



Occupational Health and Safety: A Look at Legislative Frameworks for Kenya's Mining Sector

Introduction

Unless effective occupational health and safety measures are in place, the mining industry often bears a disproportionate burden in terms of numbers of accidents, fatalities and incidence of disease. Therefore, as Kenya develops its mining industry a key focus for policy makers will be to ensure effective and efficient regulation of occupational health and safety (OH&S). Part XI of the Mining Bill 2014, reportedly soon to be assented into law, makes some general provisions regarding health, safety and environment, specifically Clause 178. This includes, but is not limited to, a directive that mining operations comply with the *Occupational Health and Safety Act 2007* while making provision for further mine OH&S regulations by the Cabinet Secretary.

This policy brief aims to outline the legislative and policy frameworks that have been in other mining countries applied specifically to mine health and safety. The comparative analysis will provide a useful background which can inform discussion on legislative approaches and considerations as the Ministry of Mining turns its mind to supporting regulations.

The legislative framework will underpin the most appropriate ways to: structure the mining regulator's (or inspectorate's) processes, enforcement approaches, recruitment of inspectors with the right skills and how it expects the mining industry to engage in active and genuine consultation with the workforce. It is therefore important to be cognizant of the pros and cons of the different existing legislative framework options, as the choice and approach chosen by policymakers will have an impact on workers' safety.

Legislative Frameworks

There are four main categories of legislative frameworks that have been applied by various countries to occupational health and safety (OHS) generally, and to mine health and safety specifically: (i) Prescriptive; (ii) General duties; (iii) Performance standards; and (iv) Process based standards.¹

There is no one-size-fits all. Often, these legislative frameworks fall somewhere

¹ Neil Gunningham, *Mine Safety: Law, Regulation, Policy*, New South Wales, 2007, p 14

along a spectrum of the four categories described above and elements of them sometimes overlap. Nevertheless, it might be helpful to think of one end of the spectrum as being the *prescriptive* end, whereby the government (through legislation and regulations) specifies 'rules' which must be adhered to the letter. Regulators and lawmakers often seek 'security' at this end of the spectrum, by specifically addressing known hazards. Conversely, the other end of the spectrum is the *risk management* approach; whereby interestingly, many OH&S regimes (in both the mining industry and other industries) are heading.

1. A Prescriptive Approach

As the name implies, a prescriptive approach 'prescribes' exactly what a duty-holder must do in relation to a particular circumstance; they are essentially safety rules.² The Kenyan *Occupational Health and Safety Act 2007 and revised in 2010* has many prescriptive clauses, for example:

- *s57 (1) Every part of transmission machinery shall be securely fenced.*
- *s57 (4) No driving-belt when not in use shall be allowed to rest or ride upon a revolving shaft which forms part of the transmission machinery.*
- *S59 (2) All power driven portable and hand held tools shall have their operating controls so located as to minimise the possibility of their accidental operation if such an accidental operation would constitute a hazard to the worker or other persons.*

Pros

² Health is often neglected in a prescriptive approach, because it can be hard to specify how to best minimize disease in a rule.

The approach directly addresses hazards that are foreseeable and which ordinarily would be addressed by tried and tested 'rules'. This is especially so where there are limited alternatives as to how the hazard can be managed.

Secondly, small-scale mining operators can favour this approach because it gives them a cheaper avenue to adhere to OH&S issues. Smaller operators may struggle more than their larger counterparts to implement the other frameworks that require proactive and more systematic management of OH&S at their sites.

Cons

There are a large variety of different mining sites in terms of size, the mineral being mined, open-cut or underground, etc. Increasing, technology can rapidly change the nature of a mine site and therefore its risks. Given this variety and potential for rapid change, three major drawbacks of a prescriptive approach are:

- It has a tendency to develop into very long and detailed legislation and regulation that can become unwieldy for both the industry and the regulator to implement.
- It is hard to keep up to date; traditionally, legislation and regulation lag behind advancements in the industry by many years.
- It is impractical to have a rule for every circumstance.

In addition, enforcement by the regulator tends to become focused on looking for breaches of these specific rules, at the expense of focusing on systemic or underlying problems (a situation akin to focusing on symptoms not the underlying causes).

Lastly, a prescriptive framework tends to engender a passive 'check-list' type approach to OH&S on the part of mine

management, and even the regulator. Ideally, mine management should take a proactive approach to identifying risks and identifying the best ways to manage those risks- in genuine consultation with the workforce.

2. General Duties Approach

This legislative approach sets out broad obligations or responsibilities that the duty-holder must follow. The Kenyan *Occupational Health and Safety Act 2007* essentially takes a general duties approach. For instance, key general duties identified in the Act are:

s6. (1) Every occupier shall ensure the safety, health and welfare at work of all persons working in his workplace.

s13.(1) Every employee shall, while at the workplace— (a) ensure his own safety and health and that of other persons who may be affected by his acts or omissions at the workplace;

s20.(1) A person who designs, manufactures, imports or supplies any article for use at work shall— (a) ensure, that the article is so designed and constructed as to be safe and without risks to health when properly used...

Pros

The benefit of a 'general duties' approach is its all-inclusive nature. Unlike prescriptive legislation, the lawmaker does not have to address a multiplicity of different hazards and different circumstances. Its generality also means it does not go out of date quickly; the onus is on the duty-holder to 'keep up to date' with well-known OH&S improvements in their respective industry.

It also provides the duty-holder very broad flexibility on how the stated obligations can be achieved at their operations, with their nuanced set of circumstances. For example, 'fencing transmission machinery' (used as an example of prescription above) might make sense for a coal conveyor belt, but it might not make sense for a car park full of rental cars; different circumstances matter.

Cons

It is precisely the all-inclusive nature and flexibility of the general duties that can engender "*considerable uncertainty, both for duty-holders and for mines inspectors, as to whether the duty of care has been complied with until and unless a matter is actually tested in court.*"³

Codes of practice or industry standards often accompany 'general duties' legislation to deal with this 'uncertainty'. The temptation of the regulator is to consider these as having the same status as regulation, when in fact they should be considered as one way of managing particular risks, or set of risks- perhaps best practice, perhaps minimum standard. Over reliance on the implementation of codes of practice and/or standards can result in the same drawbacks as evident in prescriptive legislation.

3. Performance Standards

Performance standards identify a minimum performance threshold or outcome that must be achieved, but does not state how it must be achieved. A good example of a performance standard exists in the New South Wales' *Mine Health and Safety Regulation 2007*:

³ Gunningham, op cit, p 65

s48: Ventilation: The operator of an underground mine must ensure that the mine's ventilation system is designed, installed, maintained and monitored such that:

- (a) the ventilation circuits at the mine do not allow airflows to re-circulate, and...
- (c) ventilating air does not pass through a number of work places if that is likely to result in the air becoming unfit for breathing...

Pros

This approach is particularly useful where there are accepted safe limits that can be stated in a standard; for instance, exposure limits to dangerous substances. There are some similar benefits to the 'general duties' approach in that performance standards allow considerable flexibility in how they are achieved. Moreover, the standards are unlikely to 'date' quickly. This flexibility is particularly useful in an industry - like mining - where there are often advances in technology. Unlike the general duties approach, there can be more certainty about when the standard is achieved; but only if there is an appropriate and accepted way to measure the outcome.

Cons

Arguably the biggest drawback of this approach is that not all health and safety requirements lend themselves to a minimum threshold or outcome, or if they do, they might be so broad as to exemplify a general duty or a process or standard. Performance standards are best used when there are well-known

safety limits, and they can then be used to augment a broader approach.

4. Process-based Standards

Gunningham defines 'process based standards' as a process to be followed, or a series of steps that must be followed, in the pursuit of a safety outcome. These processes are likely to be a series of steps around "hazard identification, risk assessment and risk control"⁴. Under this legislative framework, the emphasis is not on what hazards or risks should be managed, but requiring a systematic approach to managing OH&S.⁵ The regulator plays a vitally important role in assessing or reviewing the risk assessments and risk management systems.

The Kenyan OH&S Act does refer to risk assessments:

s(3) Every operator shall carry out appropriate risk assessments in relation to the safety and health of persons employed and, on the basis of these results, adopt preventive and protective measures...

However, legislation that adopts process based standards (or a risk management approach) as its main framework will have greater detail around the requirements of a risk management assessment; the development and implementation of controls; and the measurement and reporting of those controls; and the processes that must be undertaken to achieve all of these.

⁴ Gunningham, *ibid*, p 66

⁵ There are more (or less) sophisticated versions of these risk management process based standards, arguably with the 'safety case' approach being the most sophisticated, and in use in the nuclear, oil and gas and major hazard industries in some countries.

Pros

The principle behind this approach is that those who create the risks are best placed to identify the risks and mitigate them.⁶ A very important aspect of this approach should be the genuine involvement of the workforce in identifying risks and their controls.

This approach provides significant flexibility to the mine operators to tailor their OH&S system to their own circumstances. It is the approach that is most likely to engender continuous improvement and stimulate a 'safety culture'.

In practice, it is also how mine operators can demonstrate in a court of law that they have fulfilled their duties under a general-duties approach⁷. Unlike the general duties approach, there is less uncertainty by both operators and regulators, about what is required to fulfill the legislative requirement.

Cons

Small operators in particular may struggle to undertake the necessary steps to develop a risk management system due to a lack of capacity and relevant skills.⁸

This legislative framework also requires quite a different approach and a more advanced skill set within the regulator. The more traditional 'checklist' audit of a regulator is not appropriate under this legislative approach. The regulator's role, as noted above, is to review the

⁶ It should not be the regulators' role to ensure workers' health and safety; it is the mine management that has the necessary control to ensure this.

⁷ I.e. if prosecuted for an accident at their sites, mine operators could mount a defence that they had taken all reasonable steps by demonstrating their systematic risk management systems.

⁸ However, a smaller, simpler operation would also be required to produce a smaller and simpler risk management system.

risk assessment and the control measures to make sure they are adequate. They must enforce not only the implementation of the processes, but also the implementation of the identified control measures. The regulators must be highly skilled at risk management in order to do this.

Recommendations:

Given that the Mining Bill 2014 is awaiting presidential assent, there is an opportunity to ensure the OH&S legislative framework is responsive to the country's needs and is consistent with the realities on the ground. Best practice regulation in many countries in high-risk industries such as mining, oil and gas, major hazards and nuclear activities either have, or are heading towards, a risk management regulatory approach.

It is hereby recommended that Kenya develop specific OH&S mining regulations around:

- The need for a comprehensive and systematic safety assessment of potential hazards, using an appropriate risk assessment methodology.
- Adopt control measures that eliminates, or mitigates as far as practicable, the risk of the identified hazards.
- Based on the above risk assessment and control measures, develop a Safety Management System that comprehensively manages the OH&S at a mine site, and document that system in a Safety Management Plan (or equivalent);
- Requirement to develop an emergency management plan.
- Requirement to genuinely engage the workforce in the risk assessment and development of control

measures. (This may be done through workforce OH&S representatives.)

- Requirement that the Safety Management System and Plan is to be reviewed by the regulator who has the authority to require changes to ensure the mine site is managed safely.

If a risk management regulatory approach is adopted, the regulator should:

- Recruit specialist mine OH&S regulators with the necessary risk management skills to review the risk assessments and Safety Management Plans.
- Mine OH&S regulators should develop their enforcement strategy which is not based on a 'check-list' audit of a site, but based on a more tailored audit of how the mine operator is implementing their Safety Management Plan.

Ultimately, the Cabinet Secretary in drafting the OH&S regulations should be guided by the following broad principles:

- The imperative to mainstream health and safety within all the mining operations, underscoring the fact that an unhealthy workforce would translate into productivity

losses that ultimately affect the bottom-line and the country's economy at large

- The need to embrace evidence based decision making and continuous quality improvement within the OH&S environment; emphasizing the need for greater investment in data and surveillance systems that would serve as a lens for performance assessment and accountability
- The importance of investing in rigorous research to inform various aspects of policy formulation and implementation
- The need to emphasize that health is *everyone's business*, and seek to incorporate mine workers health, into other relevant national policies, e.g. the health and educational sectors

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Further information

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