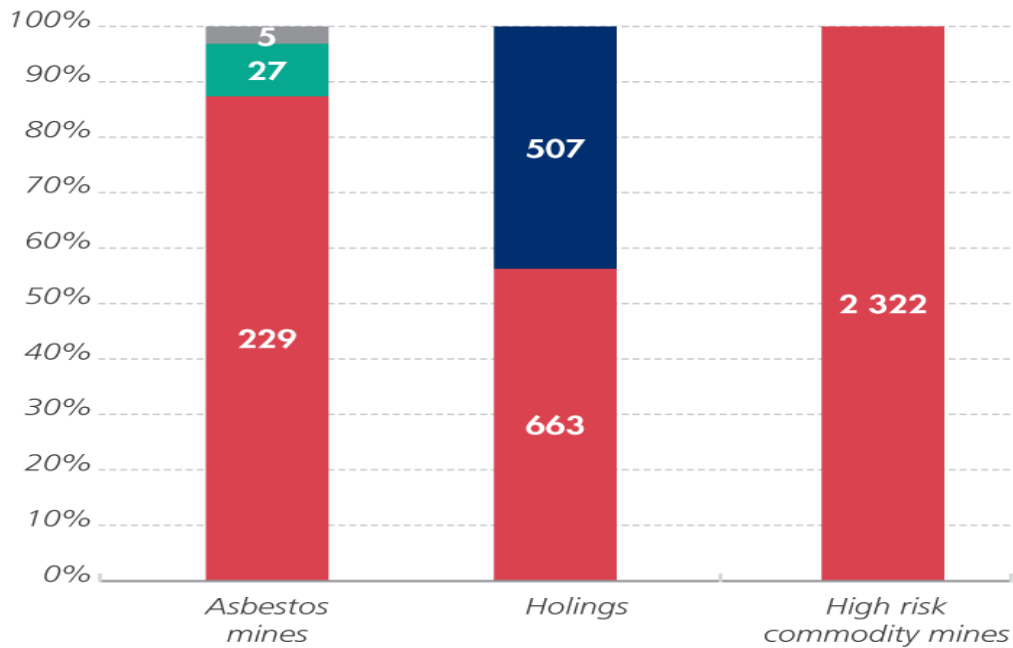
Key observations



2021 progress with rehabilitation of mines and closure of openings

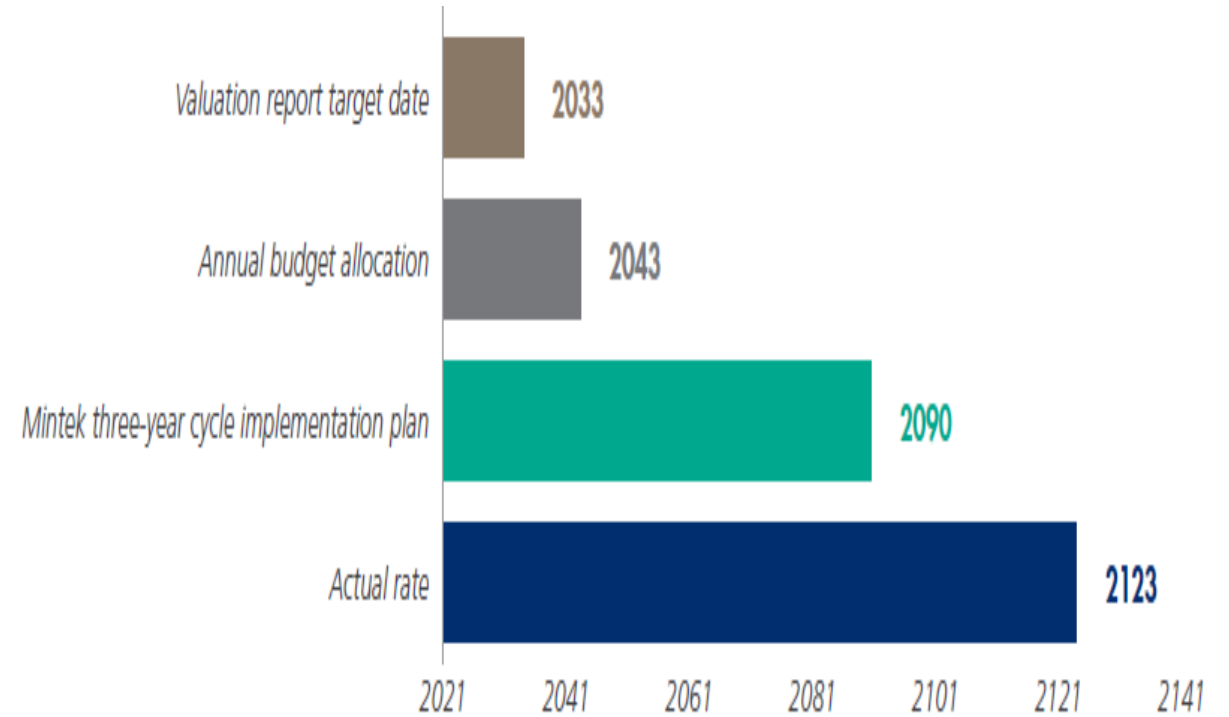
Rehabilitation of D&O mines not done in timely and effective manner to minimise social and environmental impact

Overall slow rehabilitation progress



- Not rehabilitated / closed
- Rehabilitated between 2009-2021
- Rehabilitated up to 2009
- Closed holdings

Misalignment in asbestos mine completion timeframes between actual, strategic and operational plans and/or funding levels



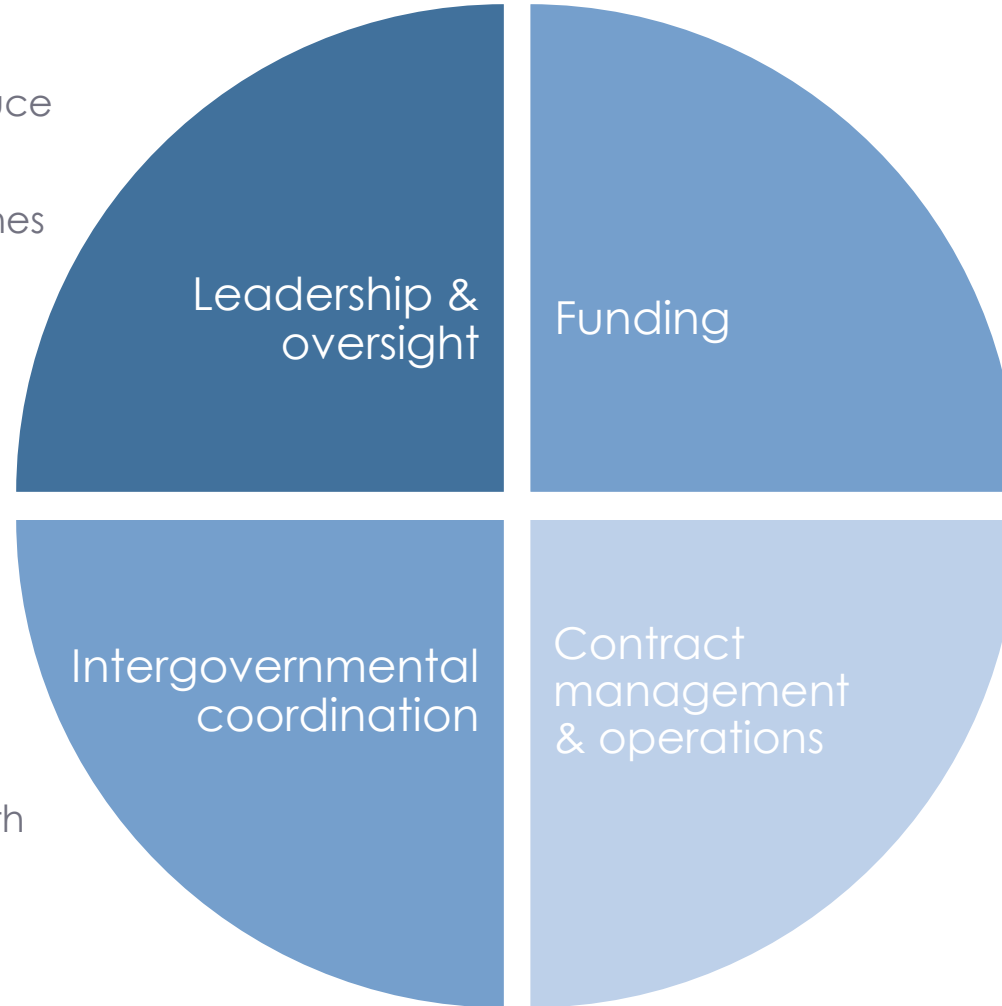
Key contributors to deficiencies



- Lack of strategic importance to reduce high number of remaining D&O mines
- ROC did not fulfil its responsibility



- GTT did not deal with rehabilitation of D&O mines



- Insufficient budget



- Lack of processes and procedures to direct programme
- Implementing agent contracts do not contain sufficient detail
- Database contains errors
- Inadequate stakeholder engagement framework
- Insufficient post-rehabilitation monitoring and maintenance



Leadership and oversight – key deficiencies



Lack of strategic importance to reduce high number of remaining D&O mines

- Outdated national strategy
- Implementation plan not costed and not aligned to all key outcomes in national strategy
- National Mine Closure Strategy not finalised 11 years after implementation of national strategy to direct different end-land use
- Between 2011-12 and 2018-19, department reported on rehabilitation of both asbestos mine sites and holings under one measure in its annual performance plans, leading to slow progress not being evident
- DMRE's current three- and five-year plans do not include rehabilitation programme
- Government's liability towards 2 238 identified D&O mines not finalised
- Key requirements of national strategy not included in performance contracts of responsible officials

ROC did not fulfil its responsibility

ROC did not fulfil its responsibility to oversee how programme is managed

Leadership and oversight – key recommendations



DMRE should reassess strategic importance by:

- reviewing national strategy every five years and compiling comprehensive implementation plan to achieve national strategy objectives
- determining strategic importance of D&O mines programme within DMRE's strategic objectives, given competing priorities and available funding
- finalising and adopting NMCS, which should include compiling a comprehensive national mine closure policy and implementation plan.
- assessing (including research) and deciding on approach to rehabilitate or repurpose all 6 100 D&O mines instead of only focusing on rehabilitating and closing D&O asbestos mines and holings
- aligning individual performance contracts of relevant officials to requirements of the NMCS

ROC function should be tightened by:

- finalising and approving ROC terms of reference to mandate its oversight functions.
- discharging its responsibility and assessing success of programme implementation

Funding – key deficiencies



Insufficient budget to rehabilitate remaining asbestos mines by 2033 and all high-risk commodity mines by 2038

Asbestos

- Required: R3,9 billion to rehabilitate 229 asbestos mines
- Current budget: R1,7 billion (up to 2033) – 44%
- Expected completion timeframe: 2043

Other 2 322 high-risk commodity mines

- No budget
- Implementation plan not costed to support request for appropriate annual funding from National Treasury
- Although specific budget was allocated for post-rehabilitation monitoring activities, it was not based on monitoring programmes and procedures to ensure that rehabilitation was sustainable and we could not evaluate whether current allocated budget was sufficient

Funding – key recommendations



Secure funding required to meet operational targets and requirements

DMRE should:

- compile, cost and approve comprehensive D&O mines implementation plan that covers all national strategy key deliverables
- use this information to compile DMRE's five-year strategic plan, rolling three-year plan and annual performance plan
- use costed implementation plan, strategic plan and annual performance plan to support the request for annual funding from National Treasury

Contract management and operations – key deficiencies



Lack of processes and procedures to direct programme

- Compiling project plans (prioritising and scheduling mines to be rehabilitated)
- Including information in project files and loading files onto D&O mine database
- Recording additional mine sites and holings identified during rehabilitation
- Implementing monitoring programmes and remedial action

Implementing agent contracts do not contain sufficient detail

- Contractual relationships and document management
- Post-monitoring activities and maintenance work
- Recording additional D&O mine sites and holings identified during rehabilitation

D&O mine database contains errors

- Not regularly updated and monitored – incomplete and inaccurate information

Inadequate stakeholder engagement framework

- Did not include solutions for unsuccessful stakeholder engagements during rehabilitation

Contract management and operations – key deficiencies



Insufficient post-rehabilitation monitoring and maintenance for asbestos

- Haphazard environmental and post-rehabilitation monitoring
- No remedial action to address deficiencies identified during post-rehabilitation monitoring:
 - Timely correction of identified site-specific deficiencies
 - Improving designs of earthworks, revegetation and water control for future rehabilitations/ sealing



Deficiencies identified by DMRE during post-rehabilitation monitoring performed in 2017 (rehabilitation performed 2007)

No corrective action taken to date

Contract management and operations – key deficiencies

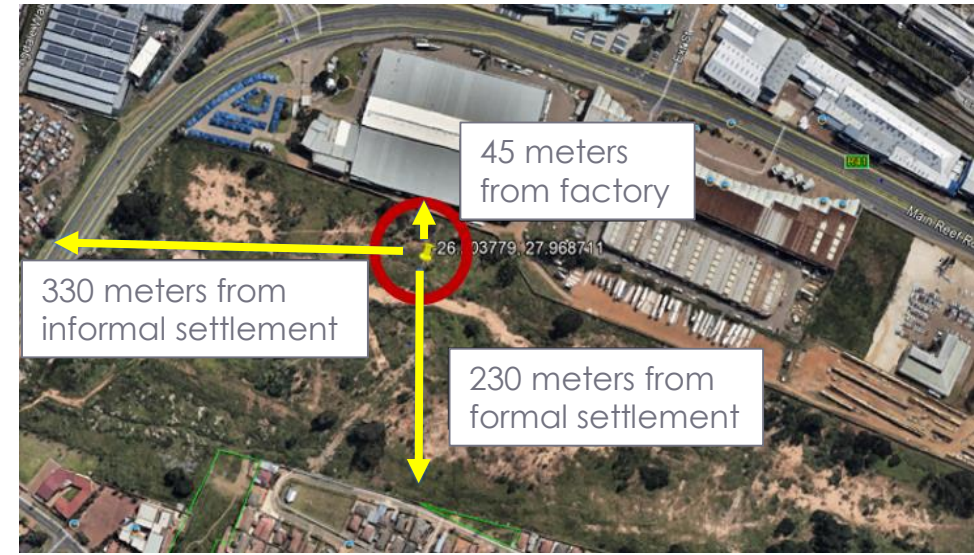


No post-rehabilitation monitoring and maintenance for closed holings

- Active illegal mining and vandalised headstone markers not detected and appropriately responded to



Active mining on previously closed holing site close to residential area in Limpopo



Illegal mining on previously closed holing site close to residential area in West Rand

Contract management and operations - Key recommendations



DMRE should:

- develop processes and procedures to direct planning, execution, monitoring and reporting of D&O mines programme
- develop monitoring programmes that include roles and responsibilities for implementing corrective actions
- amend its current contracts with implementing agents to include enough detail about contractual relationship, document management, and number and frequency of monitoring activities. Contract should be monitored continuously to implement corrective action where needed
- allocate roles and responsibilities for maintaining and reviewing D&O mines database to ensure that information is accurate and complete
- revise its current stakeholder engagement framework to include appropriate dispute resolution processes that will address current challenge of disputes between local communities and DMRE about suspended asbestos mine rehabilitation projects

Intergovernmental coordination – key deficiencies



GTT did not deal with rehabilitation of D&O mines

- GTT mandate and functions not approved by directors-general of:
 - DMRE
 - Department of Water and Sanitation
 - Department of Forestry, Fisheries and Environment
- Key functions required facilitation and coordination of challenges in mine water management and mine environmental management, including sustainable mine closure options

Intergovernmental coordination – key recommendations



GTT functioning should be improved by:

- directors-general of relevant departments approving terms of reference to direct GTT's mandate and functions.
- terms of reference including responsibilities relating to mine closure and water management at D&O mines

Recommendations to Portfolio Committee

Monitor and regularly follow up with executive authority and accounting officer on:

- progress on audit action plans implemented by DMRE
- rate of rehabilitation against planned rehabilitation rates and ensure there is consequence management where targets are not met



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Citizen impact



Impact of D&O mines

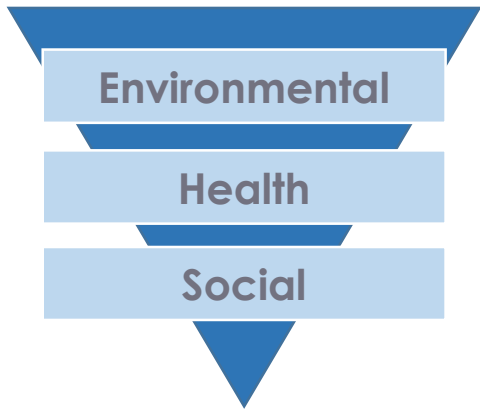


Number of abandoned mines not rehabilitated/closed, or not sustainably rehabilitated/closed

Exponential increase in government's financial liability to rehabilitate due to slow progress

Negative impact on environment and on local communities' health and safety:

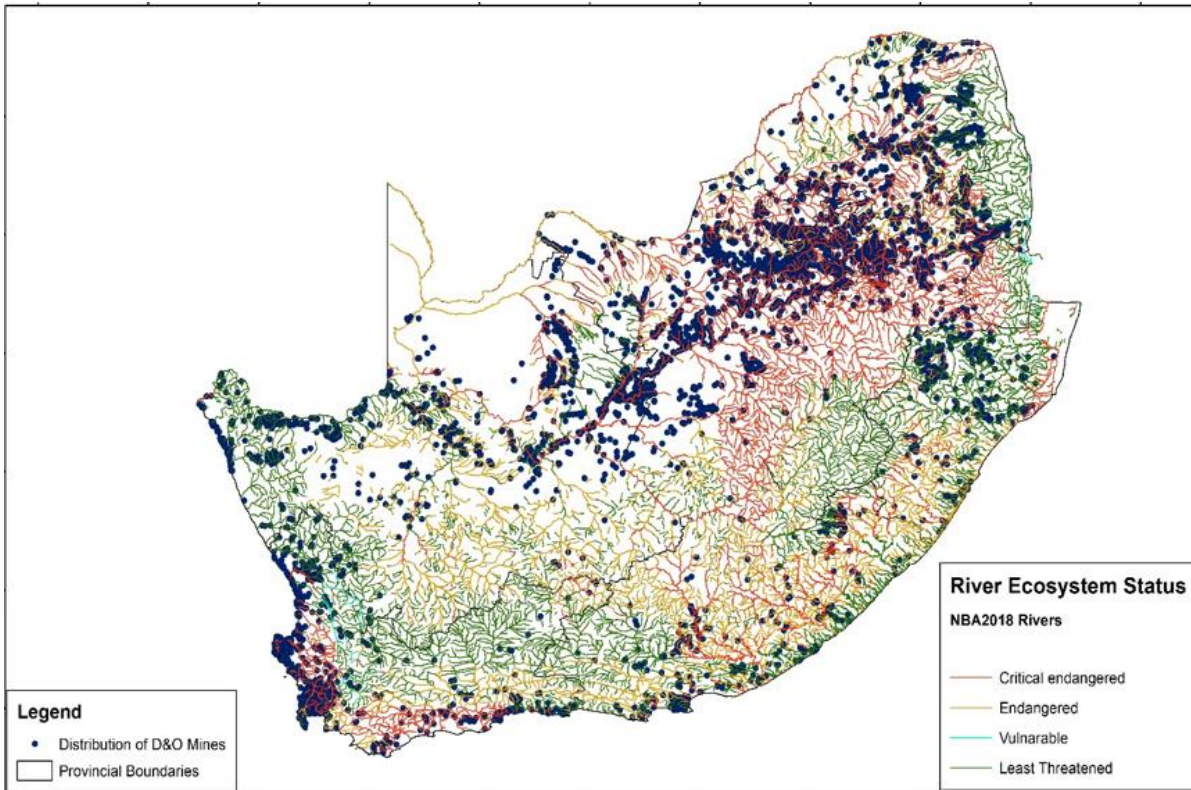
- Contamination of agricultural soil, groundwater and surface water with acid, salts and metals
- Air pollution by dust
- Uncontrolled combustion from burning mine workings or dumps
- Surface deformation – open shafts and unstable slopes
- Illegal mining activities



Impact of D&O mines



Contamination of agricultural soil, groundwater and surface water with acid, salts and metals



- South Africa is a water-scarce region that depends on rivers and groundwater for food production and economic activity
- Many abandoned coal mines and hard rock (i.e. gold and copper) mines emit acid mine drainage (AMD)

Impact of D&O mines



Air pollution



Radioactive particles blown from mine dump opposite informal settlement

- **Asbestos mine spoil dumps**
 - Unmonitored D&O asbestos-polluted environments release asbestos fibres into atmosphere, reaching critical levels and becoming a hazard if inhaled; preventing vegetation from growing
 - Could cause asbestosis, lung cancer and mesothelioma
- **Gold mine tailing dumps**
 - Highly radioactive dust (from abandoned mine waste) filled with uranium and cyanide transported during windy season – Gauteng, with highest population density
 - Pollutes land, endangering ecosystems
 - Causes respiratory diseases (TB and asthma) and heart and lung diseases in humans and livestock in communities living in close proximity
 - Biological effects of ionising radiation on human body include genetic (genes and chromosomes get altered) and non-genetic (body damage, i.e. birth defects, burns, some types of leukaemia, miscarriages, tumours)

Impact of D&O mines



Uncontrolled combustion from burning coal mine workings or dumps

- Spontaneous combustion results from self-heating, caused mainly by low-temperature oxidation of coal
- Uncontrolled fires in spoil piles present problems including:
 - production of toxic gases
 - damage to rehabilitated land
 - emission of greenhouse gases, leading to global warming
 - sink holes

Negative impact on air quality and human health, and destroys natural habitat of fauna and flora

Impact of D&O mines



Surface deformation



- Surface deformation, particularly mining surface subsidence (i.e. sinking of land surface) caused by abandoned mine infrastructure, changes hydrological pathways
- Many unsafe mine openings not rehabilitated/ closed
- Mine shafts and openings left unprotected
- Unprotected openings and unstable slopes pose serious safety risk for local inhabitants and livestock living in close proximity
- Land subsidence could disturb and damage surface infrastructure

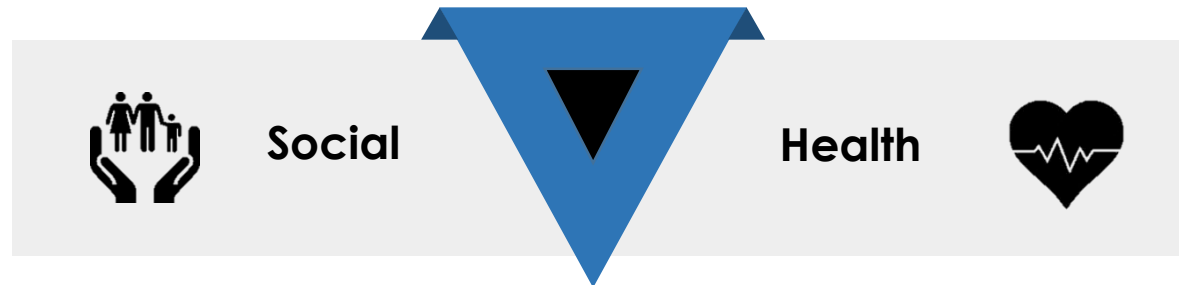
Impact of D&O mines



Illegal mining activities



- Unsafe mining operations (i.e. steep excavation slopes, high risk of collapse):
 - contribute to health and safety concerns
 - cause irreparable harm to environment and ecology
- Threaten viability of government's holing programme, as illegal miners open previously sealed holings





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Key initiatives planned / implemented by DMRE



Key initiatives by DMRE



DMRE will:

1

Update national D&O mine rehabilitation strategy once NMCS is finalised – national D&O mine rehabilitation strategy depends on NMCS because post land use should be aligned with legislation/ policies/ strategies of other government departments as defined in NMCS; NMCS was gazetted for public comments in May 2021 and final strategy will be gazetted by March 2022

2

Revise rehabilitation project targets to align with historical budget and funding trends from National Treasury

3

Immediately implement action plans to help ROC fulfil its responsibilities according to terms of reference.

4

Conduct liability study in 2022-23 financial year to quantify government's liability for all abandoned mines on D&O mines database; study will include DMRE audit and verification of information contained in database

5

Implement performance contracts that include all key requirements of D&O mines rehabilitation programme, starting in 2022-23 financial year

6

Develop procedures with immediate effect before end of current financial year (March 2022) to direct D&O mine rehabilitation programme

Key initiatives by DMRE



DMRE will:

7

Continue to expedite monitoring of D&O mine sites – will be covered in procedures for monitoring and maintenance activities, which will be developed before end of current financial year (March 2022)

8

Review and revise its contracts with implementing agents, and implement revised contracts in next financial year

9

Look at migration of D&O mines database from CGS to DMRE as part of merged department's IT requirements – database transfer will be finalised in 2023-24 financial year

10

Engage both CGS and Mintek about putting in place an interim arrangement that will ensure database is kept live and regularly updated until migration has been completed

11

Update stakeholder engagement framework to include what action should be taken if stakeholder engagements with communities are not successful

12

Propose that this item be added to GTT agenda as original GTT mandate did not address D&O mines

THANK YOU

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