

# Government engagement: insights from three Australian states





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## Acknowledgements

This project report is part of a broader initiative, the Social Aspects of Mine Closure Research Consortium. Established in 2019, the consortium is a multi-party, industry-university research collaboration challenging accepted industry norms and practices around mine closure and demanding new approaches placing people at the centre of closure. Industry partners in the consortium include: Anglo American, BHP, MMG, Newcrest, Newmont, Oceana Gold and Rio Tinto. The initiative falls under the SMI's Transforming Mine Lifecycles cross-cutting program.

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<sup>&</sup>lt;sup>1</sup> QS World University Rankings and Performance Ranking of Scientific Papers for World Universities, 2018.

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### **Executive summary**

This project sought to establish current state priorities for socially responsible mine closure and smooth regional post-mining transitions in the Australian state jurisdictions of New South Wales, Queensland and Western Australia. It concentrated on priorities that are not yet evident in legislation and cultivating state authorities' interest in the work of the consortium. The project aimed to:

- Better understand current and emerging expectations and role of Australian governments in ensuring attention to social aspects of closure
- Identify government strategies for improving the 'afterlife' for mining communities and regions
- Articulate regulator roles in protecting the public good and ensuring a positive socio-economic legacy of mining
- Facilitate two-way communication between the consortium and governments and identifying ways for government departments to connect to the consortium's work.

The project responded to constraints and leveraged opportunities presented by related developments within Australian governments and within the research community. Three strategies were used to build a picture of state arrangements:

- Desktop research including of government discussion papers
- Contacting (in person, by phone and email) key government players in the focus states
- Attendance at relevant workshops and meetings in Queensland (some with participants from other states).

The report presents findings in five areas:

- Arrangements and priorities around mine closure in selected Australian mining jurisdictions (Section 4.1).
- Perceptions and expectations of government (as a key stakeholder) with regard to realistic postmining social scenarios (Section 4.2).
- Details of exchanges with consortium partners and government stakeholders (Section 4.3).
- Recommendations for continued liaison between consortium activities and relevant Australian governments (Section 4.4).
- Links to other consortium work and potentially identification of new areas warranting research (Section 4.5).

A number of observations about trends and concerns emerged from the study, which prompt questions that may fuel future research with the consortium or the Cooperative Research Centre on Transitions in Mining Economies (CRC-TiME). They include questions about:

- Divisions of responsibility at closure transition between the state and industry.
- Directing attention to mine closure transitions without relying on 'whole of mine-life' clichés.
- Examples of clear and consistent regulatory frameworks for social aspects of mine closure.
- Characteristics of a governance system to promote public trust in mine closure regulation.
- Social completion criteria and social risk assessment as part of mine closure plans.



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## Acronyms

CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSRM	Centre for Social Responsibility in Mining, Sustainable Minerals Institute
DER	Department of Earth Resources (Victoria)
DES	Department of Environment and Science (Queensland)
DME	Department of Mines and Energy (Northern Territory)
DMIRS	Department of Mines, Industry Regulation and Safety (Western Australia)
DMP	Department of Mines and Petroleum (Western Australia)
DNRME	Department of Natural Resources, Mines and Energy (Queensland)
DPC	Department of Premier and Cabinet (Queensland and New South Wales)
DPIE	Department of Planning, Industry and the Environment (New South Wales)
EPA	Environmental Protection Authority
MRF	Mine Rehabilitation Fund (Western Australia)
PMLU	Post-mining land use
PRCP	Progressive Rehabilitation and Closure Plan (Queensland)
QTC	Queensland Treasury Corporation
SIA	Social Impact Assessment



## 1. Introduction

This project recognises that government must be part of the conversation about mine closure, and about a regulatory framework that minimises negative impacts while realising positive impacts from transition.

Australian mining law operates at federal and state/territory levels, with each level having different roles and responsibilities in resource development and mine closure. Ownership of mineral and petroleum resources is vested in the states/territories and onshore extractive activities are regulated primarily at the state and territory level. However, some federal laws affect the onshore resources sector, such as policies around company taxation, foreign investment, immigration, competition, trade and customs, company law, international agreements and native title. As well, federal environmental legislation, notably the Environmental Protection and Biodiversity Conservation (EPBC) Act, can affect the development of resource projects with national environmental significance. Accordingly, this project concentrated on determining state government expectations and requirements for operators to leave a positive legacy for future generations, and any direct state responsibilities to achieve socially responsible mine closure and smooth regional post-mining transitions.

## 2. Objectives

This project identifies current mine closure priorities and initiatives in Australian government jurisdictions. The focus was on the states of New South Wales, Queensland and Western Australia, reviewing how extensively their regulatory instruments include provisions requiring consideration of the social aspects of closure.

Legislated expectations and requirements for these three jurisdictions (among others) were also the subject of another industry-funded project under the Social Aspects of Mine Closure Research Consortium, called *Closure governance and regulation*. This project did not pursue that in equal detail, instead establishing current state priorities not yet evident in legislation, and cultivating interest in the work of the consortium. The aims of the project were to:

- better understand current and emerging expectations and role of Australian governments in ensuring attention to social aspects of closure
- identify government strategies for improving the 'afterlife' for mining communities and regions
- articulate regulator roles in protecting the public good and ensuring a positive socio-economic legacy of mining
- facilitate two-way communication between the consortium and governments and identifying ways for government departments to connect to the consortium's work. (Although beyond the scope of this project, this may, eventually promote stronger engagement between regulators and industry)

### 3. Methods

The project took a strategic and iterative approach, leveraging opportunities among related developments within Australian governments and within the research community. The intent was to consult and build relationships with governments and take advantage of existing forums and



regulatory reform processes and networks, ensuring governments had a clear picture of UQ's research agenda. Some factors influenced timing, targeting and style of interactions:

- Both the federal and New South Wales governments had elections in 2019 with subsequent changes in machinery of government, personnel and some policy priorities.
- A number of enquiries identified issues receiving the attention of authorities. During 2019, these included the Senate enquiries into Jobs for the Future in Regional Australia and Mine Rehabilitation as well as the Productivity Commission's issues paper calling for public submissions on resources sector regulation.
- In February 2019, a National Resources Statement was released, building on the Resources 2030 Taskforce report. It signalled an intent to consolidate resources regulation and reduce duplication.
- The launch of the <u>Social Aspects of Mine Closure Consortium website</u> and <u>e-library</u> in November provided a very professional and tangible resource for governments about consortium activities and focus.

The bid for a Cooperative Research Centre in Transitions in Mining Economies (<u>CRC-TiME</u>) involved considerable consultation with regulators across Australia, especially in Queensland and Western Australia, where the lead universities are based. It was deemed strategic to collaborate as much as possible and not to compete for attention or create confusion about the different initiatives.

Ten days of staff time were allocated to this study. The main activities were:

- reviewing machinery of government arrangements in selected Australian states relevant to social aspects of mine closure
- identifying resources relevant to the socio-economic transition accompanying mine closure in Australian jurisdictions
- participating in relevant meetings and workshops in Queensland (some involving interstate participants)
- informing governments of the consortium and its activities
- identifying contacts in key states and fostering links with governments.

### 4. Findings

This section summarises the background information, data and findings of this project:

- section 4.1 and Table 1 relevant arrangements and priorities in selected Australian mining jurisdictions
- section 4.2 perceptions and expectations of government (as a key stakeholder) with regard to realistic post-mining social scenarios
- section 4.3 details of related exchanges with consortium partners and government stakeholders
- section 4.4 recommendations for continued liaison between consortium activities and relevant Australian government
- section 4.5 links to other consortium work and potentially identification of new areas warranting research.



### 4.1 **Priorities and state arrangements**

#### Table 1:Comparisons of policy priorities and positions in selected Australian jurisdictions

Focus Areas	New South Wales	Queensland	Western Australia	Victoria	Other states/territories and Federal
Relevant departments	Department of Planning, Industry, and Environment (DPIE)	Department of Natural Resources, Mines and Energy (DNRME); Department of Environment and Science (DES) (+ QTC & DPC)	Department of Mines, Industry Regulation and Safety (DMIRS); Environmental Protection Authority (EPA)	Department of Earth Resources (DER) and Department of Jobs, Precincts and Regions (and Department of Environment, Land, Water and Planning)	Department of Mines and Energy (DME) in Northern Territory Productivity Commission (Federal) Council of Australian Governments councils
Focus regions	Hunter Valley	North-west Minerals Province	Goldfields and Pilbara	Latrobe Valley	South Australia – Olympic Dam Northern Territory – Ranger
Environmental financial assurance	Cash or bank guarantee for estimated cost of environmental rehabilitation	Updated cost calculator tool for approved environmental rehabilitation. Inclusion of a surety or levy depending on site and company risk profile.	Bonds replaced by a levy for Mine Rehabilitation Fund (MRF)	Bonds set by the department based on industry self- assessment of liability (judged 'inadequate' by the Australian Energy Market Commission)	Northern Territory has a 1% levy on mines for legacy sites. Tasmania requires a bond/bank guarantee to be secured by the mine owners
Mine closure plans	Mine Operations Plan to include a rehabilitation plan to be undertaken progressively over the life of mine	Progressive rehabilitation and closure plans (PRCPs) are required from 2019	Mine Closure Plans are required. Provides guidelines for preparing them (DMP and EPA 2015)	Require a mining rehabilitation work plan (consistent with the Environmental Effects Statement)	Northern Territory requires a Mining Management Plan. Tasmania requires a Decommissioning and Rehabilitation Plan.
Closure goals	Safe, stable, non- polluting, suitable for agreed post-mining land use (PMLU)	Safe and stable landform, non- polluting and sustaining an agreed land use	Safe and stable, non- polluting and non- contaminating site that is ecologically sustainable and consistent with agreed PMLU	Public safety, amenity, managing impacts on the environment to achieve safety, and stability for the land use and surrounds	



Focus Areas	New South Wales	Queensland	Western Australia	Victoria	Other states/territories and Federal
Recent closure- related initiatives		<ul> <li>Package of reforms:</li> <li>managing residual risk (discussion paper)</li> <li>financial provisioning (Act passed late 2018)</li> <li>progressive rehabilitation and closure criteria and guidance</li> </ul>		Latrobe Valley regional rehabilitation strategy. Preliminary Land Use Vision for the Latrobe Valley. <u>New rehabilitation</u> guidelines (Feb 2020)	Australian National Resources Statement 2019 Review of Environment Protection and Biodiversity Conservation Act Resources Sector Regulation: Productivity Commission issues paper (September 2019).
Priority regulatory concern	Primarily environmental but social considerations starting to influence social impact assessment and conditions so maybe mine operation plans soon?	Final voids Primarily Residual risk and environmental liabilities. Rehabilitation quality, and certification process.	Mainly ecological and biodiversity aspects but 'encourage proponents to consider socio- economic aspects in particular impacts of mine closure on local communities'	Impacts on health and local economy	
Nightmare scenario (regulators face challenges due to poor closure in socio- environmental terms)	Russell Vale – coal mine high rehabilitation liabilities, inadequate provisions, concern about social and economic benefits. After multiple periods of care and maintenance, closure planning was still regarded as 'premature' and no consultative planning process was initiated. Woodsreef asbestos mine is another example	Mt Morgan – after 100 years of gold-copper mining, now plagued by environmental pollution, specifically acid and metalliferous drainage (AMD). This has severely impacted aquatic ecosystems and also human uses of the Dee River for kilometres downstream	Wittenoom – closed, asbestos- contaminated town and significant traditional owner sites	Latrobe Valley – Hazelwood mine fire resulting in premature mine closure. Company lacked a public mine closure plan, underestimated rehabilitation cost provisions, bonds for liabilities were significantly inadequate and reference to closure in sustainability reports	Mc Arthur River lead-zinc mine in the Northern Territory diverted a river, created significant spontaneous combustion and acid mine drainage hazard and also disrupted culturally significant sites. Mt Lyell copper mine in Tasmania, was abandoned after 100 years of operation. It denuded surrounding vegetation and contaminated the King River with AMD. Savage River and Mt Bischoff are other significant AMD impacted sites in Tasmania.



#### 4.2 Government perceptions and expectations

Australian governments are increasingly reluctant to certify environmental rehabilitation and approve relinquishment of mining leases. Experience of assuming liabilities that also affect government credit ratings and lack of clarity and consensus about residual risk explain this caution. History provides examples of various government actions and inactions in the face of mine closures. In Mt Isa, the Queensland Government has subsidised relining of the lead furnace in the mine's smelter to keep the mine in production and avoid social fallout. In Western Australia, the government is working hard to reopen the Ellendale Diamond Mine. In other cases, government has left the market to take its course, leaving communities like Mt Morgan, Queensland, to their own devices, and resulting in accusations that government turns its back on mining communities once production ceases. Another scenario has governments working closely with local bodies, communities and mine operators to ensure a smooth transition, similar to the process now underway in the Latrobe Valley.

Inadequate financial provisioning was a common concern among jurisdictions throughout this project. For example, environmental rehabilitation suffered: 'Some sites go into care and maintenance and a few operators forfeit the financial assurance to the state. As the financial assurance is often insufficient to cover the estimated cost of site rehabilitation, the state is left with an increasing legacy of sites that are not rehabilitated' (Queensland Audit Office, 2014, p. 3). Other issues included lack of transparency, lack of closure planning, and an increasing awareness of the socio-economic impacts closure can bring to communities, and the social vacuum that can arise when former mining regions become 'ghost towns', or small and depressed communities.

The examined jurisdictions and the federal government maintain a strong focus on initiating new short-term mining activity, which draws attention away from mine closure. As recently as 21<sup>st</sup> November 2019, the *Australian Mining Newsletter* carried the headline, 'ScoMo'<sup>3</sup> to cut green tape for major mining projects' and went on to detail the federal government's intentions to cut complex project approval times from years to months, starting with Western Australia.

Highlights of the prominent perceptions and expectations in the key states follow.

#### 4.2.1 Western Australia

The state's guidance on mine-site rehabilitation is the result of a collaborative effort of government agencies (including the Department of Mines, Industry Regulation and Safety, or DMIRS), science experts and industry representatives. Western Australia has also recently revised (with public consultation) a number of aspects of mining regulation. In August 2019, the Department of Mines, Industry Regulation and Safety released 'A framework for developing mine-site completion criteria in Western Australia' outlines environmental criteria that mine operators can use to demonstrate they have successfully and sustainably rehabilitated their site after mining. It was produced by government agencies, leading science experts (the Western Australian Biodiversity Science Institute) and a wide range of industry representatives. These closure criteria cover social criteria to a limited extent (mainly community safety) and specify a life-of-mine perspective. This is consistent with the DMIRS's parameters for considering requests for assistance made by the resources sector that note, 'Resource projects are expected to be managed on the basis that communities benefit from resource development activity' and that support for community well-being and advancement will be a consideration. In general, this assistance seems to apply more to earlier phases of the mine life-cycle than to closure transitions.

Another proposal open for comment during 2019 related to changes to mine closure plan guidelines (to revise guidelines dating from 2015), establishing statutory guidelines that clearly specify the form and content of mine closure plans. The consequent statutory guidelines specify the form and content

<sup>&</sup>lt;sup>3</sup> ScoMo is a media nickname for the prime minister of Australia at the time of publication, Scott Morrison.



of mine closure plans including that they must be risk- and outcome-based. They apply from March 2020 and embed the existing environmental focus of mine closure planning and ties all decision-making authorities to the environmental policy context.

Western Australia's principles underpinning the regulatory framework for the resources sector are revealing and resonate with other big mining states, especially Queensland:

- Principle 1: Attract investment by minimising commercial risks for explorers and investors.
- Principle 2: Provide the industry with certainty regarding its rights to resources.
- Principle 3: Provide a clear and consistent regulatory framework.
- Principle 4: Ensure the community receives appropriate royalty returns.
- Principle 5: Foster public trust and confidence.

#### 4.2.2 Queensland

There is a recent, two-fold imperative evident in Queensland regarding some issues related to rehabilitation and mine closure, notably abandoned mines and financial assurance arrangements. First, there has been a 'stocktake' within the Queensland government to try to project the scale and nature of mines approaching end of life within various time horizons. As a result, key mining regions have identified priorities for greater government attention, but primarily to minimise public liability. Queensland's second focus is maintaining a vibrant mining industry as a cornerstone of its economy and ensuring the industry brings prosperity to resource communities and regions. Hence, there has been considerable effort toward strengthening social considerations in the earlier stages of mining through SIA at approvals time. However, there are a growing number of conversations about the social impacts and political fallout of mine closures and the need for economic diversification in mining regions. For example, there is a strategic blueprint for what Queensland calls its northwest minerals province (centred on Mt Isa and containing 75% of the state's base metals deposits). The blueprint outlines the government's three strategies:

- 1. facilitating continued resources sector development
- 2. diversifying the regional economy and creating employment opportunities
- 3. working with businesses and communities to deliver integrated and appropriate services.

The approach of establishing a regional renewal taskforce when a region is experiencing or confronting transitions holds promise.

#### 4.2.3 New South Wales

The New South Wales system differs from Queensland's in that the development consent and environmental conditions are attached to the land, not the mining lease. Surrender and relinquishment issues differ. The main concerns in New South Wales relate to coalfields, which have clusters of mines, are relatively close to substantial regional areas, and in most cases have power stations as well. This makes closure of these mines a 'double-bunger' issue for the state. Broken Hill, Cobar and other metal mines are less pressing concerns because of their remoteness, and because phasing out individual mines is more manageable and those places are viewed as having more limited alternative options to warrant investment.

There are recent requirements to develop a detailed mine closure plan five years before closure. Post-mining land use must be defined at approvals, and closure objectives and closure criteria set, but little guidance exists on these requirements and there is no compliance system for social issues, or alignment with regional plans. Another contrast with Queensland is that New South Wales Treasury is not as concerned about financial provisioning since mining is only 2% of the state's



economy and the problems of rehabilitation are perceived to be less severe. After a 2012 audit, 100% of rehabilitation costs are required to be covered in bonds by 2020. The state is also taking action on emissions, influencing state government's interest in coal mine closures.

In New South Wales, the 'super-department' of Planning, Industry and Environment brings together the separate functions from the three former clusters of Planning, Environment and Industry. For some functions, socio-economic drivers are now more important than environmental. Community pressure and interest from the Independent Planning Commission have prompted closer attention to environmental and social outcomes of rehabilitation. There are considerable differences in the various clusters in terms of interest in mine closure, few of which feature any social dimensions. Political divisions also play a part. The current planning minister is reportedly taking a proactive approach to mining as part of a complex New South Wales future. Transitions and streamlining closure processes and approvals for viable post-mining land uses, including novel uses requiring a new consent, are being considered.

In contrast, the priority for the Nationals (including the Deputy Premier and Minister for Regional Development) is increasing economic activity in the regions. They are keen to retain coal mining but equally interested in economic diversification and strengthening rural communities as a way to give communities a future. So there is an interest in building social resilience to mine closure, especially since department modelling shows supply of economically accessible coal is declining in both the western coalfields (Lithgow area) and southern coalfields (Wollongong). Though there has been little visible action, there is considerable background work that is positioning the state for action. Modelling is one example, but there is also a geographic information system (GIS) record of landscape data, including the extent of rehabilitation and post-mining uses on mined areas as well as sites likely to be relinquished in next 5-10 years (which are mainly small). The database may eventually become publicly available. In the Hunter Valley, through the Department of Premier and Cabinet, there is a 'Pathways to Relinquishment' project considering various scenarios for the region.

#### 4.3 Highlights of meetings/contacts

As noted in section 3, the engagement process leveraged some related developments within Australian governments and the research community. Communications in Queensland were mainly face-to-face, and sometimes included visitors from other states. Otherwise, email, telephone or teleconferences were the means of communication. Session or event durations ranged from 1 hour to two days. Focus was on New South Wales, Queensland and Western Australia, which were examined in the precursor paper.<sup>4</sup> They have the most elaborate guidelines for mine rehabilitation and closure.<sup>5</sup> Notably, the Western Australian contacts proved unresponsive and were more oriented to the CRC. Interest in relevant developments in other states and territories, as well as in federal ones, warranted investigation, so the jurisdictional scope was not rigidly adhered to.

Main communication activities, including workshops, conferences and symposia, are listed in Table 2.

<sup>&</sup>lt;sup>4</sup> Vivoda, V., Kemp, D. & Owen, J. 2019. Regulating the social aspects of mine closure in three Australian states. *Journal of Energy and Natural Resources Law* 37 (4) 1-20.

<sup>&</sup>lt;sup>5</sup> Blommerde, M., Taplin, R. & Raval, S. 2015. Assessment of Rehabilitation Completion Criteria for Mine Closure Evaluation. Sustainable Development in the Minerals Industry (SDIMI) Conference, Vancouver, Canada. <u>https://www.academia.edu/17630301/Assessment\_of\_Rehabilitation\_Completion\_Criteria\_for\_Mine\_Closure\_Evaluation</u>



Month	Activity
April	<ul> <li>Workshop with Queensland government representatives from DNRME, DSD and DES on issues and challenges around mine closure and regional transitions, and their knowledge gaps and research priorities (mainly to inform CRC-TiME)</li> <li>Research Report Forum on social impacts of resource development with 50+ statewide Minerals and Energy staff in Queensland. Presentations from CSRM, other UQ researchers (e.g. Business School), and CSIRO</li> </ul>
April-May	<ul> <li>International Association of Impact Assessment Conference, which included sessions on mine closure and government role. The conference gave the opportunity to meet with regulators and others familiar with mining in various Australian jurisdictions, including Victoria (Latrobe Valley initiative), Northern Territory and South Australia. International comparisons were also possible with representatives from other countries such as Canada and South Africa.</li> </ul>
May	Consortium launch and clarification of 2019 research agenda
June	<ul> <li>Meeting with Queensland Treasury Corporation representatives interested in future of mining regions</li> <li>Workshop organised by Queensland Government (DNRME, DES and QTC) and attended by other states about residual risk cost estimates, financial provisioning, etc.</li> </ul>
July	<ul> <li>Australian Coal Association Research Program (ACARP) – Bowen Basin Geologists Group symposium with a focus on ACARP research about mine closure, attended by regional DNRME staff as well as consultants and companies</li> <li>Meeting with DNRME stakeholder engagement team</li> </ul>
September	<ul> <li>Three (3) teleconferences with NSW Department of Planning, Industry and Environment</li> <li>Brief information exchange with Western Australian government personnel and liaison with the Western Australian CRC-bid team</li> </ul>
October	<ul> <li>Path to Impactful Research Workshop (CRC-focus), mainly Western Australian and Queensland participants (government and academia)</li> <li>Launch of Social Aspects of Mine Closure Consortium <u>website</u></li> </ul>
November	<ul> <li>Jo-Anne Everingham appointed to Queensland's Financial Provisioning Scheme Advisory Committee from 1 October 2019 to September 2020</li> </ul>

#### Table 2: Main engagements with Australian governments

#### 4.4 Challenges and opportunities for continued liaison

#### 4.4.1 Staff turnover and government 'silos'

Even within six months of the consortium launch there were changes in key government positions and in the 'machinery of government' in some states. These challenges to continuity plague relationships with governments and companies. Fragmented responsibilities between federal/state jurisdictions and between departments within jurisdictions detract from clarity and certainty, and make it difficult to maximise the impact of research activities and results.



#### 4.4.2 Dynamic policy space

Despite continued optimism about a thriving future mining industry among most regulators, there is increasing attention to mine closure. The catalyst, in many states, is concern about potential environmental legacies and financial liabilities. Nevertheless, there is recognition of potential socioeconomic challenges for governments as well. That may fuel interest and action by regulators and by other government departments, such as those concerned with regional development.

#### 4.4.3 Government constraints on research funding

Governments often have very limited research budgets. There can be a short-term focus on addressing urgent needs, and a piecemeal approach to informing decisions about individual issues, rather than developing a more holistic understanding. Knowing this, the Departments of Premier and Cabinet in Queensland, Victoria and New South Wales promise a whole-of-government approach. However, there is less demand for social and governance research than for 'hard science' to support decisions and actions.

#### 4.4.4 National Cooperative Research Centre Transitions in Mining Economies

Despite a delay in announcing outcomes, CRC-TiME has secured \$30m in funding as part of a 10 year commitment of \$135.4m supporting regional mining communities to transition to a sustainable future as their local mines close. The CRC has 75 partner organisations from industry state governments and researchers from sight universities. As CRC-TiME proceeds, clear delineation or coordination of separate research initiatives will be important. To that end, Tom Measham (of CSIRO) and the author have worked with Fiona Haslam McKenzie who heads program 1 (regional economic development) of CRC-TiME. Now the CRC is funded, she is keen to include CSRM as a key player, building on the Towns Tool and the Regulation and Governance project, among others. The funding for successful CRCs commences in 2020.

#### 4.5 Links to current and future consortium research

This project links to other consortium projects. It builds on the Closure Bonds study reported to the consortium partners in May 2019. It also overlaps with the concurrent Governance and Regulation project, since both explore how regulators are approaching the social aspects of mine closure. There is the potential to merge those streams of enquiry as the Governance and Regulation project expands beyond desktop research, and as attempts to engage governments move beyond Australian jurisdictions. These consortium projects complement and build on other CSRM work exploring governance and regulation of mine closure (especially in relation to social performance). One example is the review article by Vivoda, Kemp and Owen (2019), 'Regulating the social aspects of mine closure in three Australian states' in the *Journal of Energy and Natural Resources Law*.

As section 4.4 indicated, if the CRC-TiME is funded, some initial seeds of interest in researching the socio-economic impacts of mine closure can largely continue to be nurtured through the CRC. If it is not funded, there will be a greater imperative to independently maintain momentum and determine areas of mutual interest to industry and government, which can be a research focus going forward. In that event, the consortium may consider staging a joint regulator-industry-researcher symposium in 2020 to showcase its research, as well as invite presentations from each state. This could perhaps be adjacent to SMI's Life-of-Mine Conference and help identify common research interests.



## 5. Emerging trends and areas of concern

A number of observations about trends and concerns emerged from the study, prompting questions that may fuel future research.

## What divisions of responsibility between the state and industry have been tried elsewhere, and with what results?

All governments were keen for companies to be at the forefront of mitigating negative social impacts and ensuring benefits to communities. They tended to share a view that companies were comfortable with the current 'divestment' strategy and preferred not to face up to the long timeframes and potential costs of seeing a site through to surrender and relinquishment. The Victorian approach was more collaborative, government-coordinated, and assumed large state responsibilities for strategies (especially community engagement) mitigating impacts of economic decline. In that state, lessons from other industry transitions, like closure of manufacturing factories and timber mills, and dairy industry de-regulation, seem to have alerted them to the need to be proactive. There was recognition that the end of an industry such as mining raises challenges about housing, infrastructure and service provision, economic linkages and transitions, and engagement of stakeholders, including affected Indigenous people, which are all areas of government responsibility. In Western Australia, departments other than the Department of Mines, Industry, Regulation and Safety (such as the Department of Jobs, Tourism, Science and Innovation) are active in mining regions, facilitating investment and job creation, rather than building resilience against jobs disappearing.

## How can governments direct attention to later stages of the project life-cycle without becoming prescriptive, or merely engaging in rhetoric about 'whole of mine-life'?

Principle-based, rather than prescriptive regulation is widely espoused. However, there are few examples of that and neither government nor industry understands how robust, non-prescriptive regulation could function. Governments see their main points of leverage in:

- project approvals (there is action on that front to emphasise social aspects, as in New South Wales with the Social Impact Assessment [SIA] guidance)
- companies' aversion to compliance risk (though reduced government staffing has often meant weaker enforcement by governments, so lack of compliance may well go undetected)
- allocating financial liability (hence action by audit offices and treasury has often provided the main stimulus to government reform).

## What are examples of a clear and consistent regulatory framework for mine closure, including social aspects, and what are their characteristics?

All three governments stress their intent to provide a clear and consistent regulatory framework, which is mostly couched as 'reducing red tape' and creating an environment 'favourable to mining investment and development', rather than clarifying closure, relinquishment and post-mining requirements.

## What characteristics of a governance system promote the greatest public trust and acceptance in, and reduced public concerns about, regulation of mine closure?

Governments feel the community does not fully understand and appreciate the regulatory system and that regulators' social licence is threatened. However, they do not regard this as primarily related



to mine closure. This creates some parallels and anomalies between relevant government departments and mining companies. For example, both appreciate that it is important to foster the public's trust and acceptance and both think this imposes an obligation to provide accurate information and undertake 'awareness and education' activities.

## Could social completion criteria be established, and what would be the advantages and disadvantages of such an exercise?

In the prevailing focus on closure as an environmental rehabilitation exercise, there is an emphasis on early establishment of verifiable completion criteria being critical to receiving acceptance and approval for relinquishment by the regulator. However, there is no jurisdiction contemplating socioeconomic completion criteria (except insofar as the common 'safe, stable and non-polluting' goal encompasses public safety).

## What would be the advantages and disadvantages of requiring a social risk assessment and social outcomes as a routine part of mine closure planning?

An outcome and risk-based approach is favoured in all jurisdictions, but socio-cultural risks, or risks to the local and regional economy, are not considered in this way.

## How can the uncertainties and lack of precedents and examples that currently hamper governments be reduced?

There has been poor recording of relevant data to inform evidence-based policy although advances in digital technology have recently allowed some initiatives to improve this. There is a lack of systematic, up-to-date and transparent data in most states about mine life, extent of disturbed and rehabilitated land, mines approaching closure and financial assurance held. For example, only Tasmania published data about how long mines have been in care and maintenance. In that state, 40% of mines in that category have been non-productive for more than 15 years. In Queensland, there are 129 mines in care and maintenance but no information about how long that has been the case. Mines provide annual rehabilitation reports but these are not standardised in a form that can be readily aggregated to give government, the public and industry a sense of scale. Recently projects in the three focus states have tackled improving aspects of the rehabilitation data base.

In such ways, governments are finally responding to mounting expectation from industry and communities that government should act to provide an effective and coordinated response to mine closure. Initial moves though relate to environmental aspects and managing financial liabilities reflecting a narrow understanding of residual risk.



## Appendices

# Appendix A: Brief summary of the number and base of people contacted for the project

State and department	Numbers			
Queensland				
Department of Natural Resources Mines and Energy (DNRME)	4			
Department of State Development, Manufacturing and Infrastructure Planning	2			
Treasury and Queensland Treasury Corporation	3			
Department of Environment and Science	1			
New South Wales				
Resources Policy (Planning and Assessment Division) Department of Planning, Industry and Environment	3			
Resources Policy (Division of Mines, Resources and Geosciences) Department of Planning, Industry & Environment	6			
Western Australia				
Department of Mines and Petroleum, MRF (Mining Rehabilitation Fund) Team	1			
Department of Jobs, Tourism, Science and Innovation	1			
Resource and environmental compliance, Department of Mines, Industry Regulation and Safety (DMIRS)	1			
EPA Services, Department of Water and Environmental Regulation	1			
Department of Planning, Lands and Heritage (DPLA)	1			



Other	
Commonwealth Department of the Environment and Energy, Darwin-based	1
Department of Primary Industries and Resources, Northern Territory	1
Mining Team, Department Primary Industry and Resources, Northern Territory	1
Office of Economic and Environment Policy, Department of the Chief Minister of the Northern Territory	1
Strategy and Projects, Economic Strategy Branch, Department of Premier and Cabinet, Victoria	1
Planning section, Department of Environment, Land Water and Planning, Victoria	1
South Australian Mining Regulation Branch, Mineral Resources Division, Department for Energy and Mining	1



#### Appendix B: Recent resources relevant to each jurisdiction

This limited sample illustrates the aspects of closure currently receiving attention from various governments.

#### New South Wales

The recent range of measures designed to deliver greater protection to homes and agricultural land from the impacts of mining and coal seam gas (CSG) activity include:

- safeguarding 2.8 million hectares of biophysical strategic agricultural land across the state by applying the Gateway process for state significant mining and coal seam gas proposals,
- implementing Critical Industry Clusters for the equine and viticulture industries in the Upper Hunter to ensure proposals for state significant mining projects are scrutinised via the Gateway process
- establishing a Mining and Petroleum Gateway Panel to scientifically assess mining and coal seam gas impacts on strategic agricultural land and its associated water resources
- introducing an Aquifer Interference Policy
- developing guidelines and technical notes for preparing an Agricultural Impact Statement for state significant development applications

As these initiatives indicate, closure-related action is still a background activity with the most recent resources and documents concentrated on the assessment and consent stages. However, it is evident that economic, as well as environmental considerations are foregrounded.

#### Queensland

Queensland have several documents addressing mine closure.

- Queensland Government (2018). 'Achieving improved rehabilitation for Queensland'. Series of discussion papers. Available at <u>https://www.treasury.qld.gov.au/programs-and-</u> policies/improving-rehabilitation-financial-assurance-outcomes-resources-sector/.
- Queensland Treasury, Department of Natural Resources, Mines and Energy, and Department of Environment and Science, 2019. 'Mining rehabilitation reforms'. Available at <a href="https://environment.des.qld.gov.au/management/policy-regulation/mining-rehab-reforms">https://environment.des.qld.gov.au/management/policy-regulation/mining-rehab-reforms</a>.
  - The mining rehabilitation reforms are associated with the series of discussion papers, They:
    - review the state's abandoned mines legacy
    - manage residual risks in Queensland
    - review Queensland's Financial Assurance Framework.
  - Related documents include:
    - Better Mine Rehabilitation for Queensland and other associated risks and proposed solutions
    - Draft Progressive Rehabilitation and Closure Plan (PRCP) Guideline and Approved Form
    - Mined Land Rehabilitation Policy.



• Department of Premier and Cabinet (2017). 'A Strategic Blueprint for Queensland's North West Minerals Province: supporting strong and prosperous regional communities'. Available at <a href="https://statedevelopment.qld.gov.au/resources/plan/nwmp/nwmp-strategic-blueprint.pdf">https://statedevelopment.qld.gov.au/resources/plan/nwmp/nwmp-strategic-blueprint.pdf</a>.

#### Western Australia

Western Australia also has several documents addressing mine closure.

- DMIRS. 2018. Supporting the Western Australian Resources Sector. Guidance Note. Government of Western Australia. Available at <u>https://www.ritcwa.com.au/single-post/2018/05/27/DMIRS-Supporting-the-Western-Australian-resources-sector.</u>
- DMIRS. 2018. Leading practice principles for a sustainable resources sector: a Western Australian perspective. Government of Western Australia. Available at <a href="http://www.dmp.wa.gov.au/Documents/Minerals/Leading-practice-principles-sustainable-resources-sector.pdf">http://www.dmp.wa.gov.au/Documents/Minerals/Leading-practice-principles-sustainable-resources-sector.pdf</a>.
- DMIRS. 2020. Statutory Guidelines for Mine Closure Plans. Government of Western Australia,. Available at <a href="https://www.dmp.wa.gov.au/Documents/Environment/REC-EC-111D.pdf">https://www.dmp.wa.gov.au/Documents/Environment/REC-EC-111D.pdf</a>
- Young, R.E., Manero, A., Miller, B.P., Kragt, M.E., Standish, R.J., Jasper, D.A., & Boggs, G.S. 2019. 'A framework for developing mine-site completion criteria in Western Australia: Project Report'. The Western Australian Biodiversity Science Institute, Perth, Western Australia. Available at <a href="https://apo.org.au/node/254276">https://apo.org.au/node/254276</a>.

#### National

- Australian Government. 2019. 'National Resources Statement'. Commonwealth of Australia. Available at <u>https://www.industry.gov.au/sites/default/files/2019-02/national-resources-</u> <u>statement.pdf</u>
- COAG Energy Council. 2018. National Principles for Managing Rehabilitation Financial Risks. Available at <u>http://coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/Nationa</u> <u>1%20Principles%20for%20Managing%20Rehabilitation%20Financial%20Risks.pdf</u>
- Productivity Commission. 2019. 'Resources Sector Regulation'. Issues Paper. Australian Government. Available at <a href="https://www.pc.gov.au/inquiries/current/resources/issues">https://www.pc.gov.au/inquiries/current/resources/issues</a>.



#### Appendix C: The complex machinery of government in relevant state departments

C 1: New South Wales Department of Planning, Industry and Environment



Department of Planning, Industry and Environment

Source: https://www.dpie.nsw.gov.au/ data/assets/pdf\_file/0005/234194/DPIE-organisation-structure-2019-08-15.pdf



C2: Western Australia Department of Mines, Industry Regulation and Safety



(1) Kristin Berger occupied this role from 1 July 2018

Source: https://www.dmirs.wa.gov.au/annualreport/2017-18/overview/operational-structure.html



#### C3: Queensland Department of Natural Resources, Mines and Energy



Source: https://www.dnrme.gld.gov.au/ data/assets/pdf\_file/0011/1355627/dnrme-organisation-chart.pdf



#### Appendix D: Social voice in Queensland reform process

Although Queensland's ongoing reform process involves multiple government departments and has a focus on financial and environmental aspects, there are opportunities arising to inject some social considerations as the correspondence below illustrates.



Deputy Premier Treasurer Minister for Aboriginal and Torres Strait Islander Partnerships

Our Ref: 04547-2019

1 William Street GPO Box 611 Brisbane Queensland 4001 Australia Telephone 461 7 3719 7100 Email deputy.premier@ministerial.qld.gov.au

ABN 90 856 020 239

Dr Jo-Anne Everingham 38B Halimah Street CHAPEL HILL QLD 4069

Email: j.everingham1@uq.edu.au

Dear Dr Everingham

Thank you for your email of 14 November 2019 to Honourable Jackie Trad MP, Deputy Premier, Treasurer and Minister for Aboriginal and Torres Strait Islander Partnerships about the Social Aspects of Mine Closure Research Consortium (Consortium) based at the University of Queensland and the new public eLibrary. I have been asked to respond on behalf of the Deputy Premier.

The Deputy Premier commends the work that the Consortium is doing to improve mine closure outcomes for communities and is heartened to see the significant involvement of industry in this research with your industry partners including BHP, Rio Tinto, Newcrest Mining Limited, Anglo American, Oceana Gold and Newmont Goldcorp.

The Queensland Government has been focused on improving mine closure outcomes with passage of the *Mineral and Energy Resources (Financial Provisioning) Act 2018* (the Act) in November 2018. This was the most significant reform to improve environmental outcomes from resource activities in years.

The Act established a Scheme Manager to administer the Financial Provisioning Scheme. The Scheme Manager is tasked with managing the State's financial risk associated with resource activity holders of an environmental authority potentially failing to meet their environmental and rehabilitation obligations under their environmental authority.

Over three years, the Scheme Manager will transition resource activity holders of an environmental authority, where their estimated rehabilitation cost is \$100,000 or more, into a risk category allocation assessment process. Based on the assessment, the Scheme Manager will assign the holder to pay a contribution to the new Financial Provisioning Fund and/or continue to provide surety to the State.

In the future, it is expected the Financial Provisioning Fund will be able to provide funding for rehabilitating abandoned mines and rehabilitation research.



On 14 November 2019, the Deputy Premier announced the appointment of members to the Financial Provisioning Scheme Advisory Committee. A key function of this Committee is to provide guidance on the allocation of funding for abandoned mines and rehabilitation research.

The Act also amended the *Environmental Protection Act 1994* to require holders of a mining environmental authority to provide progressive rehabilitation and closure plans with milestones that can be measured.

This is not the end of the reforms, with the Department of Environment and Science undertaking work to address the residual risks associated with a resource site once it has an approved surrender of its environmental authority after its closure. More information on these reforms can be found on the Department of Environment and Science's website on mining reforms.

The Department of Natural Resources, Mines and Energy has associated reforms underway to address the legacy of abandoned mines in the State and mine management risks related to changes in control of a resource site and mines in care and maintenance.

Information on the overall reform program, (including the Department of Natural Resources, Mines and Energy reforms) can be found on the Queensland Treasury webpage – Improving rehabilitation and financial assurance outcomes in the resources sector

I note that the Consortium's program is complementary to the reforms mentioned above, Queensland Treasury will share your email with the interdepartmental working group that is facilitating the reforms.

If you require any further information, please contact Mr Murray Smith, Scheme Manager on (07) 3035 3551.

Yours sincerely

eller

MARK BELLAVER CHIEF OF STAFF

13,12 12019



Deputy Premier Treasurer Minister for Aboriginal and Torres Strait Islander Partnerships

Our Ref: 03894-2019

1 William Street GPO Box 611 Brisbane Queensland 4001 Australia Telephone +61 7 3719 7100 Email deputy.premier@ministerial.qld.gov.au

ABN 90 856 020 239

Dr Jo-Anne Everingham 38B Halimah Street CHAPEL HILL QLD 4069 j.everingham1@uq.edu.au

Dear Dr Everingham

I am pleased to advise that in accordance with the provisions of the *Mineral and Energy Resources (Financial Provisioning) Act 2018* (MERFP Act) I have approved your appointment as a Committee Member of the Financial Provisioning Scheme Advisory Committee from 1 October 2019 to 30 September 2022.

As a Member of the Financial Provisioning Scheme Advisory Committee, your duties and obligations are governed by the MERFP Act and are outlined in the terms of reference that has been attached. No direct remuneration is provided for participation in this committee but in accordance with the remuneration procedures, all necessary and reasonable expenses incurred while traveling on business and attending meetings may be paid to eligible members.

The Government has also developed the publication 'Welcome Aboard: A Guide for Members of Queensland Boards, Committees and Statutory Authorities'. This publication sets out the responsibilities and obligations placed on members of Government bodies. Noting that you are appointed to a Committee, I believe aspects of the guide will be of great assistance to you in the performance of your duties. This guide is available on the Queensland Department of the Premier and Cabinet website: www.premiers.qld.gov.au/publications/categories/policies-andcodes/handbooks/welcome-aboard.aspx.

Should you have any queries regarding your appointment, please contact Mr Murray Smith, Financial Provisioning Unit Scheme Manager, on (07) 3035 1881 or via email murray.smith@treasury.qld.gov.au.



Congratulations on your appointment and I look forward to working with you as you provide expertise and guidance to the Scheme Manager, through the Financial Provisioning Scheme Advisory Committee.

Yours sincerely

JACKIE TRAD MP DEPUTY PREMIER Treasurer Minister for Aboriginal and Torres Strait Islander Partnerships

14/11/2019



From: EP Act Policy <Epact.Policy@des.qld.gov.au>
Sent: Monday, 20 January 2020 12:55 PM
To: Csrm Web Management Account <admin@csrm.uq.edu.au>
Cc: Deanna Kemp <d.kemp@smi.uq.edu.au>
Subject: Invitation to be a part of a risk specialist group informing review of environmental regulation of resource activities in Queensland

Dear Centre for Social Responsibility in Mining,

The Department of Environment and Science (DES) has commenced a project – Better Regulation of Resource Activities - in response to a range of commitments around the:

- Review of ERA standards for mining activities
- Review of financial provisioning requirements for small operators including petroleum and small scale mining activities.

To respond to these commitments, the project will be premised by a solid understanding of environmental risks and how these risks are managed across different resource activities. To deliver a holistic approach, the first phase of the project involves a review of mining, petroleum, geothermal and greenhouse gas storage activities. This information will be used as the basis for any future policy design and analysis, such as a revised Schedule 3 of the Environmental Protection Regulation 2019.

In discussions with other research groups from UQ (SMI – Dr Claire Cote), <u>your organisation has been</u> <u>identified as having expertise that is of value to this project and we would like to invite you to be a part of a</u> <u>risk specialist group</u>. This is a chance for your organisation to be involved during the policy research stage.

The handout <u>attached</u> contains an overview of the project.

If you are interested in being considered for the risk specialist group, please send contact details of a representative to <u>epact.policy@des.qld.gov.au</u> by 24 January.

At this stage we are looking for technical experts that could support discussions and provide inputs in the next stages of the stakeholder engagement.

Let us know if you would like to book a session where we will provide further details and guidance about the project.

Kind regards,



**Barbara Oliveira De Loreto** A/Principal Policy Officer **Environmental Policy and Legislation I Environmental Policy and Planning Environmental Policy and Programs** Department of Environment and Science

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#### **Contact details**

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CRICOS Provider Number 00025B