



AUSTRALIAN GOVERNMENT

**SENATE STANDING COMMITTEES ON EDUCATION AND
EMPLOYMENT**

**THE FRAMEWORK SURROUNDING THE PREVENTION,
INVESTIGATION AND PROSECUTION OF INDUSTRIAL DEATHS
IN AUSTRALIA**

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Contact:

The Australasian Institute of Mining and Metallurgy

W: www.ausimm.com | T: +61 3 9658 6100 | F: +61 3 9662 3662

About the AusIMM

The Australasian Institute of Mining and Metallurgy (the AusIMM) was formed in 1893 and is the peak body for professionals in the resources sector, representing the 65,000 mining and minerals professionals in the Australasian region, across industry, government and academia.

Our members include professionals from traditional disciplines such as mining engineers, geoscientists and metallurgists, as well as from disciplines such as business management, finance, health and safety, social and environmental science.

With a focus on enhancing professional excellence, the AusIMM provides members with an ongoing program of professional development opportunities to ensure our members are supported throughout their careers to provide high quality professional input to industry and the community.

Submission

This submission is in response to the Senate inquiry into the framework surrounding the prevention, investigation and prosecution of industrial deaths in Australia. This inquiry is being conducted by the Education and Employment References Committee. This AusIMM submission will specifically look at industrial deaths as they pertain to the resources industry and its professionals.

This submission addresses the need – emphasised by the Productivity Commission in the mid-2000s¹ for greater harmonisation of work, health and safety regimes across Australian jurisdictions to achieve maximum efficiency. There is a need for uniform, high standard national safety legislation and regulation specific to the mining industry. This work was underway as part of the National Mines Safety Framework, which has been disbanded in recent years. By acknowledging the causal factors of past mining disasters, the AusIMM calls for a more consistent, national reporting structure to enable national benchmarking and use of data science to promulgate learnings which will enable improved risk management in the mining industry. This is increasingly important during the fourth industrial revolution (4IR) digital transformation of the industry. This transformation is occurring while the industry also moves towards a more risk-based model of health and safety regulation.

By promoting the essential requirement of qualified, experienced as well as certified mines inspectors and mine managers (statutory position holders) in the sector, the AusIMM believes mine site related illnesses, injuries and deaths will be reduced.

¹ Atkins, A. Morris, T. Jones, O. Bell, S., 'Progress of harmonisation of workplace health and safety laws for Australian mining', *The Bulletin*, 2017
<https://www.ausimmbulletin.com/feature/progress-harmonisation-workplace-health-safety-laws-australian-mining/>

Summary

The mining industry has made significant improvements in health and safety over the last decade, reducing the incidence rates of both fatalities and serious injuries. However according to Safe Work Australia, the mining industry still has one of the highest rates of fatalities of any industry.²

It should be noted that occupational illness is back on the radar with the re-surfacing of black lung in Queensland coal mines and with the latent risk associated with nano diesel particulate matter (nDPM) in underground mines, which has been shown through international research³ to be linked to cancer, dementia and other neurological conditions (sometimes not evident until the following generation).

The AusIMM has identified concerning trends around the national harmonisation of workplace safety legislation across states and territory jurisdictions, particularly as it pertains to the resources industry.

In an industry that is becoming increasingly more mobile across Australia (and internationally), this lack of co-ordination can lead to confusion and adverse incidents that compromise the safety of workers in the sector. With digital transformation of mining underway, some mine sites may also be located in a different jurisdiction to the location of the remote operation centres (ROCs).

The AusIMM concerns specifically include:

- Increasing lack of national harmonisation of Work Health and Safety Legislation
- Lack of any specific safety framework for mining in some jurisdictions of Australia (e.g. in Tasmania, Victoria, South Australia and the Northern Territory mine safety is regulated by WorkSafe)
- Lack of national data collection of mine health and safety which means there is a lack of opportunity to benchmark and promulgate learnings nationally from all incidents, accidents and workplace illnesses.
- Certificates of Competence and the potential of jurisdictions to undermine safety standards by removing or diluting requirements.

² SafeWork Australia. 'Mining', 2017,
https://www.safeworkaustralia.gov.au/industry_business/mining.

³ Jones, O. Musk, B. Reid, A. Davis, C. 2017, 'Nano Diesel Particulate Matter in the Underground Mine environment'
http://www.undergroundoperators.ausimm.com.au/Media/UndergroundOperators/presentations/1035_ChrisDavis.pdf

The effectiveness and extent of the harmonisation of workplace safety legislation between the states, territories and Commonwealth.

Work health and safety legislation harmonisation

The harmonisation of Australian work health and safety legislation commenced as a result of recommendations from the Productivity Commission⁴ to promote the cross-border mobility of the workforce and to remove, where possible, duplication and barriers arising from having numerous series of safety legislation and requirements across Australia. The aim was to initiate more effective health and safety results through further simplification, consistency and uniform training programs.

General work health and safety (WHS) harmonisation has already been enacted in some states (e.g. NSW, SA, NT, TAS, ACT) and OHS Acts have been replaced. In the cases where the WHS Acts have been enacted it is based on a national model WHS Act, which they mirror.

AusIMM maintains that uniformity has not been reached as states have discretion (and some have used this discretion) to depart from some sections of the Model legislation (both the Model Act and Regulation) and there is no way of guaranteeing ongoing uniformity while the states and territories retain the power to amend their laws. It should be noted Queensland has recently amended its mine safety legislation, but it is not aimed at progressing harmonisation. WA's legislation is also 4 years overdue to be reviewed (a review is conducted every 5 years under Section 110 of the MSIA) and it is unknown whether it will reflect the harmonised Model WHS Act.

Mine safety harmonisation

AusIMM's main concerns relate to the harmonisation of safety standards and regulations specifically in the mining industry. Negotiations were underway to standardise the 'mining states' (WA, Queensland and New South Wales) on the specifics of 'non-core' legislation. These were to supplement 'core' mine safety legislation (also known as Chapter 10 of the WHS Bill) and occurred under the umbrella of the Council of Australian Governments (COAG) endorsed National Mines Safety Framework (NMSF) between 2011 and 2013.

The NMSF was disbanded in 2013 and from that time the Chief Inspectors of Mines from each mining state have been coming together annually at the Conference of the Chief Inspectors of Mines (CCIM) to recognise and analyse the differences between each states' mine safety legislation to move further towards finding a negotiated standardised position. Unfortunately, the CCIM has lacked the necessary power to enact legislative change leading to any significant harmonisation in 'non-core' legislation.

⁴ Productivity Commission, 2004, 'Final Report Harmonisation of OH&S Regulations'
<http://www.pc.gov.au/inquiries/completed/regulation-benchmarking-ohs/submissions/sub016-attachment.pdf>

Risk-based vs prescriptive models

A core goal of the NMSF was to harmonise the mining states' legislation and Competency Frameworks (for statutory position holders), with the reporting and feedback of significant data to the Commonwealth Department of Industry into a national database of mine safety outcomes. It was intended that the harmonised legislation would reduce 'prescription' and move industry towards a more 'risk-based' approach. This was a move that would bring Australia into line with world class safety expectations. The AusIMM supports this move in theory on the basis that:

1. the prescriptive expectation of compliance does not necessarily represent up to date best practice, and
2. that a regular reporting framework would be implemented.

The importance of the risk-based foundation to the legislation was emphasised by the Honourable Tony McGrady, then Minister for Mines and Energy,

"It has been found throughout the world that change quickly makes the methods dictated by legislation outdated. Therefore, the new legislation focuses on the standards of safety and health that must be met and allows the mine operator to use the most appropriate methods and technology to achieve these standards."

For various reasons the harmonisation process has not advanced. This is partly due to the mining states being unwilling to negotiate on prescriptive elements of their individual underground coal and metalliferous mine legislation, details which have a history strongly embedded within past mine disasters.

The harmonised mining 'non-core' WHS legislation was intended to incorporate coal and metalliferous mining into a single collection of legislation, together with dangerous goods, major hazard facilities and onshore petroleum (at least in WA). However, the AusIMM maintains that these activities are vastly different and finding a way to create legislation that suits them all is problematic and may prove to be elusive long-term.

Adjustment issues arising from transitioning from entirely prescriptive legislation to risk-based legislation are understandable. To enable the digital transformation of the mining industry it is important to avoid going down the industry 'self-regulation' route, where mining companies could potentially approach mine safety as an 'optional extra' rather than 'core business'. Harvard Professor Malcolm Sparrow warns that a regulatory strategy "based entirely on persuasion and self-regulation will be exploited when actors are motivated by economic rationality".⁵

With a focus on moving towards a risk-based approach to safety, the harmonisation process was initially intended to retain essential (prescriptive) aspects from regulations through the formation of national Codes of Practice and Guidelines. These were meant to be constructed collaboratively by all mining states and endorsed by Safe Work Australia (SWA). This has not occurred.

⁵ Sparrow, MK. 2000, 'The Regulatory Craft: Controlling Risks, Solving Problems and Managing Compliance', *The Brookings Institution*, pg 40

It is the AusIMM's understanding that this process has been delayed indefinitely. This highlights the Institute's concerns that the current regulatory landscape, which includes disparate Codes of Practice and Guidelines which are often difficult to locate, has become complex, opaque and does not promulgate the significant body of knowledge obtained from past mining disasters. With the digital transformation of mining in the nascent stages, now is the time to ensure the regulatory environment is fit for purpose and can be navigated by new entrants who are unaware of what they don't know. If this is not done, there is a likelihood of more mine disasters.

Mining disasters and the need for specific mine safety government frameworks

Mining safety measures can be informed by mining disasters of the past.

"Royal commissions and other reports into the causal factors of many mining disasters such as Pike River (NZ Government, 2012) and Beaconsfield, Tasmania (Quinlan, 2014) appear to have at least one common factor - *failures in regulatory oversight* - which is often related to resourcing constraints, whether referring to people (skill or number), system limitations or financial."⁶

The Royal Commission Report from the Pike River Coal Mine Disaster of 2010 specifically detailed the lack of mining-specific safety legislation by the regulator as an underlying cause of the tragedy where 29 individuals lost their lives⁷. Mining-specific safety frameworks had been removed in the immediate time preceding this disaster.

Likewise, the coroner's report produced as a result of the Beaconsfield Mine collapse in 2006, (substantiated by safety investigators) made reference to the lack of mining-specific regulation or codes enforced by the Tasmanian Government at the time, drawing a direct comparison between the measures taken by the NSW government, who had adopted mining-specific safety expectations.⁸ It was the belief of safety consultants that this was a direct causation of the Beaconsfield mine disaster and this was openly supported by the coroner in his report. The responsibility for oversight of safety within the mining industry had been moved from the Resources Department to a generalist WorkSafe regulator, reducing any key mining knowledge from site assessors leading up to the disasters at both Beaconsfield and Pike River.

In this comparison, NSW made moves towards more thorough mining-specific safety frameworks and codes somewhat earlier. After the 1999 North Parkes air blast disaster which killed four individuals, the coroner detailed in his report that the lack of regulation (around not just mining), and specific practices within various

⁶ Deloitte, 2016. 'Mines Safety Branch resourcing and funding independent assessment: Report and recommendations by Deloitte', pg 9

http://www.dmp.wa.gov.au/Documents/Safety/MSH_R_DeloitteReport_DMPResponse.pdf

⁷ Panckhurst, G., 2012, 'Royal Commission on the Pike River Coal Mine Tragedy', pg, 32

[http://pikeriver.royalcommission.govt.nz/vwluResources/Final-Report-Volume-One/\\$file/ReportVol1-whole.pdf](http://pikeriver.royalcommission.govt.nz/vwluResources/Final-Report-Volume-One/$file/ReportVol1-whole.pdf)

⁸ Chandler, R., 2009. 'Findings, recommendations and comments of Coroner Rod Chandler following an inquest held in Launceston', pg 62 <http://eagcg.org/common/pdf/Beaconsfield.pdf>

types of mining (e.g. caving), had led to fatal errors on site.⁹ His report included that the NSW government introduce “specific recommendations into all relevant codes of practice or industry guidelines for safe mine design and operation” rather than loose expectations of safety. This highlights the importance of the certificates of competence and statutory positions on sites.

Jurisdictional issues surrounding WHS across state and territory boundaries

The Safe Work Australia 2011 Impact Statement¹⁰ on the harmonisation of WHS legislation, states three core aims when it comes to state and territory jurisdictions:

- **Reducing compliance costs for business.** For multi-state businesses, nationally consistent Acts should equate to lower compliance costs. For single-state businesses, the outcome is not clear. Given the above-mentioned issues with harmonisation between states and jurisdictions, and the ability of individual jurisdictions to adjust core and non-core legislation, the effectiveness of work health and safety legislation to reduce compliance costs has been limited.
- **Improving efficiency for regulatory agencies.** Rather than having ten regimes being reviewed every five years, there should effectively only be one national regime reviewed every five years. Providing a periodic reassessment of WHS in the mining industry by regulatory authorities is further complicated by the changing landscape of WHS on a jurisdictional level, and the various mining (non-core) specific legislation adopted by some of the larger mining states.
- **Improving safety outcomes.** The reduction of red tape and greater certainty for duty holders should allow businesses to focus more on health and safety improvements rather than on mere compliance. Regulatory efficiencies & transparency of mining health and safety related data should also allow more scope for regulators to actively improve safety and health in mining workplaces. This has been eroded by the lack of harmonisation of mines safety and health legislation, guidance material and data collection between states and territories in how the mining industry is regulated.

Currently only 85% of resources activity is covered by Mine Safety (non-core) legislation¹¹, leaving a large gap in the expectations and obligations of the mining industry, particularly for cross-jurisdictional workers and operators. A mobile workforce, with fly-in-fly-out (FIFO) workers, across multiple jurisdictions only further complicates these safety standards and expectations.

⁹ Bailey, J., 2003. ‘North Parkes Coroners Report’, recommendation 6, <http://www.mineaccidents.com.au/mine-accident/186/northparkes-airblast-1999>

¹⁰ SafeWork Australia, 2011. ‘Decision Regulation Impact Statement for National Harmonisation of Work Health and Safety Regulations and Codes of Practice’, pg ii <https://www.safeworkaustralia.gov.au/doc/decision-regulation-impact-statement-national-harmonisation-work-health-and-safety-regulations>

¹¹Australian Energy and Resources Group, 2012. ‘OHS harmonisation and mine safety: An update’ <http://www.amma.org.au/news-media/media-center/ohs-harmonisation-and-mine-safety-an-update/>

Given the tragedies of the past, the digital disruption of the mining industry, and the renewed global push for the mining industry to earn its social license to operate (often captured in the [Global Reporting Initiative's Environmental Social Governance Reporting regime](#)¹²), this current gap must be closed.

There are also significant differences in various jurisdictions when it comes to IT systems and reporting requirements, making aggregation and collation of data problematic.

Issues relating to reporting, monitoring and chains of responsibility between states, territories and the Commonwealth;

Regulatory oversight

As stated, the new harmonised WHS legislation moved away from prescriptive legislation to risk-based outcomes, focused legislation in an effort to reflect today's more modern corporate health and safety cultures that are substantially more malleable (arguably, to enable innovation). This generalist movement had the challenge of navigating the issue of covering many different processes and industries in a meaningful way.

As stated by the Australian National Audit Office report in 2014, "An appropriate level of effective regulation is an essential component of a well-functioning economy and supports the achievement of economic, social or environmental policy objectives. In designing regulatory approaches, governments need to strike a balance between the obligation to protect the community or public interest, while at the same time not imposing unnecessary costs on those they regulate"¹³

Risk-based legislation promotes a certain type of 'self-regulation' by industry where duty holders (i.e. statutory position holders) are responsible for the identification of safety threats and the implementation of measures to remove such risks. The AusIMM maintains that an essential element of this model is that 'self-regulation' is supported and overseen by an effective, independent and comprehensive regulator with a substantial monitoring and implementation regime (similar to a prescriptive model). In his review, Kenner (2009) argued that a more risk-based approach required a more competent inspectorate, as more judgement is required and the ability to negotiate with site statutory position holders requires a degree of expertise and experience¹⁴. The AusIMM maintains that this oversight is the key to any successful regulatory regime, and one that is not often achieved.

¹² International Finance Corporation, 2010. 'Getting More Value out of Sustainability Reporting: Connecting IFC's Sustainability Performance Standards and the GRI Reporting Framework', <https://www.globalreporting.org/information/about-gri/alliances-and-synergies/Pages/IFC.aspx>

¹³ Australian National Audit Office, 2014, 'Administering Regulation: Achieving the right balance' <https://www.anao.gov.au/work/better-practice-guide/administering-regulation-achieving-right-balance>

¹⁴Kenner, SJ. 2009, 'Review of the Mine safety and inspection Act 1994' pg 7-14. <http://www.dmp.wa.gov.au/Dangerous-Goods/Statutory-and-other-reviews-and-6532.aspx>,

Lack of data

Further to this, the substantial lack of national data collection of mine safety and health incidents makes an analysis of the effectiveness of each jurisdiction's regulatory framework difficult. Safe Work Australia, initially charged with this role, provides limited and sporadic data on this topic sometimes every two years. "Mines" are currently defined differently by each state, therefore it is difficult to adequately compare even the number of inspectors to the number of mines in order to assess regulatory cost and safety effectiveness by jurisdiction.¹⁵ For these reasons it is difficult to ascertain causes behind the fatalities and injuries in each state, and consequently any potential gaps in regulation that leads to adverse incidents at work.

Other related matters

Certificate of Competency

Currently under mine safety regulations in various states and territories, people wishing to be appointed as an underground mine manager or quarry manager (or their alternates or deputies), or as an underground supervisor must hold a relevant certificate of competency (CoC).

This ensures that mine management is appropriately qualified to ensure the place of work (i.e. mine design), systems of work (e.g. mining method, extraction sequence, mining equipment), training and supervision are fit for purpose with safety at its core.

Accordingly, CoC's are not easily granted, especially with the changing legislative landscape which makes holding and taking mining law exams difficult.

Mining companies are currently having trouble recruiting individuals with the requisite CoC's, which means the pay pressure on these roles is increasing. The AusIMM suggests this is for several reasons, including:

- lack of CoC examinations held by state regulators due to legal transience,
- ageing or family-rearing stage CoC holders who no longer want to work full-time on remote mine sites away from home for long periods,
- the desire of individuals to avoid the potential personal liability associated with site safety management (especially if under duress from financial pressure to do more with less), and
- a decline in the value placed on the CoC by employers more inclined to employ cheaper, overseas labour without the necessary Australian qualifications.

The AusIMM has concerns about recent considerations by individual jurisdictions to loosen or dilute CoC requirements on mine sites as a result of this industry pressure which has been delivered through lobby groups. These lobby group tend to be supported by those with a financial interest rather than those who see safety

¹⁵ Deloitte, 2016. 'Mines Safety Branch resourcing and funding independent assessment: Report and recommendations by Deloitte', pg 19

as a priority. There has been significant lobbying by these groups to remove the requirement for a mining engineer with a First Class Mine Manager's CoC to run an underground mine with up to 25 workers. Similarly, there has been pressure to remove the requirement of a Quarry Manager's CoC to run an open pit mine. This is somewhat due to the influx of non-traditional professions in open cut iron ore autonomous mines – and a growth in General Managers and Mine Managers with mechanical/civil engineering, nursing and finance backgrounds.

The AusIMM maintains that the highest standards of safety must be upheld, and the CoC is an essential part of this. The Kenner Report (2009), saw the CoC as an imperative part of mine safety, which was highlighted in recommendation 50 of this report.¹⁶

In the New Zealand quarry sector alone, there are 1076 notified sites and only 763 have statutory managers meaning that this sector is short of 313 CoC holders. In other words, 29% of quarries in New Zealand don't have a CoC holder.

In the last four years there have been five fatalities in the New Zealand quarry sector, all in small poorly resourced operations, without a CoC holder and inadequate health and safety management systems. NZ WorkSafe has been recruiting for inspectors, but the pay is significantly lower and the workload significantly higher than even its Australian counterpart and they have experienced difficulty recruiting quality personnel.

The Deloitte report into the WA mines inspectorate specifically advises “against any repetition of the type of action that led to past disasters, such as the de-skilling of the inspectorate.”¹⁷

Recommendations:

The AusIMM's Royal Charter charges our Institute with a duty to the community – to ensure Australia's resources are extracted safely and sustainably.

The AusIMM is concerned that the direction the mining industry has been taking over the past five years has been deleterious to Australia's ranking¹⁸ as one of the world's best mining jurisdictions for safety, efficiency, sustainability and legal stability. This has created a sovereign risk and may result in Australia losing its place as a desirable place to invest, especially by the swelling ranks of Ethical Investor Funds (e.g. US University Endowment Funds and Pension Funds) who consider safety and sustainability a key success factor for financial performance and social license to operate.

¹⁶ Kenner, SJ. 2009, 'Review of the Mine safety and inspection Act 1994' recommendation 50. <http://www.dmp.wa.gov.au/Dangerous-Goods/Statutory-and-other-reviews-and-6532.aspx>,

¹⁷ Deloitte, 2016. 'Mines Safety Branch resourcing and funding independent assessment: Report and recommendations by Deloitte', pg 9

¹⁸ Jackson, T. Green, K. 2016, Fraser Institute survey of Mining Companies, <https://www.fraserinstitute.org/sites/default/files/survey-of-mining-companies-2016-execsummary.pdf>

The AusIMM calls on the Government to:

- Develop a national framework of legislation and guidance that is uniform across jurisdictions.
- Re-establish the National Mine Safety Framework or similar body, and re-focus attention on introducing, and standardising where necessary, mine health and safety legislation, Codes of Practice, Guidelines and CoC frameworks across jurisdictions.
- Encourage greater attention to national reporting frameworks and statistics to promote best-practice and promulgate learnings nationally.
- Initiate a strategy by which industry can re-value competence and to ensure mining professionals are educated appropriately and charged with the power to effectively manage risk on mine sites – particularly during the 4IR.