CHAPTER XII
THE ROLE OF THE STATE

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1. INTRODUCTION

This chapter focuses on the crucial role of the State[1] in ensuring the safe design, construction, operation and closure of tailings facilities. The roll-out of the Global Industry Standard on Tailings Management ('the Standard') is expected to make a significant contribution to improving the management of tailings facilities in the sector. However, the best standards in the world, whether mandated by local law or adopted voluntarily, as with the Standard, will not prevent catastrophic tailings facility failures unless those standards are scrupulously followed and unless noncompliance results in significant consequences for the violator. Monitoring compliance and carrying out enforcement is primarily the domain of the State, as it alone has the authority to set and enforce sector-wide minimum standards and to ensure that corrective action is taken where Operators (as defined in the Standard) fall short. States must therefore be prepared and equipped to embrace this responsibility fully.

The chapter focuses on four related questions:

1. What responsibilities does the State have in relation to tailings facilities and what does good regulatory practice in these areas entail?
2. How can States manage the interface between their own regulatory processes and the requirements of the Standard to avoid unnecessary duplication and overlap and achieve better regulatory outcomes?
3. What factors currently limit the ability of States to provide effective regulation and oversight of tailings facilities, and how can these capacity constraints be overcome?
4. What roles can other actors (investors, insurers, local communities and civil society) play in ensuring the long-term success of tailings facility management?

Box 1: How the Standard can contribute to better regulatory practices

The Standard focuses specifically on the obligations of Operators and does not address the roles and responsibilities of the State, except where a state entity is itself the Operator of a facility. But the Standard also does not seek to circumvent or override the State, as the preamble to the Standard makes clear.

Conformance with the Standard does not displace the requirements of any specific national, state or local governmental statutes, laws, regulations, ordinances, or other government directives.

Although the Standard does not – and cannot – impose any obligations on States, it should serve as a valuable source of guidance to regulators about what constitutes good practice in tailings management and what can reasonably be required of Operators. Also, if the Standard succeeds in improving management systems and controls in the mining industry, this will ease the burden on States and facilitate more effective State regulation, leading to a reduced risk of future catastrophic failures and better outcomes for affected people and the environment.

2. REGULATORY FUNCTIONS OF THE STATE

States generally have legislative and regulatory authority over tailings facilities and exercise that authority to varying degrees through statutes, regulations, and inspection and enforcement protocols. States are also uniquely situated to provide independent oversight of the permitting, construction, operation, maintenance, monitoring and closure of tailings facilities. They are likewise the

1. The Standard includes the 'State' within the broad category of public sector agencies. The Standard defines that term to include '[a]ll governmental agencies at the State, regional, and/or local level with some responsibility or authority for regulating mining activities that occur within or impact their jurisdictions.'

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most appropriate entities to hold performance bonds or similar financial assurance instruments and to implement independent inspection and enforcement programmes capable of identifying and remedying problems early.

This section addresses three particular areas where the State can and should play a prominent role: (1) the permitting (or licensing) of facilities; (2) financial assurance and insurance requirements; and (3) inspections and enforcement of regulated facilities. Each of these aspects is addressed in more detail below.

2.1 THE PERMIT APPLICATION PROCESS

The State bears the initial responsibility for obtaining information about any proposed or existing mining operation that is sufficiently comprehensive to allow the State to oversee and regulate the mine effectively. The Standard recognises this and requires the production of most or all of the information that the State will normally require of an Operator of a tailings facility.

Permitting of a tailings facility will likely happen in conjunction with permitting for the mine that is served by the tailings facility. Whatever the scope of the permit or licensing process, it should begin with a written application containing relevant information about the applicant, including details about its corporate relationships and mining history. Applications should also provide the State with basic information such as:

- details on mining methods, engineering techniques, and the equipment used or proposed
- the anticipated starting and termination dates of each phase of mining operation and number of acres of land to be affected
- a map describing the particular lands that will be affected by mining and when and how they will be affected.

States should also inquire about the compliance history of the owner or Operator of the mine in other jurisdictions and should deny permits to Operators who fail to demonstrate timely correction of significant violations at other mine sites. Ideally, States should establish a global data base for sharing compliance information so that the compliance history of individual companies and their affiliates can be readily ascertained. This data base should be designed and maintained by whatever entity is tasked with certifying/verifying compliance with the Standard and made accessible to State regulator and the public. In this way, violations by an Operator at another mine site can help inform the State about potential problems that might be encountered at the new site. The State might also insist that these violations be corrected before further processing of the application proceeds.

The Standard lays out much of what would be required for a good permit application. For example, the Standard anticipates that Operators will prepare a multi-criteria alternatives analysis and environmental and social impacts assessment for new facilities and a range of other plans and reports including Closure and Post-Closure Plans, Design Basis Reports, Dam Safety Reviews, Emergency Preparedness and Response Plans, Emergency Response Plans, Environmental and Social Management Systems, Operations, Maintenance and Surveillance Manuals, Trigger Response Action Plans, and Tailings Management Systems.

States must employ a knowledgeable, professional staff capable of reviewing the detailed design, construction, operation and monitoring plans submitted by the applicant. State officials may appropriately assist applicants in understanding the information that they require, but the actual review of the permit application should not commence until the State regulators are satisfied that the application is complete and ready for comprehensive review.

The State's permit review process must include a thorough and independent review of all reports and documents submitted by the applicant. This must be done by technical experts who can fairly assess the sufficiency of the reports provided. States will most likely request some changes to these documents during the review process, and the applicant may want to pursue modifications either in response to issues raised by the State or because of changes in the applicant's plans. Provided that these changes are not substantial and do not interfere with the meaningful engagement of interested parties, they should not cause a significant delay in processing the permit application.

The Standard requires Operators to undertake meaningful engagement with project- affected people on key decisions that affect them. The State is in a strong position to facilitate, and where appropriate, to supplement such engagement as necessary to give affected parties a real voice in decisions. For example, the State can help ensure that affected parties receive sufficient notice of proposed actions and that they have an adequate opportunity to make their views known. The State can also establish informal and formal processes, including site visits, as necessary, to educate affected parties and to ensure that engagement opportunities are truly meaningful.

Because aspects of the tailings facility site and its management will likely change in some significant ways over time, States should limit permits to a relatively short term of years – no more than every ten years – to allow for a periodic, holistic review of the facilities. States should use the renewal process to identify and demand appropriate changes to the operation or maintenance of the facility to reflect the information that the Operator and the State have learned during the course of facility operations. While changes, even significant ones, may be needed to the operation and maintenance of the facility, Operators should have the right to renew their permits so long as they have complied with the original permit terms and are prepared to make the required changes.

2.2 PERFORMANCE OBLIGATIONS : MANAGING THE INTERFACE BETWEEN REGULATORY PROCESSES AND THE STANDARD

The Standard lays out specific performance obligations and establishes monitoring protocols to ensure that these obligations are met. These provisions provide a blueprint for more general application by States.

States should work with the Operator and affected parties to agree on a set of performance obligations and clarify how compliance with these requirements will be achieved. So, for example, the State may require the Operator to perform progressive reclamation of a facility contemporaneous with mining to the fullest extent possible.[2] The State should also work with the Operator to ensure that monitoring data are accurate, transmitted to State officials in a timely manner, and made available promptly to the interested public.

In order to provide effective oversight, States should insist on monitoring metrics that are specific, measurable, attainable, relevant and time-bound (SMART). Properly designed, such metrics can afford the State a relatively easy way to ascertain whether a tailings facility is being well-managed and meets regulatory requirements for safety and integrity. Following the example of progressive reclamation described above, the State might impose specific, measurable, time-bound requirements on completing certain phases of reclamation such that regulators can readily ascertain whether the Operator is achieving these requirements.

Of course, problems can arise even at the best managed facilities, including those that have been certified under the Standard. The Standard provides guidance on various mechanisms that can alert the State to potential problems at a facility. Most importantly, the Standard requires Operators to prepare, report, and act on monitoring data on a regular basis. States, for their part, should establish their own programmes to ensure that: (a) monitoring processes are current and handled with integrity; and (b) appropriate enforcement action is taken to ensure that problems identified during monitoring are corrected in a timely fashion.

The Standard also requires Operators to establish mechanisms that encourage employees, contractors and third parties to report potential problems at site. Under the Standard, such parties can generally remain anonymous and receive whistle-blower protection. States should require all Operators to protect whistleblowers as a matter of State law and also adopt their own requirements to protect government whistleblowers.

2.3 FINANCIAL ASSURANCES

Performance Bonds

All tailings facilities are at risk of abandonment before they are safely closed and reclaimed. Abandonment can occur when a mining company goes bankrupt, where a facility is transferred to a third party without significant assets who goes bankrupt, or simply because the permittee or their successor chooses to walk away. All other things being equal, abandoned facilities pose a much higher risk of failure because they are not being monitored or managed. Such facilities impose a significant and unfair burden on States because it is the State that must ultimately bear responsibility for protecting its citizens from the adverse consequences of facility failures. Where failures do occur, the cost to States, in terms of responding to community impacts, stabilising the site, and restoring the local environment to the extent possible, can run into the billions of dollars. Even where abandoned facilities have not yet failed, the threat of failure imposes a high burden on the States and communities, given the need to maintain a constant vigil over these sites to identify changes to facilities that signal an increase in the risk (see also Nash, this volume).

2. Requirement 5.6 of the Standard specifies that '[t]he design should include, progressive closure and reclamation during operations'.

In light of this potentially enormous burden, States must do everything possible to minimise the possibility that future facilities will be abandoned. Specifically, States must require Operators to provide financial assurances, such as performance bonds, that are sufficient to guarantee that a tailings facility is properly reclaimed and closed even if the Operator, for whatever reason, walks away.

Financial assurances provide resources that can be used to avoid or remedy both the short- and long-term adverse consequences that could result from abandonment. As a practical matter, assurances also make abandonment far less likely, since abandonment of a facility would lead to forfeiture of the bond. States must be vigilant in ensuring that performance bonds or other financial assurances are adequate to fully reclaim and close a facility in the event that the State is forced to hire a contractor to perform the work. This must include regular review of the bond to ensure it keeps pace with the ever-changing cost of reclamation and closure at an active site. Even if the bond or other financial assurances are not adequate to cover full cost of reclamation and proper closure of a tailings facility, the money will go a long way toward safely stabilising the site and mitigating adverse impacts to the fullest extent possible.

States must also take all appropriate steps to ensure that bonds are only available to be used for reclamation and closure of a site in the event of forfeiture. Operators who are required to post bonds should insist on such a requirement so that they do not risk any further liability after a facility has failed. It is also critically important that States deny the transfer of permits to other parties who lack the capacity to post adequate financial assurances to cover the cost of reclamation and closure. This may pose a particular risk where mineral production is in decline, or where commodity prices make it difficult to justify further mine operations, since Operators may be tempted to sell off such assets to other Operators who are undercapitalised.

The Standard requires Operators to maintain adequate financial capacity to cover the cost of closure and reclamation and requires annual public disclosure of the Operator's financial capacity. It also requires Operators to use 'best efforts' to ensure that a change in ownership does not undermine the financial capacity to cover proper closure and reclamation. Whether or not this requirement is adequate will likely depend on whether it is scrupulously implemented and enforced. But this is an important matter where the State can play an essential role. If a State is satisfied that an Operator has sufficient tangible assets to effectively guarantee the cost of reclamation and safe closure of tailings facilities it may want to allow the Operator to 'self-bond'. The State can ensure the integrity of self-bonding by requiring an annual financial assessment by the Accountable Executive with an opportunity for public review and comment on the assessment. Given the volatility of commodity prices and the long-term financial risks that many mining companies face, States should design procedures to review and approve financial assurance demonstrations generally, and self-bonds in particular. Third-party bonds should be required where the Operator's financial assets are found to be inadequate.

States should also develop procedures for bond release (a topic not addressed in the Standard). Because financial assurances can tie-up significant assets, Operators will understandably want to be released from their bonding obligations as soon as possible. Bond release, however, should track progress on reclamation and safe closure. Since the bond amount is tied to the cost of final reclamation and closure, all work carried out by the Operator toward this goal should reduce the amount of the financial instrument. In addition to ensuring that the amount of the bond tracks the cost of reclamation and closure, this should act as an incentive for Operators to undertake progressive reclamation of tailings facilities.

Lastly, States should establish a public process that allows for meaningful public engagement in the partial and final bond release process. At-risk local communities have a particularly important stake in the reclamation and safe closure of tailings facilities, and in knowing that adequate money has been set aside to ensure proper reclamation and closure. They therefore should be afforded a fair opportunity to participate in any process that leads to the partial or full release of financial assurances.

Liability Insurance

Over many years tailings facility failures have imposed massive off-site costs on communities and ecosystems, including loss of life and serious injuries, water contamination, and other serious environmental harms. Most Operators maintain liability insurance that covers limited off-site injuries, but few insure against catastrophic failures. Part of the reason for this is that insurance companies are reluctant to cover failures that can lead to billions of dollars in liability. Moreover, even where such insurance might be available, the few insurance companies willing to issue policies may believe it necessary to charge inflated premiums for policies that cover incidents which have a very low probability of occurring but which create enormous liability if they do. This problem is made all the more difficult by the fact that insurers may lack sufficient capacity to oversee tailings facilities to the extent necessary to ensure that such risks are minimised.

Liability insurance is nonetheless important for two reasons. First, it aligns with a fundamental principle of environmental law that holds that the polluter should pay for any third parties injuries that result from their activities. Moreover, an independent insurance company has a strong incentive to learn enough about the activity it is insuring to demand that the Operator comply with the very best practices.

Insurance can also help to mitigate environmental and natural resource damages. Natural resource damage assessments, with concomitant liability, are fairly common in the context of events like oil spills. Insurance can safeguard against the public having to bear the cost for those damages.

As with financial assurances, the Standard requires liability insurance but only 'to the extent commercially reasonable'. States would be wise to go beyond the Standard and demand liability insurance sufficient to address a catastrophic failure of a tailings facility. As with financial assurances for closure and reclamation, the State may wish to afford Operators the opportunity to 'self-insure' subject to similar limitations that apply to self-bonding. This option may be necessary where full liability insurance policies are not available or prohibitively expensive. The State would still, however, have to assure itself that the Operator has sufficient tangible assets to cover any potential liability from a catastrophic failure. Over time, it is hoped that the insurance industry will gain enough experience with the mining industry to better understand the risks and thus, to be in a better position to provide Operators with affordable policies where Operators cannot meet the financial conditions for self-insurance or where Operators prefer to rely on the private marketplace. (See Becker, this volume, for a more detailed discussion of issues relating to the insurance of tailings facilities.)

While Operators likely have a legal and ethical responsibility to indemnify parties who suffer losses as a result of a catastrophic tailings facility failure, if they lack sufficient assets those harmed as a result of a catastrophic failure may never be fully and fairly compensated. Thus, States should approach the 'self-insurance' option with caution because the enormous potential liability from a single catastrophic failure that causes a significant loss of human life and the destruction of ecological resources will be difficult for any Operator to bear.[3] Moreover, self-insurance raises far more serious questions of uncertainty than self-bonding, because the scope of losses from a catastrophic failure is far harder to estimate than the cost of reclamation and closure of a facility.

All of this suggests the critical need for States to adopt their own requirement for Operators to obtain liability insurance for losses that may result from catastrophic failures at a tailings facility. This would allow States to develop expertise on the cost of catastrophic failures and provide powerful incentives to put in place appropriate protections to avoid such failures. Moreover, while the State might not be directly liable for damages to people and the environment from catastrophic failures, such events nonetheless impose a heavy cost on States in the form of having to provide affected people with essential public services and other forms of public assistance, as well as burdening States with irreparable harm to their natural resources.

2.4 INSPECTION AND ENFORCEMENT

Inspections

A well-resourced inspection programme, staffed by qualified personnel, is essential for ensuring compliance with legal requirements, including permit or licence conditions. Ideally, this programme should include regular, random, unannounced inspections of every single facility, and immediate additional inspections whenever the State receives credible information about a serious problem or violation of the law.

The Standard requires regular inspections of tailings facilities by qualified personnel. Where an Operator

3. For example, Vale's estimate of the losses it will suffer from the Brumadinho failure are $4.8 billion. See https://www.nytimes.com/2019/07/10/world/americas/brazil-vale-dam.html. This is in addition to the billions of dollars in liability for the losses at the Samarco Mine that the company jointly operated with BHP. See https://www.leadersleague.com/en/news/bhp-and-vale-reach-settlement-with-brazilian-authorities-over-samarco-dam-disaster.

has been certified under the Standard, the appropriate role of the State would be to oversee the Operator's inspection process and to carry out independent inspections as appropriate to ensure the safety and sound management of facilities.

Identifying and hiring qualified inspectors will likely pose a significant challenge to States, because of the small pool of competent professionals in this area and competition from the private sector. Some strategies for addressing this are discussed in the next section and also in the chapter in this volume by Evans and Davies ('Creating and Retaining Knowledge and Expertise').

Enforcement

The Standard applies to Operators and is strictly voluntary. While it is anticipated that an agency will be established to oversee the Standard and certify compliance, the Standard itself is not enforceable other than perhaps by withdrawing certification for a facility that does not meet its requirements.

Enforcement of laws and regulations is the exclusive prerogative of the State. Those States that are serious about avoiding tailings facility failures should be prepared to take enforcement action against Operators that violate a State's laws and regulations, including the terms and conditions of State-issued licences or permits. To perform this function effectively, States must make clear to Operators that they are serious about full compliance with their legal standards.

One way for States to send this message and promote full compliance is to adopt a policy of mandatory enforcement. This policy requires an inspector to cite an Operator for any violation observed. Taking discretion out of the hands of the inspector is important because it minimises pressure on the inspector to look the other way when violations are found. If State law requires the inspector to cite every violation that is detected, the Operator will have no cause to complain about overly aggressive enforcement. The State may retain discretion to decide whether penalties or other sanctions should be imposed, and it may determine that no sanctions are necessary for relatively minor violations that are promptly corrected. However, mandatory enforcement ensures transparency and a comprehensive record of an Operator's compliance history. This information could be particularly valuable when the Operator applies for a permit renewal or for a permit at another site.

Citations generally take two forms. A 'notice of violation' or some similar device can be used for routine noncompliance that does not pose a serious threat to people or the environment. A 'cessation order' or 'compliance order' should also be available to afford the inspector with the authority to order that activities at a tailings facility cease, or to require that immediate corrective action be taken where the inspector determines that this is necessary to address a significant and imminent threat to people or the environment.

States should also adopt laws and policies that allow for civil or even criminal penalties to be imposed for intentional or reckless violations of State standards. In egregious cases, where an Operator knowingly takes an action that threatens the lives of people or significant environmental harm, criminal penalties may include imprisonment. In addition, or alternatively, State laws should also authorise civil penalties to be assessed directly against corporate directors, officers, or agents who commit knowing or wilful violations of the law. Fines paid out of corporate coffers might simply be seen as the cost of doing business, whereas fines assessed directly against officers or agents of the Operator will be felt personally and can send a strong message about the importance of full compliance with the law.

3. CAPACITY ISSUES

3.1 STAFFING

Clearly, not all States currently have the capacity to carry out the regulatory functions proposed in this Chapter. Effective State oversight requires a comprehensive understanding of the planning and engineering necessary to build, operate, maintain, and ultimately close tailings facilities. It also requires inspectors with the experience, integrity, credibility and authority to issue citations and to mandate appropriate corrective actions. This must include the capacity to recognise and evaluate problems on the ground and to identify the most appropriate solutions to these problems.

States that aspire to develop and implement an effective regulatory programme for tailings facilities must also employ a highly qualified and well-trained professional staff with sufficient resources to oversee all aspects of these facilities throughout their lifecycle. Moreover, the programme should be designed to allow the inspection and enforcement unit to operate independently from other elements of the regulatory

agency to minimise the risk of agency capture.[4] Salaries and employment conditions for these professional staff must be competitive with what the private sector offers so that experienced professionals see government employment as a realistic career choice. Developing a reliable, professional staff where one does not currently exist will require time and significant resources (see Evans and Davies, this volume) but for States this offers what is perhaps the long-term best insurance against future catastrophic failures.

3.2 FINANCING THE REGULATORY PROGRAMME

All States struggle to resource regulatory functions adequately. One option for addressing this problem would be to require a substantial permitting or licencing fee sufficient to cover the cost of issuing and reviewing permits, coupled with an annual fee that is sufficient to maintain a strong oversight and enforcement programme. Because this could disadvantage small to medium sized Operators, States might also consider imposing a severance tax[5] or requiring an enhanced royalty payment that would be dedicated to funding the State regulatory programme.[6] With adequate funding, States will be in a much stronger position to hire qualified personnel as well as to cover the costs of processing and approving permit applications, and undertaking inspection and enforcement activities.

3.3 THE ROLE OF THE STATE IN STRENGTHENING INTERNATIONAL ADHERENCE TO HIGH STANDARDS

When States step up to their responsibility to oversee the proper management of tailings facilities throughout the project lifecycle, they model behaviour for other countries and provide a framework for them to emulate. Of course, even well-run programmes will make mistakes, but these mistakes can, in themselves, offer important lessons for how to avoid future problems. Over time, the best ideas gained from the best run regulatory programmes will offer a clear framework that all States can use to design and operate their own programmes.

International organisations, such as the co-convenors of the Standard, and other entities such as the World Bank and the International Finance Corporation (IFC), have an important role to play here, as they are well-placed to identify innovative regulatory programmes and examples of leading practice, and to promote their adoption internationally. A clearinghouse and database that identifies and tracks the best ideas for addressing the particular problems posed by tailings facilities could prove enormously useful to countries around the world as they struggle to design their own programmes. Knowledge transfer could also be facilitated through technical assistance and mentoring programmes whereby a country with a successful programme offers support to another country that is trying to develop own programme. As discussed by Evans and Davies (this volume), international organisations could help to facilitate such arrangements.[7] The long-term aim should be to level the playing field so that the regulation of mining is similar regardless of where the mining takes place.

4. This issue was highlighted in a 2016 report of the Auditor General of British Columbia, who recommended that the Provincial Government '... create an integrated and independent compliance and enforcement unit for mining activities ... [g]iven that the Ministry of Energy and Mines (MEM) is at risk of regulatory capture, primarily because MEM's mandate includes a responsibility to both promote and regulate mining' (2016, p. 11).

5. A severance tax is a tax levied on the extraction of natural resources in a State. It is typically assessed as a percentage of the value of the extracted resource. This form of tax is popular in the United States, which unlike most countries allows private ownership of minerals: a severance tax allows the State to generate revue for mineral extractions even when it does not own the resource. In most States, mineral ownership is the norm, and thus an enahnced royalty payment might offer an easier way to generate additional revenues without stressing the balance sheet of smaller companies. A number of American States operate 'severance tax' programmes, and these taxes tend to be much higher than the tax imposed under the Surface Mining Control and Reclamation Act (SMCRA). For example, Montana imposes a coal severance tax of 15 per cent on the contract sale price of surface mined coal with a BTU greater than 7,000. See https://mtrevenue.gov/taxes/natural-resource-taxes/coal-severance-tax/. States might, however, want to consider flat rate severance taxes as opposed to one based on a percentage of the resource's value. Revenues can be more easily estimated with a flat fee and thus the State can more easily generate what it needs to operate the regulatory programme thereby avoiding both under and over taxing mineral production.

6. The U.S. SMCRA, 30 U.S.C. §1201, et seq., which applies exclusively to the regulation of coal mining in the United States, uses two different models for generating significant revenue. The first, requires payment of a fee 'that may be less than but that shall not exceed the actual or anticipated cost of reviewing, administering, and enforcing the permit.' 30 U.S.C. §1257(a). The regulatory agency can develop procedures so that this fee is paid over the term of the permit, so that payments are more closely aligned with revenue streams. A second programme imposes what is essentially a tax on all coal produced. Companies typically pay $0.28/ton for surface mined coal and $0.12/ton for underground mined coal. U.S.C. §1232(a). Well over $11 billion has been raised through this tax since its inception in 1977. SMCRA targets this money for cleaning up abandoned mines, and that is certainly a worthy cause. Still, it has proved an effective way to generate significant revenue that could be used for other purposes. It also has the advantage of generating revenue alongside production, such that benefits to the government and the Operator are aligned

7. The International Mining for Development Centre (IM4DC) was a programme funded by the Australian government in the years 2012-2015 which was designed for exactly this purpose. The University of British Columbia likewise operates a programme entitled the Canadian International Resources and Development Institute (CIRDI) that works with countries to improve governance on a wide range of natural resource development issues (see: https://cirdi.ca/.) Perhaps countries like Canada, Australia and the United States with significant experience regulating mining activities should come together to establish a similar entity to work with developing countries, local communities, and community organisations interested in improving compliance with sound regulatory standards.

4. THE ROLE OF OTHER STAKEHOLDERS

While an effective State regulatory and enforcement regime is an essential element for the long-term success of tailings facility management, other stakeholders such as investors, insurers, affected communities and NGOs also have important roles to play. States would be wise to recognise the value that these parties contribute to good outcomes by encouraging their constructive involvement to the fullest extent possible.

Investors can condition their financial support on compliance with strict standards for tailings facility management such as the Standard proposed here. Investors can further demonstrate their commitment to strict standards by insisting on regular reporting, public disclosure of relevant documents, and third-party audits that ensure compliance (see Barrie *et al*., this volume).

As previously discussed, insurance companies that indemnify Operators against damages to people and the environment from tailings facility failures can also play an important role in overseeing the safe operation of tailings facilities and in insisting that Operators minimise the risk of failure to the fullest extent possible. This would limit their exposure to significant claims which, as noted, can easily exceed billions of dollars. Private insurance also offers a distinct advantage over self-insurance because it incentivises insurance companies to closely monitor tailings facilities and demand immediate correction of problems as they are identified.

Local communities and civil society organisations have a strong interest in ensuring that tailings facilities are managed so as to protect public safety and the environment. These stakeholders can best perform this function if they are given a meaningful role in key decisions that affect them (as proposed in the Standard). They are also in a strong position to demand transparency from Operators regarding tailings facility plans, management plans, and other data and information relating to the tailings facility. By insisting on strict compliance with the Standard, States can also help build positive relationships and foster trust between the mining companies and the communities where they operate. As noted above, developed countries could play a useful role in supporting these efforts.[8]

5. CONCLUSION

The Global Industry Standard on Tailings Management, if fully implemented, will go a long way towards assuring the public that Operators are committed to the safe construction, operation, and closure of tailings facilities. However, the Standard is voluntary and not all Operators will commit to compliance with it at all of their tailing facilities. It is also the case that full compliance with the Standard may not be possible at some existing facilities.

States are in a position to fill the gap left by the Standard and demand adherence to the highest and best practices that are feasible, even at tailings facilities where Operators are not willing or able to adopt the Standard. Moreover, States do not need to 'reinvent the wheel'. They can look to the Standard for guidance as to the most appropriate requirements for assuring tailings facility safety and they can incorporate those requirements into their laws and regulations.

As discussed in this chapter, States are also uniquely positioned to undertake the important task of monitoring and enforcing safety requirements at tailings facilities, whether those requirements are the result of a voluntary commitment by the Operator or a mandatory obligation imposed by the State. Establishing and maintaining a credible and well-trained professional staff that is capable of effectively carrying out this task will not be easy, but the health and safety of people and the environment depend on doing so. It is hoped that States will embrace the opportunity that they alone possess to fulfil this responsibility that they owe to their public.

REFERENCE

Auditor General of British Columbia (2016). *An Audit of Compliance and Enforcement of the Mining Sector*. Victoria, May 2016. https://www.bcauditor.com/sites/default/files/publications/reports/OAGBC%20Mining%20Report%20FINAL.pdf

8. See footnote 6 and the accompanying text.

KEY MESSAGES

1. States play a critical role in the success or failure of tailings facilities
2. The Standard offers a roadmap for States for how to establish an effective regulatory programme for tailings facilities.
3. States have understandable concerns about their capacity to fund and implement a regulatory programme. Operators should therefore be expected to bear the cost of the programme, including the cost of training competent personnel.
4. States bear a substantial part of the burden when people and the environment suffer from tailings facility failures. States should therefore embrace requirements for adequate performance bonds to assure full reclamation and safe closure, and for insurance to cover liability for injuries to third parties.
5. States are uniquely positioned to monitor the performance of Operators and to take appropriate enforcement action where violations of tailings facility requirements occur.
6. States that lack the capacity to adopt and implement a sound regulatory programme with well-trained staff should work with other countries and the international community to build that capacity.