Considerations and Recommendations in Mine Closure Policy in Papua New Guinea

The consultant’s findings on investigative research into mine closure policy with consideration to biophysical, financial, economic, socio-cultural and environmental issues in the light of contemporary international best practice

Presentation and discussion: regional forums
Acknowledgement

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“Vision 2050 should be grounded and secured in the first ten years [...] Projections and key tangible outcomes must be achieved during this period in order to secure the way forward for 2020 to 2050. [...] A key opportunity is to adopt a ‘focus’ strategy on the resource and manufactured exports to ensure that it is accountable and sustainable, with strong initial growth measures from 2010 to 2020. Once strong growth has been achieved in the mining industries and the renewable resource-based exports, it is important to use that income to create more opportunities to grow the economy.”
The Importance of a Mining Closure Policy

“With the industrial revolution and improved enrichment techniques came large scale, often open pit, mining. Such mining not only removed large tonnages of ore but also of waste rock and produced large quantities of tailings as well - all of which require rehabilitation upon mine closure. Unfortunately, such rehabilitation on closure did not take place until recent years, and today the developed nations, as well as the developing and emerging economies, are faced with the need for closure and rehabilitation of mines and mining waste facilities that represent almost a century of mining activities.

For the future, in order to prevent history from repeating itself, the majority of countries have put in place policies and legislation that provide directly (within the national Mining Law) or indirectly [...] for comprehensive mine closure. “

In the past mining companies used irresponsible mining methods with no regard for environmental protection and mine rehabilitation. Inadequate and inefficient mine closure policies, legislative controls, and past mining practices have resulted in a legacy of abandoned and derelict mine sites, which can have substantial impacts on environmental liabilities and mine rehabilitation costs in the absence of appropriate legislative frameworks and controls.

Until recently mine decommissioning and mine closure planning were not a requirement or regulated within the mining industry and the environmental, social and economic impacts were not identified or considered within the initial mine site development. “

Principles of Mine Closure

1. To demonstrate responsible governance and leadership in Mine Closure appropriate planning and strategic implementation will have to be undertaken to ensure that as many benefits as possible from mining are sustained beyond the life of a mine.

2. Appropriate planning is also required to ensure that any negative environmental or social impacts from mining activities are minimised before operations begin, during the mine life and eliminated, where possible, after mining operation ceases.

3. Mine Developer required to inform the State at the pre-feasibility stage, on how the company would be planning to work with stakeholders to achieve (i) and (ii) above, during and after mining.
Mine Closure Principles

4 Each mining project in Papua New Guinea will develop and implement a site-specific ongoing mine closure plan.

5 Integrated mine planning, incorporating exploration, development, operations and closure, will be practised.

6 Integrated mine planning to address:
   – Conversion of the resource into long-term sustainable capital;
   – To have an action plan and monitoring measures commensurate with the project’s impacts and risks particularly as it affects the social and environmental management system.

7 Mine closure plans are not static and will require revision and update from pre-operation, operation, pre-decommissioning and post-decommissioning.
8 Plans must include easily identified targets which form key monitoring and evaluation criteria for external and independent auditing:

- Scope of plans are to minimise short and long-term negative impacts on the environment and social fabric of the people living in and around the mine affected areas.

- Plans must adopt the KISS principle (kept simple and strictly assessable)

9 That in order to protect the interests of landholder stakeholders and community members more generally, processes of mine governance, negotiation and mediation are to employ the *Participatory Resource Management* methodology (PRM) or an equally acceptable best practice method of engagement.

10 These principles are best achieved through this Mine Closure Policy, which will apply to all current and future mining operations in Papua New Guinea.
In line with the PNG Vision 2050, beyond the *biophysical*, the Mining Closure challenge for PNG is:

- To align with medium-term development objectives
- To support these objectives (environmentally, financially, socially, economically)
- To have identifiable, measurable outcomes with monitoring

Pre-contemporary Mine Closure focused on the biophysical
## Contents of Mine Closure policy

### Table of Contents

**PART (I):** PREAMBLE AND GUIDING GOALS AND STRATEGY

1.0 Preamble

1.26 Monitoring and accountability

**PART (II):** PRINCIPLES FOR MINE CLOSURE PLANNING

**PART (III):** KEY POLICY ELEMENTS

**PART (IV):** GUIDELINES FOR THEIR APPLICATION

- 1.0. Administration Aspects
- 2.0. Financial Aspects
- Section 2(a): Mine Closure Security
- Section 2 (b): Mine Closure Trust Fund
- 2.1 Component Summary Outline
- 3.0. Environmental/Technical Aspects
- 4.0. Socio–Economic Aspects
  - 4.1 The socio-economic aspects of mine closure will be referred to in the Mine Closure Plan
- 5.0. Dispute Resolution
- 6.0 Structure of a Mine Closure Plan
Best Practice

The Equator Principles (2006)

Mining Finance and Sustainability (2002) World Bank Group

Performance Standards on Environmental and Social Sustainability Effective (2012) International Finance Corporation (IFC)


Accidents Prevention and Response (Seveso I, II and III)

The Mining Closure Policy must embody the principles from best practice
Sustainable Development

DEVELOPMENT:

• Raising levels of life sustenance and dignity
• Sustainable occurs when you can measure the progress.
• The cost of sustainable development to the mine developer: that is to ensure integrated development has long term impact
Financial Models only after income is produced (from revenue)

Cost to Mine Developer from Revenue or Income;
- Security Bond is never paid unless called on eg environmental disaster
- Money held in trust for a project and then released. Only occurs after mine is in production
- Tax credit scheme
- Production Levy .25% (can vary by 5%)
- Royalty 2%
- Total 2.25% after mining starts
Proposed New Levy on Capital Expenditure

Contribution Levy

• charged over capital cost of mine establishment as expansion
• guarantees the Mine Developer is linked in with integrated regional development
• applies to all licenced miners: large scale, small scale and alluvial
Financial Assurance

Feasibility

Construction

Operations

End of commercial life

Decommissioning

Income applied to expenditure

Must not burden MD and be a flexible application of financial assurance over the life of the mine

Security Bond + MCDT + SEDPT

Capital

Contribution Levy
World statistics suggests mine developers pay up to 3.75% from revenue to ensure compliance with international standards.

PNG receives 2.25% from mining.

What will miners pay to ensure standard compliance in PNG?
All Mine Closure plans must describe identifiable objectives for Mine Closure. These objectives should produce key result outcomes for Mine Closure. They should be structured as projects and reference a formal project management methodology such as PMI’s PMM / PMBOK or PRINCE2. Monitoring and evaluation provisions should be included as well as a reporting schedule.
Small development steps covering each phase of mining closure

Each step requires external auditing
“The reasons for poor performance are well known. Much of the poor maintenance and inadequate conditions result from weak institutional arrangements governing the delivery of infrastructure. These include:

- Unclear roles and responsibilities among government infrastructure planning, funding and implementing agencies;
- Unsatisfactory financial management, often related to unclear responsibilities;
- Procurement of any major civil works project is prolonged by a lengthy NEC approval process (typically extending to six months).

These are complex issues and the public sector cannot be rebuilt or reformed overnight. Reform efforts will take time to bear fruit. In the meantime, we have to act to halt further deterioration of our stock of infrastructure, and find ways to build new infrastructure effectively.”

Thank you for your attention.