

Project 4.7 fact sheet: Regional cumulative effects assessment and management for transitions in mining economies: Stage 1 case study analysis



INTRODUCTION

The aims of this Stage 1 project were to illustrate the variety and range of regional cumulative effects assessment and management (RCEAM) processes that have been undertaken, as the basis for considering how this approach could be applied to the context of mine closure and mining transitions, and to extract learnings from practice to date to inform the future development of guidance for RCEAM in Australia. The specific objectives were to:

1. Analyse selected Australian and Canadian RCEAM case studies, including their success factors, challenges and lessons learnt, and generate insights on the how of RCEAM, including: regional definitions, governance arrangements and stakeholder engagement, Indigenous involvement and the incorporation of Traditional Knowledge, data collection and management, analytical tools, and indicator development.
2. Develop a typology of RCEAM practice, distinguishing what scope RCEAM might have; who might initiate, conduct or implement RCEAM; and why the RCEAM might be conducted, in terms of the outputs it might deliver and its ultimate purpose.
3. Consider the potential value of RCEAM to planning and decision-making for mining transitions and to develop a guide to support regional stakeholders in planning and scoping an RCEAM process for mining transitions.

KEY FINDINGS

- RCEAM takes many guises, which can be distinguished according to the *why* (the purpose of the process and the outputs to achieve that purpose); the *who* (who initiates and who coordinates the process) and the *what* (the process type and structure, and the scope of values and pressures considered).

- RCEAM can be a costly and time-consuming process, typically taking several years, so it is essential that each process is fit for purpose. This requires that the purpose of RCEAM is very clearly established and agreed at the outset, that the process is scoped and planned to respond to this purpose, and that resources are allocated accordingly.
 - RCEAM for mining transitions should not be viewed as a tool to apportion responsibility for cumulative effects between mining companies, but rather as a tool for collaborative management and shared responsibility.
 - There has been a rapid emergence of Indigenous-led and Indigenous-informed RCEAM (and impact assessment of other forms) in Canada. Indigenous groups are undertaking RCEAM to inform their own territorial management, but also as the basis for negotiating with proponents and governments with respect to potential future development.
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THE CHALLENGE

The research sought to address the key barriers identified in the Foundation Project 1.1: *Towards a framework for regional cumulative impact assessment*. The lack of common understanding of RCEAM and its applications in particular was identified as a significant barrier.

There is a need to understand how RCEAM in its various forms can add value to regional scale planning and decision-making related to mining transitions. While there are limited case studies of RCEA focusing specifically on the context of mining regions in transition, much can be learnt from the substantial body of practice of RCEAM in other contexts that can be tailored as appropriate.

METHODOLOGY

Ten Canadian and nine Australian RCEAM case studies were reviewed to develop a draft typology of RCEAM practice, which distinguished six dimensions responding to questions of the who, the what, and the why. While none of these specifically related to mine closure or mining transitions, all offered valuable insights and opportunities to learn that can be applied in the mining context.

A subset of 12 case studies was selected for detailed data collection and analysis, with data collected through document review and interviews, conducted

in person in Australia and Canada where possible. In most cases multiple stakeholders were interviewed in relation to each case study to ensure a breadth of perspectives. Six case studies were analysed in detail, while the others serve to illustrate points in the report. More general interviews were also conducted with practitioners, researchers and other experts in RCEAM. A total of 38 interviews were conducted in the project and the data analysed using NVivo. The draft typology provided a conceptual framework for the initial analysis and was revised through the analytical process.

KEY OUTPUTS

Typology of RCEAM practice. The typology has been structured to reflect the primacy of purpose, and the importance of establishing this from the outset. This includes articulating who the audience for the RCEAM is, what decisions it is intended to inform, and therefore what outputs should be generated to ensure that it informs these decisions.

Guide to initiating and planning an RCEAM process. The Guide for mining transitions was developed, as a tool for planning and designing an RCEAM process to ensure that it is fit for purpose. The Guide provides

prompting questions in relation to five key considerations, both generic questions and questions specific to mine closure and mining transitions.

List of hypothetical applications. A preliminary list of hypothetical applications of RCEAM to inform planning and decision-making for mine closure and mining transitions was generated. These applications include processes to understand and manage the legacy effects of mining, as well as the effects and opportunities of the closure/transition process itself.

NEXT STEPS

The Stage 2 project will build on Stage 1 to develop a roadmap and toolkit for RCEAM in the context of mine closure and mining transitions in Australia. A particular focus will be given to:

- Analytical tools and methods for RCEAM, and the development of a toolkit to support the selection and use of appropriate methods.
- Potential governance arrangements for RCEAM, with a focus on identifying the success factors for multi-stakeholder collaborations.
- Indigenous-led RCEAM, exploring the barriers and opportunities for translating the Canadian experience to an Australian mining context.

Stage 2 will also identify one or more suitable mining regions to test the developed tools and methodologies to undertake a RCEAM in the context of mine closure and mining transitions.

The proposed Stage 3 project will provide an opportunity to deepen understanding of the practice of RCEAM and to develop practical expertise through the conducting of one or more RCEAM pilot study/ies. The goal is to equip Australian mining stakeholders with the knowledge and tools to realise the potential of RCEAM as a flexible tool to direct planning and decision-making for mine closure and mining transitions towards a sustainable future.

PROJECT PARTNERS

Murdoch University; The Western Australian Biodiversity Science Institute; Conservation Council of Western Australia; Department of Climate Change, Energy, the Environment and Water; Federation University; Hanson; Iluka; MMG; Newmont; Pilbara Development Commission; Pershke Consulting; Queensland Resources Council; Rangelands NRM; Rio Tinto; Roy Hill; The University of Queensland; The University of Newcastle; University of South Australia; Department of Water and Environmental Regulation.

REPORTING

[View full Stage 1 report.](#)

Pope, J. and R. Young (2024). 'Regional cumulative effects assessment and management for transitions in mining economies: Stage 1 Case Study Analysis Report.' Report by CRC TIME.



ABOUT US

The Cooperative Research Centre for Transformations in Mining Economies is part of Australia's national innovation ecosystem. Our diverse partnership brings scale, collaboration and coordinated investment to tackle the most complex mine closure and post-mine transition challenges. Together we're rethinking what's possible to improve outcomes for people, communities, the environment and industry.

We acknowledge the traditional custodians across all the lands on which we live and work, and we pay our respects to Elders both past and present.

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