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CREATE CHANGE

Proposing a research consortium for social aspects of mine closure

A prospectus for industry members

Sustainable Minerals Institute



Foreword

This project is being developed by the Centre for Social Responsibility in Mining, one of six research centres within the Sustainable Minerals Institute (SMI) at The University of Queensland.

As mines around the globe mature, mine closure is becoming a more salient issue – for industry, governments and communities. The legacy of a mine endures long after the last product has left for the port. Addressing these legacies is not simply a matter of engineering voids, rehabilitating landforms, and cultivating appropriate biodiversity. Often there are a complex set of social aspects to address. Mine closure is fundamental to the mine lifecycle and requires critical conversations and analysis about the social aspects of closure. This consortium will drive these discussions through industry-engaged, multidisciplinary research.

Why are the social aspects of mine closure important?

Numerous mining operations are slated for closure in the next 10 years. In northern Australia alone, Argyle, Telfer and several Pilbara operations (Western Australia), Ranger and Gove (Northern Territory), East Weipa and Stradbroke Island are preparing for closure, while Century (Queensland) continues under economic rehabilitation. Many of these are iconic mines with established local communities and townships in culturally and environmentally significant locations.

Internationally, operations approaching closure include Yanacocha, Antamina, Cerro Corona, Cerro Matoso and Piurina (Peru), Phu Bia (Laos), Hidden Valley and Ok Tedi (PNG), Waihi (NZ), Vatakoula (Fiji), and Mintails and Richards Bay (South Africa). Managing the social aspects of mine closure will be imperative in the years to come.

The key question is: What legacy will the mining industry leave after operations close?

There is increasing global attention on the social aspects of mine closure. The International Council on Mining and Metals (ICMM), and associations such as the Minerals Council Australia (MCA), the Mining Association of Canada (MAC), and the Australasian Institute of Mining and Metallurgy (AusIMM) have initiated dialogue in this area. Companies are beginning to appoint closure specialists and establish closure committees internally. It is imperative that social performance considerations are an integral part of these discussions.

The need for innovative thinking

There are no ready-made solutions available to manage the social aspects of closure. Each mine operates in a unique context with features that influence the social impact of closure. At the same time, communities and governments are expecting mining companies to deliver ongoing economic development or – at the very least – zero externalised liability after closure. While foundational principles for the social optimisation of mine closure are generally established, how these principles are being put into practice is not well known.

Few jurisdictions have well-developed regulations to govern the social aspects of mine closure. In some jurisdictions companies can divest major assets with no ongoing liability. In other jurisdictions the level of company input required to discharge liabilities is unclear. In most mining locations there are strong expectations for economic development, including the use of existing assets such as the re-purposing of port, rail, road or airport infrastructure. In some instances there are agreements with communities struck decades earlier that must be recalibrated in the context of mine closure.

The manner in which a mine is closed will influence community and governments stakeholders' receptiveness to the opening of subsequent mines. The need to manage the social aspects of mine closure is part of a broader inquiry into how the lifecycle of individual mines influence the industry as a whole.

10 questions about the social aspects of mine closure¹

1. What does a 'positive legacy' mean in the context of mine closure?
2. What are the key contextual factors that are likely to enable, or constrain, different types of post-mining futures for impacted communities?
3. What would best practice in mine closure look like from a social performance perspective?
4. What kinds of knowledge are needed to be able to plan more effectively for mine closure?
5. What should be the role of governments in the closure planning process?
6. How can communities be more effectively engaged in closure planning and management processes?
7. What governance mechanisms (e.g. multi-stakeholder forums, taskforces, statutory bodies) would support more effective closure planning from a social perspective?
8. What controls should there be on companies placing mines on indefinite care and maintenance or transferring ownership of the mine to smaller, less well-resourced, companies?
9. Where companies do transfer ownership, what steps should they take to ensure that pre-existing commitments to communities are honoured, particularly as these relate to closure?
10. How should mining companies be configured internally to ensure that appropriate attention is paid to the social aspects of mine closure?

¹ Owen, J. and D. Kemp (2018) Mine closure and social performance: an industry discussion paper; and Bainton, N.A. and S. Holcombe (2018) The Social Aspects of Mine Closure: A Global Literature Review. Both published by the Centre for Social Responsibility in Mining, Sustainable Minerals Institute, The University of Queensland: Brisbane. Available online at: <http://bit.ly/2CMyzFY>



A shortage of documented knowledge

Recent work by SMI establishes a clear need for research on this topic. There is a shortage of social performance knowledge, innovative case studies, and policy guidelines that focus specifically on the social aspects of closure. Initiatives to manage the social aspects of closure are generally poorly documented, limiting the industry's ability to learn from companies' successes and failures.

Most research on mine closure has focused on land rehabilitation, water management, post-closure land use, and physical decommissioning. The knowledge base on social aspects of mine closure lags behind knowledge on the biophysical aspects. This gap needs to be closed.

The proposed Consortium will bring together SMI and stakeholders from industry, government and civil society, to engage a series of key questions and develop pragmatic forward pathways for managing the social aspects of mine closure. Some of these questions are outlined below.

What is the proposed consortium?

The consortium will be a co-funded research partnership between the SMI and at least five consortium partners from private or public sector organisations.

Through a collaborative research agenda, the consortium will:

- Provide a global platform for profiling case studies of leading practice,
- Call attention to the challenges of social aspects of closure,

- Assist industry understand priorities and find evidence-based solutions,
- Engage with and provide guidance to regulatory bodies,
- Convene multi-stakeholder forums to explore pathways to responsible mine closure.

To date the SMI has secured the support of The University of Queensland and two major mining companies as consortium partners for a period of three years.

The consortium will proceed in 2019 if three more partners are secured. The University of Queensland has agreed to match the funding provided by consortium partners subject to securing five partners.

What do consortium partners commit to?

Consortium partners will contribute untied research funds of \$40,000 per year, over a period of three years.

Members would provide in-kind support where field research is hosted at a member's site. In-kind support would include access to site accommodation, on-site transport and travel costs.

Social performance and other staff employed by consortium partners will set aside time to engage in the work of the consortium.

How will the consortium function?

The consortium will be hosted by the Centre for Social Responsibility in Mining (CSRSM), within UQ's Sustainable Minerals Institute. The CSRSM will convene a working group, comprising SMI researchers and social performance leaders from consortium partners.

Consortium funding will:

- Enable the SMI to appoint a dedicated senior researcher as the consortium lead. The senior researcher will drive research direction in close consultation with the working group.
- Provide seed funding to ensure social aspects of closure are integrated within other areas of the SMI's program of research.
- Fund 'deep dive' case studies into current industry practices, as a method of research.
- Enable workshops and forums to involve a broad range of stakeholders.
- Support the development of capability that enables University research to be applied to industry problems.

What are the benefits to consortium partners?

1. Global profiling of innovative closure initiatives

Consortium research will be conducted in part through case studies. SMI will provide critical – but fair and balanced – assessments of current practice.

2. Opportunity to shape the research agenda

The SMI is interested in driving new thinking into this area, in a direction that is useful to industry and other stakeholders. The Working Group will be invited to nominate priority research topics, as part of a multi-stakeholder consultative model of research.

3. Early access to research outputs

Research outputs will be distributed for the working group's feedback prior to publication. Early access to outputs means that consortium partners can use research findings as they are developed without having to wait for publication. Early access has operational benefits because it reduces delay.

4. Access to SMI's research centres and cross-cutting programs

The consortium will have access to the breadth of research across SMI's research centres and cross-cutting programs. In particular, consortium work will connect with the Transforming Mine Life Cycles program, which seeks to understand how the mining industry can create new economic value, target reduced footprints and significantly diminish liability from mining waste.

5. Demonstrable commitment to leading practice

Investing in the consortium sends a clear signal that partners are committed to exploring new ways to manage social aspects of closure. It also signals a commitment to developing transformative ways of thinking about mine lifecycles more broadly.

About the Sustainable Minerals Institute

The University of Queensland's Sustainable Minerals Institute (SMI) is a world-leading² research institute committed to developing knowledge-based solutions to the sustainability challenges of the global resource industry, and to training the next generation of industry and community leaders.

The Institute is multidisciplinary, independent, impartial and rigorous. It integrates the expertise of production, environmental and social science specialists to deliver responsible resource development.

Our researchers have applied knowledge of the industry and experience working across the research, government, civil society and minerals sectors.

SMI is made up of six research centres and a Centre of Excellence based in Chile. We have a strong track record across all areas of mining – in exploration, mining, mineral processing, workplace health and safety, mine rehabilitation, social responsibility, water and energy.

We offer future-focused professional development and customised courses to suit broader societal trends and company needs. We have supervised over 200 Research by Higher Degree students and are proud that many of them are now in influential roles in resource companies, non-government and government organisations around the world.

The Centre for Social Responsibility in Mining – a strong track record

The CSRSM is committed to improving the social performance of the resources industry globally. CSRSM focuses on the social, economic and political challenges that occur when change is brought about by resource extraction.

CSRSM staff work with companies, communities and governments in mining regions all over the world to improve social performance and deliver better outcomes for companies and communities

Specific to closure planning, CSRSM is known for its industry-facing publications and operationally-focused research and advisory work.

Our track record with companies, communities and governments shows that our consortium research will be rigorous, pragmatic, and industry-focused.

www.smi.uq.edu.au

² ShanghaiRanking's Global Ranking of Academic Subjects 2018 - Mining & Mineral Engineering. Online at: <http://bit.ly/2CMv0zq>



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