Mine Closure & Rehabilitation: From Dereliction to Accountability?

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Accountability and Responsible Mining

- Achieve zero harm
- Realise net positive environmental impact
- Improve social performance
- Leave a positive legacy

- What does this mean for closure and rehabilitation?
Mining Lifecycle Planning


- Good environmental and social practice throughout operating life
- Concurrent rehabilitation
- Adequate financial provision
- Implementation of regularly updated closure plan
- Regular and meaningful consultation
- Collaboration

→ Closing old mines is difficult
→ On-selling of marginal mines problematic
Post-closure thinking is relative new
Existing guidance is inadequate – we need new models
Mine closure legislative review

A review of public policy in 10 jurisdictions with a view to determining level of convergence and divergence in the character and content of regimes and regulatory trends

Focus Areas

- Integrated closure planning
- Environment, health & safety requirements
- Financial assurance systems
- Relinquishment & post-closure obligations
- Socio-economic requirements
- Transparency, stakeholder engagement & public participation
- Role of international standards
Mine closure is moving higher up the regulator’s agenda

- Regulations, guidelines and processes under review
- Economic cycle seeing more unplanned closure
- Growing public/civil society awareness
- “Shifting goal posts”
Regulation continues to focus on environmental clean-up & rehabilitation with increasingly stringent financial provisioning & relinquishment criteria

- Convergence around core set of closure issues including safety, decommissioning, physical & chemical stability and restoration of ecosystem functionality
- Cost models produce widely different estimates of total closure costs
- Very few examples of successfully relinquished mines sites
Lack of regulatory structure around socio-economic aspects

• Passing reference to integrated planning and social impacts
• Lack of community involvement in closure planning
• Closure performance will influence social licence to operate
There are a number of emerging issues affecting direction of regulation – including climate change impacts & water security

- Look to trends in EIA practice
- Role of water ministries in closure permitting likely to increase
International standards are playing an important role in developing countries

- In weak governance zones, the IFC performance standards and the Equator Principles play an increasing role in setting the conditions for accepted good practice for mining projects, including decommissioning.

- The establishment of a technical committee in ISO to look at a mining reclamation management standard could be an interesting development at some stage in the future.
Outstanding issues 1

- Measure the number of officially closed mines [More scrutiny required of successful relinquishment examples].
- Do increased levels of prescriptiveness lead to better closure outcomes?
- How do different jurisdictions align multi-agency governance of mine closure?
- How do we better understand uncertainty and complexity of linked socio-ecological systems & move away from assuming stable conditions over time?
- How do we better link mining planning & permitting with spatial development plans & frameworks developed by different parts of government?
Outstanding issues 2

- As strategic impact assessments become more widely applied, how will regional closure planning be embedded in closure regulations?
- Assessment of pooled funds to manage rehabilitation default risk.
- Alignment of bonding requirements; e.g. water quality laws.
- Comparing different methodologies used to estimate closure costs.
- Different mechanisms allowing for the release of the financial assurance.
- Forecasting for climate change and post-closure obligations.
- Transfer of residual and latent risks upon closure.
- Scope and duration of post-closure monitoring and maintenance.
Outstanding issues 3

- What processes & institutions are needed to manage downscaling, retrenchment and reskilling of mine employees?
- What systems are needed for employees who have contracted occupational diseases?
- What processes and institutions to support local economies, local governments & establishment of alternative livelihoods?
- What models for continued operation & maintenance of certain mining infrastructure, including provision of electricity?
- Increasing pressure for stakeholder engagement as the mine transitions to closure.
Licence to operate in South Africa

Legal licence to operate

- The national environmental management act (green laws)
- Biodiversity management policy
- Coastal zone act
- Air quality act
- Environmental conservation act
- Waste management act
- Water management act

Social licence to operate

- Mining charter
- Social and labour plans
- Local economic development plans
- Carbon Disclosure Project
- JSE/SRI/GRI
- External audit and assurance
- King II and III
- Sustainable development

Market licence to operate

- All elements managed in an integrated manner

Source: Exxaro
Why are we not getting it right in SA?

- Deep resistance to talking about closure and downsizing
- ‘Mines never close’ – from A to Z
- ‘Chain of custody’ - those that open mines, develop closure plans, build relationships with communities & make financial provision, seldom close the mine
- Lack of knowledge about the extent of social costs of closure
- Timeframes – building social and human capital (and sustainable businesses) takes time (often longer than life of mine)
- Challenges of managing long-term environmental issues
- Scale – current focus on individual mine and local/ mine-scale, rather than multi-mine and regional approach (incl. labour sending areas)
Regional closure planning

“No mine can close independently of its neighbours – there is a need to rethink the kind of tools that we use to manage impacts. If a mine closes prematurely, that mine has impacts on its neighbours; mines cannot have a stand-alone closure plan.”

Chamber of Mines Submission to HRC
Links between poor closure practice and illegal mining

• Huge legacy of poorly closed sites in South Africa

• Estimated 70,000 *zama zamas*

• Re-opening of old mine workings presents a significant environmental, safety, and security challenge on rehab, access

• Impact on rehab, access

• ‘Filling the gap’ between operations ceasing and legal closure?

• Require clarity regarding temporary cessation, partial closure, “warehousing” and care and maintenance
• It is time to start an explicit conversation and public debate about the future of local communities both in the mining regions and the labour sending areas.