



PanAfGeo+ SO1 national
AMREC/PARC - UNFC
workshop
Pretoria | 12 May 2026

UNFC Case study

Towards national resource governance

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**Classification becomes national resource intelligence only
when it is connected to governance routines.**

1 Order

UNFC creates the
decision grammar

2 Awareness

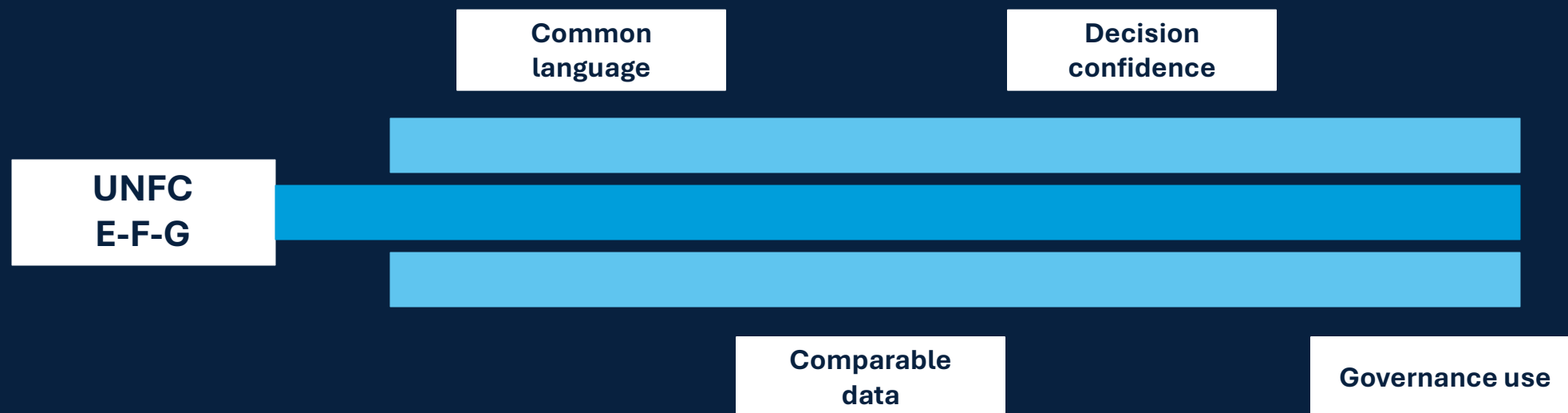
the map must be
tested against the
territory

3 Action

UNRMS turns
information into
stewardship

Classification is the headlight

Without classification order, national resource data is like driving in darkness: motion may continue, but judgement becomes unsafe.



**Classification is not bureaucracy.
It is the first operational condition
for rational policy, investment and
stewardship.**

UNFC is a map for resource projects

The system classifies projects by viability, feasibility and confidence. It is a structured view of a resource in context, not a label for tonnes alone.



**Environmental,
social and
economic
viability**

Market, legal, regulatory, social and environmental conditions for a project to proceed.



**Technical feasibility
and project
maturity**

Studies, technology, approvals and commitments that show whether the project can be implemented.



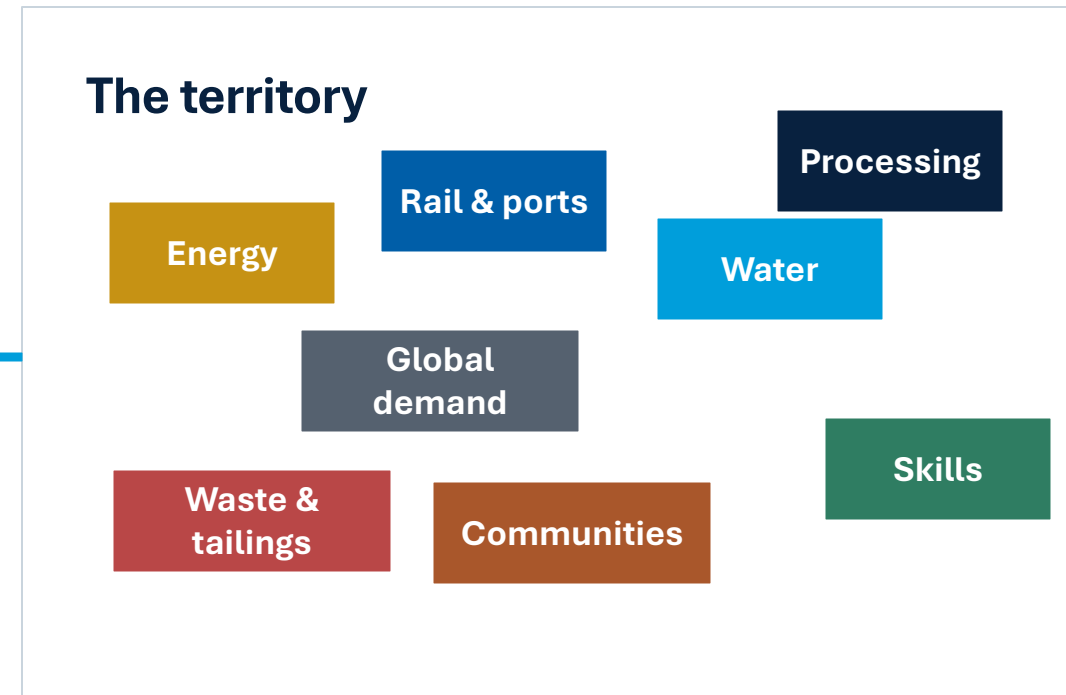
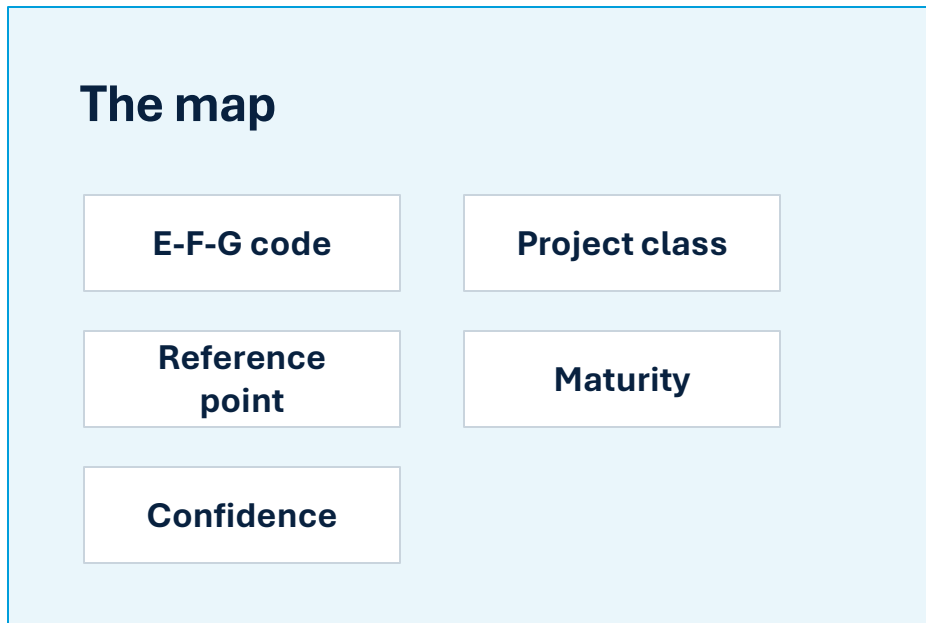
**Degree of
confidence in
estimates**

Geological knowledge and estimate confidence, from direct evidence to early indirect evidence.

Reading discipline: E-F-G gives a project address. The governance question is what that address enables or blocks in the national resource system.

The map is not the territory

UNFC gives the structured map. National resource governance must also read the live territory: infrastructure, institutions, social trust, technologies and global demand.



A good professional uses the map, but does not become fixed on the map.

South Africa's mineral system is strategic, but stressed

The country has scale, expertise and strategic commodities. The governance challenge is to convert that base into resilience, trust and industrial options.

6.1%

Mining contribution to nominal GDP in 2024

R203.7B

Mining gross value added in 2024

R865.8B

Total mineral sales value in 2024

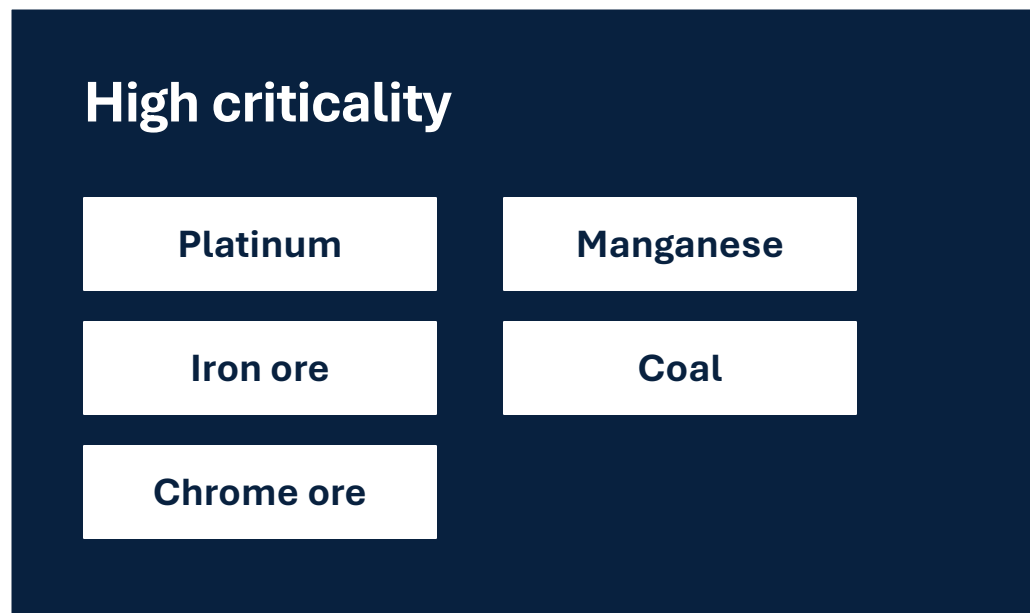
474,736

Direct and contractor employment in 2024

Constraint field: logistics, illegal mining, regulatory issues and cost pressure can turn geological strength into system fragility.

The resource portfolio is already critical

South Africa's 2025 strategy makes criticality a national prioritisation question: what matters, where supply can fail, and which choices create resilience.



Criticality is not a list. It is a disciplined national conversation about system exposure, supply resilience and industrial options.

Source: Critical Minerals and Metals Strategy for South Africa, 2025

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Case-study logic: from deposit to national option

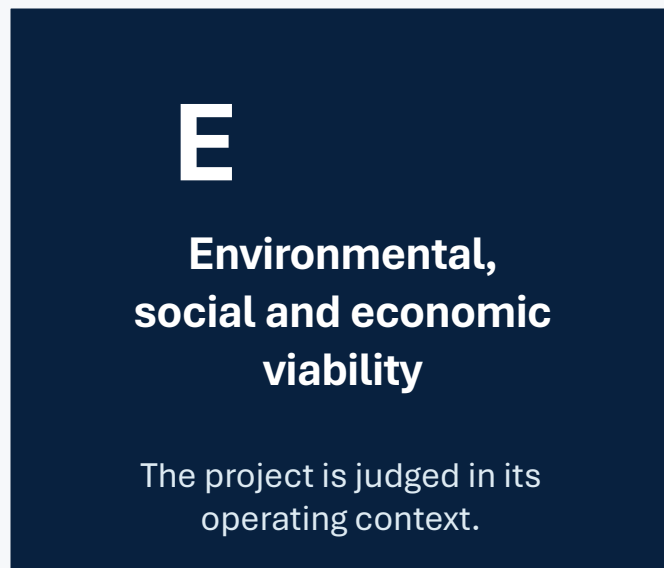
A UNFC case study should show how a classified project becomes a usable governance object.



Portfolio lens: PGMs | manganese | chrome/ferrochrome | vanadium | iron ore

The E axis is where the territory enters

For national governance, E is not only commodity price. It is the interface between the resource project and the society, environment, law and market in which it must operate.



Social licence

community trust, labour and
local impact

ASM / illegal mining

formalisation, safety and
accountable participation

Waste and tailings

liability, circular recovery and
stewardship

Water-energy

operational resilience and
system stress

**This is where professional judgement links geology to
governance.**

From upstream extraction to a mineral-based economy

The fast-changing world changes the role of geology: minerals increasingly carry the energy, digital, mobility and defence transitions.

Extract-export model



Useful, but narrow: value and risk can leave the national system.

Mineral-based economy

hydrogen

batteries

EVs

defence

digital systems

renewables

South Africa's question is not only what is in the ground, but which mineral systems can support future industrial capability.

Connect UNFC outputs to the 12 UNRMS principles

Classification provides order. UNRMS provides the management direction for stewardship, value addition, circularity, transparency and competencies.



UNRMS management principles

1. State rights and responsibilities

2. Responsibility to the planet

3. Integrated and indivisible management

4. Social engagement

5. Service orientation

6. Comprehensive resource recovery

7. Value addition

8. Circularity

9. Health and safety

10. Innovation

11. Transparency

12. Continuous strengthening of competencies

Governance point: classification is the entrance. Management is the operating system.

What the modern geologist must see

The map remains essential. The professional edge is seeing how the map behaves inside the real system.

Resource maturity

E-F-G classification, study level, reference point and confidence

System constraints

energy, water, logistics, skills, processing, social risk and waste

National intelligence

resilience, value-addition, innovation, transparency and stewardship

The role expands from resource estimation to national resource intelligence.

Takeaway: order, awareness, action

The national value of classified resource information is realised only when it is connected to stewardship, innovation and decision routines.

1 Order

Classification creates the order needed to move.

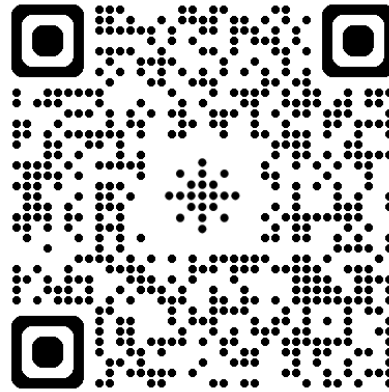
2 Awareness

Classification alone is not management.

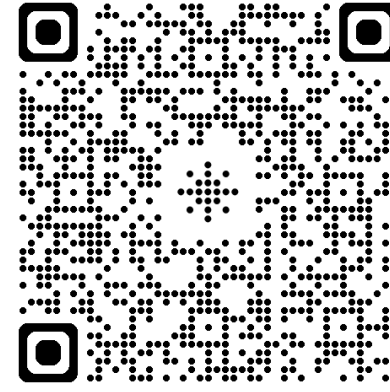
3 Action

UNFC plus UNRMS can turn resource data into accountable national governance.

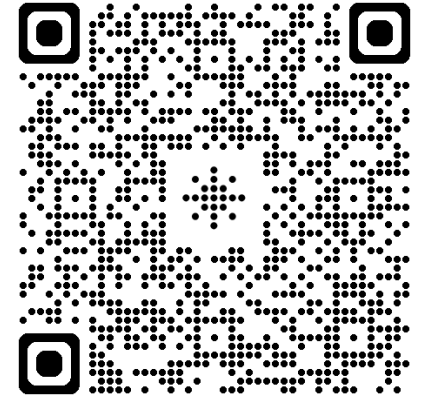
South Africa does not need classification as an administrative end point. It needs classified information with accountable use.



Scan for UNFC
and UNRMS



Scan for
Criticality Tool



Scan for MidReVa
Tool

SUSTAINABILITY IN RESOURCE MANAGEMENT



Thank you!

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