



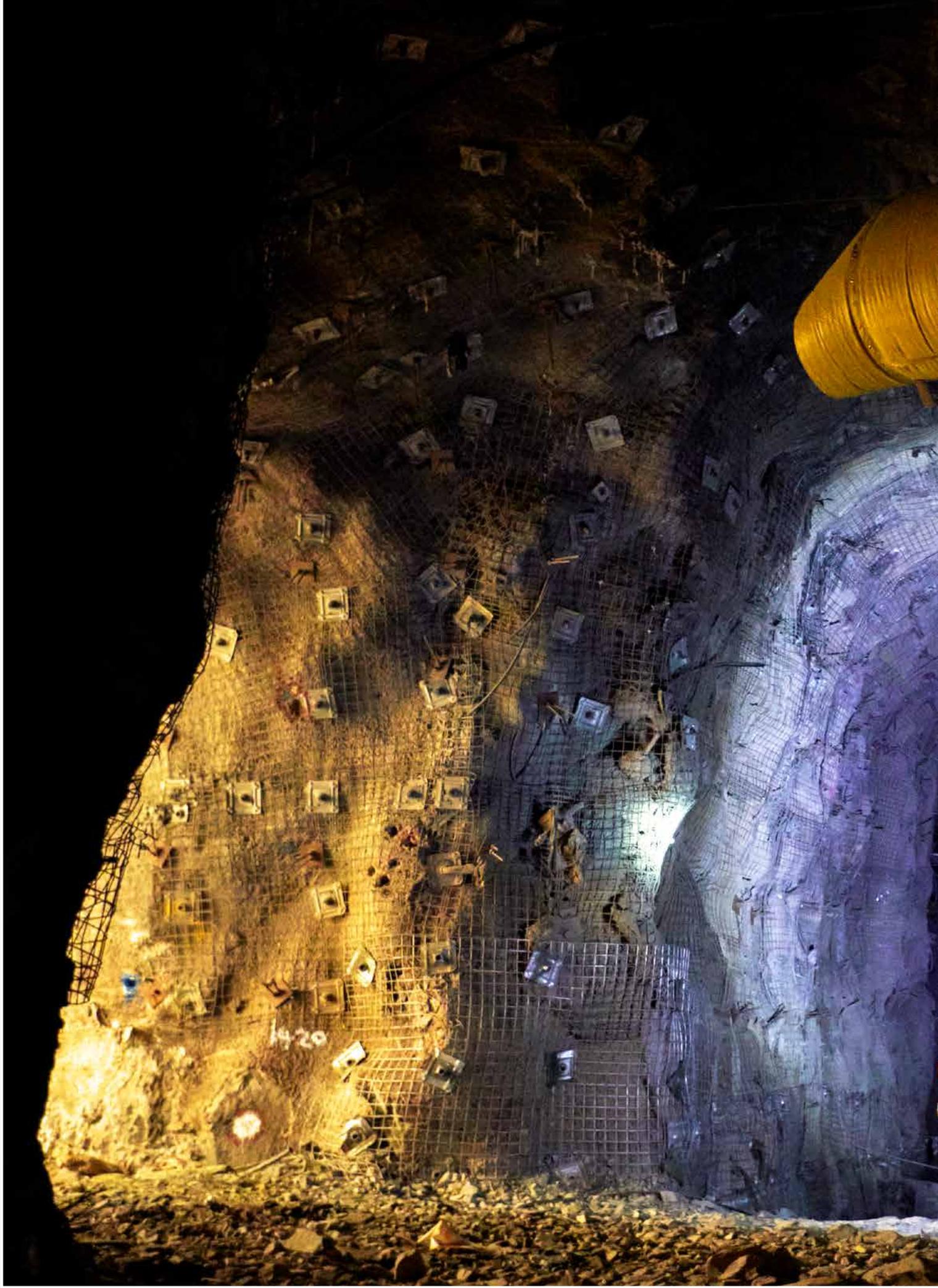
**SUSTAINABLE
DEVELOPMENT
GOALS**

**SUSTAINABILITY
IN ACTION**

Australian Mining and the United Nations
Sustainable Development Goals

October 2018





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About the Minerals Council of Australia

The Minerals Council of Australia (MCA) represents Australia's exploration, mining and minerals processing industry, nationally and internationally, in its contribution to sustainable development and society.

The MCA represents the minerals industry in advocating responsible policies to promote growth, prosperity and sustainability. We engage with the community, other industries, industry and representative bodies, opinion leaders and other stakeholders to reinforce and raise awareness of the industry's contribution to Australia and Australians.

The mining industry is committed to contributing to the sustained growth and prosperity of current and future generations through the integration of economic progress, responsible social development and effective environmental management.

www.minerals.org.au

About Cardno

Cardno is a global social and physical infrastructure development firm supporting public and private sector clients across more than 100 emerging markets to achieve their strategic objectives.

Drawing on 50 years of project design and implementation experience, we provide guidance to our clients to articulate strategic shared value and social investment approaches, and successfully match these with impactful project delivery.

www.cardno.com/internationaldevelopment

View this report online

www.minerals.org.au/sdgs

Aboriginal and Torres Strait Islander readers are advised the following report may contain images of people who have died.



This photo and all other photos in this report provided by MCA unless otherwise credited

Global Compact Network Australia

Launched in 2000, the United Nations Global Compact is a call to companies to align strategies and operations with ten universal principles on human rights, labour, the environment and anti-corruption, and take actions that advance societal goals, such as the Sustainable Development Goals (SDGs), with an emphasis on innovative and collaboration. Since its launch, the UN Global Compact has grown to become the world's largest corporate sustainability initiative. It is both a practical framework for action and a platform for demonstrating corporate commitment and leadership.

In Australia, the business-led Global Compact Network Australia (GCNA) brings together signatories to the UN Global Compact, including a number of Australia's leading companies, non-profits and universities, in a platform for dialogue, learning, influence and action. Through its activities, the GCNA supports our companies' practical implementation efforts and brings the UN Global Compact and SDGs to life in the Australian context and wherever Australian companies operate.

The GCNA's significant partnership with the Department of Foreign Affairs and Trade and broader work with the Australian Government on private sector engagement means we are a leading platform for business-government engagement around policy development in the corporate sustainability space.

This report was peer reviewed and is supported by the GCNA.



MCA Foreword

Australia's minerals industry is proud to be at the forefront of global sustainable development practice. Many world-leading approaches to support responsible environmental stewardship, Indigenous economic empowerment, minerals sector education and sustainable regional development were pioneered right here in Australia by our world-class minerals companies and the communities in which they operate.

Our Australian Minerals Industry Framework for Sustainable Development – Enduring Value demonstrates our commitment to learning, continuous improvement and partnership. This is why we are excited to have joined with Cardno International Development to prepare this pioneering in-depth industry report outlining how the Sustainable Development Goals (SDGs) are being put into action by our great member companies in Australia.

The SDGs cover the three dimensions of sustainable development and provide an agreed framework to understand and work towards a better life for all. Our report provides a snapshot of how Australia's minerals industry is supporting progress towards five of the 17 SDGs, providing case studies of how companies are supporting inclusive economic development and decent work (SDG8), water and biodiversity and land management (SDG6 and SDG15), gender quality (SDG5) and quality education (SDG4). At its heart, each case study shows how companies are working with partners—ranging from local Traditional Owners, community and environmental groups to governments, the education sector and other stakeholders—to support individuals, regional, national and global priorities and aspirations.

Thank you to all who contributed to this report and—most importantly—the people working together to ensure these and other initiatives support strong, resilient and inclusive communities.

We cannot rest on our accomplishments. Our communities and partners expect more of us and we will continue to work closely with them, learn from them and build more enduring partnerships in the years and decades ahead.

[Tania Constable PSM](#)
[Chief Executive Officer](#)
[Minerals Council of Australia](#)



Cardno Foreword

At Cardno, impactful, equitable development is our core business. For 50 years, we have supported donors and private resource sector clients across more than 100 countries to advance the sustainable development agenda.

The private sector has a substantial role to play in accelerating progress on the Sustainable Development Goals and we see the greatest success where partnerships are carefully designed and executed, ensuring that the issues at the nexus of social and business challenges are addressed. These models—called ‘shared value’—have proven successful in amplifying the impact of public-private sector partnerships and private sector investment in tackling global social issues.

While there is still much work to be done to support all stakeholders in getting these partnerships right, this report highlights how effective private sector collaborations are showing positive social outcomes.

We are thrilled to have supported the Minerals Council of Australia in exploring and capturing these member company case studies that explore some of these approaches and highlight specific opportunities for the mining sector in Australia.

What is clear is that the industry is taking thoughtful and purposeful action on issues of sustainable development and setting an example for peers both inside and beyond the sector to follow.

Colin Adams
Area Manager – Asia Pacific
Cardno International Development



About this Report

Purpose of this report

Adopted in 2015 and in effect from 1 January 2016, the United Nations Sustainable Development Goals (SDGs) are 17 ambitious and integrated global goals to achieve progress across the three dimensions of sustainable development: economic prosperity, social inclusion and environmental conservation.¹ Each goal represents a specific aspect and outcome of sustainable development.

While some challenges and complexities the SDGs seek to address are not new, the goals provide a new way of understanding sustainable development and driving collective action to 'achieve a better and more sustainable future for all'.²

This is the first report specifically considering the SDGs in the context of Australia's minerals industry.

Using a case study methodology, the report seeks to understand how Australian mining companies are working to support community and national aspirations and priorities within the context of the SDGs.

Case studies link back to and reference *Enduring Value – the Australian Minerals Industry Framework for Sustainable Development* to show its 10 principles in practice.

The report also highlights important takeaways for industry.

Developed to support industry's commitment to continuous improvement, the report may also assist others to understand how the minerals industry approaches sustainable development. Identified lessons and opportunities may also be relevant to other sectors.

This report is the first step in a long-term program of work to better understand and share how Australia's minerals industry is contributing—and can keep contributing—to sustainable environmental outcomes and safe, healthy, prosperous and resilient communities.

Case studies

To provide a snapshot of how the minerals industry is collaborating for progress towards the SDGs, this report profiles seven good practice case studies, representing a range of MCA member companies operating in Australia.

This report focuses on five SDGs:

- **SDG4 – Quality education:** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- **SDG5 – Gender equality:** Achieve gender equality and empower all women and girls
- **SDG6 – Clean water and sanitation:** Ensure available and sustainable management of water and sanitation for all
- **SDG8 – Decent work and economic growth:** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- **SDG15 – Life on land:** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

The case studies also support progress towards other SDGs, including:

- **SDG13 – Climate change:** Take urgent action to combat climate change and its impacts
- **SDG16 – Peace, justice and strong institutions:** Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

As this is not an exhaustive list of all activities underway, the intention is to progressively develop case studies to show contributions towards each SDG.

How this report differs from other reports on mining and the SDGs

This report differs from other reports by peer organisations and global mining companies by providing in-depth, scalable and Australian-specific examples of how companies are supporting local, regional and national contributions to the SDGs. It can be read on its own or in conjunction with other guidance.

'Many Australians are familiar with the concept of sustainable development, but may not be aware of the SDGs and their universal nature.'

Department of Foreign Affairs and Trade, Report on the Implementation of the Sustainable Development Goals, Australian Government, Canberra, 2018, p. 9.

¹ United Nations, Sustainable Development Goals, UN, viewed 2 October 2018.

² Ibid.



Global Agenda for Sustainable Development

In 2015, world leaders adopted the Sustainable Development Goals (SDGs) to support the 2030 Agenda for Sustainable Development.³ The goals define global aspirations to 2030.⁴

In January 2016, the SDGs came into effect applying to all countries.

Described as ‘the blueprint to achieve a better and more sustainable future for all’, the 17 goals describe specific outcomes across the three dimensions of sustainable development: economic prosperity, social inclusion and environmental conservation.⁵

The SDGs are ambitious, interconnected and underpinned by the principle ‘leave no one behind’.⁶ The SDGs are also described as a ‘human-centred’ agenda.⁷

In effect, the goals provide a shared global understanding of sustainable development and aim to support and encourage shared action to 2030.

The SDGs seek to build further on the success of the Millennium Development Goals (MDGs), which over 15 years contributed to environmental sustainability and poverty reduction, improved health and well-being and access to education among the world’s extreme poor.

However, unlike the MDGs, the SDGs apply in all 193 member states of the United Nations, including Australia.⁸

While the SDGs consider new challenges—including rapid urbanisation and climate change—many of the complexities and challenges the goals seek to address, such as access to quality education, inequalities, ecological sustainability and gender equality, are not new.

Each goal includes indicators and targets to define aspirational outcomes and support monitoring and reporting. Some targets are specific while others enable national governments—and others—to develop robust, measurable indicators appropriate for their particular context.⁹

This reflects that different countries are at different stages of development, how challenges exist in different forms and the importance of locally appropriate responses.¹⁰

While directly applicable to national governments, there is broad recognition that the private sector—along with civil society, academia and others—are key partners in achieving progress towards the goals. The framework also establishes a common language that all sectors can use to understand sustainable development, facilitate learning, communicate progress and share success.

The importance of partnerships is emphasised by Goal 17: Partnerships for the Goals – Revitalise the global partnership for sustainable development. This goal recognises the importance of inclusive partnerships in working towards common goals at local, national, regional and global levels.¹¹

The 2030 Agenda for Sustainable Development also encourages member states to undertake periodic reviews of progress against the SDGs at national and regional levels.¹² This approach differs from past practice, where progress towards global sustainable development objectives, such as the MDGs, was reported at a global level.¹³

Reviews will be undertaken by a high-level political forum to support information sharing and collaboration. The first were undertaken in 2017.¹⁴

Two years after adoption, progress towards the SDGs is considered mixed and there is an opportunity—and need—to accelerate efforts to achieve the 2030 Agenda.

There is significant opportunity to draw on lessons from the first two years of the SDGs, as well as past sustainable development practice, to enhance outcomes and drive progress.

³ United Nations, *The Sustainable Development Agenda*, UN, viewed 2 October 2018.

⁴ Global Reporting Index, *UN Global Compact and WBC SD, SDG Compass, GRI, UNGC and WBCSD*, viewed 3 October 2018.

⁵ United Nations, *About the Sustainable Development Goals*, UN, viewed 15 October.

⁶ *Ibid.*

⁷ Department of Economic & Social Affairs, *Voluntary National Review Reports – what do they report?*, United Nations, July 2018, p. 2.

⁸ United Nations Development Programme, *World leaders adopt Sustainable Development Goals*, United Nations, viewed 15 October 2018.

⁹ D. Osborn, A. Cutter and F. Ullah, *Universal Sustainable Development Goals*, Stakeholder Forum, New York, May 2015, p. 2–3.

¹⁰ Department of Economic & Social Affairs, *Voluntary National Review Reports – what do they report?* United Nations, July 2018, p. 1.

¹¹ United Nations, *Goal 17: Revitalize the global partnership for sustainable development*, UN, 2 October 2018.

¹² United Nations, *Voluntary National Reviews*, UN, viewed 4 October 2018.

¹³ Department of Economic & Social Affairs, *Voluntary National Review Reports – what do they report?*, United Nations, July 2018, p. 2.

¹⁴ United Nations, *Voluntary National Reviews*, UN, viewed 3 October 2018.

Advancing the SDGs in Australia

The SDGs have been widely embraced in Australia, with governments, civil society and the private sector taking active steps to understand, embed, integrate and work towards the 17 goals.

This follows the Australian Government's leadership in shaping the SDGs.¹⁵ Together with civil society, the Australian Government championed the establishment of specific goals focused on gender equality, economic growth, life under water (oceans) and peace and good governance.¹⁶

The Australian Government has continued its leadership role through collaboration with agencies such as the Global Compact Network Australia (GCNA) and the Australian Council for International Development (ACFID), among other groups, to build awareness, advance best practice and support collective action towards the SDGs within Australia.¹⁷ This includes support for the GCNA's Australian SDGs Hub for Business.¹⁸

The Australian Government, through the Department of Foreign Affairs and Trade (DFAT), also noted alignment between the SDGs and its aid investment priorities of agriculture, fisheries and water, building resilience, education and health, effective governance, gender equality and infrastructure, trade facilitation and competitiveness.¹⁹

An important action by the Australian Government was the establishment of an online reporting platform to publicly share SDG indicators and report on progress. The platform brings together work by the Australian Government and its partners to identify SDG indicators appropriate for the Australian context and robust data sources.²⁰ This recognises that, due to the global nature of the goals, not all indicators are relevant in Australia.

The Australian Government has identified 116 indicators from 59 data sources covering national SDG progress and how Australian overseas development and humanitarian aid is supporting global progress. Additional indicators will be added as appropriate.²¹

Australia reinforced its commitment to the SDGs—domestically and globally—in its first Voluntary National Review on Agenda 2030 to the UN High Level Political Forum on Sustainable Development in July 2018.²² DFAT coordinated the review, which was prepared following consultation with a diversity of stakeholders championing and working towards the goals, including GCNA and ACFID.²³

The report highlighted the role of the Australian Government's inter-departmental group in working to support progress domestically and globally to the SDGs.²⁴

It also emphasised that the SDGs are a 'whole of Australia' effort, requiring contributions and sustained effort by all levels of government, private industry, civil society, academia and the education sector and other parties.²⁵

In emphasising a shared approach, the report included a range of case studies showing how different organisations, companies and sectors—in addition to all levels of government—are adopting innovative, collaborative and data-based approaches to SDG implementation.

Various organisations and government departments have also hosted summits and roundtables to share approaches, discuss progress and identify new ways to drive outcomes. This includes an extractives sector and UN SDGs roundtable hosted by Cardno, in partnership with the Columbia Centre on Sustainable Investment (CCSI) and the United Nations Sustainable Development Solutions Network (SDSN), in April 2018.

Despite noting progress, innovative partnerships and a long-term focus, the review highlighted the need to raise awareness of the SDGs across Australian society.



'Australia is committed to the Sustainable Development Goals (SDGs) as a universal, global approach to reduce poverty, promote sustainable development and ensure peace and prosperity of people across the world.'

Department of Foreign Affairs and Trade, Report on the Implementation of the Sustainable Development Goals, Australian Government, Canberra, 2018, p. 6

¹⁵ Australian Council for International Development, *From Policy to Action – Australian Aid and the Sustainable Development Goals*, ACFID, March 2016.

¹⁶ Department of Foreign Affairs and Trade, *Report on the Implementation of the Sustainable Development Goals*, Australian Government, Canberra, 2018, p. 7

¹⁷ Department of Foreign Affairs and Trade, *Sustainable Development Goals*, DFAT, viewed 2 October 2018.

¹⁸ Global Compact Network Australia, *Australian SDGs Hub for Business*, UN Global Compact, viewed 9 October 2018.

¹⁹ Department of Foreign Affairs and Trade, *Investment priorities*, DFAT, viewed 5 October 2018.

²⁰ Australian Government, *Tracking Australia's Progress on the Sustainable Development Goals*, Australian Government, Canberra, 2018, p. 1.

²¹ *ibid.*, p. 1.

²² *ibid.*, p. 2.

²³ *ibid.*, p.14.

²⁴ *ibid.*, p. 7.

²⁵ *ibid.*, p. 7.



Australian Mining and the SDGs

Responsible development of Australia's mineral resources is a driver of sustainable development and prosperity in the communities in which it occurs, across Australia and globally.

The minerals industry's contribution to Australia's economic prosperity is well understood particularly its significant contribution to higher wages, jobs and tax revenues to fund essential services.²⁶

High-quality materials produced by Australia's minerals industry are the basis for modern goods and services used in Australia and around the world.

Less understood is the minerals industry's contribution to sustainable development by embedding of sustainable development principles within business and operating practices, risk management and social investment.

Australian minerals industry approach to sustainable development

Australia's minerals industry is committed to environmentally and socially responsible practices from exploration through to mine rehabilitation and closure.

Enduring Value – The Australian Minerals Industry Framework for Sustainable Development articulates this commitment. The framework contextualises the International Council on Mining and Metal's (ICMM) 10 Principles of Sustainable Development principles for Australia.²⁷

Put simply, Enduring Value describes how sustainable development is practiced by Australia's minerals industry, covering safety, health and environmental and social performance, community engagement, good governance and transparency and risk management. A central aspect of Enduring Value is a commitment to continuous improvement.²⁸

²⁶ D. Byers, *Structural reforms needed to deliver long-term prosperity*, Minerals Council of Australia, 8 March 2018.

²⁷ International Council on Mining and Metal, *ICMM 10 principles*, ICMM, viewed 9 October 2018.

²⁸ Minerals Council of Australia, *Enduring Value Framework*, MCA, viewed 2 October 2018.



Enduring Value

Enduring Value puts the commitment of Australia's minerals industry to sustainable development into practice. It outlines actions that guide long-term and mutually beneficial outcomes for the minerals industry and its many stakeholders. Enduring Value includes 10 principles.

1. Implement and maintain ethical business practices and sound systems
2. Integrate sustainable development principles into company policies and practices
3. Uphold fundamental human rights and respect cultures, customs and values in dealings with employees and others who are affected by our activities
4. Implement risk management strategies based on valid data and sound science
5. Seek continual improvement of our health and safety performance
6. Seek continual improvement of our environmental performance
7. Contribute to conservation of biodiversity and integrated approaches to land use planning
8. Facilitate and encourage responsible product design, use, re-use, recycling and disposal of our products
9. Contribute to the social, economic and institutional development of the communities in which we operate
10. Implement effective and transparent engagement, communications and independently verified reporting arrangements with stakeholders.*

* Minerals Council of Australia, [Enduring Value](#), MCA, 2015, Canberra, p. 1–10.

Why consider the SDGs?

A number of drivers encourage consideration of how the Australian minerals industry is responding to the SDGs domestically. Key drivers include:

- increasing recognition of the SDGs in Australia
- the SDG framework providing a broadly accepted means of understanding how the Australian minerals industry contributes to sustainable development through business practices, risk management and social investment
- the opportunity to clarify how the SDGs link to the practice of Enduring Value and other sustainable development frameworks.

At a high level, major companies are more likely to have taken steps to understand how their activities align with the SDGs. Some companies have gone further, using the SDG framework to prioritise future sustainability investment and understand how their business activities, such as mine rehabilitation and water stewardship, support the SDGs.

This highlights the importance of capturing and sharing lessons across the minerals sector, openly discussing challenges and good practice and engaging with others about their experience in understanding the role of the SDGs as part of the industry's commitment to continuous improvement. Industry associations, such as the MCA, can play an important part in this.

This report is an important first step in this work.

Key Report Takeaways

Development of seven in-depth case studies allowed researchers to gain a broad understanding of how Australian mining companies—and the industry as a whole—are responding to the SDGs and how the SDGs interact with sustainable development approaches.

Many companies have taken steps to understand their contribution to the SDGs

Some MCA member companies, such as Newmont and BHP, have undertaken significant work to understand how their activities do—and can further—contribute to the achievement of the SDGs.

Newmont, for example, undertook a significant and robust mapping process over more than a year to understand how the company could focus effort towards goals where they could have the most impact and most aligned to business strategy. Newmont's process identified five goals: SDG3 – Good health and well-being, SDG5 – Gender equality, SDG6 – Clean water and sanitation, SDG8 – Decent work and economic growth and SDG17 – Partnership for the goals.²⁹ Newmont's contribution to SDG6 in the Peel–Harvey Catchment of Western Australia is profiled in this report.

BHP has worked to understand how its social investment themes of governance, human capability and social inclusion, environment and host communities align with the SDGs.³⁰

Companies contribute to the SDGs without knowing

Embedded across minerals industry practices are the principles of sustainable development. This includes principles relating to social investment, environmental conservation and protection, risk management and good governance.

Some member companies, particularly junior companies, may not yet be aware of how company sustainable development initiatives align with or contribute to the SDGs. For example, Mandalay Resources had not mapped its extensive community investment program against the SDGs; however, its partnership to support development of its host community's first childcare centre aligns with SDG8 – Decent work and economic growth.

Building awareness—through tools such as this report—may assist some companies to further understand how their activities interact with the SDGs.

SDG indicators provide a starting point

Underpinning each SDG are specific targets and indicators to help countries measure and understand progress towards the goals at a national level.³¹

Due to the global nature of the SDGs, not all indicators are relevant in the Australian context. Recognising this, the Australian Government has worked with its partners to confirm indicators relevant in Australia and, where necessary, identify meaningful and practical measures to monitor progress.³²

Some company contributions align well with national metrics. Others support the intention of the SDG, yet do not align specifically with a national SDG metric.

For example, Newmont's partnership with the Peel–Harvey Catchment Council supports SDG6 – Clean water and sanitation, in particular the indicator to support and strengthen the participation of local communities in improving water management. Newmont's partnership enables it to support its host community to develop and implement a water management approach that is community-owned, championed and delivered by them.

At the same time, some contributions may be locally highly significant—as with Newcrest's partnership with the Martu people to support local employment outcomes—yet not substantially change the SDG indicator. While is very important to the local community, the total number of local people employed at Telfer would not markedly change the national unemployment rate.

This highlights the need for specific project and program metrics to be developed as necessary.

²⁹ Newmont, *Beyond the Mine: Our 2016 Social and Environment Performance*, Newmont, viewed 2 October 2018.

³⁰ BHP, *Social Investment*, BHP, viewed 2 October 2018.

³¹ Department of Foreign Affairs and Trade, *Tracking Australia's progress on the Sustainable Development Goals*, Australian Government, Canberra, Australia, p. 6.

³² *Ibid.*, p. 1.



There is alignment between the SDGs and Enduring Value

Enduring Value articulates the Australian minerals industry's approach to sustainable development. Given the prominence of Enduring Value in Australia, it is important to understand linkages between the framework and SDGs.

Case studies in this report demonstrate how the practice of Enduring Value principles supports progress towards the SDGs. For example, BHP's support for land conservation and protection activities contributes to SDG15 – Life on land and demonstrates the implementation of Enduring Value principles 2, 3, 6 and 7.

Another example is Newcrest's partnership with the Martu people, which demonstrates Enduring Value principles 2, 3 and 9

Companies should focus social investment activities on SDG opportunities aligned with their operations

Companies—and the minerals industry collectively—can contribute to the 17 SDGs by embedding sustainable development principles within their activities. Industry-specific guidance, such as the Mapping Mining to the Sustainable Development Goal Atlas, can assist to identify alignment.

The case studies in this report also highlight the benefits of focused efforts on goals that best align with core business activities and sustainable development priorities. This is especially relevant for social investment.

Rather than trying to support and report against each goal, scaling up or out existing programs, refining internal policies and management systems or looking across the supply chain for opportunities to make an impact is more likely to support meaningful progress against selected goals.



SDGs are not just the remit of the major companies—smaller companies are having a meaningful impact

The case studies demonstrate how social investment to progress towards the SDGs is possible for all companies, not just large ones. This reflects the minerals industry's long-standing commitment to supporting sustainable development in a way that is meaningful and supports the aspirations and priorities of key stakeholders, particularly host communities and Traditional Owners.

Existing literature captures many examples of major companies undertaking major projects that align with the SDGs—often multi-year, complex programs involving multiple partners. Australian companies such as St Barbara and Mandalay Resources are demonstrating that smaller-scale, community-driven and targeted efforts can be just as effective in supporting local social and economic priorities.

SDG focus helps highlight outcomes from sustainable development practices, risk management and sustainability initiatives

In addition to goals, the SDGs have been described as a framework, a means, and the outcomes of sustainable development.³³

For example, SDG6 – Clean water and sanitation describes the outcome of responsible environmental and water stewardship—access to clean water and sanitation. SG6 has also been described as a means of achieving social goals within the SDGs.³⁴ Another example is SDG4 – Quality education, which describes the outcomes of investments in education development and collaborations to create and provide access to meaningful, relevant and engaging curricula that equips students with foundational skills.

For example, Rio Tinto's investments to support young people to develop an interest in science, technology, engineering and maths (STEM) are providing lifelong skills that will support future employability and prosperity.

Another example is Mining Education Australia, which provides a network for the minerals education sector to collaborate and better leverage resources to ensure job-ready mining professionals.

Companies are not going it alone—partnerships and collaboration are key

SDG17 – Partnerships for the goals makes explicit the importance of a multi-stakeholder approach and shared responsibility in advancing Agenda 2030. These case studies show a diversity of partnership and collaborative approaches, from formal industry-government engagement to define new sector performance and certification benchmarks to support for existing community organisations working hand-in-hand with marginalised community groups.

The case studies demonstrate partnerships can vary in size and approach—from multi-year, structured engagement and dialogue mechanisms to benefits agreements that provide life-changing access to employment opportunities for Newcrest stakeholders. There is no one-size-fits-all approach; different models can be uniquely effective when soundly designed and implemented.

In addition to showing a diversity of approaches, the case studies also demonstrate the diversity of partners. BHP's partnership with Conservation International in Australia and around the world is an example of this. Rio Tinto is collaborating with the Western Australian Government and South Metropolitan TAFE to develop nationally-recognised qualifications in automation and technology.

Regardless of the type of partnership model, the SDGs provide a useful framework for identifying shared company, government and community priorities, and mobilising efforts towards these.

Different investment approaches and programs are supporting meaningful progress towards the same SDGs

There is no one way to meet indicators or the intention of an SDG; in fact, programs and approaches are more likely to be effective when tailored to the local context.

For example, this report includes two case studies profiling two unique approaches focused on SDG8 – Decent work and economic growth. In one example, Mandalay Resources assisted

³³ M. Elder, M. Bengtsson and L. Akenji, *Making the SDG Implementation Easier: Thinking about the Goals as Means*, SDG Knowledge Hub, International Institute for Sustainable Development, 9 March 2017.

³⁴ *ibid.*

a community organisation to secure community access to children's and family services while another case study shows how Newcrest is supporting the Martu people to achieve their employment and business aspirations. While different, both cases demonstrate a meaningful contribution to SDG8.

Similarly, this report also includes two case studies on SDG15 – Life on land. The first focused on BHP's partnership to support conservation of valuable eco-systems in Tasmania while the second case study discusses Glencore's approach to mine rehabilitation. Both support the intention of the SDG15.

Programs to support the SDGs are more sustainable and effective if they sit at the intersection of business and social issues

MCA member companies operating across Australia are increasingly making smarter, more informed decisions about their social investment activities, which magnify the impact and sustainability of these programs.

Prioritising programs and partnerships that sit at the intersection of business and social challenges can provide a measurable return on investment for companies and support the business case for undertaking these programs.

This approach—often referred to as 'shared value'—is shown by Mandalay Resources' support for the Bunbunarik Children's Hub. The Hub will provide vital children and family services for the community, unlock new economic opportunities for the town and support Mandalay to attract and retain skilled workers at its regional operation. Another example is St Barbara's focus and rollout of innovative recruitment approaches to attract and retain skilled women in trades and technical roles across their workforce.

Sharing company knowledge and good practice can create new industry benchmarks in Australia and overseas

The importance of company leadership and vision is a recurring theme throughout the case studies. Innovative approaches to progress specific SDGs at site-level are increasingly influencing broader industry practice through both informal peer-to-peer learning, and the development of formalised evaluation and certification processes

An exceptional example of this is Glencore's pioneering of land rehabilitation and management practices, which have led to the development of a formal, transparent process to evaluate and certify company land rehabilitation.

Meaningful engagement is enabling stakeholders to determine their own sustainable development priorities

Sustainable development programs are often most successful when stakeholders can define their own aspirations, priorities and approach. For example, 'decent work' may be seen differently by a community in the Pilbara than by community members in a regional Victorian town. At the same time, how to engage people in STEM disciplines may vary depending on the regional, educational and cultural context.

An important factor in the success of all case studies has been sound and ongoing engagement—through both formal and informal dialogue processes. Glencore has engaged specifically on issues of land rehabilitation and management via the Upper Hunter Mining Dialogue, Newcrest shares employment opportunities through its long-standing partnership with the Ngurra Kujungka organisation and Mandalay has worked with local community champions and organisations to understand and support their own vision of a vibrant, liveable regional town.

Progress towards the SDGs is benefiting the wider Australian community and economy—not just those interacting with the minerals industry

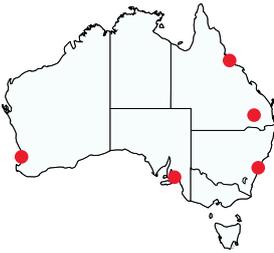
An important finding from the case studies is that company efforts to support progress towards SDGs can also benefit other industries outside of the minerals sector.

As captured in the STEM case study, mining industry support to attract graduates into STEM careers—from primary school through to tertiary education—ultimately provides an economy-wide benefit, especially in industries that rely heavily on STEM-skilled individuals. Another example is BHP's partnership with Conservation International that supported conservation activities in a region where BHP does not have operations.



Snapshot: Case study links to SDGs and Enduring Value

This section provides a snapshot of each of the seven case studies featured in this report. It also highlights Enduring Value principles demonstrated by and relevant national SDG indicator



SDG4 – Quality education: Building the skills of the future

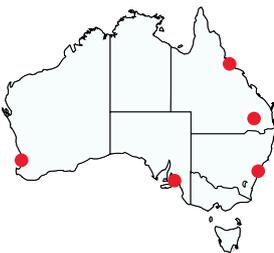
Rio Tinto's pioneering partnerships with governments, educational institutions, academia, volunteer organisations and other groups is supporting young people and existing minerals industry employees to prepare for the jobs of the future.

Outcomes

- New, nationally-recognised qualifications in automation and technology
- Greater student awareness, including female and Indigenous students, of science, technology, engineering and maths careers.

Enduring Value principle in practice

- **EV2:** Integrate sustainable development principles into company policies and practices
- **EV3:** Uphold fundamental human rights and respect cultures, customs and values
- **EV9:** Contribute to social, economic and institutional development of communities in which we operate.



SDG4 – Quality education: Minerals industry as a whole, including the Minerals Tertiary Education Council

Engagement and contributions by the minerals industry to the minerals education sector improves education outcomes and provides new career pathways

Outcomes

- Work underway to identify and prepare for skills and capabilities required for future minerals workforce
- High-quality mining education delivered through collaboration and sharing of resources across four universities
- Three students have graduated and 16 students are enrolled in para-professional geoscience and mining associate degrees since programs were established in 2016.

Enduring Value principle in practice

- **EV2:** Integrate sustainable development principles into company policies and practices
- **EV3:** Uphold fundamental human rights and respect cultures, customs and values
- **EV9:** Contribute to social, economic and institutional development of communities in which we operate.

Relevant Australian indicators

- Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by gender
- Parity indices for all education indicators on this list that can be disaggregated.³⁵

³⁵ Australian Government, [Quality Education](#), Australian Government, viewed 4 October 2018.

SDG5 – Gender equality: Diversity in the mining workforce

St Barbara’s work to embed gender equality within its core business strategy is enhancing employment outcomes for its employees and supporting safer workplaces and communities.

Outcomes

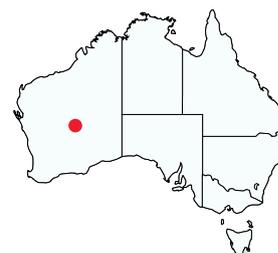
- 100 per cent of female employees at St Barbara have returned to work following parental leave since 2009
- Nil gender pay gap and women representing 25 per cent of St Barbara’s leadership
- Development of a gender smart safety audit tool that can be applied in a range of contexts
- Safer and more appropriate work environment for female employees
- Development of countrywide work conditions model to support safer working environments for women across Papua New Guinea.

Enduring Value principle in practice

- **EV2:** Integrate sustainable development principles into company policies and practices
- **EV3:** Uphold fundamental human rights and respect cultures and values
- **EV5:** Seek continual improvement of our health and safety performance
- **EV9:** Contribute to social, economic and institutional development of communities in which we operate.

Relevant Australian SDG indicators

- Proportion of women in managerial positions.³⁶



SDG6 Clean water and sanitation: Working together for healthy water systems

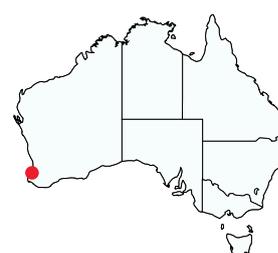
Newmont’s partnership with the Peel–Harvey Catchment Council will support improved water quality within the catchment while also supporting integration of local traditional knowledge into water management practices, sustainable agricultural practices and regional capacity-building.

Expected outcomes

- Restoration and improvement of the Peel–Harvey Catchment, enhancing water quality and supporting biodiversity
- Incorporation of traditional ecological knowledge into catchment planning, improved water management practices and promotion of Indigenous knowledge
- Strengthened community capacity for future land management activities.

Enduring Value principle in practice

- **EV2:** Integrate sustainable development principles into company policies and practices
- **EV6:** Seek continual improvement of our environmental performance
- **EV4:** Implement risk based management strategies based on valid data and sound science
- **EV7:** Contribute to conservation of biodiversity and integrated approaches to land use planning
- **EV9:** Contribute to the social, economic and institutional development of the communities in which we operate.

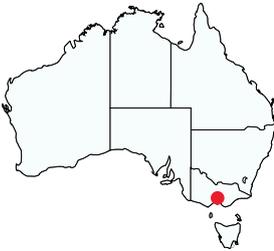
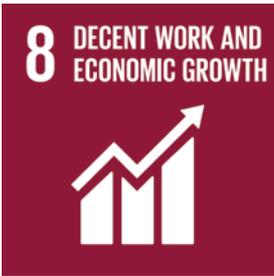


Relevant Australian SDG indicators

- Level of water stress: Freshwater withdrawal as a proportion of available freshwater resources.³⁷

³⁶ Australian Government, Gender equality, Australian Government, viewed 4 October 2018.

³⁷ Australian Government, Clean Water and Sanitation, Australian Government, viewed 4 October 2018.



SDG8 – Decent work and economic growth: Supporting a vibrant regional community

Mandalay Resources is supporting community-driven priorities to make Heathcote a more vibrant and attractive place to live and work and increase employment and economic opportunities.

Outcomes

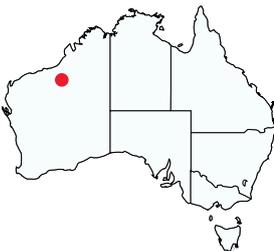
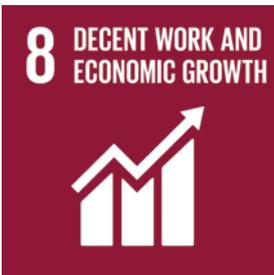
- Heathcote’s first Children’s Hub will include places for 76 children, create 37 jobs in the community and provide an estimated \$660,000 in economic stimulus annually
- Improving access to childcare facilities in Heathcote will allow local workers with families to remain in their jobs, including women returning to work after parental leave
- Mandalay’s support for the initiative has been part of broader community and government activities to improve access to these services. The Hub will exist long after mine closure.

Enduring Value principle in practice

- **EV2:** Integrate sustainable development principles into company policies and practices
- **EV9:** Contribute to the social, economic and institutional development of the communities in which we operate.

Relevant Australian SDG indicators

- Unemployment rate, by sex, age and persons with disabilities.³⁸



SDG8 – Decent work and economic growth: Leading the way in Indigenous relations

Newcrest Mining Limited’s intergenerational partnership with the Martu people in remote Western Australia is continuing to support employment and business opportunities.

Outcomes

- More than 500 Martu people have worked at Telfer over the past 15 years
- Newcrest’s Telfer mine has improved access to local employees and suppliers and benefits from workforce diversity

Enduring Value principle in practice

- **EV2:** Integrate sustainable development principles in company policies and practices.
- **EV3:** Uphold fundamental human rights and respect cultures and values.
- **EV9:** Contribute to the social, economic and institutional development of the communities in which we operate.

Relevant Australian SDG indicators

- Unemployment rate, by sex, age and persons with disabilities.³⁹

³⁸ Australian Government, Decent work and economic growth, Australian Government, viewed 4 October 2018.
³⁹ *ibid.*

SDG15 – Life on land: Land rehabilitation management and innovation

Glencore land management and rehabilitation approaches are setting new industry standards.

Outcomes

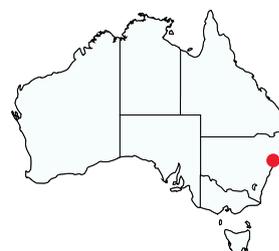
- New mine rehabilitation certification process supports improved outcomes across the minerals industry
- 70 per cent of mined land across Glencore Coal Assets Australia mines was rehabilitated between 2013 and 2017
- New scientific techniques advanced which support successful land rehabilitation outcomes.

Enduring Value principle in practice

- **EV2:** Integrate sustainable development principles in company policies and practices
- **EV6:** Seek continual improvement of our environmental performance
- **EV7:** Contribute to conservation of biodiversity and integrated approaches to land use planning.

Relevant SDG indicators

- Proportion of land that is degraded over total land area.⁴⁰



SDG15 – Life on the land: Support land conservation and protection

BHP's long-standing partnership with Conservation International is advancing conservation practices across Australia.

Outcomes

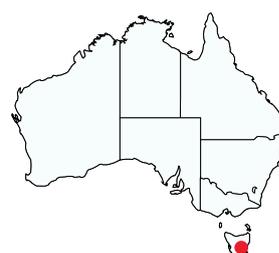
- Conservation and ongoing management of more than 11,000 hectares in Tasmania's Fire Rivers region
- Strengthening of internal expertise and experience within BHP

Enduring Value principle in practice

- **EV2:** Integrate sustainable development principles into company policies and practices
- **EV3:** Contribute to the social, economic and institutional development of communities in which we operate
- **EV6:** Seek continual improvement of our environmental performance
- **EV7:** Contribute to conservation of biodiversity and integrated approaches to land use planning supports healthy environments and biodiversity conservation

Relevant Australian SDG indicators

- Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected area, by ecosystem type
- Proportion of land that is degraded over total land area.⁴¹



⁴⁰ Australian Government, Life on Land, Australian Government, viewed 4 October 2018.

⁴¹ ibid.



SECURING AUSTRALIA'S FUTURE MINERALS WORKFORCE

Supporting STEM learning and career paths

The minerals industry is proactively working to prepare for changes to the skills composition of its future workforce, addressing SDG4 – Quality education: Ensuring inclusive and equitable education and promoting lifelong learning opportunities for all. While focused on SDG4, this case study also supports SDG8 – Decent work and economic growth.

These changes flow on from the evolving nature of work and workers and increasing technology adoption (such as automation, robotics and artificial intelligence) across the mining value chain.



4 QUALITY
EDUCATION



The changing nature of the minerals industry workforce requires new approaches across the entire learning lifecycle, including within the Australian education sector.

Through industry-wide collaboration and company-specific initiatives, Australia's minerals industry is taking a leading role to secure its future workforce and provide new career pathways for existing and new employees. This case study shows how the minerals industry embeds SDG4 within its core business by supporting employee, student and community training, education and development. Also shown is how social investments can support broader access to quality education.

Relevant Australian SDG4 indicators include participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex.¹

SDG4 – Quality education

The skills, knowledge and learning gained through quality education are building blocks for healthy and prosperous lives. Quality education also equips people with the tools necessary for innovative solutions to the challenging and complex problems facing the world today.

Science, technology, engineering and maths-related (STEM) skills are increasingly important to live and work in a globalised world. Around 70 per cent of all future jobs will be STEM-related.²

The SDG Compass suggests that companies can contribute to SDG4 by collaborating with governments and the higher education sector to develop programs that meet workforce needs.³

Australia's future national productivity requires workers that can fill STEM-related jobs in order to withstand global competition.

Drivers for SDG4 inclusive and quality education in Australia

Studies established a relationship between education outcomes and diminished health, unemployment, low wages, social exclusion and teenage pregnancy.⁴ In Australia, students with lower socio-economic status, Indigenous students and those residing in regional and remote areas can experience lower educational opportunities, experiences and outcomes.⁵ As a significant employer in rural and regional Australia, the minerals industry is well-placed to support programs and interventions that contribute to improved outcomes for these students.⁶

The marked decline in STEM subject participation in schools over the last decade is concerning and is prompting a number of questions, including whether Australia will have enough STEM-skilled professionals for future jobs across the economy. A significant gap also exists in women's participation and tertiary enrolments in STEM; only 16 per cent of university and vocational education and training STEM graduates are women.⁷

STEM learning and education in the Australian mining sector

Australia has a highly-skilled and adaptable minerals workforce. For example, 29 per cent of its workers hold a Certificate IV level qualification or higher—above the national average and one in five workers hold a bachelor degree or higher.⁸ Apprentices also make up 4 per cent of the minerals workforce, well above the national all-industries average of 2.1 per cent.

Australia is a global leader in minerals higher education, moving from a state of near collapse in 2000 to a unique, innovative and collaborative model developing world-class mining graduates.⁹

According to Australia's Chief Scientist, Australia loses female talent at every stage of the STEM pipeline from primary school through to entry and involvement in the workforce.¹⁰



Preparing for the future minerals workforce

Broader skills and capabilities important to the future minerals workforce include core technical skills coupled with cognitive and interpersonal skills in addition to specialist skills in complementary disciplines. STEM skills are becoming even more important as companies embed digital thinking into strategy and practice.¹¹

However, the supply of suitably qualified minerals professionals in Australia is dwindling. From a minerals industry perspective, the transition from the mining construction to the production phase resulted in less employment demand in some disciplines. Falls in commodity prices and perceptions of a 'post-mining boom' further contributed to a pronounced drop-off in minerals education tertiary enrolments since 2012.¹²

Companies and industry organisations continue to develop new partnerships and approaches to encourage people to pursue further education and learning.

The World Economic Forum counts STEM literacy as a measure of the future readiness of countries, enabling students to thrive in the 'known unknown' of future careers.¹³

Preparing for the future minerals workforce

On 17 May 2018, industry, academia and governments convened the first Minerals Industry Education Summit. The summit examined current and future workforce needs, the

1 Australian Government, Quality Education, Australian Government, viewed 4 October 2018.

2 Pricewaterhouse Coopers, A Smart Move: Future-proofing Australia's workforce by growing skills in science, technology, engineering and maths (STEM), April 2015, p. 14. As referenced in www.riotinto.com/ourcommitment/spotlight-18130_22976.aspx.

3 Global Reporting Initiative, United Nations Global Compact and WB SCD, SDG4, GRI, UNDC and WB SCD, viewed 3 October 2018.

4 Committee for Economic Development Australia, How unequal? Insights on inequality, April 2018, chapter 3, p. 57.

5 *ibid.*, p. 50.

6 Minerals Council of Australia, Submission to Senate Select Committee on the Future of Work and Workers Inquiry, January 2018, p. 7.

7 Office of the Chief Scientist, Women in STEM – A story of attrition, Australian Government, 2016, viewed 17 October 2018.

8 Department of Education, Industry Outlook: Mining, Canberra, 2014; and Minerals Council of Australia, Miners at Work, Canberra, 2018.

9 Minerals Council of Australia, Submission to Senate Select Committee on the Future of Work and Workers Inquiry, January 2018, p. 11.

10 *ibid.*

11 Productivity Commission, Shifting the Dial: 5 Year Productivity Review, Report No. 84, Canberra, 3 August 2017, p. 83-84.

12 Minerals Tertiary Education Council 'Key Performance Measures Report 2017', Minerals Council of Australia, p. 3.

13 M Timms, K Moyle, P Weldon & Pru Mitchell, Challenges in STEM learning in Australian Schools, Australian Council for Educational Research, 2018, p. 3.

education and training landscape and discuss a collective response to changing skills requirements, educational challenges and the recruitment and retention of qualified professionals. Participants discussed how to work with students, the education sector, industry and governments to plan for the future minerals workforce.

Further informed by the summit, industry-wide and cross-sector collaboration is continuing as partners work to develop a national strategy that will:

- Create post-graduate qualifications providing a pathway for graduates of other engineering disciplines to qualify as mining engineers
- Identify skills and capabilities to enable the existing minerals workforce to upskill, cross-skill and re-skill through Vocational Education and Training, including micro-credentialing
- Mapping career and employment pathways to show the opportunities and pathways into the minerals industry
- Forecast future employment needs and opportunities across the industry.

Minerals Tertiary Education Council

Through the Minerals Tertiary Education Council (MTEC), Australia's minerals industry has invested more than \$50 million over the last decade in a range of minerals-related tertiary education programs. This has led to the development of new, innovative programs to educate, train and ready Australia's minerals workforce.¹⁴

A key initiative is Mining Education Australia, a joint venture between MTEC partner universities—the University of Queensland, University of New South Wales, University of Adelaide and Curtin University in Western Australia—to combine teaching resources for delivery of high-quality third and fourth-year mining tertiary education.¹⁵ It is a world-first approach to delivering a consistent curriculum across institutions, garnering international attention. Partner universities rank within the World's Top 10 Minerals and Mining Schools.¹⁶

Another major initiative—the Minerals Industry National Associate Degree in mining engineering and minerals geoscience—is an associate degree supported through MTEC. It provides para-professional qualifications to support entry or upskilling into the minerals industry. The Associate Degree in Mining Engineering is delivered at the University of Southern Queensland while the Associate Degree of Geoscience is delivered at Central Queensland University, providing access for students in regional Australia.¹⁷

Supporting diversity and inclusion

In addition to company-specific initiatives, the MCA acts as a central point to support for programs encouraging girls and women and Indigenous students to pursue an interest in STEM careers. Key partnerships are with Aurora Education Foundation (to support the career aspirations of Indigenous students), the Indigenous Australian Engineering School and Robogals Asia Pacific (to encourage girls to develop an interest in engineering).

In addition, the MCA along with a number of its member companies are corporate partners of the Clontarf Foundation. The foundation supports young Aboriginal

and Torres Strait Islander men to achieve their education, employment and life goals.

MCA also coordinates industry support for the national Teacher Earth Science Education Program. The program assists the professional development of science teachers through nine professional development modules. Online resource and minerals kits are also provided at no cost.¹⁸

MCA research shows many young people know little about careers in the mining industry, underlining the importance of industry-wide efforts for a youth-focused awareness campaign and broader future minerals workforce strategy.¹⁹

In action: Rio Tinto

Rio Tinto is a leading global mining group focused on finding, mining and processing mineral resources. Its goal is to deliver strong and sustainable shareholder returns from its portfolio of assets and pipeline of projects. Australia is home to about half of Rio Tinto's global assets, with operations spanning aluminium, copper and diamonds, energy, minerals and iron ore.

Rio Tinto is a long-term partner of initiatives supporting literacy and numeracy, vocational education and training.

Developing Australia's first qualification in automation

In 2017 Rio Tinto announced a partnership with the Western Australian Government and South Metropolitan TAFE to support development of new technology and innovation career pathways. This collaboration recognises the need for skills to support new roles within the workforce being created by automation and digitisation.

For example, a range of new roles were created when Rio Tinto introduced driverless trucks at its Western Australian Hope Downs 4 iron ore mine in 2014. This included entirely new roles as controllers to operate and monitor driverless vehicles, pit controllers to monitor and manage vehicle operations on site and communications and systems engineering specialists to provide detailed fault diagnostics.²⁰

Rio Tinto has committed \$2 million to support industry, government and the education sector to collaboratively develop and deliver new nationally-recognised qualifications in automation. The qualifications will be available through TAFE colleges and high schools in Western Australia from 2019. The collaboration will also see development of complementary programs to build digital skills.²¹

Partnering with Scitech

Scitech is a not-for-profit organisation aiming to increase the awareness, capability and participation of Western Australians in STEM disciplines. Rio Tinto's long-term partnership with Scitech supports outreach programs across the state as well as a two-day 'RoboCup' robotics contest. Students apply skills like coding, robotics, engineering, programming and maths in a fun—yet competitive—environment during RoboCup.^{22 23}

Partnering with Murdoch University

Rio Tinto's partnership with Murdoch University facilitates various activities to encourage the interest of students in

¹⁴ Minerals Council of Australia, *Modernising STEM education for Australia's future mining workforce*, MCA, viewed 15 October 2018.

¹⁵ Minerals Council of Australia, *Minerals Tertiary Education Council*, MCA, viewed 27 September 2018.

¹⁶ Mining Education Australia website, MEA, viewed 27 September 2018.

¹⁷ Minerals Council of Australia, *Workforce, Education and Skills* viewed 1 October 2018.

¹⁸ Minerals Council of Australia, *Minerals Tertiary Education Council*, MCA, viewed 27 September 2018.

¹⁹ *ibid.*

²⁰ Michael Gollschewski, 'Case study: Automation and Australia's future workforce', in CEDA (Eds) *Australia's future workforce?* Melbourne, 2015, p. 73.

²¹ Rio Tinto, *Rio Tinto partners with TAFE to deliver Australia's first automation qualifications*, Rio Tinto, Melbourne, viewed 4 April 2018.

²² Rio Tinto, *Can robots future-proof Aussie kids?* Rio Tinto, viewed 1 October 2018.

²³ Shannon Fleming, *WA Students Compete with STEM Skills at 'Robotics Olympics'*, SciTech, viewed 28 September 2018.



Photos: RoboCup Junior 2018, Scitech

This case study demonstrates practice of *Enduring Value*:

- **Principle 2:** Integrate sustainable development principles into company policies and practices
- **Principle 3:** Uphold fundamental human rights and respect cultures, customs and values in dealing with employees and others who are affected by our activities
- **Principle 9:** Contribute to the social, economic and institutional development of communities in which we operate.



chemistry, physics, maths, statistics and engineering. It also seeks to give students an insight into mining careers and show the steps to get there. It is focused on building an inclusive, modern picture of STEM careers, including encouraging more women and young Indigenous people to participate in science and technology.²⁴

A long-term collaboration

For more than a decade, the Rio Tinto Centre for Mine Automation at the University of Sydney has pioneered world-class research to develop new mining technology. Through its work, the centre also supports the education of mining engineers and technicians and more than 10 PhD scholarships have been awarded to support automation research over this period.^{25 26}

Key outcomes

Contributing to quality education through targeted initiatives, cross-industry collaborations and investment has secured and enhanced Australia's world-class minerals education sector. This approach has helped develop job-ready mining professionals.

Creating a network of minerals tertiary education providers in mining regions has supported skills retention and development in regional areas. This has flow-on benefits for other industries that may require the same or similar skill sets.

Development of a para-professional qualification is assisting people of different backgrounds and experience to join or advance within Australia's minerals workforce.

Lessons

- Existing industry-wide collaboration and company-specific initiatives, coupled with new interventions and innovation, are fundamental to securing Australia's future minerals workforce
- New partnerships that challenge traditional ways of doing business can support enhanced outcomes. An important part of the success of approaches is identifying and remaining committed to shared goals.
- Local efforts, including in regional areas, to support education and awareness may have a significant impact and represent a win-win for companies and employees
- Effective partnerships with other organisations, including small not-for-profit organisations that share similar goals and values enable fit-for-purpose approaches to common challenges. For example, Rio Tinto's partnership with Scitech supports a locally-based approach to engagement with students.

²⁴ Rio Tinto, *Can robots future-proof Aussie kids?* Rio Tinto, viewed 1 October 2018.

²⁵ The University of Sydney, *Celebrating a decade of smart mining solutions*, The University of Sydney, 5 December 2017, viewed 28 September 2018.

²⁶ The University of Sydney, *Australian Centre for Field Robotics*, The University of Sydney, viewed 28 September 2018.

DIVERSITY IN THE MINING WORKFORCE

St Barbara's leadership in addressing gender equality

St Barbara, a mid-tier gold miner, demonstrates strong leadership in addressing SDG5 – Gender equality – Achieve gender equality and empower all women and girls. While this case study focuses on SDG5, St Barbara's contribution also supports SDG8 – Decent work and economic growth, SDG4 – Quality education and SDG3 – Good health and well-being.

St Barbara demonstrates business leadership and innovation to achieve workplace equality and inclusion, applying a sophisticated approach that integrates gender diversity with core business strategy. St Barbara has improved employment, retention and business outcomes: 100 per cent of its female employees returning from paid parental leave between 2009 and 2018, a nil like-for-like gender pay gap and women representing 25 per cent of its leadership team.



5 GENDER EQUALITY



This case study explores the role of visionary leadership in championing SDG5, operational policies to support SDG5 and St Barbara's development of leading practice gender smart safety audits across its operations. It also shows how SDG5 can be embedded core business and supported by targeted social investment.

Relevant Australian SDG5 indicators include: the proportion of women in managerial positions.¹

Global and Australian drivers for SDG5 – Gender equality

Achieving gender equality and the empowerment of girls by 2030 requires shared action to eliminate the causes of discrimination that limit women's rights in private and public spheres.² Integral and interconnected to all other SDGs, economic growth and social inclusion for half the world's population is central to equitable and sustainable development for all.

Closing the gender gap makes good business sense: research shows organisations valuing inclusivity attract and retain high performers, reduce staff turnover costs, enhance operational performance, boost reputation and improve access to markets.³

Despite significant progress, women and girls in Australia continue to experience inequality and discrimination limiting the choices and opportunities available to them. For example, in 2018 the all industries average national gender pay gap was 22.4 per cent.⁴

Recommended actions for companies to support SDG5 have included creating inclusive business models, ensuring pay equity and implementing policies to prevent violence against women.⁵

A diverse and inclusive workforce regardless of size and industry generates tangible benefits, such as increased efficiency, productivity, innovation, creativity and improved employee engagement.⁶

Diversity and inclusion in Australia's minerals industry

The minerals industry is historically male-dominated. Barriers to women's participation include a perceived lack of flexibility in operational roles and challenges associated with time away from family in fly-in-fly-out (FIFO) arrangements.⁷ Women represented about 16 per cent of Australia's mining workforce in 2017, far lower than the national all-industry average of 47 per cent.⁸

Similar misconceptions about STEM roles also hamper girls' enrolment in these subjects, limiting women's broader representation in Australia's STEM workforce—currently at 16 per cent. STEM subject enrolment is at a 20-year low, presenting challenges to meet future labour workforce requirements. This has flow-on impacts on the number of women moving into the minerals industry.⁹

Mining companies are increasingly at the forefront of change to support gender equality. Companies are improving organisational frameworks to achieve diversity, realising that these same frameworks are required for broader

organisational and strategic success. Indeed, the 'benefit of gender diversity is not just the diversity of thought women bring to the table ... [but] the culture and governance it requires'.¹⁰

A snapshot of St Barbara—'a rich history and bright future powered by diversity'

St Barbara is an Australian-based, ASX-listed gold producer and explorer, with assets in Western Australia (Gwalia) and Papua New Guinea (Simberi).

St Barbara employs approximately 1,000 staff across its Australian and PNG operations. At Gwalia, 16 per cent of employees are female while across its Australian operations, including head office in Melbourne, 24 per cent of employees are female. At Simberi, 97 per cent of employees are PNG nationals, with 56 per cent Simberi and Tabar Islanders.

The start of the journey ...

In 2007, St Barbara recognised its human resources practices were largely transactional with minimal linking of recruitment, retention and remuneration to core business strategy. A pay equity gap of 43 per cent and women representing just 19 per cent of its workforce reflected this.

St Barbara acknowledged workforce diversity could be a critical component of its future success and set itself a goal to be an employer of choice for gender equality. This started St Barbara on a journey that would position the company as an Australian leader. St Barbara's practice and performance today exceed industry benchmarks driven by a mandate of 'continuous focus—combined effort'.

Diversity as core business strategy

St Barbara formalised a strategy to address gender inequality within its workforce in 2010. It aimed to remove barriers for women's workforce participation and embed women's empowerment within a five pillar People Strategy: talent, diversity, leadership, engagement and performance.

St Barbara's approach was hard-wired to core business strategy, approved at Board level and supported by strong leadership from its Managing Director and Chief Executive Officer and Executive Leadership Team. This approach extended beyond site-level actions and embraced a holistic approach to gender equality including:

- **Focus on female recruitment:** rolling out innovative recruitment processes promoting gender equality, including campaigns to attract women into trades and technical roles, eliminating gender-specific language from job advertisements and sharing female employee success stories. Eliminating unconscious bias—discrimination based on hidden biases—has also been a key focus.
- **Retaining female talent:** leading practices implemented include paid parental leave, return-to-work incentives, flexible working arrangements, a parental support network and paid leave for those experiencing domestic violence. Mentoring programs are in place and 100 per cent of women have returned to work after paid parental leave between 2009 and 2018. St Barbara's Women's Internal

1 Australian Government, Gender equality, Australian Government, viewed 4 October 2018.

2 United Nations Women, SDG5: Achieve gender equality and empower all women and girls, United Nations, 2018, viewed 27 July 2018.

3 Workplace Gender Equality Agency, The business case for gender equality, Australian Government, 2017, viewed 19 July 2018.

4 Australian Human Rights Commission, Face the Facts: Gender Equality 2018, viewed 20 July 2018.

5 Global Compact Network Australia, SDG5, UN Global Compact, viewed 2 October 2018.

6 Workplace Gender Equality Agency, The business case for gender equality, Australian Government, 2017, viewed 19 July 2018.

7 Workplace Gender Equality Agency, Case study: Attracting women to a male-dominated industry, Australian Government, 2018, viewed 17 July 2018.

8 Workplace Gender Equality Agency, Gender workplace statistics at a glance, Australian Government, August 2018, viewed 2 August 2018.

9 Office of the Chief Scientist, Australia's STEM Workforce, Australian Government, 2016, viewed 2 August 2018.

10 Sara Prendergast, What does effective attraction of females to operational roles look like', Sara Prendergast, 2018.

Network is also instrumental in bringing women together across the company.

- **Career development pathways:** ensuring women attend training, can access mentoring opportunities and there is gender equity across succession plans. St Barbara has a target of 25 per cent female participation in leadership development programs and now has 25 per cent representation across its leadership.
- **Addressing the gender pay gap:** through targets and monthly organisation-wide pay gap analyses and annual like-for-like analysis, assessing and understanding changes in real time to ensure inequities are addressed.



A recognised gender equality champion: Bob Vassie, Managing Director and Chief Executive Officer has sponsored all initiatives rolled across St Barbara. Bob was one of the first Workforce Gender Equality Agency Pay Equity Champions in Australia in 2014.

marginalised group—not just women’, notes Val Madsen, St Barbara General Manager Human Resources.

Pioneering approaches to gender smart safety in Australia, based on lessons from Papua New Guinea

‘Gender safety’ recognises women may face different safety risks and experience work safety differently than men, largely as traditional work sites were designed to accommodate men.¹¹

St Barbara piloted a ‘Gender Smart Safety’ program as its first step in developing a system of assessing and measuring women’s safety at its PNG Simberi operations—a location where a 2016 analysis found 56 per cent of women believed real or perceived safety concerns affected their career¹²

Most safety programs focus on eliminating workplace injuries and workplace health and well-being; however, St Barbara recognised increasing safety for its female employees also supported attraction and retention of quality female workers.

St Barbara’s Gender Smart Safety Pilot involved a partnership with the PNG Business Coalition for Women. It aimed to identify safety issues for women on site and actions to address these.

In addition to other programs—including a ‘Warrior Program’ delivered on-site and designed in partnership with local communities to raise awareness of family and sexual violence—the pilot has produced excellent results. St Barbara, along with industry partners, is now supporting drafting and implementation of a national countrywide model policy and minimum standards for women’s safety at work across PNG.

Based on this success, St Barbara is piloting the program at its Gwalia operations. It has institutionalised workplace safety practices that recognise and respond to the needs of women and committed to sharing this approach with industry peers. ‘The safety audit could in fact be run for any

Benefits of the Gender Smart Safety Program at Simberi have included a strengthened awareness of and compliance with safety protocol amongst workers, positive feedback from female workers, and an 18 per cent increase in the percentage of women who feel happy about their safety at work.¹³

Looking forward—gender equality as an ongoing commitment at St Barbara

St Barbara has received numerous accolades—including the Australian Workplace Gender Equality Agency ‘Employer of Choice for Gender Equality’ from 2014-2018. It also continues to advance its commitments, including developing a company strategy and processes to support people experiencing domestic violence within its workforce.

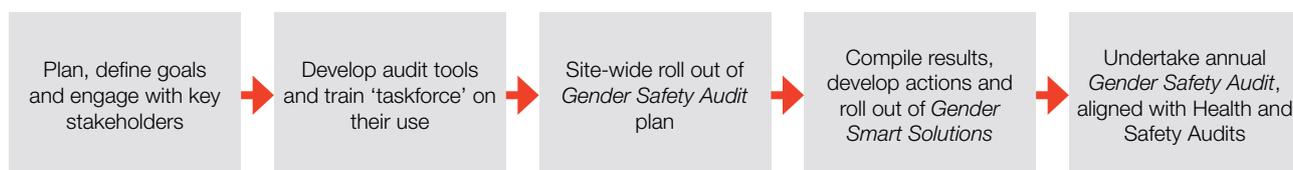
Where do the future challenges lie? Val notes workforce diversity is an ongoing effort. ‘It is relatively easy to have balanced gender representation in a capital city ... our biggest challenge is attracting and retaining women into FIFO roles. We need to be more progressive in how we talk about the career stories of our women so that women considering a career in mining can see that it’s not a dirty, grubby environment’.

St Barbara is also focused on attracting more young people, including girls, to STEM careers. ‘There’s a view that the resource boom is over, but that couldn’t be further from the truth’, notes Val. ‘Australia is resource rich and there will be careers in the resource industry for years to come.’

Accordingly, St Barbara has shifted focus with an eye on attracting the future workforce. Through programs focused on primary schools and Technical and Further Education (TAFE), the company is encouraging young students to consider STEM subjects.

Finally, St Barbara is thinking about future workforce skills and its response to challenges and opportunities associated with block chain, automation and other areas. ‘We are already starting to understand this ... the skills will change and some skills will be different, but some things will

St Barbara’s Gender Smart Safety Audit process



¹¹ Business Coalition for Women, Gender Smart Safety: Toolbox Talk Workplace Safety for Women, fact sheet, Australia, 2017.

¹² Factive, Case Study: St Barbara Promotes Gender Smart Safety in Papua New Guinea, 2015.

¹³ *ibid.*

Photos: St Barbara

This case study also demonstrates practice of *Enduring Value*:

- **Principle 2:** Integrate sustainable development principles into company policies and practices
- **Principle 3:** Uphold fundamental human rights and respect cultures
- **Principle 5:** Seek continual improvement of our health and safety performance
- **Principle 9:** Contribute to the social, economic and institutional development of communities in which we operate.



remain consistent—notably problem solving and innovative thinking.’ St Barbara continues to emphasise upskilling its workforce in these core areas.

St Barbara has also maintained a nil gender pay gap since 2013 in like-for-like roles.¹⁴

Social and economic outcomes

St Barbara’s work to develop an Australian-leading gender diversity strategy and then translate the strategy into outcomes has enabled it to champion, support and realise the benefits of gender equality.

Key business, economic and social outcomes include:

- Women representing 25 per cent of St Barbara’s leadership team, enabling St Barbara to benefit from diversity of thinking and experience and broadening its talent pool
- 100 per cent of women returning to work from paid parental leave between 2009 and 2018, ensuring talent and corporate experience and knowledge is retained and staff turnover costs are reduced
- Women at St Barbara’s Simberi operation feel happier about the working environment, which supports employee retention and diversity.

St Barbara’s gender diversity leadership is also supporting improved social and economic outcomes for women across PNG through its involvement in the development of a country-wide model and minimum national work standards for women.

Lessons

- Integrating diversity and equality within core business strategy mean gender equality is discussed at Board level and championed by senior management
- Setting targets and measurement tools enable companies to pivot quickly to respond to changes affecting diversity targets
- Openly communicating commitments to gender and diversity—externally and internally—support companies to attract the best talent
- Being open about what has and what hasn’t worked has enabled St Barbara to assume a leadership role among industry peers, sharing valuable lessons and contributing to new industry performance benchmarks
- Company programs can act as a catalyst for the development of local, national and international initiatives to support achievement of the SDGs.

¹⁴ Workplace Gender Equality Agency, Case study: Attracting women to a male-dominated industry, Australian Government, 2018, viewed 17 July 2018.

EFFECTIVE COLLABORATION AND CATCHMENT MANAGEMENT

Natural resource management and conservation

Newmont and the Peel–Harvey Catchment Council have a longstanding partnership that is supporting more effective catchment management in the Peel Region in Western Australia. This partnership will contribute to SDG6 – Clean water and sanitation: Ensure availability and sustainable management of water and sanitation for all. It also supports SDG12 – Responsible consumption and production. Newmont and Peel–Harvey Catchment Council have entered into a Community Investment Agreement—recently signed and building on many years of cooperative engagement—working to support enhanced catchment management in the fragile Peel–Harvey Catchment.



6 CLEAN WATER AND SANITATION



The Community Investment Agreement provides a comprehensive set of actions that will support better integration of traditional ecological knowledge into catchment planning, build community and local landowner capacity to design and deliver sustainable agricultural practices and establish a baseline of river health for the Hotham and Williams Rivers and tributaries.

Relevant Australian SDG6 indicators include: level of water stress: freshwater withdrawal as a proportion of available freshwater resources

Global drivers for SDG6 – Clean water and sanitation

Efforts to ensure the availability and sustainable management of water and sanitation are more important than ever as global water resources come under increasing pressure. Increasing urbanisation, population growth, extreme weather events, climate change, pollution and other factors are key challenges. Recognising these challenges, the UN General Assembly declared a new 'International Decade for Action on *Water for Sustainable Development*' from March 2018.¹

The Australian SDGs Hub for Business identifies actions businesses can take to support SDG6. These include measuring and minimising water use, understanding and minimising water risks and engaging in collaborative water stewardship initiatives.²

SDG6 in Australia

Managing water resources on the driest inhabited continent on earth is inherently complex, and water management and access is an ongoing priority for all Australian governments.³

Australia responds to these challenges in innovative ways, developing integrated water governance arrangements that balance economic, social and environmental considerations. For example, Australia hosts the largest integrated catchment management program in the world—the Murray-Darling Basin Initiative—covering an area of over one million square kilometres.⁴ Lessons from this initiative continue to provide insights for other resources management programs across the country.

Water scarcity and security of supply is a critical business risk for Australia's mining sector, which in turn has an important role to play in the sustainable management of water resources.⁵ Recent sector-wide efforts have focused on water stewardship, including enhanced transparency and accountability regarding water use, proactive stakeholder engagement and collaboration and adoption of catchment-based approaches.⁶

'Water stewardship' is defined as 'The use of water that is socially equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that involves site and catchment-based actions'.⁷



Newmont Mining Corporation

Newmont is a leading gold producer headquartered in Colorado, USA. Newmont prides itself on its commitment to sustainable, responsible resource development and RobecoSAM's Corporate Sustainability Assessment named Newmont overall industry sustainability leader in 2018.⁸

Newmont's Australian operations span Western Australia (Boddington and Kalgoorlie) and the Northern Territory (Tanami). The company also manages two legacy sites—Mt Leyshon in Queensland and Woodcutters in the Northern Territory. In 2017 Newmont employed 4,423 staff and contractors, increased Aboriginal employment to 6.7 per cent and invested more than A\$2.3 million in training and development.⁹

Newmont achieved a 1 per cent reduction in freshwater use across its Australian Operations in 2017.¹⁰

About the Peel-Harvey Catchment

Located on the lands of the Noogar people, the Peel-Harvey Catchment is a 1.17 million hectare area covering the entire surface water catchment of the Peel-Harvey estuarine system. The Hotham-Williams is the upper portion of the Peel-Harvey surface water Catchment and makes up almost half of the Peel-Harvey Catchment.¹¹

As the largest operating gold mine in Australia, Newmont Boddington Gold (NBG) employs approximately 1,850 employees and contractors. The mine is located 16 kilometres from the town of Boddington, approximately in the centre of the Peel-Harvey Catchment. NBG was established shortly after gold was discovered at the site in 1980.

One of the largest custodians of land in the South West of Western Australia, Newmont has an operational footprint of 5,000 hectares and landholdings of approximately 30,000. These holdings include including native forest, plantation and agricultural land. The operation is licensed to extract and store up to 15 gigalitres of water per annum from the Hotham River, subject to water flow limits and results of ongoing eco-system health monitoring of the river and surrounding riparian vegetation.

1 United Nations, Resolution adopted by the General Assembly on 21 December 2016, UN, 7 February 2017.
2 Global Compact Network Australia, SDG6, United Nations Global Compact, viewed 3 October 2018.
3 Australian Government, The Australian continent, Australian Government, viewed 15 October 2018.
4 Australian Government, Murray-Darling Basin Authority, Australian Government, viewed 2 October 2018.
5 Sustainable Minerals Institute and Minerals Council of Australia, Water Accounting Framework, SMI and MCA, January 2014.
6 International Council on Mining and Metals, Water management, ICMM, viewed 2 October 2018.
7 Alliance for Water Stewardship, Impacts of Alliance for Water Stewardship, AWS, viewed 2 October 2018.
8 RobecoSAM, Industry Leaders 2018, Robeco SAM, viewed 2 October 2018.
9 Newmont Australia, 2017 Sustainability Summary Beyond the Mine – Australia Region Summary, Newmont Australia, Perth, p. 1.
10 ibid.
11 Peel Harvey Catchment Council, Our Catchment, PHCC, viewed 2 October 2018.

While a key tourist and recreational destination, the catchment system face significant challenges. The western third of the catchment remains heavily forested, yet clearing has occurred across 80 per cent of the central and eastern catchment for agricultural production (sometimes known as the Western Wheatbelt). Changes to vegetation density led to rising water tables and land salinisation.

Ongoing pressures—including a rapidly expanding population in the coastal plain—have prompted innovative actions and partnerships to preserve this precious ecosystem and prevent future decline.¹²

A catchment is an area where water is collected by the natural landscape. Integrated water catchment management is the coordinated management of land, water and biodiversity resources based on catchment areas, incorporating environmental, economic and social considerations.¹³

The Peel–Harvey Catchment Council

Peel–Harvey Catchment Council (PHCC) is a not-for-profit, community-based Natural Resource Management (NRM) organisation promoting an integrated approach to catchment management. PHCC emphasises partnerships and works with landholders, community groups, industry and all levels of government.

PHCC’s activities address sustainable natural resource management, including the effects of climate change, river and wetland restoration, biodiversity protection, sustainable agriculture and building community capacity.¹⁴

Background to the Newmont Boddington Gold / Peel–Harvey Catchment Council Partnership

NBG and PHCC first worked together in 2011 as members of the Hotham–Williams Catchment Environmental Alliance (HWCEA), a community group focused on catchment-level responses. HWCEA members included a broad range of stakeholders: local Landcare groups, resource sector companies, Traditional Owners, environmental organisations, local government representatives, local schools, universities and community members.

After many years of strong support and community-level projects, public investment in Landcare in the Hotham–Williams Catchment declined. Supporting its mandate to prioritise community-based projects, HWCEA approached the PHCC in 2012 for support to reinvigorate Landcare in the catchment area. Through the HWCEA, Newmont requested the group look to develop a comprehensive natural resource management business case study to identify key actions underpinning long-term Landcare support in the catchment. PHCC welcomed the initiative, working with HWCEA to develop the business case study.

The study found further work was required to define priorities and guide future public and private investment. PHCC then applied for and secured four years of Australian Government Biodiversity Funding.

The funding, supplemented by local in-kind assistance, supported activities such as Landcare works, community awareness building and re-establishment of a NRM officer in Boddington to service the Hotham–Williams sub-catchment.

These projects delivered positive outcomes and reinforced the importance of a strategic approach to identify and

implement community priorities and maintain a NRM presence in the community. NRM and Landcare are again now firmly part of the Hotham–Williams community.

A new phase of collaboration: the Newmont Boddington Gold–PHCC Community Investment Agreement

In 2017, PHCC and Newmont built on this relationship by entering into a new five year Community Investment Agreement—the *Hotham–Williams Rivers & Tributaries’ Natural Resource Management and Conservation Project*. Through the agreement, Newmont is supporting the PHCC to manage and deliver projects that aim to strengthen catchment management across the Hotham–Williams region. Key aspects include:

- Employment of a Landcare officer to oversee activities in the Hotham–Williams Catchment
- Development of a River Action Plan for the Hotham and Williams Rivers and tributaries that address natural, conservation and cultural resource management knowledge gaps. The plan will capture Aboriginal cultural perspectives, outline further studies to establish a baseline of river health and inform future research collaborations.
- Collaboration with Noongar elders and community members to incorporate traditional ecological knowledge into catchment planning
- Delivery of biosecurity activities, including education and training of local community groups and landholders and support for a new biosecurity group in the upper catchment
- Community capacity building activities to support for future land management. These will include conservation workshops, accredited skills development courses for



¹² Department of Water and Environmental Regulation, Peel – Harvey Estuary, Government of Western Australia, viewed 10 October 2018.

¹³ Department of Environment, Land, Water and Planning, *Catchment Management Framework*, Victoria State Government, viewed 10 October 2018.

¹⁴ Peel–Harvey Catchment Council, *What we Do*, PHCC, viewed 2 October 2018.



Photos: Peel-Harvey Catchment Council and Newmont

This case study demonstrates the practice of *Enduring Value*:

- **Principle 2:** Integrate sustainable development principles into company policies and practices
- **Principle 4:** Implement risk management strategies based on valid data and sound science
- **Principle 6:** Seek continual improvement of our environmental performance
- **Principle 7:** Contribute to conservation of biodiversity and integrated approaches to land use planning
- **Principle 9:** Contribute to the social, economic and institutional development of the communities in which we operate.

Newmont’s neighbouring landholders and Aboriginal stakeholders and local community planting events focused on priority catchment areas.

- Restoration projects for the Hotham and Williams Rivers and tributaries including invasive weed control, riparian vegetation and community planting days
- Development and delivery of a landowner grants program to support sustainable agricultural activities across the catchment.

Key outcomes

NBG’s agreement with PHCC is the culmination of many years of collaboration and partnership. This partnership began as an informal relationship developed via the HWCEA and now supports a formal partnership that will deliver beneficial and sustainable environmental and social outcomes for the region.

The partnership will enable host communities, Aboriginal Elders and groups, Landcare groups and farmers to define develop their own priorities and approach to catchment management.

Funding investment from NBG to support the employment of NRM officer[s] enabled PHCC to attract other significant funding for on-ground and engagement works. This additional support would have been unlikely if PHCC had to also build in the costs of an officer to deliver them. The investment has also helped support other local groups to attract investment as well.

Together, this partnership demonstrates the importance of cross-sector engagement between various organisations to support social capital and ensure local ownership and decision.

Lessons

- Investing time and resources in relationships with environmental and other community partners supports constructive long-term approaches to complex challenges
- NBG’s agreement with the PHCC is the culmination of many years of collaboration and partnership, starting with an informal alliance developed via Hotham-Williams Catchment Environmental Alliance and developing into a formal partnership supporting beneficial outcomes for both parties
- Demonstrating a community-led approach to NRM, research funded by the NBG-PHCC Agreement will support the current Hotham-Williams NRM Plan and lead to further work to support community priorities. The partnership is enabling environmental baseline studies and river health monitoring to occur where there were otherwise no resources to do so.
- The focus on cross-sector engagement—NGOs, community, educators and school children, private sector industry, and all levels of government—is fostering cooperation across the Catchment and supporting a grassroots approach to NRM
- Investment occurring in the right areas enables additional funding to be sourced, maximising the value of the original investment.

SUPPORTING A VIBRANT REGIONAL COMMUNITY

Mandalay’s investment in child and family services

Mandalay Resources has worked closely with community stakeholders near its Costerfield mine site in regional Victoria to address SDG8 – Provide sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Mandalay supported the nearby Heathcote community—facilitating investment in child and family services—to create a more vibrant and attractive regional town to live in. The childcare hub—Heathcote’s first—will have places for 76 children, create 37 jobs and provide an estimated \$660,000 of economic stimulus annually.



8 DECENT WORK AND ECONOMIC GROWTH





While this case study focuses on SDG8 – Decent work and economic growth, Mandalay Resources’ contribution also supports SDG3 – Good health and well-being, SDG5 – Gender equality and SDG4 – Quality education.

Relevant Australian SDG8 indicators include: the unemployment rate, by gender, age and persons with disabilities.

SDG8 – Decent work and economic growth

It is forecast more than 600 million new jobs will need to be created globally by 2030 to keep pace with the growth of the global working age population.¹ More people in decent jobs mean stronger and more inclusive economic growth and resilient local economies.²

SDG8 promotes sustained, inclusive economic growth, higher productivity and technological innovation to achieve productive employment and decent work for all. ‘Leaving no one behind’ is central to SDG8, which encompasses women, girls, marginalised groups, regional and other communities. Localisation of the goals—going beyond national implementation to make goals meaningful and relevant at the local level is key to achieving SDG8.

As at June 2017, 32.7 per cent of Australia’s population lived outside greater capital city areas and 28.2 per cent lived outside major cities.³ The population in regional Australia is rising—between 2007 and 2017 it grew by 10.6 per cent.⁴

Australia’s regional economies and the mining sector

Australia’s unemployment rate of 5.4 per cent is below the International Labor Organisation (ILO) global average, 5.6 per cent.⁵ However, disparities exist across the country, with youth unemployment in some regional areas exceeding 20 per cent.⁶ Regional and remote Australia also faces unique challenges including access to quality educational and medical services.⁷

In 2016, Australia’s agriculture, forestry, fishing and mining industries—mostly located in regional Australia—made up 57 per cent of the value of merchandise exports.⁸ The Victorian Government’s *Regions 2030* agenda seeks to unlock the regional Victoria’s economic potential through job

creation and economic development, infrastructure, health, education and communications activities.⁹

Mining in rural Australia has long generated significant economic opportunities for communities; most of the 220,000 Australians employed by the resources sector work in remote and regional areas.¹⁰ Mining companies also support broader economic growth and regional development through local procurement of goods and services, training apprentices and graduates and partnerships with community groups to support local initiatives.¹¹

‘It is crucial for small rural communities like ours to have a major business like Mandalay that we can look up to and know we can call on their support—both financially and through participatory leadership.’
Sandra Slatter, local community champion

Mandalay Resources—living its values in regional Australia

Mandalay is a Toronto-based producer with assets in Chile, Australia and Sweden. The company operates the Costerfield Project, Australia’s only antimony mine, located about 150 kilometres from Melbourne.

Costerfield employs 200 staff and approximately 50 contractors. In a traditionally male-dominated industry, 15 per cent of Mandalay’s workforce and 50 per cent of its leadership team are women. In addition to a mostly local workforce, Mandalay prioritises partnerships with local businesses and contracting local providers.

Internally the company also prioritises development of its leadership team, including through annual leadership programs, and ensuring its entire workforce is satisfied and happy at and outside of work. An empowered corporate culture, a local and community-minded workforce and partnership focus has established Mandalay Resources as a respected leader and partner within the community.

¹ International Labour Organisation, Topics - Decent work and the 2030 Agenda for sustainable development, ILO, 2017, viewed 10 October 2018.

² International Labour Organisation, Decent work and the 2030 Agenda for sustainable development, ILO, 2017, viewed 10 October 2018.

³ Regional Universities Network, Regional Australia, RUN, 2018, viewed 21 July 2018.

⁴ Regional Universities Network, Regional Australia, RUN, 2018, viewed 21 July 2018.

⁵ International Labour Organisation, ILO: Unemployment and decent work deficits to remain high in 2018, ILO 2018, viewed 25 July 2018.

⁶ Brotherhood of St Laurence, An unfair Australia? Mapping youth unemployment hotspots. BSL, March 2018, viewed 1 August 2018.

⁷ Royal Flying Doctor Service, 30 year study shows further services needed in country Australia. Regional Australia Institute, December 14, 2017, viewed 28 July 2018.

⁸ Commonwealth of Australia, Department of Infrastructure and Regional Development, Regions 2030: Unlocking Opportunity, 2017, viewed 20 July 2018.

⁹ Commonwealth of Australia, Department of Infrastructure and Regional Development, Regions 2030: Unlocking Opportunity, 2017, viewed 20 July 2018

¹⁰ D Byers (Interim Chief Executive), Support mining jobs to lessen regional inequality, media release, Minerals Council of Australia, 21 May 2018.

¹¹ *ibid.*

Creating economies of scale through smart, community-driven social investment

Mandalay takes an impactful approach to community engagement: ‘keeping it simple and making investments or other decisions that are reasonable and benefit local communities’.¹² It has a strong commitment to community ‘liveability’ and focuses on social outcomes.

Mandalay recognises it has an important role in driving solutions to key community challenges through targeted social investment. It also recognises partnerships and targeted in-kind support can amplify impact beyond one-off, financial contributions.

Costerfield Site Manager Melanie McCarthy was named the 2018 Exceptional Woman in Australian Resources at the Women in Resources National Awards in Canberra.¹³

Partnering to support improved community health services

In 2015, Mandalay joined a community working group established to investigate and progress development of Heathcote’s first child care centre.

Out of this, Mandalay agreed to fund a detailed feasibility study that confirmed a range of key community challenges:

- A lack of childcare services (with the closest centre more than 40 kilometres away) was a significant employment barrier and challenge for the broader community as well as Mandalay employees returning to work after parental leave. This discouraged young families from living in Heathcote and limited opportunities for social development and economic growth
- Access to specialist, allied health and other services locally was limited, a particular challenge for a vulnerable community at higher risk of poor health and social, emotional and behavioural challenges. Short- and long-term specialist needs were not being met
- Children entering primary school in Heathcote presented with low levels of literacy and language development. 17.5 per cent of all children experienced difficulties compared with 7 per cent in the wider Bendigo shire.¹⁴

The feasibility study recommended further community consultation: childcare services were both wanted and needed and would provide enduring social and community value. Mandalay supported the community by funding a consultant to undertake further research and conduct community surveys.

Based on study findings and consultant research, a community organisation was formed to progress identified priorities.

The organisation developed a grant proposal that led to its award of a \$650,000 Victorian Government grant to progress the study. The concept for the Bunbunarik Children’s Hub—an integrated Children’s Centre—was born. The local Anglican Diocese supplemented the grant by providing \$250,000 as well as the land for construction of the Hub.

The name *Bunbunarik* means ‘children’ in local Taungurung Aboriginal clan dialect

Getting the show on the road—Bunbunarik, Heathcote Children’s Hub

To maintain momentum, Mandalay provided funding for a well-connected, passionate local community champion to drive the agenda forward. This assisted to fast-track construction of the Children’s Hub.

Construction of the Hub is expected to be completed by the end of 2018.

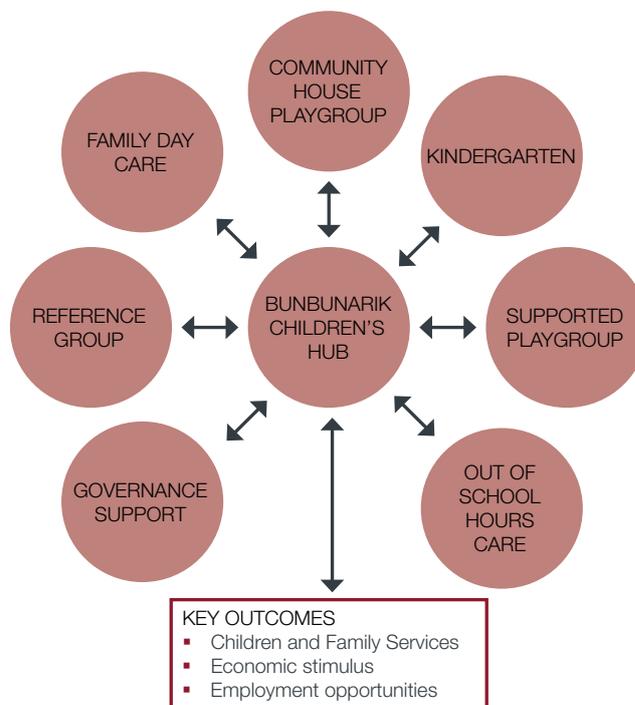
The Hub will offer integrated services including childcare, early learning services, family support, literacy and language programs, parenting and family violence support.

Beyond service delivery, community engagement and socialisation, the Hub will provide a significant economic stimulus and new job opportunities for the community. It has capacity for 76 children, will create 37 jobs will create an estimated local economic stimulus of \$660,000 annually. Solar power will provide electricity to the hub.

Development of the Hub—driven by the community—has leveraged significant support from local business, community groups and existing initiatives. This resulted in reduced construction costs due to community partnerships and discounted services, use of local suppliers, tradespeople and contractors (which also circulated money back into the community) and businesses and individuals volunteering time to assist hub construction.

Overall Mandalay contributed more than \$100,000 towards getting the Hub to construction stage and provided in-kind support. Mandalay also provided feedback about employee shift times, influencing the Hub’s proposed opening hours and benefiting Mandalay employees with children.

‘We want to leave a community improved by our presence here.’
Kerstin Brauns, Community and Environment Coordinator, Mandalay Resources



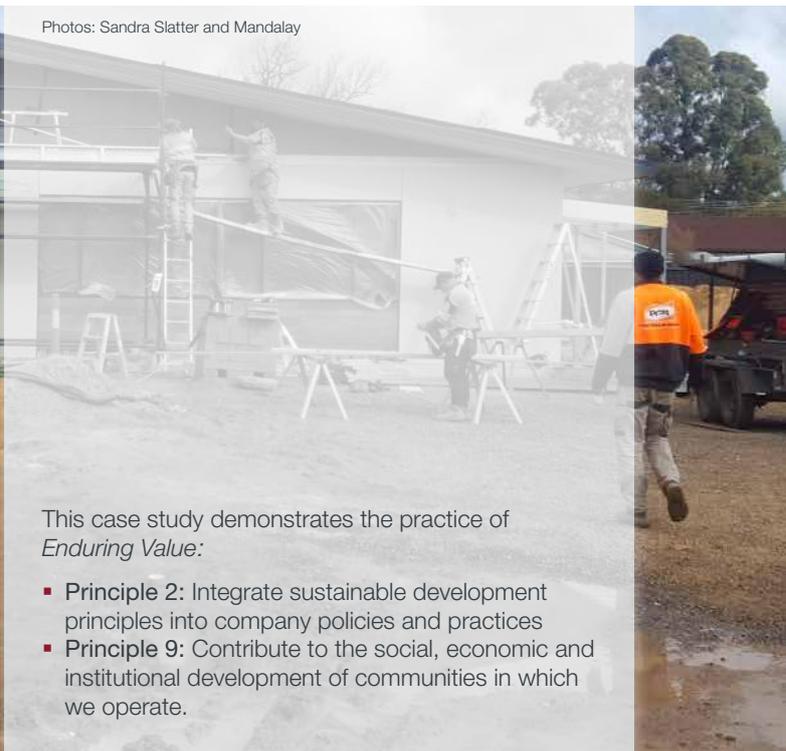
¹² M McCarthy, *Costerfield – a narrow-vein case study*, AusIMM Bulletin, 2016, viewed 10 October 2018.

¹³ N Croxon, *Costerfield mine manager wins at 2018 Women in Resources National Awards*, Bendigo Advertiser, September 16 2018, viewed September 20 2018.

¹⁴ Australian Early Development Census, *Greater Bendigo Community*, Australian Government, 2015, viewed 10 October 2018.



Photos: Sandra Slatter and Mandalay



This case study demonstrates the practice of *Enduring Value*:

- Principle 2: Integrate sustainable development principles into company policies and practices
- Principle 9: Contribute to the social, economic and institutional development of communities in which we operate.

Social and economic outcomes

Mandalay's investment of \$100,000 towards the feasibility study and employment of a project champion supported the community organisation to leverage \$1.7 million in total investment to develop the Hub

The Hub will have places for 76 children, create 37 new jobs and support approximately \$660,000 in economic stimulus within Heathcote annually

The project will exist beyond life of the mine, add to the long-term liveability of the area and enable people with young families to move to the town.

Community ownership of the initial feasibility study, collective efforts to build support for the Children's Hub and now helping in physical construction has built social capital within the Heathcote community.

Mandalay benefits directly from the Hub through an ability to retain and attract skilled workers and it remains a community-owned and driven project that will exist beyond the life of mine.

Lessons

- Mandalay's social investment sits at the intersection of business and social challenges—addressing a social issue (lack of childcare and children's health services) with business implications (lack of services are a deterrent to attracting and retaining skilled workers, including employees with young families) to create measurable social change and business value. This investment-based approach—known as shared value—is often a more sustainable investment approach for companies.
- Minerals companies in partnership with local stakeholders can promote and support regional liveability and economic growth by localising SDG8. Localising means working with host communities and other stakeholders to understand and support community owned and driven priorities.
- Companies can be driving partners in regional development by aligning efforts and working with governments, non-government organisations and communities to achieve broader regional development plans.

LEADING THE WAY IN INDIGENOUS RELATIONS

Newcrest, local employment and partnerships

Newcrest Mining Limited has spent the last 30 years building policies, programs and partnerships that contribute to SDG8 – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (Decent Work and Economic Growth). While focused on SDG8, Newcrest's contribution also supports SDG16 – Peace, justice and strong institutions.

Newcrest's relationship with local Martu people at its Telfer mine in Western Australia's Pilbara region demonstrates an intergenerational and multi-pronged approach to Indigenous inclusion and employment. This was formalised in an AU\$18 million, five-year Indigenous Land Use Agreement (ILUA) in 2015 to further support Indigenous training, employment and business development.



8 DECENT WORK AND
ECONOMIC GROWTH



This case study explores how a partnership centred on achieving mutual benefit is supporting employment and skills development outcomes in remote Western Australia. It shows both how Newcrest has embedded SDG8 within its core business and how the company prioritises its social investment contributions towards decent work and economic growth.

Relevant Australian SDG8 indicator: Unemployment rate, by sex, age and persons with disabilities.

SDG8 – Decent work and economic growth

As stated in the 1948 United Nations Universal Declaration of Human Rights, the ‘right to work, to free choice of employment ... the right to just and favourable remuneration’ are fundamental human rights. Targets for SDG8 – Decent work and economic growth reference the creation of jobs for marginalised and under-represented groups, which, while supporting human rights also create opportunities for global Indigenous groups to influence inclusive policy, business and national dialogue.¹

Indigenous employment and the Australian mining sector

The number of Aboriginal and Torres Strait Islander people with a tertiary education and working in professional outcomes has increased significantly in recent decades. For example between 1996 and 2006 the number of Indigenous people in professional occupations increased by approximately 74 per cent.² Common professional areas included education, environmental science, and human resources. It has been estimated that between 40 per cent of these professionals hold university degrees or higher.³

Despite these important gains, Australia’s Indigenous people continue to experience high unemployment rates compared to non-Indigenous Australians, particularly in regional and remote areas.⁴ While steps are underway to close this gap, such as the Australian Government’s Indigenous Procurement Policy⁵, the private sector can also explore ways to further increase Indigenous employment levels.⁶

Despite the decline in Indigenous employment rates in mining states, the mining industry itself is employing significantly more Indigenous Australians than previously, providing crucial opportunities for employment in regional areas.⁷

Newcrest—Australian born and bred

Newcrest Mining Limited is one of the world’s largest gold mining and exploration companies. Headquartered in Australia, Newcrest’s operations are located in Australia, Indonesia, Papua New Guinea and Fiji with exploration projects in Cote d’Ivoire, New Zealand and Nicaragua.

Newcrest’s Australian mines are in Cadia Valley, New South Wales and Telfer, Western Australia. The Telfer mine is a large open cut and underground mine in the Pilbara region of Western Australia. Operational since 1975, improvements to technology mean it now has the potential to become the largest gold mine in Australia.⁸

Newcrest’s Social Performance Standard, Communities Policy and Human Rights Policy reflect Newcrest’s company values. The company recognises sustainable development is not possible without inclusive community engagement, mutually beneficial partnerships and the recognition of human rights.

Good practice in company-community relations

Mining operations in Australia are often located in locations with higher Indigenous populations, sometimes passing through or bordering with Aboriginal land.

Indigenous Australians have ownership or other rights to more than 20 per cent of the continent, requiring that companies with operations on their land reach agreements with Indigenous communities. The *Native Title Act* (1993) provides mechanisms for negotiation of land use agreements.⁹

Newcrest has a deep history of more than 40 years’ engagement with the Martu people, the Traditional Owners of the land surrounding Telfer. The Martu people were some of the last of Australia’s Indigenous people to make contact with European Australians .

Awarded native title rights to over 136,000 square kilometres of the Western Desert in 2002, their land provides one of the last wild havens for some of Australia’s iconic yet highly threatened desert species.¹⁰ From Newcrest’s perspective, implementation of a structured Community Relations Program assisted to strengthen relationships with the Martu people.

In December 2015, this longstanding relationship culminated in the signing of an Indigenous Land Use Agreement (ILUA), which included an \$18 million five-year commitment by Newcrest.¹¹ The ILUA consolidated projects and programs previously delivered, building on Newcrest’s experience in the areas of employment, training, contracting and community support for the Martu.

Newcrest has employed more than 500 Martu men and women over the past 15 years, with 90 Indigenous people currently employed at Telfer. Telfer is working with the Martu people to increase Martu employment at the mine to 100 Indigenous people by the end of 2018.

Creating best practice employment and training opportunities

Although Newcrest is engaged in many community sustainability initiatives, its contribution to SDG8 – Decent work and economic growth at Telfer focuses on four key areas:

1. Training and employment: Newcrest’s International Employee Policy stipulates that each site must strive to give preferential employment to people from the local community. Newcrest works to maximise employment opportunities and outcomes for Martu people through:

- **Targeted identification and recruitment:** working with local community groups to identify interested candidates, maintain a skills register of ‘work-ready’ individuals and conduct gap analyses to identify specific training needs

1 United Nations, *The Universal Declaration of Human Rights*, UN, 1948, viewed 17 July 2018.

2 J. Lahn, *Aboriginal professionals: work, class and culture*, Centre for Aboriginal Economic Policy Research, ANU College of Arts & Social Sciences, May 2013, p. 8.

3 Creative Spirits.

4 J Korff, *Aboriginal employment, jobs & careers*, Creative Spirits, 2017, viewed 26 July 2018.

5 *ibid.*

6 J Constable, *Engaging Aboriginal Australians in the Private Sector*, Diversity Council of Australia, 2009, viewed 4 August 2018.

7 Department of the Prime Minister and Cabinet, *Closing the Gap: Prime Minister’s report 2018*, Australian Government, Canberra, 2018.

8 Newcrest Mining Limited, *Telfer*, WA, Newcrest, 2018, viewed 15 July 2018.

9 Centre for Social Responsibility in Mining, *Agreement-making with Indigenous Groups*, The University of Queensland, 2012, p.19.

10 Kanyirninpa Jukurrpa, *About Martu Country*, Kanyirninpa Jukurrpa, 2017, viewed 24 July 2018.

11 J. Mills, *Newcrest and Martu sign Telfer Indigenous Land Use Agreement*, Newcrest Mining Limited, 11 December 2015.

- **Specialised training:** specialised training programs enable individuals to gain skills that will enable them to fulfil certain roles. Telfer also commits to provide eight full-time trainee positions annually with employment at the end of the program
- **Flexible employment opportunities:** Newcrest understands 12-hour days and full-time positions are not suitable for everyone, so offers short-term employment opportunities to allow people to trial employment at the mine
- **Mentoring and support:** Newcrest has full-time staff to assist employees and trainees adjust to living and working on site, integral to the program's success.

Some trips taken by Newcrest's Martu drivers are more than 1000 kilometres in the one shift.

2. Assistance to travel to Telfer: some Martu employees live more than 15 hours away from the site without transportation. To address this, Newcrest supports a pool of Martu drivers who collectively drive over 500,000 kilometres a year to transport Martu employees to and from site.¹² Newcrest also provides Martu community members with logistical support worth up to \$75,000 per year to cover other transport, accommodation and meal costs. This program, put in place 16 years ago, significantly increased retention of Martu employees.

3. Preferential tendering: the ILUA encourages Newcrest to preference Martu-owned contracting companies and to companies offering training and employment opportunities for Martu people. A Martu contracting company was awarded a significant road works contract as a result.

4. Partnership with Ngurra Kujungka: many Martu workers at Telfer learn about employment opportunities via the Martu-managed community sports and recreation organisation Ngurra Kujungka Inc.

- Founded in 2008, Ngurra Kujungka is an effective vehicle for Newcrest to support communication between the company and the Martu people and support social, governance and economic development opportunities
- This includes professional development opportunities for Ngurra Kujungka council members, officers and volunteers to undertake Indigenous Governance Training delivered by the Australian Institute of Company Directors. Newcrest is the founder and major sponsor of Ngurra Kujungka.

While the number of Aboriginal people with tertiary qualifications has increased significantly, gaps remain between outcomes for Aboriginal people in urban and regional and remote areas.



¹² Newcrest Mining Limited, Application for Award Department of Mines and Petroleum Community Partnership - Resources Sector Award, 2015. Internal Newcrest Document.



Photos: Newcrest

This case study demonstrates the practice of *Enduring Value*:

- **Principle 2:** Integrate sustainable development principles into company policies and practices
- **Principle 3:** Uphold fundamental human rights and respect cultures
- **Principle 9:** Contribute to the social, economic and institutional development of communities in which we operate.



Key social and economic outcomes

Newcrest and the Martu people have transformed what can be a complex relationship between companies and host Indigenous communities. Newcrest is fulfilling benefits agreed in the ILUA and implementing programs and policies which reach far beyond the agreement's scope. Success of these programs is due to a commitment to listening to understand and working together to identify and implement solutions.

Intergenerational engagement supports mutually beneficial outcomes: Newcrest benefits from diversity within its workforce and access to employees, while Martu benefit from employment and business opportunities in a remote region.

Skills gained at Newcrest-supported Indigenous Governance Training have benefited Martu who act on community Aboriginal corporations and/or school boards. This supports broader institutional development within the community.

Lessons

- Newcrest's journey highlights the importance of Indigenous Australians being able to define and drive their own cultural, community and economic priorities. The company supports Martu to achieve their own aspirations
- Newcrest's approach to attracting and retaining Martu employees demonstrates best practice in addressing structural barriers to employment in remote communities. It is best practice because, while aligned with sustainable development principles, the programs are designed to support local cultural, social and economic needs and aspirations
- Genuine participation and deep engagement between Newcrest and Martu people across all levels of program planning, design and operation support sustainable economic, social and cultural outcomes
- Listening to understand is the basis of constructive, trusted and long-term working relationships. This deep participation and commitment is often more effective than top-down approaches to community development.

LAND REHABILITATION AND MANAGEMENT INNOVATION

Glencore's Coal Assets sets new benchmarks

Glencore's Australian coal business (Glencore Coal Assets Australia, or GCAA) has pioneered industry best practice approaches to rehabilitate and manage land and biodiversity offset areas at its New South Wales and Queensland operations. These practices and outcomes aligned with SDG15 – Life on land: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

GCAA manages land responsibly across the mining lifecycle through open stakeholder dialogue, planning for and implementation of progressive and temporary land rehabilitation across its sites and trialling of innovative re-grazing approaches.



15 LIFE ON LAND



This case study explores how GCAA's holistic approach to land rehabilitation and management supports post-mining land use, biodiversity conservation and continuous improvement of industry performance. It shows how GCAA has embedded contributions to SDG15 within its core business.

While focused on SDG15 – Life on land, GCAA's contribution also supports SDG6 – Clean water and sanitation.

SDG15 – Life on land

Human life depends on the Earth as much as the ocean for sustenance and livelihoods. Roughly 2.6 billion people depend on the land to make a living.¹

At a global scale, deforestation, desertification and biodiversity loss are threatening life on land, and have significant implications for climate change.

As a land manager, mining companies have an important role towards supporting SDG15. Many companies have shown significant leadership, demonstrating considerable progress to reduce the environmental and biodiversity impacts of their operations through state of the art land rehabilitation and ecosystem restoration techniques.²

During 2017, a total of 1080 hectares of rehabilitation was completed at GCAA's mines in New South Wales and Queensland.³

Looking after our land in Australia

Australia is one of the world's 17 megadiverse countries—with flora and fauna renowned for its diversity and profound connection to our Aboriginal and Torres Strait Islander people.⁴ However, Australia's most recent State of the Environment Report found our biodiversity is under increased threat largely due to climate change, land-use change, habitat fragmentation and degradation and invasive species.⁵

Stakeholders—government, businesses, non-government organisations, Aboriginal and Torres Strait Islander peoples, and community groups—are increasingly collaborating through concerted, interlinked efforts and approaches to look after the land.

Mining and its associated infrastructure can also disrupt ecosystems and biodiversity, despite mined land representing less than one per cent of Australia's land mass.⁶ The localised impacts of individual mine sites are important, yet the greatest potential for biodiversity and land impacts occurs through the cumulative effects of multiple projects across regions.⁷

Glencore Coal Assets Australia (GCAA)

Glencore has operated in Australia for nearly 20 years and is one of the country's largest coal producers. GCAA owns and operates 17 mines in NSW and Queensland and employs almost 8,000 people.

GCAA is committed to minimising environmental impacts from its operations and applies the precautionary principle in decision-making. With a significant footprint in NSW and

QLD, GCAA's commitment to progressively rehabilitate and restore land and minimise impacts on biodiversity is critical.

Glencore is one of the largest coal producers in Australia and employs almost 8000 people across its coal business.

Pushing the envelope

GCAA aims to deliver quality rehabilitation to minimise its active footprint to the smallest area practicable, meeting its legal obligations and other applicable global standards and frameworks.

GCAA has also set new standards for openness, accountability and monitoring in establishing processes to meet its commitments and regulatory requirements.

GCAA's rehabilitation program focuses on:

- Improving the business-wide focus and awareness of land rehabilitation, particularly planning
- Progressive rehabilitation or at a minimum, temporary cover
- Establishing Annual Rehabilitation and Land Management Plans capturing quantity and quality of rehabilitation undertaken
- Measuring and reporting progress towards rehabilitation goals, including using science- and data-based monitoring programs.

Land rehabilitation and temporary cover is prioritised to address areas where operations are having the most impact, including on visual amenity, dust generation and areas of particular importance for biodiversity.

Effective engagement as key to defining land management, rehabilitation and use priorities

Moving beyond a focus on regulatory requirements and legal commitments, meaningful stakeholder engagement on land rehabilitation issues has long-term benefits including reducing the likelihood of legacy issues. It also supports a company's ability to develop future projects and maintain and enhance its social licence.

This engagement supports community wellbeing and enables members to discuss and share their own vision for gradual and post-closure rehabilitated land use.

GCAA is committed to this dialogue across its Australian operations. A leading example of this in action is Glencore's involvement in the Upper Hunter Mining Dialogue (UHMD).

Bringing together key representatives (mining companies, community and business leaders, environment groups, residents, regulators, local government and other industries), the UHMD has a mandate to proactively listen, understand and respond to community concerns, establishing an open dialogue about the role of mining and the region's future, including its relationship to other key regional sectors including agriculture and grazing.⁸

Within the UHMD, a working group dedicated to land management established a set of 'final and temporary rehabilitation principles and commitments' for member companies. This spurred further action and innovation, new

1 United Nations Development Program, Goal 15: Life on land. United Nations, 2017, viewed 1 August 2018.

2 International Council on Mining & Metals, Mining and protected areas position statement, 2003, viewed 30 July 2018.

3 Glencore, Upper Hunter Mining Dialogue Final and Temporary Rehabilitation Principles and Commitments. NSW Mining, 2018, viewed August 2018.

4 United Nations Global Compact, Goal 15, United Nations, 2017, viewed 29 July 2018.

5 Commonwealth of Australia, Department of foreign Affairs and Trade, Report on the implementation of the Sustainable Development Goals, 2018, viewed 29 July 2018.

6 United Nations, World Economic Forum, Columbia Center on Sustainable Investment, Mapping mining to the Sustainable Development Goals: An atlas 2016, p. 60, viewed 28 July 2018.

7 CSIRO, Science and solutions for Australia: Biodiversity, 2014, viewed 30 July 2018.

8 Glencore, Upper Hunter Mining Dialogue Final and Temporary Rehabilitation Principles and Commitments. NSW Mining, 2018, viewed August 2018.

partnerships, further engagement and supported industry best practice.

Across its other operations, GCAA is also actively working to identify, prioritise and pioneer—in consultation with key stakeholders—a range of industry-leading practices aligned with community and stakeholder expectations. Examples include reducing impacts on visual amenity through natural landform in mine overburden rehabilitation, and restoring rehabilitated land to its pre-mining uses, including pastures for grazing or native ecosystems.

Key initiatives reshaping the industry's approach to land management, rehabilitation and certification

Pioneering the use of natural landform in mine overburden rehabilitation

GCAA's Mangoola Open Cut mine in the Upper Hunter Valley is adopting natural landform in its mine overburden rehabilitation at a scale not previously seen. Believed to be the largest project of its type in the region, the mine's entire pit disturbance area—some 1,300 hectares—will be returned to landform and vegetation consistent with surrounding undisturbed land.

The Mangoola operation sits within a scenic natural landscape of undulating hills from the Hunter River to the east, and sandstone escarpments to the west. Despite meeting the mine's approval conditions, traditional overburden rehabilitation techniques—uniform slope angles and flat top dumps—were deemed to be inappropriate for the landscape by the Mangoola operation, which employs many people from the local community.

Mangoola revised its final landform plans for the entire disturbance footprint following successful natural landform trials in December 2012. Natural landform design is now considered in all planning decisions, requiring locally-occurring vegetation types to be selected for establishment based on similar topography, slope, aspect and topsoil type. Vegetation types typically include shrubby and open woodland, riparian forest, shrub land and native grassland.

Potential environmental benefits of this project include:

- Increased biodiversity due to a range of topographic relief, appropriate planning for vegetation communities and habitat augmentation, creating a more familiar terrain for fauna species
- Better water quality through stability of landform; reduced erosion potential
- Reduced maintenance due to lack of specific water management structures
- Increased visual appeal in landform; over time the revegetated area should not look like mine rehabilitation.

The Mangoola project is believed to be the first Geofluv™ based landform constructed in Australia. Geofluv™ is a method adaptable to computer design programs that supports design of landforms similar to surrounding areas and can convey runoff water the same way as a natural landform.

Government certification of mine rehabilitation

GCAA worked collaboratively with the Queensland Government, the Queensland Resources Council and other industry members to develop a formal process to better evaluate rehabilitation against agreed standards for a project.

This is an important step for the wider industry as it provides a transparent certification process to achieve government



sign-off once a rehabilitated area meets all required conditions.

GCAA's Newlands and Rolleston Open Cut mines have achieved Queensland Government certification for areas of their rehabilitation in the past two years.

- For Newlands, the requirement for certification was to provide habitat suitable for flora and fauna within overarching objectives of being safe, stable, non-polluting and sustainable
- At Rolleston, the area of rehabilitation that achieved certification complies with all conditions for sustainable post-mining use and in coming years will be used for grazing cattle.

GCAA's focus on progressive rehabilitation and post-mining land use means that further submissions for certification will soon be made for its Newlands, Rolleston and other Queensland mining complexes at Oaky Creek and Collinsville mines.

Newlands achieved certification for 73 hectares of rehabilitation in 2017 (the first time that rehabilitation of mine overburden spoil has ever been certified) followed by 220 hectares of rehabilitation at Rolleston in 2018.

Utilising rehabilitated land for grazing — the Liddell Grazing Trial

At its Liddell Mine in the NSW Upper Hunter, GCAA undertook a five-year trial to explore whether rehabilitated mining land can support cattle grazing sustainably and on a scale at least equivalent to its pre-mining capacity—a key community concern.

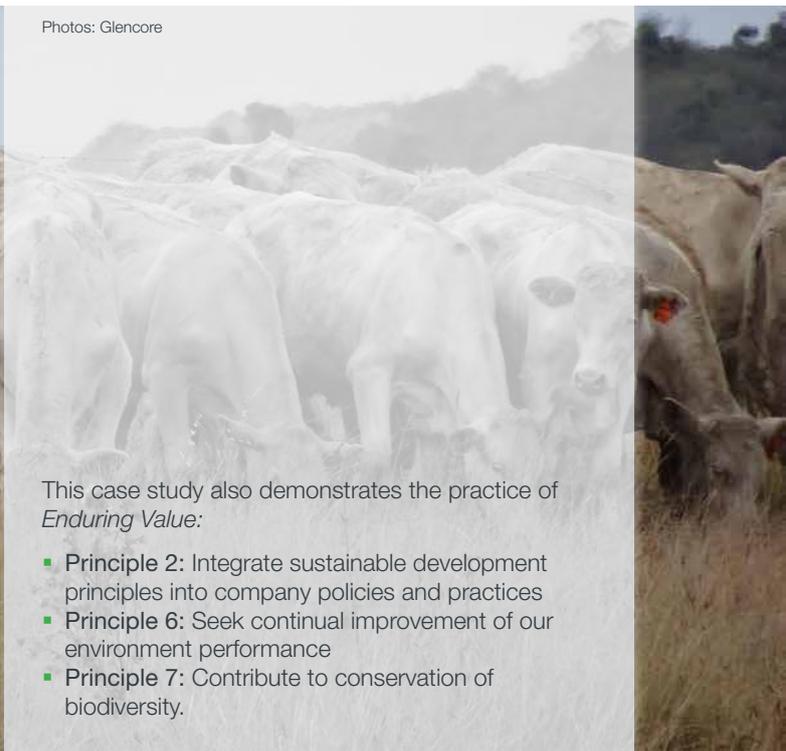
The trial focused on identifying gaps in knowledge and opportunities for further trials or research, with objectives including:

- Assess and compare performance of a rehabilitation grazing site against an adjoining 'unmined' grazing site
- Inform the development of guidelines for the management of grazing on rehabilitation areas.

In each of the rehabilitation and unmined areas, the trial has used up to 30 Charbray steers sourced from local breeding stock, randomly selected and placed into rehabilitated or natural pastures over varying periods. Stocking rates have been at or above district averages established by the NSW Department of Primary Industry. During the trial, the cattle were monitored and testing undertaken against a range of soil, water, pasture and livestock parameters.



Photos: Glencore



This case study also demonstrates the practice of *Enduring Value*:

- **Principle 2:** Integrate sustainable development principles into company policies and practices
- **Principle 6:** Seek continual improvement of our environment performance
- **Principle 7:** Contribute to conservation of biodiversity.

Results from the trial are encouraging. Broadly, baseline monitoring of water quality (salinity, acidity, toxic elements) found stock water in dams within both paddocks was of suitable quality for grazing cattle. Quality measurements showed rehabilitated pasture generally has a higher feed quality, resulting in better cattle performance. Cattle grazed on rehabilitated land also grew significantly quicker and to a larger overall weight than cattle on unmined sites.

The Liddell grazing trial has involved four phases over a five-year period, during which cattle on rehabilitated pasture have out-performed those on natural pasture and rehabilitated land has proven to be capable of supporting commercial grazing over longer timeframes.

Environmental outcomes

A strong internal focus on land management and mine rehabilitation has enabled GCAA to minimise its active mining footprint and rehabilitate mined land to self-sustaining native ecosystems or for agricultural and other use.

GCAA mines completed rehabilitation on a total of 1080 hectares of land in 2017. In addition, in 2017 GCAA rehabilitated, and will rehabilitate in 2018, more land than it disturbs across its operations.

GCAA's focus on mine rehabilitation, backed by scientific rigour, analysis and the use of new technology, has also supported continuous improvement of mine rehabilitation processes across the broader minerals industry.

GCAA's work with Queensland Government agencies and other industry stakeholders to develop a formal and transparent certification process for rehabilitation provides clarity for industry, governments and communities. This will enable other companies to engage in the certification process, which will support improved environmental outcomes.

Lessons

- Engaging in meaningful and open discussion with key stakeholders—such as the Upper Hunter Mining Dialogue and other forums—drives industry collaboration to address the cumulative impacts of mining activities in various mining regions
- As processes are refined, GCAA's sites set more challenging land management targets embedding a culture of continuous improvement. This culture enables companies and industry to respond to changing expectations and embed environmental management approaches.
- Engaging in meaningful and open discussion with key stakeholders through the Upper Hunter Mining Dialogue and other bodies has also supported cross-industry collaboration to reconceptualise land use post-mining. Community concerns and priorities are reflected in planning.

CONSERVING OUR AUSTRALIAN BIODIVERSITY

BHP – Partnering towards conservation

BHP is deepening and advancing cross sectoral partnerships to support conservation in Australia, supporting SDG15 – Life on land.

BHP's partnership with Conservation International has resulted in the protection of areas of national conservation significance, such as the Five Rivers Reserve in Tasmania's remote central highlands. The outcomes include protected habitat, an increased ecological monitoring capacity and 11,000 hectares of protected land. The partnership is also enabling BHP to build internal capacity and achieve its public biodiversity and conservation targets.



15 LIFE ON LAND



While this case study focuses on SDG15, BHP's contribution also supports SDG13 – Climate change, and SDG17 – Partnerships for the goals.

Relevant Australian SDG15 indicators include: 'Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected area, by ecosystem type' and 'Proportion of land that is degraded over total land area'.

SDG15 – Life on land – The global context

Lands and forests are home to more than 80 per cent of all terrestrial species of animals, plants and insects globally.¹ Sustainably maintaining the global ecosystem is not only important for the protection of biodiverse habitats, the maintenance of water quality and the productivity of agriculture systems, but these ecosystems also contribute to the capture of carbon and greatly support climate change mitigation and adaptation efforts.²

Biodiversity sustains human livelihoods and life itself. An estimated 40 per cent of the global economy is based on biological products and processes.³

Australia's biodiversity and environmental conservation story

Australia is home to ancient landscapes, middle aged agricultural lands and more recently urban and suburban development.⁴ Currently more than 19 per cent (or 150 million hectares) of Australia's terrestrial land is permanently protected under national or state environmental law.⁵ Australia's land underpins the country's infrastructure, climate, economy and health. In 2010, Australia's Biodiversity Conservation Strategy 2010–2030 was released providing a framework for governments to conserve Australia's national biodiversity to 2030, providing an overview of the state of Australia's biodiversity and outlining collective priorities for conservation. The strategy aims to coordinate efforts at a national level across all sectors to sustainably manage biological resources in a way that meets our current needs and ensures their long term resilience, health and viability.⁶

The minerals industry understands stakeholders have concerns about impacts of mining activity on the environment.⁷ Amidst this public concern, the Australian mining industry has a long history of mitigating the environmental impacts of their work through a range of different environmental management measures. These include land rehabilitation, waste management, the use of low emissions technology and offsetting environmental impacts by investing in biodiversity and ecosystem preservation programs.⁸

Australia's nature, now and into the future is healthy, resilient to threats, and valued both in its own right and for its essential contribution to our health, well-being, prosperity and quality of life.⁹

BHP – Sustainability as a core business requirement

BHP is a world-leading resources company, extracting and processing minerals, oil and gas for a global market. Employing over 60,000 employees and contractors primarily in Australia and the America's, they are among the world's top producers of major commodities, including iron ore, metallurgical coal and copper.¹⁰

BHP acknowledges that their strategy of owning and operating long-life assets means that they need to think and plan in decades. Sustainability is the first value in BHP's charter, a framework which means putting health and safety first, being environmentally responsible and supporting communities.¹¹

BHP also acknowledges that pressure on land and water resources is growing and is amplified by climate change. Maintaining the right to access these resources relies on the Company's ability to demonstrate responsible management and contribute to a resilient environment. This is achieved by minimising the environmental impacts from their activities and by working in partnership with others to support environmental resilience.¹²

BHP understands that by their nature its operations will have an impact on the environment and therefore it has become a core business requirement to implement land and biodiversity management plans that include controls to prevent, minimise, rehabilitate and offset, as appropriate, impacts to biodiversity.¹³

In addition, supporting conservation efforts of the highest quality is a targeted way of BHP creating value for society and upholding their Charter value of sustainability.¹⁴ In practice, BHP has established a biodiversity conservation target, which aims to 'improve marine and terrestrial environmental outcomes by developing a framework to evaluate and verify the benefits of its actions, in collaboration with others, and by contributing to the management of areas of national or international conservation significance exceeding their disturbed land footprint'.¹⁵

The BHP–Conservation International Alliance

In 2011 BHP and Conservation International, a global non-government conservation organisation, formed a strategic, long-term alliance. The alliance supports the delivery of BHP's voluntary biodiversity conservation target by delivering enduring and significant benefits to ecosystems and biodiversity, through the conservation of land with high domestic and international conservation value. The alliance works to strengthen BHP's on land and biodiversity management practices.¹⁶

1 United Nations Environment Programme, Goal 15: Life on Land. UN, 2017 viewed 16 October 2018.

2 ibid.

3 International Council on Mining & Metals, Integrating Mining and Biodiversity Conservation, 2004, International Union for Conservation of Nature and Natural Resources, viewed 17 October 2018.

4 Department of the Environment and Energy, Australia's strategy for nature 2018–2030, Australian Government, 2017, viewed 17 October 2018.

5 Department of Foreign Affairs and Trade, Report on the Implementation of the Sustainable Development Goals, Australian Government, 2018, p. 79.

6 Department of the Environment and Energy, Australia's Biodiversity Conservation Strategy, Australian Government, 2018, viewed 17 October 2018.

7 Australian Bureau of Statistics, Mining and the environment, Australian Government, 2003, viewed 17 October 2018.

8 ibid.

9 Department of the Environment and Energy, Australia's strategy for nature 2018–2030, Australian Government, 2017, viewed 17 October 2018.

10 BHP, About us, BHP, 2018, viewed 17 October 2018.

11 BHP, Sustainability Report 2018, BHP, 2018.

12 ibid.

13 BHP, Biodiversity and Land, BHP, 2018, viewed 17 October 2018.

14 ibid.

15 BHP, Sustainability Report 2017, BHP, 2017, viewed 17 October 2018.

16 Conservation International, Conservation International – BHP Alliance, CI, 2018, viewed 17 October 2018.



Swifts Parrot Photo: Chris Tzaros

The partnership sought to build the capacity of BHP in three key areas.¹⁷

- **Inform corporate policies and practices:** Technical expertise has been provided by Conservation International to BHP on the responsible management and enhancement of biodiversity. This has included the strategy and management advice in corporate environmental requirements in the areas of compensatory actions, and the design and pilot of a Landscapes Values Assessment (LVA) tool to support BHP to make informed social and environmental decisions.
- **Invest in conservation projects:** The BHP–Conservation International alliance has enabled the voluntary commitment of more than US\$50 million to conservation programs within Australia, Peru, Chile and Kenya.¹⁸
- **Support climate change efforts:** Integrating into BHP’s broader climate change strategy, the Alliance has focused on natural climate solutions, supporting the United Nation’s innovative REDD+ (Reducing Emissions from Deforestation and Forest Degradation) mechanism.¹⁹

The BHP–Conservation International Alliance is innovating solutions for some of the world’s greatest environmental challenges, including climate change.²⁰

A strategic partnership to conserve biodiversity

Conservation International has proven expertise in the field of both enduring conservation outcomes and working with the extractives sector, making them the ideal partner to collaborate with BHP and their commitments to conservation.²¹

Prior to the launch of the Alliance, both parties spent time collaborating, building trust, and understanding each other’s management systems, tools and experience. This exercise ended up being crucial in identifying common frameworks for methodological communication, which in this instance focused on BHP’s robust risk identification systems and how this could be applied to environmental conservation.²²

While 2018 marks the end of its initial seven year partnership, BHP and Conservation International are scoping the next phase of collaboration.

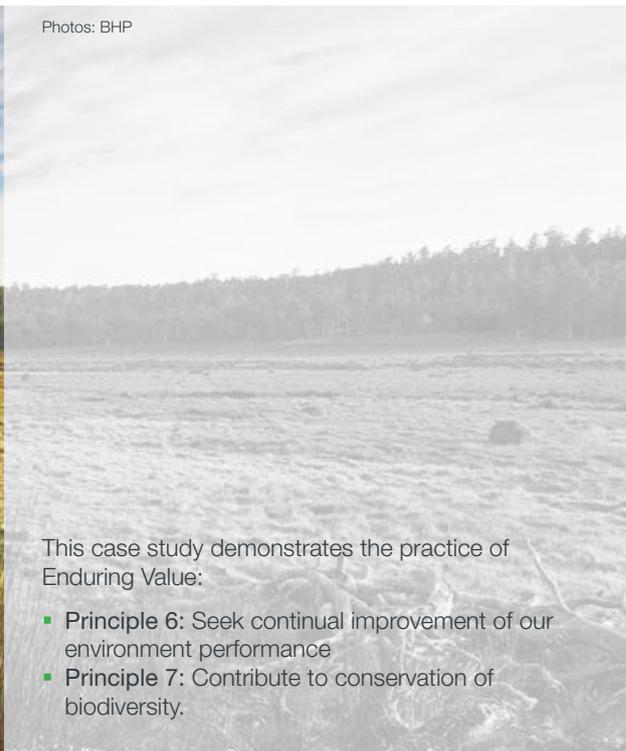
Five Rivers conservation project

In 2014, BHP–Conservation International announced the Five Rivers Conservation project in Tasmania, in an innovative partnership with the Tasmanian Land Conservancy.²³ The project involves an investment of \$13.4 million over three years to support conservation of the Five Rivers Reserve in Tasmania’s remote central highlands. The project covers 11,000 hectares of Tasmania’s unique and threatened bushland.

¹⁷ Ibid.
¹⁸ Conservation International, *A strategic partnership to protect biodiversity*, CI, 2017, viewed 17 October 2018.
¹⁹ BHP, BHP and Conservation International | *Climate Change*, BHP, 2018, viewed 17 October 2018.
²⁰ Ibid.
²¹ BHP, *Case study- Conservation International Alliance*, BHP, 2018, viewed 17 October 2018.
²² Panorama Solutions, *Design and implementation of conservation project portfolio*, Panorama, viewed 17 October 2018.
²³ BHP, *BHP Billiton Launches Five Rivers Conservation Project*, BHP, 2014, viewed 17 October 2018.



Photos: BHP



This case study demonstrates the practice of Enduring Value:

- **Principle 6:** Seek continual improvement of our environment performance
- **Principle 7:** Contribute to conservation of biodiversity.

This area is home to some of Australia's most endangered wildlife including the Tasmanian Devil, the Tasmanian wedge-tailed eagle and other endemic species such as the Clarence galaxias fish not found in any other region on earth.²⁴

The BHP–Conservation International alliance has also supported sharing of expertise and informed the Tasmanian Land Conservancy's vision for Tasmania as a global leader in conservation practices.²⁵

Finally, the project is assisting Australia to meet its international commitments under the Convention on Biological Diversity – Aichi Biodiversity Target 11. Target 11 focuses on the conservation of important terrestrial and inland waters through well connected systems of protected areas.²⁶

Key outcomes

Through its long-term alliance, BHP and Conservation International have worked together to support conservation and ongoing management of more than 11,000 hectares of land in Tasmania. This supports protection of 16 threatened species and will assist Australia to meet its commitments under the Convention on Biological Diversity.

The BHP–Conservation International partnership has supported the sharing and strengthening of each partner's expertise and experience in building capability.

Lessons

- Drawing on external expertise and diversity such as Conservation International can assist companies more effectively achieve broader business objectives aligned with societal expectations.
- Investing to build sustaining relationships and effective partnerships is key to achieving long-term strategic objectives that provide societal benefits.
- Mining companies can contribute to national environmental targets through focused strategic investments and partnerships.

²⁴ Conservation International, *Five Rivers Reserve*, CI, 2017, viewed 17 October 2018.

²⁵ *Ibid.*

²⁶ Convention on Biological Diversity, *TARGET 11 – Technical Rationale extended*, 2012, UN Environment, viewed 17 October 2018.



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