

# Guidance Paper

## Financial Assurance for Mine Closure and Reclamation

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# Guidance Paper: Financial Assurance for Mine Closure and Reclamation

**2 ICMM members view the provision of financial assurance as a responsibility of the mining industry. There is, however, a need to ensure that the application of financial assurance is efficient, fair, consistent and transparent. Currently a very wide range of practices has been adopted by governments internationally; in certain circumstances insufficient funds are being set aside and in others funds are excessive. Key aspects of government policy that might be reviewed include: definition of closure standards, methods for calculating closure costs, and flexibility and cost-effectiveness of financial instruments. This guidance document provides general recommendations for actions by both mine operators and governments that are aimed at improving standards of practice.**

## Introduction

ICMM members are global leaders in the mining industry committed to providing continuous improvement in sustainable development performance. Responsible mine closure is a core component of this commitment. Environmental financial assurance for mine closure ensures that funds are available for decommissioning and reclamation of a site if an operator does not fulfill its obligations. It provides confidence to both governments and communities that satisfactory closure will be achieved. Consequently, ICMM members view the provision of financial assurance as an important aspect of the mining industry's commitment to sustainable development. There is, however, a need to ensure that the application of financial assurance is efficient, fair, consistent and transparent.

This document outlines some guidance on environmental financial assurance for mine closure for both operators and regulators. It covers the following areas:

- The case for financial assurance;
- Key issues associated with the application of financial assurance policies; and
- Recommendations for improving standards of practice relating to financial assurance.

This paper builds on two earlier studies that examine financial assurance policies and practices in key mining jurisdictions and from the perspectives of mine operators, governments and financial institutions (Miller, 1998; International Council on Mining and Metals, 2005). Both reports are important background references to this paper and on financial assurance for mining in general.

## The Case for Financial Assurance

The mining industry has changed substantially over the past ten years. There has been a dramatic increase in societal demand that metals and minerals be produced in an environmentally and socially acceptable manner. ICMM members recognize this need and in 2003 published a set of ten Sustainable Development Principles (International Council on Mining and Metals, 2003). Through these Principles our members commit to good performance across the entire spectrum of sustainable development. This includes, as a minimum, adhering to environmental, health and safety regulations, and to additional voluntary standards of good practice in business areas that are not currently regulated. The sixth Principle,



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to **‘seek continual improvement of our environmental performance’**, includes a supporting statement to **‘design and plan all operations so that adequate resources are available to meet the closure requirements of all operations’**. Responsible closure is clearly part of this commitment.

Environmental closure activities include decommissioning the mine or processing facilities, dismantling and removing redundant infrastructure and fixtures, and rehabilitating the site to a safe and environmentally and socially acceptable end condition. Specific closure requirements are usually set out in government regulation.

Closure costs can often be substantially incurred after the mine is no longer generating revenue. Consequently, financial provisions for closure must either be set aside by the company during active operations, provided by other revenue streams or made available through security of other assets. In the past, failure by some mine operators to make adequate financial provision for environmental closure costs has resulted in the abandonment of sites in unsafe and unacceptable environmental conditions. In such cases the environmental responsibility and financial liability for closure often defaults to publicly-funded government agencies. This has prompted governments in most mining jurisdictions to require closure plans and financial assurance as part of project approval.<sup>1</sup>

<sup>1</sup> Of the 25 jurisdictions surveyed by Miller (ICMM 2005), 22 had financial assurance requirements.

Governments and communities have sent a clear message that they expect a level of future certainty such that they will not have to bear the costs of mine closure and reclamation.

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ICMM members view the potential creation of abandoned sites as a risk to their reputations and to that of the mining industry generally. For this reason, we endorse the development of government policies that support responsible environmental mine closure and reclamation. Mine closure and reclamation should be an integral part of the mining life cycle. Preliminary closure and reclamation plans should ideally be prepared as part of project feasibility studies, and in all cases detailed plans should be completed well before the active life of the mine has ended. Such plans should be updated as required to reflect changes in environmental conditions and in mine operations. In addition, an acceptable level of assurance that closure will be funded should be provided through the use of appropriate financial instruments.

In recent years, there has been a trend for governments to adopt an increasingly cautious approach in public policy development in this area. This is a result of a response to societal expectations for high levels of certainty that adequate funds will be available to achieve environmental standards. The trend is reflected in the approach to calculation of closure costs, the requirement for significant amounts of financial surety, and the introduction (in some jurisdictions) of financially onerous surety instruments. The resulting cost to industry can be substantial; for example, in an industry survey conducted in 1998, an international mining company (based in Australia) identified more than 1,056 financial assurance instruments in place in four countries, representing a contingent liability of greater than A\$20 million. By 2004, when the survey was repeated, the comparative amount had risen to A\$60 million (ICMM, 2005).

ICMM is concerned that public policy should be developed in a manner that realistically balances the desire for a guarantee of environmental protection with consideration of the financial implications. Recent trends suggest that there may be a danger that public policy regarding mine closure may reach a level where the desire for certainty associated with environmental protection, as reflected in conservatism in financial surety

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4 requirements, may place an unnecessary burden upon the mining industry. This could result in a situation in which the financial and administrative burdens constrain development of new properties or jeopardize the viability of current projects, thus resulting in net economic loss to the country as well as the company.

## Key Issues

Financial assurance represents a significant cost for mining companies. The loss of working capital caused by the need to sequester funds in reserves or other instruments makes it unavailable for investment or operations. For this reason, policies for mine closure and financial assurance must be efficient: they must provide effective protection of the environment at minimum economic cost. Inefficient policies are those which can impede mineral investment with little or no gain to the environment. The following section identifies key issues that currently arise with respect to environmental financial assurance for mine closure.

### 1. The closure standard

Many jurisdictions now require preparation of closure plans as part of the project approvals process. However, there can be a lack of clarity on what is an 'acceptable' closure standard. The endpoint of mine closure can change considerably, especially in long-life mines where closure standards may evolve over time. This can have significant impacts on closure costs and give rise to unanticipated costs. The process to establish the accepted standard of closure, and any changes which may be required to it, needs to be clear upfront.

In addition, mining companies, like all investors, need certainty in their exit strategies. When the closure standard has been achieved companies should be enabled to vacate a site with no further liability, or by providing financing for long-term management including 'in perpetuity' management if necessary, e.g. for water management.

### 2. Calculation of closure costs

There is wide variation in the methods used to calculate closure costs. There are also an increasing number of unnecessarily conservative assumptions applied. Together, these factors can result in a significant over-estimation of actual

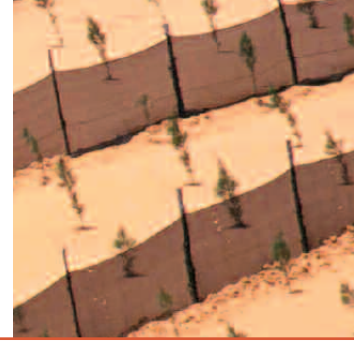
'Public policy should be developed in a manner that realistically balances the desire for a guarantee of environmental protection with consideration of the financial implications.'

costs. Some aspects of cost calculation that require careful attention include:

- The application of a wide range of safety factors, including protection against highly unlikely events;
- Cost calculations based on closure execution managed by a third-party rather than internally, regardless of the likelihood that a third-party will be required;
- Calculations based on the ultimate development (maximum footprint) of the mine site rather than the costs of reclamation at a given stage of the mine life;
- Lack of recognition of liability reduction as a result of progressive reclamation;
- Failure to consider the remaining operating life of the mine;
- Inadequate flexibility to consider innovative closure technologies that might reduce costs; and
- The use of blanket formulae that do not give adequate consideration of site-specific features that affect the cost of closure and reclamation.

### 3. Flexibility and cost-effectiveness of assurance requirements

ICMM recognizes and understands that the financial surety required by governments is intended to provide a level of future certainty that mining disturbance will be able to be closed and reclaimed. This represents a safety net option for closure financing when the primary source of finance, the mining company, has defaulted. The current approach is often based on a 'worst case scenario' perspective that does not distinguish



between the environmental commitment, record of performance, and business strength of a company. Companies (large and small) with a proven track record of environmental performance and/or a strong reputation should present a lower risk than operators with limited or poor operating histories or weak financial positions. In addition, companies with multiple operations, strong cash flow and a good credit rating are likely to have a broader spectrum of options to finance mine closure and reclamation and this should be taken into account.

### Key issues

The study identified the following key issues that currently arise with environmental financial assurance for mine closure:

- There can be a lack of clarity on what is an acceptable closure standard. This can have a significant impact on closure costs and give rise to unanticipated costs;
- There is a wide variation in the methods used to calculate closure costs. Unnecessarily conservative assumptions are increasingly being applied. Together, these factors can result in a significant over-estimation of actual costs;
- Current policy approaches are sometimes based on a 'worst case scenario' perspective that does not distinguish between the environmental commitment, record of performance, and business strength of a company.

### Recommendations

This section provides general recommendations for actions aimed at improving standards of practice in the application of financial assurance for mine closure.

#### The Operator's responsibility

##### 1. Providing adequate financial assurance for mine closure and reclamation.

The operator should demonstrate how it will ensure that adequate funds for closure and reclamation will be available, and therefore that the public will not be left with a liability.

The operator should have a clearly defined process for development of a closure plan with provision for review and update, as required. This plan

should be initially developed at the feasibility stage and have adequate technical validity and financial resources on which to base future updates and reviews. It should be consistent with the regulatory requirements of the particular jurisdiction and should include the following environmental considerations:

- A defined post-closure use for the site, with respect to safety and environmental standards;
- A good understanding of a site's background and baseline conditions and clear definitions of the zone of influence and key receptors;
- Ongoing and effective input from key stakeholders in plan development and modification;
- Explicit consideration of potential social impacts and benefits associated with environmental quality and potential future land use alternatives for the site (including consideration of possible uses for site infrastructure);
- The use of risk analysis methods in the closure plan development and to establish the design criteria, for example to address the possibility of major events (e.g. earthquake, flooding, drought);
- A clearly identified sequence and schedule of closure activities;
- The application of, where possible, progressive (i.e. concurrent) rehabilitation of areas during the operating life of the mine to reduce the environmental footprint of the site;
- The review and adjustment of closure plans on a regular basis and after changes in operations or conditions;
- Periodic monitoring and audits that provide a measure of actual versus planned rehabilitation; and
- Closure costs calculations which are consistent and transparent, and based on reasonable estimates of actual costs taking into account local conditions and cost structures.

#### The Regulator's responsibility

##### 2. Providing flexibility in financial assurance

Flexibility should be provided in terms of the level of assurance required and the range of financial instruments that can be used. In deciding the form of financial assurance and amount of funds required, consideration should be given to factors such as the financial strength (relative to level of potential liability of project) and track record of the company.

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6 A variety of surety instruments should be available in order to maximize flexibility. A recent review of financial assurance options used by the governments of 25 important mineral-producing jurisdictions around the world showed that most offered a number of alternatives (ICMM, 2005). The most commonly mentioned options were third-party guarantees or bonds provided by financial institutions, cash deposits and irrevocable letters of credit. Others include trust funds and insurance policies. Annex 1 provides a summary of the advantages and disadvantages of these commonly used surety instruments. Further details and discussion are contained in the ICMM (2005) report.

### 3. Considering existing operations

New requirements for environmental closure and financial assurance should be applied to existing operations in a phased manner over a period of time. There should also be options as to the nature of the security required. The inflexible application of new requirements can result in premature closure. One creative solution to this dilemma would be to provide non-cash securities, such as pledge of assets.

### 4. Allowing for an exit strategy

Legislation should provide explicitly that, at a certain time, companies can be relieved of future liabilities. This should happen once companies have achieved the closure standard, and any necessary financing for long-term management has been provided.

### 5. Taking into account taxation arrangements

The level of burden associated with financial assurance is greatly affected by taxation arrangements. As closure financing is a normal capital expense, operators should expect to deduct immediately from taxable income all costs associated with the financial security. Some jurisdictions may be prepared to offer a fiscal incentive in return for increased provision of environmental assurance.

### Conclusions

ICMM recognizes that it is the responsibility of mining companies to provide assurance to governments and the public that closure of facilities will be protective of health, safety, communities and the environment. Financial assurance must be applied in a manner that ensures proper protection but does not place an unnecessary financial burden on the operator which could discourage investment

‘Financial assurance must be applied in a manner that ensures proper protection without placing an unnecessary financial burden on the operator’

that would stimulate socio-economic development. It is important that the mechanisms put in place serve as far as possible to promote the efficient exploitation of mineral resources and their associated economic benefits while achieving levels of environmental protection and future land use that are acceptable to society. This guidance is intended to help achieve this.

### References

- International Council on Mining and Metals (2003) *ICMM Principles*  
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## Annex 1: Financial Assurance Options

Options	Description	Advantages	Disadvantages
<b>Third-party guarantee</b>	Includes unconditional bank guarantee and insurance bonds. All are required to be unconditional and/or irrevocable.	<ul style="list-style-type: none"> <li>• Relatively inexpensive (usually between 1 and 1.5% of amount) for the operator to establish</li> <li>• Has full backing of financial institution (funds available 'on demand')</li> <li>• Transparent and operation-specific</li> <li>• Cannot normally be unilaterally withdrawn by the issuer</li> <li>• Can be altered as requirements change</li> </ul>	<ul style="list-style-type: none"> <li>• Often considered by financial institution to be part of working capital, thereby reducing available operating funds</li> </ul>
<b>Cash deposit</b>	Normally deposited direct with government and only usually accepted for "small" operations.	<ul style="list-style-type: none"> <li>• Provides an advantage to the government which has direct control over funds and has sole responsibility for making funds available if required</li> <li>• The cash is returned to the company, normally on completion of closure works</li> </ul>	<ul style="list-style-type: none"> <li>• Providing cash 'upfront' is a financial impediment to the operator and potential loss of income through interest on funds</li> <li>• If operator goes bankrupt cash may be classed as a company asset and available to all creditors</li> <li>• Government must have a system to ensure segregation of funds for their intended use</li> </ul>
<b>Letter of credit</b>	A form of third party guarantee which normally has a one year term, usually extended following review by the issuer. If not extended the beneficiary (government) is notified and has the option of drawing down the full value.	<ul style="list-style-type: none"> <li>• Relatively inexpensive for the operator to establish</li> </ul>	<ul style="list-style-type: none"> <li>• Can be unilaterally withdrawn by the issuer at the end of the credit term</li> <li>• May restrict company access to other credit</li> </ul>
<b>Trust fund</b>	Administered by a third party trustee with a defined investment policy. Intended to cover the costs of a specific closure plan through a structured series of contributions. Surplus funds are returned to the operator.	<ul style="list-style-type: none"> <li>• The Fund is visible to government (and the public)</li> <li>• Any surplus after the completion of the closure/ decommissioning plan are returned to the operator</li> </ul>	<ul style="list-style-type: none"> <li>• A transition period is required to allow the operator to build up the fund</li> <li>• Administrative requirements (similar to a pension fund) can be cumbersome</li> </ul>
<b>Insurance policy</b>	Several jurisdictions nominate this as an acceptable method of providing financial assurance. No examples have been located of this being implemented.	<ul style="list-style-type: none"> <li>• Relatively inexpensive for the operator to establish</li> <li>• Less administration required than with a cash trust fund</li> </ul>	<ul style="list-style-type: none"> <li>• Only valid if annual premium paid</li> <li>• Recourse to financial assurance often takes place some years after the operator becomes inactive and is unable to pay the premium</li> </ul>
<b>'Soft' options</b>	Examples of soft options include: Financial strength rating (where a company is rated as investment grade); Self-funding; Financial test (e.g. balance sheet test); Corporate guarantee based on financial grade; Parent company guarantees; Pledge of assets.	<ul style="list-style-type: none"> <li>• Does not involve direct costs</li> <li>• Relatively inexpensive for the operator to establish</li> </ul>	<ul style="list-style-type: none"> <li>• Does not provide the same level of security as hard forms of assurance</li> </ul>

## **ICMM – The International Council on Mining and Metals**

The International Council on Mining and Metals (ICMM) is a CEO-led organisation comprising many of the world's leading mining and metals companies as well as regional, national and commodity associations, all of which are committed to improving their sustainable development performance and to the responsible production of the mineral and metal resources society needs.

ICMM's vision is a viable mining, minerals and metals industry that is widely recognised as essential for modern living and a key contributor to sustainable development.

Our library at [www.goodpracticemining.com](http://www.goodpracticemining.com) has case studies and other examples of leading practices.

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