Relinquishment of Closed Mine Sites: Policy Steps for Government

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INTERGOVERNMENTAL FORUM on Mining, Minerals, Metals and Sustainable Development Secretariat hosted by



Secretariat funded by



Kingdom of the Netherlands



Presentation Overview

- What is relinquishment and why is it important?
- Current global status of relinquishment
- Key considerations to achieve relinquishment
- Policy steps for governments

What is Relinquishment?

Relinquishment is defined as the legal transfer of the responsibility for a closed mine site from the mine operator to government or the next landowner, after all closure commitments have been fulfilled and approved by the regulator.

Three main aspects:

- 1. Legal transfer of mineral and land tenures;
- 2. Transfer of the site to a clearly defined next landowner who will take over responsibility for the site, including <u>residual risks</u> and liabilities; and
- 3. Transfer occurs only after the mine operator has completed all closure activities and met completion criteria as defined in an approved closure plan, and funding is ideally in place for monitoring and to manage residual risk.

An important step to achieve the full closure of a mine!

What is Residual Risk?

The risk or liability that remains after all closure activities have been completed.

It includes:

• Monitoring and maintenance to ensure completed closure work meets objectives

E.g. known liabilities such as water monitoring or geotechnical stability monitoring or management of invasive weeds or erosion features.

• Future risks that were unknown at the time of closure and are identified through monitoring or an unexpected event.

E.g. unusual weather events; or where completed closure work did not perform as expected, such as the failure of a reclaimed waste rock pile.

Why is Relinquishment Important?

- Meet the principles of sustainable development
- Avoid mine abandonment
- Incentivize mine operators
- Improve competitiveness

Not always the best option

- Keep additional mineral resources available
- Significant residual risks
- No clear landowner



Global Examples

- There are few global examples of fully developed relinquishment policies or regulations and similarly there are also few global examples of relinquished mines.
- Chile, Queensland and Saskatchewan have modernized relinquishment policies with Saskatchewan's being the best developed.
- Two common scenarios have been identified in our research:
 - Less developed mining jurisdictions that allow for relinquishment after somewhat limited site inspection and with little or no post-closure monitoring or legal responsibility remaining with the mine operator and where no financial provisions are provided to address future issues.
 - More developed mining jurisdictions that outline what is needed to attain relinquishment, but where it is difficult to achieve due to government risk aversion, unclear or undefined processes, and an inability to arrive at a suitable financial provision for residual risk.

Key Considerations for Relinquishment

Closure Plans, Completion Criteria and Monitoring

- Comprehensive closure plans with well defined objectives, activities and completion criteria
- Consider residual risk in choice of closure activities
- Monitor to defined completion criteria rather than to a fixed timeline.

Post-Mining Land Uses

Consider revenue generating activities that reduce risk and cover the costs of monitoring and maintenance

Risk Acceptance and Management

- There will always be some risk; acceptance is necessary to achieve relinquishment
- Reduce risk through choice of closure activities and residual risk funding solutions



Key Considerations for Relinquishment

Residual Risk and Post-Closure Funds

- Determine monitoring and maintenance costs
- Estimate costs for unforeseen events based on risk assessment
- Establish funding mechanisms that is non-refundable, sufficient over extended timelines and securely managed

Legal Process for Relinquishment

- Develop clear legal process for transfer to next landowner
- Recognize that legal frameworks may limit the ability to completely extinguish the liability of the mine operator

Coordination Between Regulatory Authorities

- Coordinate with other ministries and agencies that have authority or active permits over the site
- Involve agencies that will have responsibility over the relinquished site.



- 1. Require comprehensive closure plans.
- 2. Complete independent inspection and approve completed closure activities.
- 3. Require a residual risk monitoring and management plan.
- **4.** Establish a relinquishment funding mechanism.
- 5. Execute a process for legal transfer of closed sites.
- 6. Implement a residual risk monitoring and management plan.

1. Require comprehensive closure plans Ensure regularly updated closure plans are reguired in regulations and provide guidance on their development and implementation. Support progressive reclamation and require closure completion criteria that include a period of monitoring before they can be achieved. 2. Complete independent inspection and approve final closure • Require an independent inspection or audit of closure activities after an appropriate period of monitoring. Involve relevant government ministries, post-mining landowners, and other stakeholders with rights over the relinquished site. 3. Require residual risk monitoring and management plan 9000 · Define monitoring and maintenance requirements after relinguishment and how they will be managed. Include maintenance or equipment replacement that may occur well into the future. Include a cost estimate to implement the plan. 4. Establish relinquishment funding mechanism • Secure funding to implement the residual risk monitoring and management plan. Recognize that funds may be required for decades. · Consider a range of options including retaining mine financial assurance, pooled funds, use of third-party management, and transfer of site responsibility to a new owner. 5. Execute process for legal transfer of closed site • Complete transfer of the site to the next landowner, who should be prepared to accept responsibility for the site. · Ensure legal liabilities of the mine operator and next landowner are clearly defined, including any legal liabilities that remain with the mine operator and cannot be extinguished. 6. Implement residual risk monitoring and management plan · Implement the plan, maintain an oversight role, and ensure issues are addressed according to the plan.

• Support landowners and communities with achieving post-mining land uses.



1. Require comprehensive closure plans

- Ensure regularly updated closure plans are required in regulations and provide guidance on their development and implementation.
- Support progressive reclamation and require closure completion criteria that include a period of monitoring before they can be achieved.

2. Complete independent inspection and approve final closure

- Require an independent inspection or audit of closure activities after an appropriate period of monitoring.
- Involve relevant government ministries, post-mining landowners, and other stakeholders with rights over the relinquished site.



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3. Require residual risk monitoring and management plan

- Define monitoring and maintenance requirements after relinquishment and how they will be managed. Include maintenance or equipment replacement that may occur well into the future.
- · Include a cost estimate to implement the plan.

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4. Establish relinquishment funding mechanism

- Secure funding to implement the residual risk monitoring and management plan.
- Recognize that funds may be required for decades.
- Consider a range of options including retaining mine financial assurance, pooled funds, use of third-party management, and transfer of site responsibility to a new owner.





5. Execute process for legal transfer of closed site

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- Complete transfer of the site to the next landowner, who should be prepared to accept responsibility for the site.
- Ensure legal liabilities of the mine operator and next landowner are clearly defined, including any legal liabilities that remain with the mine operator and cannot be extinguished.

6. Implement residual risk monitoring and management plan

- Implement the plan, maintain an oversight role, and ensure issues are addressed according to the plan.
- Support landowners and communities with achieving post-mining land uses.



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