WORLD GOLD COUNCIL

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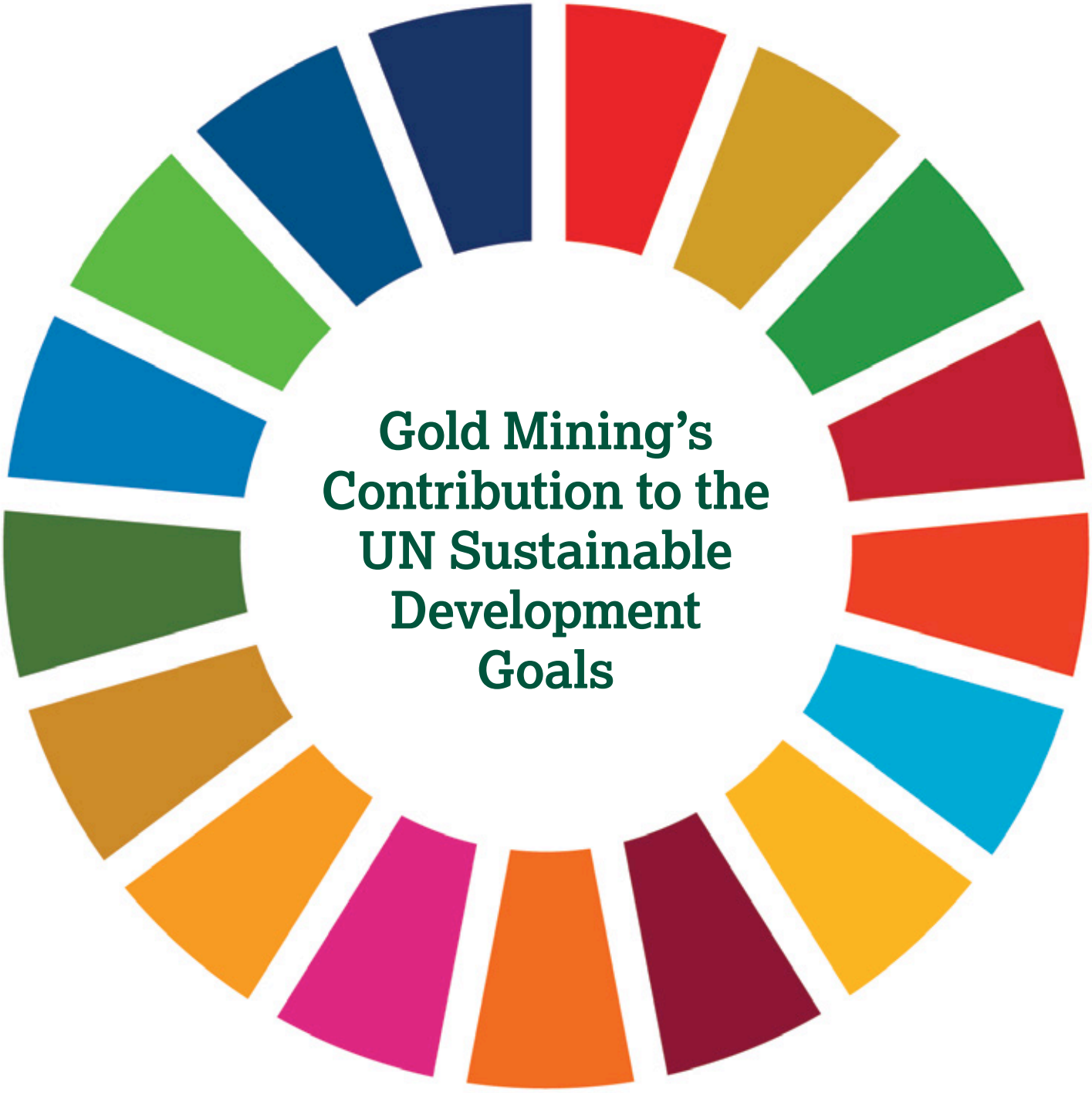

Gold Mining's Contribution to the UN Sustainable Development Goals

About the World Gold Council

The World Gold Council is the market development organisation for the gold industry. Our purpose is to stimulate and sustain demand for gold, provide industry leadership, and be the global authority on the gold market.

We develop gold-backed solutions, services and products, based on authoritative market insight and we work with a range of partners to put our ideas into action. As a result, we create structural shifts in demand for gold across key market sectors.

We provide insights into the international gold markets, helping people to understand the wealth preservation qualities of gold and its role in meeting the social and environmental needs of society.

Based in the UK, with operations in India, China, Singapore and the USA, the World Gold Council is an association whose members comprise the world's leading and most forward thinking gold mining companies.

Our members:

Agnico Eagle Mines Limited
Alamos Gold Inc.
AngloGold Ashanti
Barrick Gold
Calibre Mining Corporation
Centerra Gold Inc.
China National Gold Group Corporation (China Gold)
Compania de Minas Buenaventura SAA
Eldorado Gold Corporation
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Foreword – Terry Heymann

Terry Heymann
Chief Financial Officer
World Gold Council

Welcome to this World Gold Council report on the Sustainable Development Goals (SDGs)

This report showcases the actions taken by leading gold mining companies as part of global efforts to reach the SDGs.

It can sometimes be easy to forget quite how important gold is in our daily lives. We carry it with us in our mobile phones and computers and we wear it as jewellery and in rings. Critically, gold also provides financial resilience – for individuals, communities and countries. Gold provides financial security in time of financial stress, a proven form of investment that is ageless, liquid and dependable.

Gold does not corrode or tarnish over time, which is part of the reason it features so strongly in our thinking about legacy and inheritance, and why in different cultures around the world women and men are so often given gold as a wedding gift.

It is precisely because gold has such an indispensable role to play in society and in the global economy, that it is incumbent on the gold mining industry to demonstrate how it employs business practices based on the clear principles of long-term sustainable development, supporting social and economic development wherever gold is mined.

The SDGs are becoming increasingly urgent as 2030 inches closer. The SDGs are a roadmap to a better, more sustainable future. They were specifically designed to confront some of the most pressing global challenges of our time - poverty, inequality, climate change, environmental degradation, conflict and social injustice. In 2020, we must review progress in the knowledge that the progress made in recent years risks being thrown in to reverse by the Covid-19 pandemic.

At the World Gold Council, our member companies are alert to this call to action, and recognise that everyone is impacted by the challenges that the SDGs are designed to address. Our members, the world's leading gold mining companies, are not new to the concept of sustainability or responsible mining – this has been a long-standing foundation of their business practices. The Responsible Gold Mining Principles, published in 2019, codify these practices into an organising framework so that all stakeholders can understand the material environmental, social and governance risks associated with gold mining; and understand how responsible gold mining companies are managing these risks and seeking to maximise opportunities for their host societies. A well-rounded appreciation of an industry's developmental impacts involves both the responsible management of negative impacts, where these cannot be avoided altogether, and spreading the benefits of investment and other economic activities.

> *"Be a global citizen. Act with passion and compassion. Help us make this world safer and more sustainable today and for the generations that will follow us. That is our moral responsibility."*
>
> Then-UN Secretary General
> Ban-Ki Moon, 2015

Foreword

Your guide to this report

This report sets out a selection of our members' work in investing in the SDGs, and transitioning to the more sustainable and inclusive business practices that the SDGs urge for all businesses.

We invite you to browse through our wide range of case studies in the following pages, reflecting the geographic diversity of World Gold Council members' operations. A simple Index can also be found at the end of the report, to allow the reader to explore particular issues or regions she or he might be interested in.

The SDGs can be broken down into 17 distinct goals, with 169 separate targets that define what success looks like. Following on from the progress made through the Millennium Development Goals, all UN members have committed to try to achieve these targets by 2030, in order to put us on the path to a better future. And like the challenges they seek to address, the 17 SDGs themselves are interconnected.

It is national governments and governmental institutions who have explicitly pledged to try to achieve the SDGs. Nevertheless, the SDGs are also a call to action for private businesses, including gold mining companies. Many of the SDGs can only be achieved through partnerships - as SDG 17 ('Global Partnerships') explicitly recognises. The private sector is a vital actor in these partnerships, both in mobilising resources, and in bringing to bear innovation, skills and experience.

The Goals provide some guidance about what role the private sector can play. The SDGs encourage companies to focus on reducing their negative impacts while enhancing their positive contributions to sustainable development through the investments they make, the solutions they develop, and the business practices they adopt.

A thematic approach

All 17 of the SDGs are connected, and in some cases the linkages are so close that progressing towards one means simultaneously making progress towards another. To reflect this interwoven reality, we have grouped our SDG mapping in this report into four broad themes:

- **Global partnerships**
- **Social inclusion**
- **Economic development**
- **Responsible operations, energy and the environment**

Three Spotlight Topics

This report also spotlights three topics which are key to any contemporary discussion of gold mining companies and the SDGs.

Spotlight 1 – Artisanal and Small-Scale Gold Mining (ASGM): This report touches on artisanal and small-scale gold mining (ASGM). This complex economic activity can have both positive and negative impacts on the SDGs. This report notes some measures our members are taking to support legitimate elements in the ASGM community so as to enhance its positive contributions to the SDGs, and mitigate some of its negative impacts. This topic is addressed in Section 2: Social Inclusion.

Theme	Relevant SDGs
Global partnerships	• SDG 17: Partnerships for the Goals
Social inclusion	• SDG 5: Gender Equality • SDG 10: Reduced Inequalities • SDG 16: Peace, Justice and Strong Institutions
Economic development	• SDG 1: No Poverty • SDG 2: Zero Hunger • SDG 3: Good health and Well-being • SDG 4: Quality Education • SDG 8: Decent Work and Economic Growth • SDG 9: Industry, Innovation and Infrastructure
Responsible operations, energy and the environment	• SDG 6: Clean Water and Sanitation • SDG 7: Affordable and Clean Energy • SDG 12: Responsible Consumption and Production • SDG 13: Climate Action • SDG 15: Life on Land

Spotlight 2 – Covid-19: The Covid-19 pandemic has underlined the very premise of the SDGs - how interlinked our world is, and how important cooperation and collaboration is when working to solve complex challenges. Effective global co-operation is needed now, more than ever, to help countries recover from the pandemic. WGC member companies have taken some remarkable steps to partner with developing countries in an effort to respond to the virus and offset the economic and public health consequences, which are worth singling out for special focus. This topic is discussed in Section 3: Economic Development.

Spotlight 3 – Gold in technology: An extraordinary substance, gold itself makes a significant contribution to advancing the SDGs, particularly via its role in innovative technologies. Gold's unique chemical properties make it an increasingly important industrial metal, with a vital role to play in renewable technologies. Excitingly, it is also becoming clear that gold has an important contribution to make to medical technology. This is explored further in Section 4: Responsible Operations, Energy and the Environment.

A note on materiality and the SDGs

As you will see in the coming pages, World Gold Council (WGC) member companies have made notable contributions to 15 of the 17 SDGs. In line with recommended practice for reporting, we have considered a materiality assessment of all 17 of the SDGS, and how they map onto the nature of gold mining as a business activity.

Given the nature of where gold mining operations are located, and the expertise of World Gold Council members, we note that Goal 11 (Sustainable Cities and Communities) or Goal 14 (Life Below Water) do not fall within WGC member companies' broad sphere of influence, and are therefore not covered in this report. Some of the world's great cities, like Johannesburg and San Francisco, were created on the back of gold mining and, as this report shows, responsible gold mining supports the sustainable development of local communities, but our industry's connection with the urban challenges of today's cities is marginal. Our focus in this report, therefore, has been on the remaining 15 Goals.

Terry Heymann
Chief Financial Officer
World Gold Council

Foreword – Lisa Sachs

Lisa Sachs
Director of the Columbia Center on Sustainable Investment at Columbia University

This timely report demonstrates the key role that gold mining companies play – through their products, operations, supply chains, infrastructure, and external engagements – in the sustainable development challenge. The report usefully discusses the complex ways in which gold mining impacts on just about all of the Sustainable Development Goals (SDGs), and demonstrates how responsible gold mining companies have been working progressively to contribute to the SDGs.

The SDGs offer a valuable orientation to the mining sector. They guide companies to understand the global transformations and societal expectations within which businesses operate, and help to bring coherence to company activities with national and local priorities and plans.

When implementing the vision of this new report, and positioning business leaders as partners in achieving the SDGs, we at the Columbia Center on Sustainable Investment have found it useful for companies to consider SDG alignment in the following ways:

First, do no harm: This report notes both the positive and negative ways in which gold mining companies may impact on certain SDGs, and highlights examples of both positive contributions as well as robust efforts to avoid, mitigate or redress harms. Both of these approaches are of course correct; but the latter is paramount. Overarchingly, the primary responsibility of companies with respect to the SDGs is to ensure that they do not cause harm, directly or indirectly, through their products, operations, supply chains, policy engagements, legal practices, or otherwise. In the extractive sectors, this is even more challenging. As the report notes, mining projects are resource-intensive; they often take place in remote and impoverished communities, sometimes requiring displacement of communities or other livelihoods; and they inevitably impact on the environment, including water sources and biodiversity. Historical records of environmental, social, and human rights shortfalls – both by mining companies and their government counterparts—have eroded trust, most notably in the communities whose trust is critical to project success. This report's recognition of the sector's obligation to avoid harms is laudable, and should remain the lodestar for companies; no CSR program can compensate for failures to protect people and planet from harm.

Understand your business: The granularity of the SDG framework enables companies to identify concrete ways in which they may contribute, as evidenced by the thoughtful activities described in this report. In addition to this level of granularity, we advise companies seeking to ensure alignment with the SDGs to step back and reflect on the company itself, and the role it plays in the SDG transformations.

- What is the company producing? Are its products contributing to societal wellbeing, now and in the future?
- What are the environmental and social impacts of production, and what are the implications of avoiding such impacts? In mining, these include strict limitations to impacts on the environment (including water pollution, greenhouse gas emissions, and waste) and on human settlements; responsible engagement with and law-abiding consent from affected communities; and the protection of human rights, including rights to health, living wages, and worker representation.

- How sustainable is the company's value chain? Does the company share co-responsibility with other companies in its value chain, including impacts from energy sources, transportation, business relationships, and consumer products?
- How does the company engage externally with lawmakers and the public? This reflection might include a company's tax strategy and practices; engagement in litigation with communities, consumers, or host governments; engagement in direct or indirect lobbying; and so on.

Understand your communities: As the report recognizes, the SDGs are ultimately the responsibility of governments; each government develops plans to achieve the goals and collects data to assess progress. Understanding national and local development strategies can support the prioritization of impactful interventions. For instance, an important way in which mining companies can contribute to sustainable development is by leveraging their investments in power, water filtration, transport, and information and communication technologies to expand critical infrastructure in the region. Coordination with investors, governments, and regional banks can create scale economies, reduce costs, and improve public access.

Local data collection and monitoring platforms can help companies and governments assess development needs, coordinate interventions (for instance, by integrating company investments into public chains of responsibility or budgetary mechanisms), monitor impacts, and adapt programs as needed. Data-driven SDG planning and interventions promote transparency on progress toward development outcomes, and facilitate stakeholder engagement and participation in decision-making.

With continued population growth, increasing electrification, and automation, one can expect a continued increase in the demand for and role of gold in our economy. Thanks to the leadership shown by the members of the World Gold Council, leading gold companies can be key partners in sustainable development as well. This report offers a critical step forward, and we can look to corporate boards, community forums, and the public square for successes in implementing this important vision.

> *"This report's recognition of the sector's obligation to avoid harms is laudable, and should remain the lodestar for companies; no CSR program can compensate for failures to protect people and planet from harm."*

Lisa Sachs is the Director of the Columbia Center on Sustainable Investment at Columbia University, where she teaches a masters seminar on Extractive Industries and Sustainable Development. She has served on World Economic Forum Global Future Councils on International Governance and as vice-chair of the Global Future Council on Mining & Metals, and is a co-chair of the UN Sustainable Development Solutions Network's thematic network on the Good Governance of Extractive and Land Resources. She received a Bachelor of Arts in Economics from Harvard University, and earned her Juris Doctor and a Master's degree in International Affairs from Columbia University.

Foreword – Kojo Busia

Kojo Busia
Non-Executive Director of AngloGold Ashanti Ltd and until recently Chief of Natural Resources Management of the UN Economic Commission for Africa

The UN Sustainable Development Goals provide an integrated set of standards around which organisations can measure their contribution to issues of sustainable development relevant to long term value creation in society. Adopted in 2015 by all United Nations member states after extensive and broad consultations, recently there has been a welcome increase in awareness in both business and investment communities about the growing importance of sustainability and the 17 SDGs.

These goals address the main challenges facing the global community, including those related to poverty and social exclusion, environmental degradation and climate change. These challenges call for action by all sectors of society, and many companies have started voluntarily reporting against the SDGs in partnership with industry associations.

Some companies may seek to defend the status quo by building an SDG narrative around what the business is already doing. Others offer a selective stance, responding to just a few SDGs and quietly ignoring those where their impacts are more detrimental. By contrast, some industries adopt a holistic approach; one which considers all of the SDGs impact, both positive and negative, across the industry's entire value chain. The Gold mining industry is leading this batch by making significant strides to align its operational practices and reporting against the SDGs.

During the last decade, Africa, as a significant gold producer, has taken deliberate actions, through the adoption of the African Mining Vision, to optimize the value created by mining for all stakeholders. As someone who had the benefit of leading an African institution created to operationalize the African Mining Vision and was personally engaged with African policy-makers to align their mineral policies and programs to achieve the SDGs, I welcome this World Gold Council report. In many ways the SDGs were shaped by inputs from the Africa Union's Agenda 2063 of which the African Mining Vision made a critical contribution. From this perspective, either by design or by default, the Gold Mining industry is responding to the development aspirations of many African countries by aligning their practices with the SDGs.

This World Gold Council Report presents qualitative data through case studies to measure progress towards the SDGs for its members in the gold mining industry. The report provides the first comprehensive mapping and clustering of the SDGs and indicators to the gold mining industry standards and operational performance. The report is an ambitious accomplishment and demonstrates how committed the industry is to contributing to sustainable development issues that affect all stakeholders and societies.

The report acknowledges the need for the mining industry to respond and engage by connecting self-imposed industry standards with the SDGs. It also demonstrates the important role the gold industry has in managing its impacts and creating positive benefits related to the interconnected themes of social inclusion, economic development and responsible operations, energy and environment. The potential contributions that gold mining can make towards realizing the sustainable development goals include increasing local added value, creation of linkages with local industry, investments in local infrastructure, skills and technology transfer as well as diversification of local economy.

Recent global incidents of COVID 19 and the Black Lives Matter movement, together with the existential threat of Climate Change, have raised the imperative of accelerating the implementation of the SDGs to address issues of social justice, inequitable access to health services and environmental threats facing the planet. Mining has a major impact that cuts across many sectors of developing countries' economies, and gold mining is perhaps the industry with the most versatile and significant global value chain compared to other commodities. No industry is better placed to embrace the challenges and address the SDGs than the gold mining industry.

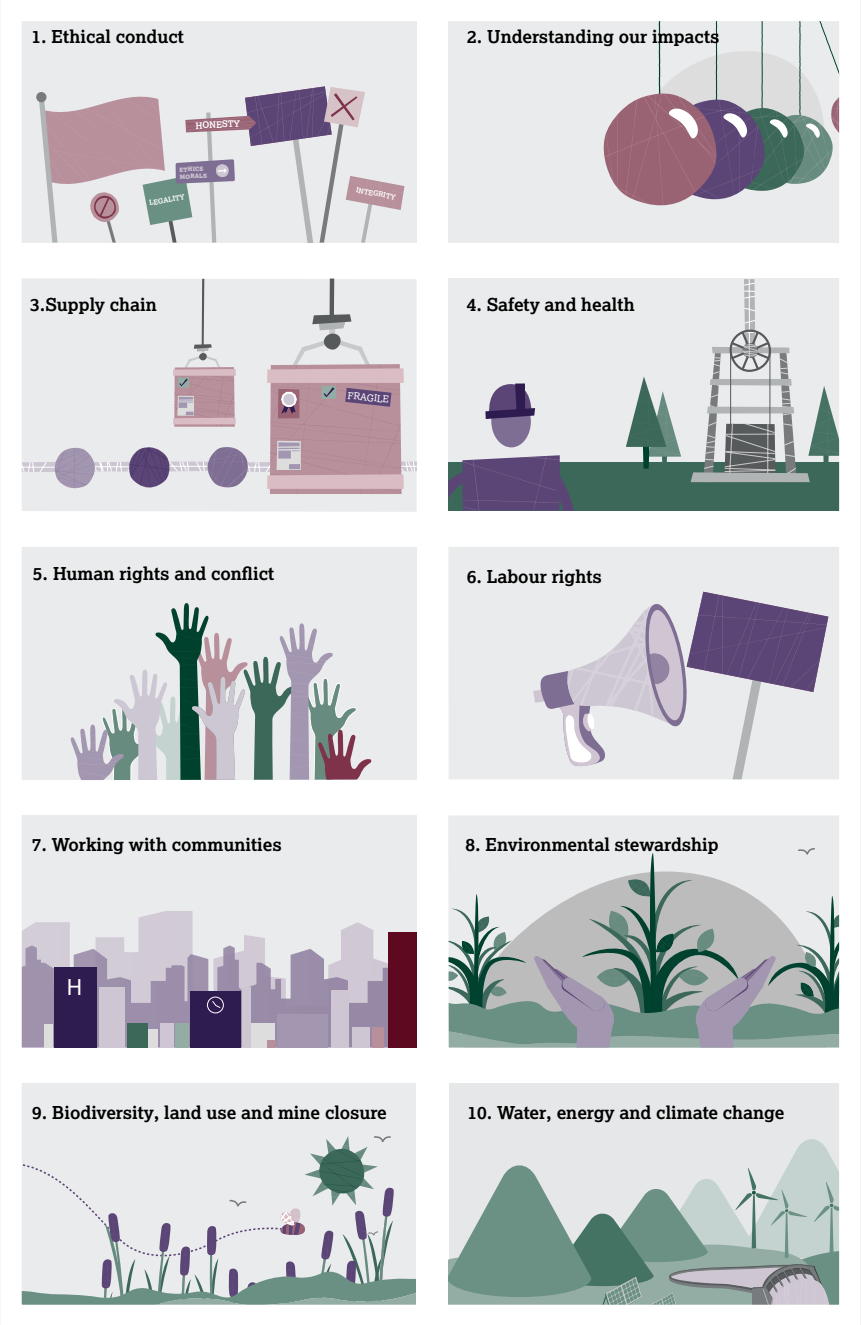
As historically high gold prices created from a global pandemic and unprecedented uncertainty will likely translate into more investment in the gold mining in the future, it will be imperative for the industry to share fairly the additional benefits this brings with its host governments and communities. In addition, as the energy transition begins to take shape, gold miners can show further leadership by committing to lowering their carbon emissions and investing more in climate solutions both at their operations and in their supply chains. By doing so the gold industry can play a major role in addressing today's major social, economic and environmental challenges and expand its overall contribution to the Sustainable Development Goals.

> *"The report is an ambitious accomplishment and demonstrates how committed the industry is to contributing to sustainable development issues that affect all stakeholders and societies."*

Kojo Busia is a Non-Executive Director of AngloGold Ashanti Ltd, the third largest gold producer in the world. Until recently, Kojo served as the Chief of Natural Resources Management at the United Nations Economic Commission for Africa; prior to that he was the Coordinator of the African Mineral Development Center (AMDC), an African Union flagship sustainability framework for mineral resources development in Africa. Kojo holds a BA in international Relations from George Mason University, VA, and received both his Masters and Ph.D. in African Studies and International Development Policy from Cornell University, USA.

How the Responsible Gold Mining Principles support the journey to meeting the Global Goals

In 2019, the World Gold Council published the Responsible Gold Mining Principles (RGMPs), which set out clear expectations for consumers, investors, governments, communities and the downstream gold supply chain as to what constitutes responsible gold mining.



There are numerous standards and frameworks to which gold mining companies adhere, covering the Environmental, Social and Corporate Governance (ESG) aspects of their operations. However, there had not been a single, coherent framework that clearly set out the material risks associated with responsible gold mining. In September 2019, following almost two years of extensive consultation with governments, supply chain participants and civil society, the World Gold Council launched the Responsible Gold Mining Principles (RGMPs) an over-arching framework aimed at enhancing confidence in gold's responsible production.

The RGMPs spell out what responsible gold mining looks like in practice. They recognise and consolidate existing standards and instruments including the UN Guiding Principles on Business and Human Rights, the OECD Due Diligence Guidance for Responsible Sourcing of Minerals, the Extractive Industries Transparency Initiative and the Voluntary Principles on Security and Human Rights.

It is the World Gold Council's aim that the RGMPs will become a credible and widely recognised industry standard through which gold mining companies can provide confidence to end-users that their gold has been produced responsibly. Implementing companies are currently going through a three-year implementation phase, leading to full compliance with the RGMPs.

Implementation is open to all responsible gold mining companies. Implementing companies will be required to obtain external assurance from a credible, independent assurance provider. This will provide further confidence to purchasers that the gold they are buying is responsibly mined and sourced. To support a consistent approach to assurance, the World Gold Council has also developed an Assurance Framework. Assurance will take place at both site and corporate levels and assess both processes and performance.

During the development of the RGMPs, the World Gold Council examined the SDG targets and indicators carefully. This was in order to understand how gold mining could contribute to their realisation. As a consequence, there are many close links between the SDGs and RGMPs. This means that any gold companies implementing the RGMPs will also be contributing to a variety of SDGs. Here's how:

- **Global Partnerships:** The RGMPs have a strong focus on working in partnership with local communities, stakeholders and supply chains to deliver better development outcomes. Responsible gold mining necessarily involves advancing SDG 17.
- **Social Inclusion:** Responsible gold mining also means taking steps that advance SDGs 5,10, and 16. As part of the RGMPs, responsible gold mining companies commit to addressing historic disadvantages due to, for example, gender or ethnicity. The RGMPs also require participants to implement the World Gold Council's Conflict-Free Gold Standard. This ensures that responsible gold mining does not fuel conflict or, directly or indirectly, provide funds for illegal armed groups.
- **Economic Development:** Responsible gold mining means supporting the socio-economic development of the communities in which mines operate and their host nations. This includes respecting core labour rights and the human rights of workers and communities, providing generally well-paid jobs, supporting infrastructure development and supporting the creation of new supplier companies. Responsible gold mining also means making social investments in communities that provide a broad range of benefits such as strengthening public health systems and tackling infectious diseases such as malaria and tuberculosis. As a result, responsible gold mining involves advancing SDGs 1,2,3,4, 8 and 9.
- **Responsible Operations, Energy and the Environment:** Mining is a water-intensive process. Responsible gold mining companies are careful to offset any potential negative impact in this respect by prioritizing responsible water usage and working collaboratively with other water users. They must do so by committing to investing in infrastructure, providing sanitation facilities and encouraging good hygiene. The RGMPs additionally require responsible miners to focus on greater energy efficiency and decarbonising and switching to renewable energy resources. Responsible gold mining, then, also contributes to SDGs 6 and 15.

Acting as a responsible gold mining company through the implementation of the RGMPs effectively means operating a company in a way that contributes to the realisation of a wide variety of the SDGs (See page 72).

Global partnerships

SDG 17: Strengthen the Means of Implementation and Revitalise the Global Partnership for Sustainable Development

SDG 17 focusses focuses on inclusive partnerships at global, regional, national and local levels as being key to successful sustainable development. Such partnerships should take the form of knowledge-sharing with developing and least developed countries, of making investments in, and enhancing trade with, least developed countries and enhancing global macroeconomic stability.

> *“Coming together is a beginning, staying together is progress, and working together is success.”*
>
> Henry Ford

What Global Partnerships mean for gold mining companies

This report’s first theme – Global Partnerships – focusses exclusively on SDG 17 (Strengthen the Means of Implementation and Revitalise the Global Partnership for Sustainable Development), reflecting its central importance for leading gold miners. SDG 17 is – in part – a call to action for private sector companies to work in partnership with governments, civil society and others to help deliver the SDGs

SDG 17 focuses on inclusive partnerships at global, regional, national and local levels as being key to sustainable development. This is built on the shared goal of placing people and the planet at the centre of decision-making in order to deliver the ambitious 2030 Agenda.

Mining is a complex business, and success requires the collaboration and support of many other institutions and organisations. Working in partnership – with employees, communities, governments, civil society and many other stakeholders has become indispensable for successful gold mining operations to flourish sustainably.

The most critical partnerships, which underpin virtually all mining operations, are those with host governments and local communities. Mining projects only proceed once permission is granted by governments and, increasingly, only once accepted or endorsed by local communities.

Securing a ‘social’ licence to operate depends on building and nurturing healthy, collaborative partnerships with host governments and communities. Trust is foundational to these long-term partnerships. Over time, trust can be built through responsible environmental and social impact management, appropriate stakeholder engagement, contributing to good governance and fairly sharing the benefits of mining.

World Gold Council Members are committed to supporting and implementing a range of leading practices that are grounded in multi-stakeholder partnerships. These include the UN Guiding Principles on Business and Human Rights, the Extractive Industries Transparency Initiative, the Voluntary Principles on Security and Human Rights, the International Cyanide Management Code and the implementation of the OECD’s due diligence guidance on responsible sourcing.

As the case studies in this section will show, these commitments have made a significant difference to how gold mining companies operate in practice. As a matter of course, responsible gold miners collaborate with host governments, civil society and development agencies to deliver their sustainable development objectives.

While much work remains to be done, here are some recent examples of gold mining companies forming inclusive partnerships with governments. communities and/or civil society in a way that advances SDG 17.

17 PARTNERSHIPS FOR THE GOALS

Newmont's strategic partnering for long-term and sustainable impact

Newmont has established three global partnerships to advance SDG 17 (as well as other SDGs) and create shared value. These three partnerships have been carefully chosen to complement Newmont's focus on the five Goals where it believes it can have the most impact: health, decent work, water, gender and working in partnerships.

The first is Newmont's long-standing partnership with Project CURE. Project CURE is the world's largest distributor of donated medical equipment and supplies to developing countries. The company focuses on delivering medical supplies to those countries where it has operations, conducting on-site clinics, and training healthcare providers in techniques to prevent infant mortality. Expected outcomes are in line with SDG3, with specific emphasis on neonatal and maternal health indicators.

During 2019, Newmont supported Project WET, a global non-profit organisation which promotes science-based water education. Their work aligns with Newmont's global water strategy. In Peru, Project WET has strengthened ongoing environmental education programmes, and in Suriname they have built capacity in villages to support potable water infrastructure projects.

The third of Newmont's partnerships is with the International Union for the Conservation of Nature (IUCN) to sustain its performance in biodiversity conservation and impact management activities, including restoration and offset activities. Partnership outcomes contribute to Newmont's commitment to No Net Loss and improved conservation practices throughout the natural resources sector.

Global partnerships

17 PARTNERSHIPS FOR THE GOALS

Fighting malaria in Ghana with AngloGold Ashanti

In 2005, AngloGold Ashanti's (AGA) Obuasi mine in Ghana, was losing 7,500 person shifts a month due to malaria. This affected more than a third of the 8,000-strong workforce with treatment costs averaging US$ 55,500 a month.

Unsurprisingly, malaria was also a significant health problem for the surrounding communities. So, in collaboration with the government, AGA commissioned a wide-ranging malaria outreach programme. This focused both on education in the community and improving access to diagnostics and therapeutics through the mine's hospital facility. While the cost for the initial programme was US$ 1.5 million, within three years the incidence of malaria had reduced by an impressive 74%.

The success of the programme led to the company being awarded a multi-year grant of US$ 138 million by the The Global Fund for AIDS, Tuberculosis and Malaria. This support enabled the company to scale up operations beyond the initial mining region and to make an even greater contribution by offering indoor preventative spraying in the northern districts of Ghana with the highest malaria rates.

The programme's modern insectary and laboratory has become central to Ghana's fight against the disease. It also serves as a satellite centre for academics and public agencies, alongside the national research centre, the Accra-based Noguchi Memorial Institute for Medical Research.

17 PARTNERSHIPS FOR THE GOALS

Wheaton Precious Metals' Partner CSR Programmes

Wheaton Precious Metals is a global streaming company which provides finance to operating mining companies. Through its Partner CSR Programme, it joins forces with its partner mines to provide financial support for environmental and social initiatives within the communities that are directly affected by their mines.

This highly collaborative programme is designed to support initiatives, either by matching funds for specific projects or by funding new projects. Wheaton's mining partners manage the projects at the site level and provide results-based progress updates.

Wheaton teams meet with local stakeholders and visits the projects during annual site visits.

Since the start of the programme, Wheaton has supported over 20 projects with seven of its streaming partners.

The company works closely with its partners to identify community needs and to assess where programmes could help fill gaps in services, infrastructure or resources. The Partner CSR programme is principally focused on regions in Brazil, Mexico and Peru.

Social inclusion

SDG 5: Achieve gender equality and empower all women and girls

SDG 5 focuses on gender, and on eliminating discrimination, violence and the exploitation of women and girls, as well as ensuring women are afforded the same economic, leadership and decision-making opportunities as men and have access to reproductive health care.

SDG 10: Reduce inequality within and among countries

SDG 10 focusses on inequality. It seeks to reduce economic inequalities between both social groups and nations, eliminate discrimination, promote social, economic and political inclusion for vulnerable or marginalised groups, level the playing fields between richer countries and developing nations, and encourage responsible migration policies.

SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

SDG 16 focusses on strengthening the institutions needed to effectively reduce violence, exploitation, trafficking and abuse against vulnerable groups, and especially children. This includes promoting non-discriminatory laws and policies, strengthening the rule of law, taking on corruption, building effective, accountable and transparent institutions, creating cultures of responsive and inclusive decision-making and protecting people's fundamental freedoms, including access to information.

> *"The evidence is clear: Development is not sustainable if it is not fair and inclusive – and rising inequality hinders long-term growth."*
>
> Antonio Guterres, UN Secretary General

Social inclusion

The second theme of this report is social inclusion, covering the three SDGs which focus on the importance of greater equality and inclusivity in building a better future for all.

These are SDG 5 (Achieve gender equality and empower all women and girls), SDG 10 (Reduce inequality within and among countries) and SDG 16 (Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels).

Why gold mining can contribute to social inclusion

Two features of large-scale gold mining can contribute to strengthening and improving social inclusion in the countries which host their operations.

First, large-scale gold mines create significant economic opportunities in the surrounding communities, through direct employment but also through economic linkages.

Secondly, mines are often located in remote or less-developed locations where there may be a lack of other major employers, infrastructure and government services. Gold mining companies are potentially well placed to help reduce inequality by providing opportunities where there may otherwise be no catalyst for development and creating relatively well-remunerated jobs, strengthening local services, and providing training opportunities – although careful planning, regular consultation and ongoing collaboration with local communities is vital if this potential is to be successfully and equitably realised.

Gold mining companies can further sharpen their contribution to social inclusion by ensuring that marginalised groups in particular benefit from the opportunities and services mining companies bring with them. Carefully designed and implemented social investment programmes can help to boost socio-economic empowerment for marginalised or vulnerable groups.

An additional area where gold mining companies can contribute to strengthening social inclusion is through the protection and promotion of human rights. By helping to ensure the proceeds of gold sales do not make their way to human rights abusers or armed or criminal groups engaged in illicit conflict, companies have a small but important role to play. Conflict almost always deepens poverty and exacerbates inequality in communities and host countries.

A collective approach on gender

For much of its long history, mining has been considered 'man's work' by cultures all over the world. As a result, in some places it remains an unwelcoming environment for women. The under-representation of women in gold mining from the ore face to the boardroom has been identified as a major issue.

During the consultation phase for the RGMPs it became clear that gender equality and the role of women in mining needed urgent attention if the RGMPs were to help create a more inclusive environment.

The RGMPs include two principles designed to address these issues. The first, Principle 6.6: Women and Mining, sets out to identify and resolve any barriers to the advancement and fair treatment of women in the workplace. The Principle creates a clear expectation that, responsible gold mining companies should contribute to the socio-economic empowerment of women in the local communities around their operations not only as employers, but also through the supply chain, training, and community investment programmes.

The second, Principle 7.2: Understanding Communities, states that responsible gold mining companies must be especially vigilant about the dangers of causing the kinds of harms that disproportionately affect women, children, Indigenous peoples and other potentially vulnerable or marginalised groups.

These Principles have been singled out for praise by Women in Mining UK (WIM), a non-profit organisation that promotes and progresses the development of women in the mining and mineral sector. WIM has expressed the opinion that these provisions go further in promoting gender diversity and sensitivity to the position of women in society than any other existing mining industry framework or guidelines.

How World Gold Council Members are advancing gender equality in mining

Efforts from World Gold Council Members to advance SDG 5 (Achieve gender equality and empower all women and girls) include providing a more gender-sensitive and inclusive working environment inside the company in order to attract and retain female talent at all levels.

But many WGC members have also taken on gender related issues that exist beyond the mine gates.

Social inclusion

5 GENDER EQUALITY

Women take the driver's seat at Endeavour Mining's operations

Endeavour Mining has operations across West Africa, and has prioritised the challenging but much needed work required to build a more inclusive workforce, while making efforts to empower local people. The company's Women in Mining programme encourages women to succeed in jobs not traditionally seen as welcoming for women. The programme provides long-term skills development, supports career path mapping, provides competitive salaries and prioritises certainty of income.

The experiences of one woman in Burkina Faso – Tene Konate, who works at Endeavour's Houndé mine – illustrate the programme in action. After separating from her husband, Konate struggled when responsibility for providing for their two young daughters abruptly fell on her alone. Initially she took odd jobs cleaning houses, cooking, and mixing concrete. Today, Konate drives a 72-tonne dump truck at Endeavour's open pit gold mine, earning a good salary with social benefits including medical insurance. Her job has given her financial security, and the ability to provide decent accommodation and to invest in her daughters' schooling.

In Côte d'Ivoire, at Endeavour's Ity mine, 20 women have now been trained as mining equipment operators, and two experienced female dump truck operators have since become mining supervisors. Building on these and other successes, Côte d'Ivoire's Minister of Mining and Energy has asked Endeavour to lead the 'HeForShe' gender equality initiative in the country.

5 GENDER EQUALITY

Putting Mauritanian women at the centre of Kinross's initiatives

Kinross has supported the establishment of women's cooperatives, provided direct and indirect employment for women at Tasiast mine in Mauritania, as well as ongoing skills training, and advanced the economic inclusion of women.

In the nearby community of Benichab, Kinross helped local women establish economic opportunities through small business training and funding for micro-projects, through its "Programme D'appui aux Initiatives Locales" (PAIL) initiative implemented in collaboration with a local NGO. At the start of the programme in 2012, there were 49 projects, of which 71% were run by women. A detailed assessment conducted in 2016 found that 40% of the projects had become sustainable. The grants and interest free loans provided by Kinross were instrumental in enabling the women's cooperative to be the first one to succeed in the Inchiri region. Kinross continues to support the shops by providing equipment and goods as well as training in literacy, bookkeeping and small business fundamentals.

A socio-economic survey commissioned by Kinross in 2017 continued to show higher unemployment rates among local women (58%) than men (23%) despite the ongoing success of the cooperatives. The company consulted with local women to identify additional opportunities for generating jobs and income, resulting in a project to train women in sewing. Seven women completed the initial programme through a partnership with a women's training centre in Akjoujt, the capital city of Inchiri. Applying their new skills, the women are working to support the Tasiast mine by repairing and improving work uniforms. Today, over 40 women are working in a cooperative in Nouadhibou that is serving a diverse range of clients in the city, including local schools. In early 2020, as part of Tasiast's program to manage the spread of COVID-19, the cooperative has supplied thousands of face masks to the mine.

Social inclusion

5 GENDER EQUALITY

Golden Star rapidly building a more gender inclusive workforce

To mark International Women's Day 2020, Golden Star launched its Policy on Inclusion and Diversity. The company's management team has recognised that with women making up only 7% of its workforce, the company had a big problem to solve. Most of Golden Star's workforce is in Ghana, where despite ongoing policy efforts a significant workplace gender gap persists.

The company has set a target of having 20% female representation across the business by the end of 2025 – an ambitious first step, considering its timeframe, context and starting point. It has also increased the number of women in leadership roles inside the organization.

Women now hold 33% of the positions on the company's Board of Directors and in executive management. Although much remains to be done, this number is nearly twice the 2018 average for companies listed on the Toronto Stock Exchange.

Golden Star has implemented a variety of programmes to directly and indirectly empower women: launching and supporting the Golden Star Ladies Club; providing all employees with medical coverage and educational subsidies to enable children to attend school; supporting creche and educational facilities for parents with young children and requiring that all school-aged children residing in company accommodation attend school.

Combatting inequality

Economic inequality is not the only form of inequality SDG 10 (Reduce inequality within and among countries) focusses on, but it is nonetheless a central concern of this SDG.

One of the ways gold mining companies are contributing to SDG 10 is by taking steps to ensure that economic and educational opportunities – and the supporting services which often accompany these opportunities – benefit the communities around their mine sites. This is done by sourcing procurement and contracting services from local businesses, and creating job opportunities and educational programmes that are tailored to the needs of those communities.

In many developing countries, talent, expertise and capital are highly concentrated around big cities. This exacerbates economic inequalities between rural and urban communities. Many WGC member companies have been striving to combat this challenge by working as a growth or development catalyst in rural areas – thereby helping to preserve and grow the number of local residents able to build a decent life in their home communities, and slowing the rapid migration of young people to the cities.

Many World Gold Council member companies have also been working to create a more economically open and inclusive environment for their direct employees, their families and the surrounding communities, and removing some of the structural barriers to equal opportunity. This includes the provision of scholarships, training and social investment to support those who may have been previously disadvantaged due to gender or ethnicity.

Social inclusion

Employees take control of chronic debt through Sibanye-Stillwater's financial literary efforts

South Africa has high levels of personal debt which can have a potentially ruinous effect on citizens' lives. Recognising this, Sibanye-Stillwater put in place its 'CARE for iMali' initiative, a financial literacy and awareness programme. This has grown into one of its most successful employee initiatives.

The programme was launched in 2014 following an employee survey that highlighted the importance of personal finance. Their concerns ranged from understanding salary advice notices to more complex issues such as the implications of signing credit agreements, or what to do when debt becomes unaffordable. The complexity of the problem was evident in the high number of 'garnishee orders' – a court order that effectively allows a person's bank to make payments to any third party to whom that person owes money. This can drastically reduce employees' take-home pay.

And so, Sibanye-Stillwater designed the CARE for iMali initiative around the concerns and interests of its employees. The financial literacy and awareness programme encourages employees to embrace financial management and helps them address the high levels of indebtedness that, in some cases, severely reduces their ability to support themselves and their family.

Following the implementation of the second phase of this programme in 2015, the initiative focussed on investigating and auditing garnishee orders, improving debt management, and providing focussed coaching for debt-stressed employees. Since the programme was launched in 2014, there has been a 63% reduction in garnishee orders and an average monthly increase of 30% in take-home pay.

Driving programme opens up opportunities for Newcrest's Indigenous employees to pursue

Finding flexible and accommodating solutions is often the key to achieving greater social inclusion. One of the obstacles facing Australia's indigenous communities is location. Many indigenous people live in remote areas with a limited range of employment opportunities, and, crucially, limited access to transport to the places where a wider range of jobs are available.

By pioneering an innovative drive-in, drive-out Community Driving Programme in Western Australia, Newcrest has assisted many indigenous employees to address this challenge. Now, employees whose homes are in remote areas not serviced by flights are able to travel the long distances to work, safely and reliably. Newcrest's Telfer mine in the Western Desert region has increased its indigenous workforce to more than 100 full-time employees, with many more indigenous staff working casually, in short-term or part-time roles, or completing on-site training. The company is committed to increasing the representation of Aboriginal and Torres Strait Islander employees in its workforce through its Diversity and Inclusion Strategy, launched in 2018.

More than half of Telfer's indigenous workforce now travel by motor vehicle from remote Western Desert locations, often hundreds of kilometres from the mine site, using the company's driver programme.

Social inclusion

10 REDUCED INEQUALITIES

Agnico Eagle's emphasis on employing 100% local

Agnico Eagle contributes to the fight against inequality by ensuring that the economic opportunities it offers go to members of the local communities around its operations. It does so, in part, by aiming to hire 100% of its workforce, including management teams, from the region or country in which it works.

The company is closing in on this 100% target at its mines at Kittila in Finnish Lapland and Goldex and LaRonde in the Abitibi region of Quebec, Canada. It has already hit the target in Mexico, with 100% of its workforce drawn from the northern states of Chihuahua, Sonora and Sinaloa.

This strategy has not gone unnoticed. In 2019, its La India mine received the Diversity and Inclusion Award for organisations with more than 500 employees from 'Great Place to Work Mexico'.

The company is also taking other steps to recruit and retain employees from smaller communities in proximity to mine sites. In Northern Canada, it focuses on creating sustainable and high-quality jobs and careers in mining for the Inuit population, with the long-term objective of attaining a level of 50% Inuit employees at all its Nunavut operations. In 2019, its Nunavut operations employed 442 Inuit people, up 11% from the 398 employed the previous year.

The company is also working to support the career development of its Inuit employees. As a direct result of employee consultations, the company recently launched the Rapid Inuit Specific Education (RISE) programme. This is carefully designed to give Inuit employees the support and skill development needed to excel in more senior roles.

Promoting peace and human rights: the Conflict-Free Gold Standard and Responsible Sourcing

Gold mining companies have an important role to play in supporting SDG 16 (Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels).

Good progress has been made in this respect by many in the gold industry. In 2012, the World Gold Council and its member companies released and subsequently implemented the Conflict-Free Gold Standard. This Standard enables gold producers to provide assurance that their gold has been extracted in a manner that does not cause, support or benefit unlawful armed conflict or contribute to serious human rights abuses or breaches of international humanitarian law. The Conflict-Free Gold Standard is an industry standard to support the implementation of the key tenets of the Gold Supplement to the OECD's Due Diligence Guidance on the responsible sourcing of minerals from conflict-affected and high-risk areas.

A number of leading gold mining companies are actively involved in implementing the Voluntary Principles on Security and Human Rights. These principles are a collaborative effort by governments, major multinational extractive companies and NGOs to provide guidance for companies on the tangible steps that they can take to improve their risk assessment processes and minimise the risk of security-related human rights abuses, including gender-based violence, whether by public or private security entities, in communities located near to extraction sites.

Some gold mining companies have also taken, additional steps to improve governance and transparency and advance the cause of peace, justice, and strong institutions by, for example, taking steps to protect the human rights of the communities who live and work in the areas around their mine sites through impact assessments and intensive engagement with community stakeholders and civil society. Both the Conflict-Free Gold Standard and the Responsible Gold Mining Principles stipulate that implementing companies must make available a grievance mechanism so as to give individuals or groups who have suffered damage the opportunity of achieving redress.

Creating a company-wide culture of respect for human rights

AngloGold Ashanti (AGA) aspires to eliminate all human rights abuses within its sphere of influence. But it also recognises that some aspects are beyond its immediate control. These include traditions and cultures in the areas of operation, embedded poverty and inequality in various jurisdictions, weak governance zones and working with third parties who may not share their commitment to human rights.

AngloGold Ashanti's 2030 aspiration of 'No human rights violations' takes this complexity into account, embraces the spirit of the SDGs, and even goes beyond the UN Guiding Principles on Business and Human Rights (UNGPs).

The company aims only to do business with those who comply with its standards; for example, through rigorously assessing local suppliers, and providing training and awareness briefings for security service providers. AGA has also progressively implemented a Human Rights Framework since 2015. This requires all sites to undertake due diligence assessments and gap analyses, and to address any issues identified.

On-line human rights training has now been integrated into the compliance training platform for staff at all levels.

This has succeeded in embedding a culture of respect for the sanctity of human rights across AngloGold Ashanti's sites. This can be seen by the emergence of a new trend of self-reporting human rights violations, rather than having these uncovered by third parties.

All operations also have grievance and independent anonymous whistle-blowing mechanisms accessible to internal and external stakeholders, and every allegation is rigorously investigated.

Spotlight topic

Artisanal and small-scale gold mining and the SDGs

Artisanal and small-scale gold mining (ASGM) accounts for approximately 20% of newly mined gold production – because it often exists in the informal economy, it is difficult to get precise figures. It occurs in around 70 countries and provides direct livelihoods for over 20 million people. It is largely driven by poverty, the lack of alternative occupations in many rural areas, and pressures on land from population growth and climate change. The prevalence of ASGM is also impacted by the gold price. Since artisanal and small-scale mining is of significant scale in rural areas across the developing world, it is directly relevant to many of the SDGs.

This report focuses principally on the role and contribution of large-scale gold mining (LSM) undertaken in the formal sector; ASGM is obviously different. The World Gold Council supports ASGM where it is undertaken in compliance with legal and regulatory frameworks, with respect for environmental, safety and human rights standards and where the miners are working legitimately.

The reality in many developing countries, however, is that a significant proportion of economic activity occurs in the informal sector, with the vast majority of ASGM taking place outside formal legal frameworks (again, data are hard to obtain, but some estimates suggest over 80%). Some of this illegal production, is conducted by or associated with organised criminal groups. This is particularly the case in high risk and conflict-affected areas associated with smuggling and the funding of conflict. Those involved in ASGM may be vulnerable to extortion and corruption; the sector is open to exploitation by a variety of shadowy intermediaries who make substantial rewards whilst many individual small-scale miners receive far less.

ASGM also accounts for up to 40% of global mercury emissions and the pollution of air, soil and water-courses. This results in significant adverse health impacts for affected communities. Women are increasingly represented in the ranks of artisanal miners, especially in processing roles, but they are less likely to receive equitable rewards for their work. Safety is also a major concern, with anecdotal evidence of a high level of workplace fatalities; this is of particular concern given the frequent use of child labour in ASGM.

In the absence of official figures on the impact of ASGM, and because of its association with some severe negative social and environmental impacts, it is currently difficult to assess the overall contribution of ASGM to the delivery of the SDGs. It is hoped that moves to legitimise the sector will bring future recognition of a positive contribution from ASGM. This would involve co-operation between stakeholders under the leadership of national governments, and the application of the rule of law.

A number of large-scale mining companies are keen to co-exist alongside ASGM but need the right legal frameworks to make this possible. In Peru, for example, Buenaventura has called on the government to formalise responsible artisanal mining, where relevant. But also to help small-scale miners meet the costs associated with operating in the formal sector (such as meeting environmental permitting requirements and acquiring personal protective equipment) by providing access to better processing technologies in order to increase their productivity and gold recovery rates.

The Responsible Gold Mining Principles contain commitments that are relevant to the interface between LSM and ASGM. These include measures against mercury use and the provision of support to enable responsible ASGM players to access to legitimate markets.

Working with the ASGM community to improve development outcomes

Newmont is working with the Pamaka community in Suriname near its Merian gold mine. In 2016, the Pamaka and Newmont signed a Cooperation Agreement that includes a focus on legitimate artisanal small-scale mining. The company supports the local miners' representative body(small-scale mining co-operative) working to build its management capacity and establish formal legal status. Newmont is also engaging with the UN Development Programme, the US Embassy in Paramaribo, and NGOs to promote mercury-free processing technologies and support legitimate ASM livelihoods in Suriname.

In Ghana, Newmont is working with the national government on its' community mining initiative, aimed at formalising small-scale mining in selected communities external to current mining lease areas. The company's community development foundations at the Ahafo and Akyem mines are looking to identify alternative livelihood opportunities, which would reduce local peoples' economic dependency on illegal ASGM.

AngloGold Ashanti's aim is to seek harmonious co-existence with legal ASGM. The company has initiated a two-pronged approach focusing on providing direct support for formalisation and helping to create alternative livelihoods through the development of local enterprises.

The area around the Gramalote project in Colombia, a joint venture between AngloGold Ashanti and B2Gold, has a long tradition of artisanal mining and the company is contributing land to support formalising initiatives. Gramalote started the project with 18 traditional miners from the municipality of San Roque in 2018. Through an act of mediation with the miners, a formalised sub-contract was granted and 16 production units legalised in a 15 hectare area. Since then the company has supported seven new sub-contracts with 40 miners in another section of San Roque. In addition, in the La Maria area of the muncipality, another group of 18 miners signed a contract to establish a formalised entity. In 2019, after completing inspections, the Mining Secretariat of the Provincial Government of Antioquia declared nine of the units (employing around 60 people) to be viable. Material extracted from the newly formalised entities will be processed in a plant partly funded by the Company. The ASGM formalising process is also being supported through a safe mining programme provided by the state training agency, SENA.

Economic development

SDG 1: End poverty in all its forms everywhere

SDG 1 is focused on reducing poverty by 50% and eradicating extreme poverty entirely by putting in place poverty-reducing policies and systems, and building resilience into societies against the kind of economic and social shocks that drive people to poverty.

SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

SDG 2 is focused on challenges that arise from hunger. It aims to make safe and nutritious food accessible to all by promoting sustainable and more productive agricultural practices and increasing the stability of the food commodity markets.

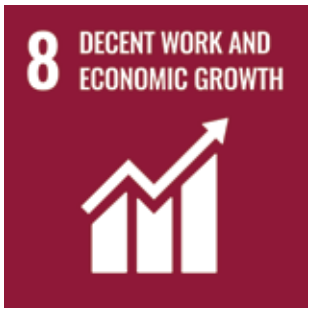
SDG 3: Ensure healthy lives and promote well-being for all at all ages

SDG 3 focusses on challenges that relate to people's health. It seeks to reduce maternal mortality, eliminate preventable deaths of children under 5, reduce mortality from both communicable and non-communicable diseases, improve mental health, prevent and treat substance abuse, reduce road accidents, improve access to health care, and improve access to vaccines and medicines.

> *"Economic growth without investment in human development is unsustainable – and unethical."*
>
> Amartya Sen, Economist

SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

SDG 4 focusses on challenges brought about by inadequate or non-existent education. It aims to improve access to good-quality education at primary and secondary school, as well as at tertiary level.



SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

SDG 8 focusses on challenges that arise from a lack of employment opportunities, and precarious or exploitative working conditions. Its primary focus is on growing the economies of developing countries in a sustainable way that also involves decent, and fairly paid, work.

SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

SDG 9 is focused on providing sustainable and inclusive infrastructure for all, especially those who live in developing countries. This also includes telecommunications infrastructure to provide universal access to information and communications technology.

Economic development

Economic development

This report's economic development section covers the six SDGs which call for the transformation of industries or of economies more generally, in order to make them more sustainable, responsive to the needs of their society, equitable, or productive.

Economic development and gold mining

Many natural resources, including gold, are found in developing countries. If well-managed, the economic activity which accompanies the development of a gold mining operation can make a significant and positive impact on the economies of these countries, and on the lives of their citizens.

Such positive impacts can take several forms. Creating direct employment is one, but there are other positive benefits such as business opportunities for local suppliers; foreign investment, foreign exchange earnings, better infrastructure and tax revenues for host governments; and strengthening capacity and systems in social services, such as education and healthcare.

But meaningful economic development on the scale envisioned by the SDGs extends beyond 'business as usual'. Governments are increasingly aware of the importance of diversifying their economies and of avoiding the governance and economic challenges associated with the so-called 'resource curse', including problems associated with currency appreciation and the volatility of commodity prices. Gold mining companies are equally alert to this problem and are able to positively contribute to mitigating these risks by:

- helping local communities develop transferrable skills
- preserving and enhancing alternative livelihoods to mining
- investing in the physical and social infrastructure that successful economies need, and
- developing innovative new technologies and processes that can generate further employment opportunities.

Together, these contributions can make a notable positive impact on local communities by putting in place the social and human capital they need to become sustainable, diverse and thriving local economies.

Joining the fight against poverty

The world has made great strides in the battle against poverty over the past few decades, even if much more remains to be done.

According to the United Nations, extreme poverty rates fell by more than half between 1990 and 2015. This is an achievement to be celebrated even as we continue to work towards eliminating poverty entirely. More work is certainly required: in 2018, one in five people in developing countries were still living on less than US$ 1.90 per day – the internationally agreed poverty benchmark.

In many of these countries, gold mining companies are providing a significant source of employment and income for poor rural communities not only in developing countries but also in in relatively wealthy countries such as Australia and Canada with impoverished indigenous communities who live in remote locations, essentially detached from the mainstream economy.

Gold mining companies employ significant numbers of people, both directly and indirectly via suppliers of support services to their mines.

These employment opportunities can have positive knock-on effects and contribute to the expansion of local spending power and capacity, which further stimulates the local economy. So gold mining companies, by bringing economic activity to the areas in which they operate – often in remote and sometimes economically deprived rural areas – are making a contribution to the fight against poverty in their host nations and communities.

However, more needs to be done which is why many WGC member companies are therefore also investing in local communities to help them stimulate and participate in broader economic activities. This process sometimes takes the form of investing in infrastructure (such as road construction or improved access to electricity or potable water), sometimes it is providing capacity-building and training, and sometimes it is direct investment in local businesses and suppliers. This wide variety of interventions is illustrated in the following case studies.

1 NO POVERTY

Stimulating local economic activity in Senegal through targeted investments

In Senegal Teranga Gold contributes US$ 1.2 million annually to communities surrounding its Sabodala Gold Operations (SGO), with a focus on strengthening economic self-sufficiency.

Encouraging local suppliers is one such investment. Mariama Diallo is a member of the Madina Sabodala village women's market garden. In 2016, during the first market garden season, she produced 150kg of onions and sold them to the SGO mine. With this money, she bought her first goat – an asset indicating relative wealth in her community. Within two years, she had managed to accumulate a herd of 15 goats through the income she earned from her vegetable production. In 2019 there were eight irrigated market gardens supported by SGO operating in the area, producing over 61 tonnes of vegetables which are consumed by families to improve nutrition and reduce food insecurity, and sold in local markets and to the mine to increase household income.

SGO works with communities to identify assets that can be collectively owned and managed in order to boost productivity and production, and reduce costs. Three tractors donated by SGO are managed by local committees that collect fees for maintenance and operation, with 222 hectares cultivated in 2019. SGO has donated or repaired 19 cereal processors and grain mills that are collectively owned and managed, delivering steady revenue: in the community of Dindifa, the last four years of profits from the mill paid for the building of a new mosque, helping to inject civic pride into the local community.

Economic development

Local communities benefit from jobs and new income sources

China Gold implemented a diverse range initiatives to improve local communities' livelihoods and eliminate poverty within these communities.

Since 2011, China Gold has been working with Zhenfeng, a county in the Guizhou Province, where one of the company's mining operations China Gold's scholarship programme aided students from impoverished families to study at Sanmenxia Gold Technical School, at which after graduates are offered to work at China Gold's operation in Zhengfeng.

China Gold brings job opportunities to local communities. Their operation in Zhengfeng has hired 500 locals, accounting for 48% of the total employees and ensuring stable income for the residents with the annual payroll of 22 million RMB. China Gold also partners with authority and commercial banks to develop e-commerce businesses for local produce, which has provided diversified income sources for the local communities

Through China Gold's efforts in fostering sustainable industries, infrastructure, education, and investment, Zhengfeng has officially removed from the list of impoverished areas by the government on March 3, 2020.

1 NO POVERTY

Prioritising self sufficiency

Resolute is committed to sharing the benefits of its operations through investment in sustainable development initiatives. Central to this, is a strategy that prioritises participatory land-use and development planning with local authorities and host communities to support the establishment of their vision for their land and livelihoods. The company partners with organisations, host governments and local people, and prioritises initiatives in water and sanitation, community health, education, income generation and accountability.

At its Syama gold mine in Mali, the community investment strategy was updated in 2019 to reflect a greater focus on leaving a positive legacy. An inclusive process for drafting community development plans and training to increase local governance were completed. Other investment projects include: construction of three rural maternity units and three equipped classrooms; rehabilitation of three classrooms; installation of solar-powered water boreholes; and funding and training for income generating projects.

The social and environmental investment strategy at the Mako gold mine in Senegal is aligned with local planning and development processes and prioritises investments that are sustainable, effective, measurable and transparent. A total of 20 micro-projects were selected by the local and regional planning and development authorities for investment in 2019. These included: construction of four secondary school classrooms and a kindergarten; supplying teaching materials to primary schools; a bursary programme for tertiary-level students; installation of two community boreholes; extension of Kedougou District Hospital and maternity ward; a pilot community health and sanitation programme; a feasibility study for a 10ha community market garden; modernisation of livestock breeding practices through facilitation of access to credit; and supporting local authorities in the development of land use plan.

Economic development

How World Gold Council Members contribute towards the fight against hunger

Severe food insecurity is a serious problem across the world today. In 2017, for instance, approximately 1 in 9 people in the world were under-nourished and 770 million people faced severe food insecurity - many of them from the same regions where our member companies have mining operations. The topic has growing urgency because of pressure on land from population increases, soil erosion and climate change.

A number of gold mining companies have been contributing towards the fight against hunger in several ways. Conscious of food security implications, where mines have acquired agricultural land, they are increasingly aware of the importance of minimising their use of land and providing adequate compensation or suitable replacement land so as to ensure that people displaced are better off (wherever possible) or at a minimum, not worse off than they were before.

Member companies are also increasingly investing in providing their host communities with the skills and tools to produce nutritious food and maintain livelihoods. Several WGC members companies have also been helping small-scale food producers to get established. This has been done with a particular emphasis on empowering women within their communities, and also on improving agricultural practices including in order to strengthen food security in communities after mines close.

By strengthening local linkages, companies are supporting Argentine farmers

San Juan sits in western Argentina, along the country's border with Chile. The province has fertile valleys and is home to both farmland and the Veladero mine which is a 50-50 joint venture between Barrick Gold and Shandong Gold.

In 2016, Barrick launched an Agricultural Procurement Plan to help local farmers to share in the benefits of the mine while also improving food security in the region. This plan was designed to increase the number of opportunities for local producers and to increase overall food production, and is being realised in partnership with local authorities, local producer associations and the San Juan Ministry of Mining.

The company is working with Veladero's main catering contractor, Aramark, to help it maximise the purchases it makes from local producers, while helping to build capacity and develop skills for the local farming industry.

During 2018 and early 2019, Aramark invested in local agricultural infrastructure for both the Jachal and Iglesia Farming Management Associations, the communities closest to Veladero. This provided four cooling chambers, a loading storehouse and a 200m^2 greenhouse, and has helped to further increase production. Produce can also be stored longer, reducing food waste and increasing profit for the farmers.

2 ZERO HUNGER

Women are driving innovative farming supply partnerships in the Pacific Island region

Around Newcrest's Lihir operations in Papua New Guinea, more than 2000 small-scale farmers from the Namatanai region have struck an innovative supplier deal benefitting their communities, the gold mining operation, and its employees. The 2,000 farmers in this case are all women.

This deal enables the farmers to sell their produce to the mine camp's canteen, potentially generating US$ 1.14 million (PGK 4 million) a year for the local economy.

Under the project, the farmers are paid when they deliver their produce to a central point, where it is weighed and sorted for quality. The site buys some and the rest is shared between the hospital and local markets.

Newcrest's mine camp prepares 7,000 meals a day and previously had to import vegetables. The new arrangement provides the company's kitchen with high-quality, fresh local produce while also guaranteeing a regular, reliable income to the farmers, and giving them an opportunity to grow their businesses.

Similar partnerships are in place with communities near Newcrest's Namosi Project in Fiji, where local farmers, also all women, are able to take up opportunities to learn about financial management, the use of business technology, and market development and expansion to secure a future beyond the life of the mine.

Economic development

2 ZERO HUNGER

Seeking to turn a resettlement in to a development opportunity

In order to build a mine or its supporting infrastructure it is critical that unavoidable negative impacts – such as economic or physical displacement of communities – are mitigated.

The complex process of resettlement took place at Teranga Gold's Wahgnion gold mine in south-west Burkina Faso. In order to ensure the displaced communities were better off (or at minimum, not worse off) than they were previously, Teranga launched an US$ 18 million Livelihoods Restoration Plan (LRP) at the mine to support people who had been physically or economically displaced by the mine's activities.

In order to address reduced access to fertile land, LRP programmes were collaboratively developed with local stakeholders. Four of these aimed at increasing agricultural production, two aimed at increasing livestock, and two focused on assisting vulnerable groups.

An early success story has been engaging with women's groups on income-generating activities. In the area around the mine, women have traditionally been limited in their ability to own assets, access capital or even handle household income.

Two years in, the programme has successfully supported a number of schemes. One scheme made it possible for 539 local women to establish links with an agricultural supply company, an opportunity the local entrepreneurs have seized with both hands. To date, they have sold 54 tonnes of shea nuts at a 60% premium to the local market price, generating over US$ 10,000 in income.

Another scheme made available to local female entrepreneurs the training and equipment they needed to cultivate cassava. The beneficiaries of this scheme have subsequently flourished: they now produce four tonnes of cassava a month. This has allowed them to expand their business by taking on additional full-time employees and sharing the agricultural techniques they learned with other women in the community.

Gold mining, health and well-being

The Covid-19 pandemic which has swept the globe has brought SDG 3 (Ensure healthy lives and promote well-being for all at all ages) into stark focus once again. This goal touches on the urgent and interconnected issue of human health and wellbeing, and there are a number of targets to which many WGC member companies actively contribute. These include ending the epidemics of HIV/AIDS, tuberculosis, malaria and other communicable and neglected tropical diseases. Many WGC members operate in regions impacted by such healthcare challenges, and run education programmes designed to help prevent outbreaks of disease.

Where incidents do occur, gold mining companies often provide equipment or personnel to diagnose and treat cases within the community.

For a particularly noteworthy example of leadership in the area of health, in the early 2000s, a number of South African mining companies – including gold mining companies – made life-saving anti-retroviral drugs freely available to their HIV positive employees, long before such treatment became available through South Africa's public health system.

SDG 3 also sets target for achieving substantial reductions in the number of deaths and illnesses from hazardous chemicals and reductions in pollution and contamination in the air, water and soil.

Mining has the potential to be part of the problem when it comes to hazardous chemicals, pollutions and contaminations. That is why all World Gold Council member companies have rigorous management systems and extensive environmental stewardship programmes designed to protect the environment and prevent – or otherwise minimise, mitigate and remediate – those impacts.

No discussion of gold mining companies and health would be complete in 2020 without addressing how Covid-19 has stimulated close and urgent cooperation between the mining sector and host governments, with some gold mining companies providing vital support in the face of great distress and difficulties amongst communities severely impacted by the pandemic.

Bringing down mortality rates in Papua New Guinea with nursing and midwifery training

Papua New Guinea suffers from high maternal and child mortality rates, two of the key targets in SDG3, with one of the contributing factors being the fact women often give birth without a skilled birthing attendant present. Scholarships, provided by Newcrest, to train nurses and midwives are saving the lives of mothers and babies in remote areas of Papua New Guinea, and supporting the national community health system.

The innovative public-private partnership directs Newcrest funding through an Australian Aid Programme to support the development priorities of the Papua New Guinea government so as to improve health and education and encourage women's empowerment.

Six students who began studying in 2018 were joined in 2019 by five Newcrest-sponsored students on the three-year Diploma of Nursing in Lae, Papua New Guinea. Another 10 students graduated with a Bachelors of Midwifery degree in 2018 with a further 10 students starting their studies this year – all sponsored by Newcrest.

By the end of 2019, the company had funded advanced maternity care skills training for 28 community health workers from New Ireland and East New Britain. And, as part of its long-term commitment, the company will be supporting an additional 10 midwives and five nurses in 2020. Newcrest also funds the Lihir Medical Centre, which treats more than 50,000 patients each year, as well as a ground-breaking malaria eradication programme.

Spotlight topic

Covid-19 and the SDGs

“The world has seen many crises over the past 30 years, including the Global Financial Crisis of 2007-09. Each has hit human development hard but, overall, development gains accrued globally year-on-year. Covid-19, with its triple hit to health, education, and income, may change this trend.”

UNDP Administrator Achim Steiner

The United Nations Development Programme (UNDP) has estimated that, as a direct consequence of the Covid-19 pandemic, global human development – a combination of education, health, and living standards – could fall in 2020 for the first time since 1990, when measurements began. While the pandemic undoubtedly represents an enormous challenge for realising the 2030 Agenda and the SDGs, there are also potential opportunities to change the way governments and society at large respond to crises.

Responsible gold mining companies cannot effectively respond to Covid-19 in isolation, or separate their responses from other efforts. We have seen a renewed commitment from World Gold Council members to working with governments, host communities, and civil society groups in helping them to respond effectively to the health crisis caused by the novel coronavirus pandemic

Gold mining companies' dynamic support to government and communities during the Covid crisis

World Gold Council member companies were quick to respond to some of the immediate challenges created by Covid-19. Many embarked on humanitarian initiatives and provided help to their host nations, ranging from donating funds, launching screening tests to making mine-site medical facilities available to support the delivery of healthcare to local communities.

AngloGold Ashanti responded quickly during the early stages of the pandemic. In South Africa, the company made two of its mining hospitals available to the provincial governments of North West and Gauteng, in April 2020. These facilities provided an extra 570 beds to the region, and AGA also procured 27 electronic intensive care beds for the Covid-19 isolation unit of Soweto's Chris Hani Baragwanath Hospital. The company provided 24 mobile toilets to the same hospital, which is the world's third-largest healthcare facility.

As part of its efforts to support Senegalese authorities in the fight against Covid-19, Teranga Gold donated diagnostics equipment to Dakar's FANN University Hospital along with reagents to conduct 10,000 tests. The rapid-testing automated machine also conducts analysis that will help in the management of a range of other diseases and infections and so will be broadly useful to the FANN hospital.

Newmont is closely monitoring the progress and outcomes of a $20 million fund, which it launched in April 2020 to support host communities, governments and employees in combating Covid-19. Deployment of the funds will be fine-tuned as the situation evolves, helping to ensure the best outcomes as the pandemic progresses in different locations. The company has been working closely with host governments and communities to implement strict safety protocols at its sites with physical distancing and reduced workforce presence. In addition, they implemented the provision of hygienic and other critical supplies and training and, in certain cases, pre-emptively ramped down operations to safeguard vulnerable communities, or placed operations in care and maintenance to align with government efforts.

Economic development

How gold mining companies invest in inclusive education to drive development

Many World Gold Council member companies contribute to SDG 4 (Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all) by collaborating with host governments to help local communities through technical, vocational and educational training programmes. These programmes in turn improve employability among community members and contribute to building a skilled workforce.

Through social investment or partnerships, many gold mining companies have been improving school facilities, and helping ensure that both girls and boys receive the education needed to prepare them for future career opportunities. They also often support vocational training and help to improve the quality of higher education. Gold mining companies have been doing this by sponsoring scholarships or providing better access to on-line university degrees.

In addition, many WGC member companies provide apprenticeships to help local people to take advantage of the opportunities created by the arrival of a mine.

This can help local residents to become experts in in a particular field, and helps them enhance their life-chances by providing them with the transferrable skills needed to take advantage of alternative opportunities once the mine eventually closes.

These educational programmes also put equality at the forefront of their objectives by promoting educational and training opportunities for women and other traditionally marginalised groups

4 QUALITY EDUCATION

Empowering local talent in Côte d'Ivoire

Endeavour Mining is a major employerin Côte d'Ivoire and Burkina Faso. To help progress SDG4 and support the development of our host countries, our long-term goal is to hire close to 100% of our workforce directly from the country in which the mine is located.

The company has implemented a 'Growing Local Talent' programme. This allows the sharing and transfer of knowledge, skills and expertise between expatriate and national team members.

In 2019, 75% of the company's general managers were West African, 42% of Head of Departments and 95% of the site workforce were nationals.

4 QUALITY EDUCATION

Alamos Gold is supporting equitable education in Mexico

SDG 4 speaks about the need to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all." For over ten years, Alamos Gold's founding operation in Mexico – the Mulatos mine – has been running an educational programme that has provided scholarships for students from elementary school to university. The mine also donates school supplies such as notebooks, shoes, pencils, and backpacks to ensure students have the resources required to support their schooling.

Recognising the important role of sport in education, Alamo's sports initiatives also donate uniforms and sports equipment to four local communities, and supports municipal and sporting events to bolster community spirit, physical wellbeing and mental health.

In 2018, the Mulatos mine completed the construction of a new elementary school, kindergarten and sports field in the nearby village of Matarachi, further strengthening local resources for education.

Economic development

4 QUALITY EDUCATION

A focussed investment in education on the Ashanti gold belt

Golden Star's operations can be found in the Ashanti Gold Belt in Ghana. Working in the areas surrounding its mines, the company is supporting SDG 4 by helping children and families to access – and stay in – school. Since 2006 the company (along with the Golden Star Development Foundation) has built 43 school classrooms and dormitories, and numerous school bus stops. The company has supplied electricity to a number of schools, and with its contractors, provided power and solar lamps to communities, enabling children to study in the evening.

The company and its Development Foundation have also awarded scholarships for in-need children to attend school, with almost 1,080 scholarships awarded since 2008. Golden Star have also been improving their host communities' access to qualified teaching professionals by providing incentives to teachers and early childhood educators to work in those communities.

In each of its primary host communities, the company has 'adopted' a model school to demonstrate Golden Star's commitment to the objective of life-long learning. Since 2010 the company has provided opportunities for extended education for over 800 work experience students and over 700 national service students. Additionally, 164 graduate traineeships, 84 apprenticeships and 143 post-graduate sponsorship opportunities were supported.

In 2020, Golden Star and the German development agency, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Ghana Education Service, commenced a private-public partnership programme to enhance curriculum delivery in host community technical high schools.

The programme also has a parallel objective which is to diversify skills and employment opportunities. This aims to upskill at least 600 young people in trades such as masonry, carpentry, cookery, and other relevant skills sets for the job market.

4 QUALITY EDUCATION

School students in Peru translate Buenaventura Mining's 'Learning to Grow' programme into improved academic results

Since 2013, Buenaventura Mining has been sponsoring the Aprender para Crecer ("Learning to grow") programme in Peru as part of its work to contribute to SDG 4. This programme is implemented by the Cayetano Heredia Peruvian University and Empresarios por la Educación (Entrepreneurs for Education), and focuses on elementary and middle schools.

The programme runs in the areas surrounding Buenaventura's operations. Due to their remote location, and limited access to technology, these villages have battled to attract and retain properly trained teachers, which has adversely impacted on the quality of local education. The programme helps the villages redress this problem by providing teachers with additional training in communication and mathematics skills.

While more remains to be done, student performance has improved dramatically in terms of their academic performance assessments. By the end of 2019, 22% of students were judged to be at a satisfactory level in science compared with just 4% at the beginning of the year. Similarly, 45% of students achieved a satisfactory level in reading comprehension; up from 24% at the start of the year. In writing, 29% of pupils achieved a satisfactory level up from 15%.

Economic development

Gold mining, economic growth, and decent work for all

Gold mining operations are typically a major source of government revenues and a driver of economic growth in many developing countries, both of which are important success factors in working towards SDG 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all).

Many responsible gold mining companies offer quality and well-paid employment opportunities. If carefully designed and well-managed, these employment opportunities can help to reduce informal employment and even close the gender pay gap. Many companies also invest significant resources in continuous learning and training for their employees, and this often extends to community initiatives too. Ensuring safe and secure working environments is generally the top priority in the formal gold mining sector.

These efforts are in line with the SDG 8 targets of increasing education and training, and achieving full and productive employment and decent work for all women and men. Many gold mining companies also support SDG 8 in other ways, by providing additional support for local businesses.

Local linkages in the Kyrgyz Republic boost Centerra Gold's supplier network

At Centerra Gold's Kumtor gold mine in the Kyrgyz Republic, nearly 600 local businesses supply the mine with the 11,000 items that are needed for day-to-day operations. Since 2008, the company has procured 100% of the food it needs for the mine from local markets and it spends around US$ 81 million every year on goods and services from local suppliers.

By making local procurement a priority, Centerra Gold's is supporting SDG 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all). This local investment has a ripple effect - resulting in new jobs and generating income for the communities surrounding the mine. It creates opportunities for people from the surrounding areas to learn new skills, adopt new technologies, and also helps establish local enterprise networks.

Centerra's procurement policy has dramatically boosted local businesses. For example, in 2005 the mine began buying from a local egg farmer based in the nearby Chuy Province. Initially, the egg farm was small – it had seven employees and produced 400,000 eggs from 1,000 chickens. Thanks in part to the steady income from Centerra, the farm has grown significantly. By 2018, it employed around 20 workers, produced 3 million eggs from 12,000 chickens and operated on 500 hectares of land leased from 100 local families. It also has been able to protect itself from risk by diversifying its customer base.

8 DECENT WORK AND ECONOMIC GROWTH

In Ghana, local companies upskill to grow their businesses

When a group of 18 local companies in Ghana expressed an interest in receiving practical business skills and assistance, Golden Star undertook an extensive programme to provide them with support. The programme provided assistance in supporting their business registration, establishing systems, and obtaining the required regulatory permits.

This eventually led to the establishment of LOCOMS, an umbrella corporation including all 18 local companies. Since the commencement of their partnership with Golden Star, LOCOMS has earned contracts that add up to US$ 27 million in revenue.

Golden Star also supported local businesses in Ghana by donating 400 items of equipment to 432 small and medium-sized enterprises (SMEs) from more than 16 trade associations. This donation was based on a needs assessment that the company carried out in partnership with a local government authority to determine barriers to economic growth within existing local industry trades. These and ongoing programs underway in 2020 are just some of the ways that Golden Star is working to enhance and retain he value of its operations for host communities.

Economic development

Building infrastructure and contributing to sustainable industrialisation

As noted throughout this report, gold is often found in remote or undeveloped locations, meaning large-scale mining operations require considerable infrastructure investments to enable their development. In many cases, gold mining companies have to build the necessary infrastructure themselves. This typically means strengthening road or air linkages, investing in power infrastructure and housing, and sometimes includes building schools, water and healthcare facilities too. These sorts of investments clearly link to SDG 9, with its focus on sustainable industrialisation and the role that shared infrastructure can play in that journey.

Gold mining companies also support SDG 9 via their contributions to innovation. Leading gold mining companies are constantly improving their mining practices and processes in creative ways that are often shared with in ways that benefit host countries. This drive for innovation is a key part of supporting sustainable industrialisation.

Agnico Eagle is building all season roads in remote northern Canada

In the remote Nunavut region of northern Canada, Agnico Eagle built a 64-kilometre-long all-season road during 2017, connecting its Amaruq deposit to its Meadowbank gold mine. This infrastructure project supplemented the company's earlier investment in a 110-kilometre long all-season road from the Meadowbank mine to the community of Baker Lake, strengthening the linkages between operation and community. The mine's access roads, 100% financed by the company, are now the longest roads in Nunavut and available for use by the whole community.

Collaborating with communities to modernise farming practices in Mexico

At Alamos Gold's El Chanate mine in Mexico, the company is supporting SDG 9 by fostering a strong relationship with the neighbouring Ejido 16 de Septiembre communities in order to promote regional industrialisation. The communities in the area are in need of fundamentals like water, education and agricultural skills. Alamos has helped in a variety of ways, including renovating a local school, and building a water purification system. In addition, Alamos is collaborating with the local Centro de Bachillerato Tecnológico Agropecuario (CBTA) school to help modernize and improve farming practices in the region. The goal is to enable the community to develop crops that will become a revenue stream for the school.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Generating hydroelectric power on a Congolese river

In the remote north-east of the Democratic Republic of Congo (DRC), the Azambi Hydropower Project can be found on the Kibali river. This 11MW plant was developed to support the increasing power demands of Barrick Gold's Kibali mine, one of the largest gold mines in Africa. Producing approximately 64GWh of renewable, reliable electricity each year, it has reduced the mine's energy costs by approximately 75% and its reliance on diesel fuel equivalent to US$ 19.2 million per year in savings. In addition to facilitating skills transfer and local procurement, a portion of the mine's power grid capacity is provided free to local communities and will ultimately become a legacy asset for these communities once the mine has closed.

Responsible operations, energy and the environment

SDG 6: Ensure availability and sustainable management of water and sanitation for all

SDG 6 primarily focusses on challenges that relate to access to, or preventing the contamination of, water. SDG 6 aims to improve people's access to safe drinking water and sanitation, and to protect and restore water ecosystems.

SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all

SDG 7 aims to make renewable energies more efficient and widespread, and also to ensure that more people – and especially those in developing countries – have access to electricity.

SDG 12: Ensure sustainable consumption and production patterns

SDG 12 focusses primarily on challenges that relate to waste generation and its impact on the environment. The Goal encourages consumers and industries to change their habits so they produce less waste, and where waste is unavoidable, it encourages more responsible management of that waste, especially chemical waste.

SDG 13: Take urgent action to combat climate change and its impacts

SDG 13 focusses on the challenges that climate change brings with it – including an increase in the intensity and frequency of extreme weather events. SDG 13 also encourages building resilience to climate change by preparing people and industries for its consequences.

SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

SDG 15 focusses on protecting biodiversity and ecosystems, including taking steps to restore degraded land and combat desertification.

> *“We must connect the dots between climate change, water scarcity, energy shortages, global health, food security and women’s empowerment. Solutions to one problem must be solutions to all.”*
>
> Ban Ki Moon, former Secretary General of the United Nations

Responsible operations, energy and the environment

The central issues: climate change and the environment

The final theme of this report is Responsible Operations, Energy and the Environment. This theme covers the Goals that relate to protecting the environment, safeguarding natural resources, and combating climate change. This includes SDG 6 (Ensure availability and sustainable management of water and sanitation for all), SDG 7 (Ensure access to affordable, reliable, sustainable and modern energy for all), SDG 12 (Ensure sustainable consumption and production patterns), SDG 13 (Take urgent action to combat climate change and its impacts) and SDG 15 (Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land).

What Responsible Operations, Energy and the Environment means for gold mining

Gold mining is resource-intensive. It requires access to significant amounts of land, water and energy. It also generates waste products and materials, which require careful management throughout their life cycle. This means that gold mining companies have a vital contribution to make to this set of SDGs in the shape of limiting or mitigating their potential negative impact on the environment and the climate.

Gold mining companies have made significant strides in recent years. They have introduced efficiency programmes and increased their use of renewable energy. Many gold mining companies have also been working to minimise the volumes of water used at their sites while also helping ensure that local communities have access to clean water and sanitation.

Gold mining's negative impacts can, of course, still be further reduced and the objective of diminishing and mitigating these impacts is an ongoing one. Nevertheless, there has been considerable progress from gold mining companies when it comes to reducing their environmental footprint and helping achieve long-term biodiversity goals.

It is also important to note that the industry is guided by a number of internationally agreed and transparent environmental frameworks and reporting protocols designed to promote responsible operations and efficient resource use at all stages of the mining process.

Reducing water use and ensuring access to drinking water

Gold mining's impact on water is often identified as one of the biggest challenges associated with the industry, especially in water-stressed areas. Mining is water-intensive, despite modern innovations to improve efficiency.

As a result, gold mines are understandably subject to strict controls and oversight from regulatory authorities. Thus, responsible gold mining companies are fully aware of their obligation to use water responsibly, including to do so with proper consideration for the needs of their host communities and the environment. Access to water is now accepted as a human right and, the Responsible Gold Mining Principles reflect this reality and set out obligations for companies to improve efficiency, protect water quality, and work co-operatively with other water users.

Many WGC members are contributing to SDG 6 (Ensure availability and sustainable management of water and sanitation for all) by continuously working towards reducing their water footprint. They are doing this by improving the efficiency of their water use, recycling water and minimising, treating and controlling discharges. An increasing number of mines now operate on the basis of zero discharge.

Gold mining companies also contribute to SDG 6 by working with local authorities and communities to ensure efficient and equitable water management. As a result, in many cases mining companies, local authorities and communities are actually able to improve both the quality and access to water for all users both on, and around, gold mine sites.

Where mining companies operate in semi-arid or very dry climates, they are often able to help improve water access within these regions and create new agricultural opportunities for local communities.

6 CLEAN WATER AND SANITATION

Providing safe water for over 100,000 people in the Sahel

Africa's Sahel remains one of the most arid and vulnerable regions in the world, facing resource depletion, unmet sanitation needs, disease and hunger. IAMGOLD is working with partners in the region to implement a sanitation infrastructure project that will, by the end of its first phase, provide safe drinking water for over 100,000 people.

Triangle d'eau is a four-year, US$ 10 million (C$ 17 million) project aimed at increasing drinking water supplies, improving sanitation, enhancing governance of water management services and promoting economic development. This will in turn contribute to increased revenues from agriculture, livestock and market garden production in the region. IAMGOLD contributed US$ 1.5 million (C$ 2 million) toward Phase 1 of the project, which is operated by Cowater International, a Canadian company, in collaboration with the government of Burkina Faso, community leaders and artistic groups.

The project has built the necessary infrastructure for drinking water in a number of towns and villages – which typically includes a water-intake facility, a pumping station, a water treatment plant and a 12km water pipe system with the capacity to provide safe and reliable water access. Further work continues on improving household sanitation facilities and on providing institutional gender-specific sanitation facilities.

IAMGOLD and its partners will undertake a second phase that will extend these essential services to a further 250,000 people. This next phase – which will scale up to US$ 13.14 million (C$ 32.7 million) through new funding from IAMGOLD and One Drop (a Canadian-based charitable foundation) – will support the government and continue to improve people's lives in rural Burkina Faso.

Responsible operations, energy and the environment

6 CLEAN WATER AND SANITATION

Harnessing the power of rain in Papua New Guinea

At Barrick Gold's/Zijin mine in the Porgera valley in Papua New Guinea, there is no government or municipal water supply. While there is river water in the Porgera valley, it has high, naturally occurring, levels of sediment which preclude it from being a significant source of drinking water. That means that the local communities rely heavily on rainfall for drinking water.

Since 2011, Barrick's Porgera mine has been helping local communities harvest rainwater to improve the reliability of their water supply. The project builds and installs water tanks, which are fed by water collected from the roofs of nearby houses, at central and easily accessible sites throughout the valley.

Local people have been trained in tank maintenance and hygiene management at the collection and distribution points.

In 2019, 44 new tanks were installed in local villages and seven tanks at schools within the mining lease. Since 2011, a total of 151 water tanks have been installed in communities across the Special Mining Lease.

6 CLEAN WATER AND SANITATION

Upgrading vital local water infrastructure in the Kyrgyz Republic

Since 2018, through its Kumtor Gold Company (KGC) Centerra Gold has completed several water infrastructure projects near its Kumtor mine. These projects have provided much needed access to safe drinking water for local communities.

In local villages KGC has been working with local organisations to implement ambitious plans to upgrade existing water infrastructure and to install entirely new infrastructure for clean water supplies when required.

One project involved constructing a reservoir in the Djety-Ögüz District, the rehabilitation of a water intake site and wells, installing 6.5km of pipes and installing a new well in nearby villages.

KGC were also the major sponsor for another project that improved the water supply for 10,000 people in another of the mine's surrounding villages.

Responsible operations, energy and the environment

6 CLEAN WATER AND SANITATION

Providing comprehensive water supply systems to Hummingbird's host communities in Mali

Hummingbird Resources is bringing clean drinking water to the communities around its new Yanfolila mine in southern Mali via its Water, Sanitation and Hygiene (WASH) programme.

In the three communities of Kenieba, Leba and Komana, Hummingbird built new comprehensive water supply systems – boreholes, pumps, taps, solar panels and water storage tanks - which provide potable water for the local communities.

Hummingbird also installed a new borehole and pump in the village of Kona and rehabilitated four existing boreholes in the villages of Donsosso and Kona.

In 2018 the company calculated that 6,445 people benefitted from their (WASH) programme.

How gold mining companies are tackling climate change

Confronting and tackling climate change is one of humanity's biggest and most pressing challenges in the 21st century, and is the key focus of both SDGs 7 (Ensure access to affordable, reliable, sustainable and modern energy for all) and SDG 13 (Take urgent action to combat climate change and its impacts).

Industrial activity – including gold mining – contributes to the generation of carbon dioxide in the atmosphere. Gold mining companies are contributing to both SDG 7 and SDG 13 by limiting their carbon footprint and increasing transparency through better reporting. They are also working to prepare their operations and surrounding communities for any climate change-related physical impacts of more extreme weather events.

The gold mining industry is already moving towards installing renewable and clean sources of energy to power their operations. While every mine has differing energy requirements, clean energy is increasingly becoming economically viable and commercially attractive for mining. As a result, where remaining mine life supports the investment, mining companies are switching to clean sources of electricity generation as the costs associated with renewable energy continue to fall.

The uptake of such technologies is expected to accelerate and coincide with various other programmes designed to decrease carbon emissions. These include vehicle electrification, optimised underground operations and improved haulage conditions. All of these initiatives vary in size and scale, but share the overall object of lowering carbon dioxide emissions. Reducing dependence on diesel generation for off-grid mines also has air quality, logistical, safety and security benefits.

Many companies are now evaluating opportunities to develop off-grid renewable projects to serve both the mine site and surrounding area; designing such systems with sufficient additional capacity is becoming increasingly achievable at marginal additional cost, and provides benefit to all through lowering demand (and thus increasing reliability) from the grid at times of peak demand and potentially becoming a legacy asset for local communities once the mine has closed.

Responsible operations, energy and the environment

7 AFFORDABLE AND CLEAN ENERGY

13 CLIMATE ACTION

The 'mine of the future' is in Northern Canada

Canada has been a world leader in electrification and reducing greenhouse gas emissions across a number of sectors. Newmont's Borden gold mine in northern Ontario represents the 'mine of the future' where digitization, low carbon energy technologies, and a focus on partnership and consultation with local communities underpins the viability, sustainability and profitability of the mine. It began commercial production in October 2019, and all vehicles in the fleet become commercially available as batter electric, the mine will become the first all-electric underground mine in Canada. Instead of using diesel-fueled mobile equipment, the mine will install battery electric vehicles (BEVs), improving operational efficiency whilst lowering greenhouse gas (GHG) emissions.

The investment in electrical equipment is expected to eliminate all GHG associated with diesel-based equipment and the movement of ore and waste rock. This equates to roughly 50% of the total GHGs on site or 7,000 tonnes of CO_2 per annum. Over a 10-year period, this represents a reduction of close to 70,000 tonnes of CO_2 and 330,000 MWh in electricity. With the decrease in emissions comes a reduction in underground ventilation needs, which will see Borden require 50% less ventilation than a comparable diesel underground mine. It is expected that this better air quality will also lead to a better work environment and improved safety performance.

7 AFFORDABLE AND CLEAN ENERGY

13 CLIMATE ACTION

Improving air quality by cutting emissions at Kirkland Gold

Kirkland Gold's Macassa mine in Ontario, Canada is now among the lowest greenhouse gas emitters per ounce of gold in the world. 2018 saw greenhouse gas (GHG) emissions temporarily increase at the mine due to the completion of two major construction projects, but since then Kirkland Gold's operations have introduced a number of energy efficiencies and productivity improvements. The mine now relies heavily on battery electric vehicles at the site, and the company has been increasing the size of the fleet each year due to the significant benefits of switching from diesel equipment. While this has led to Macassa having a higher energy intensity relative to other Kirkland gold mines, it has recorded better air quality and lower GHG emissions.

7 AFFORDABLE AND CLEAN ENERGY

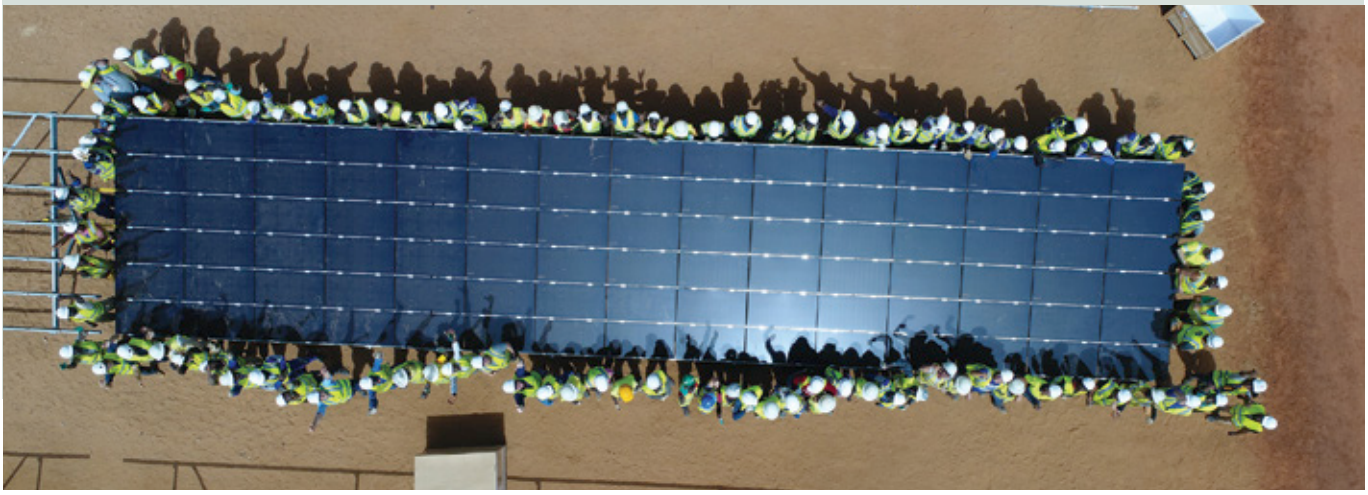
13 CLIMATE ACTION

Using sunlight to help power gold mines in West Africa

Harnessing the power of the sun is key for cleaner energy, including for large scale operations. Recent years have seen an increase in the number of solar installations at mine sites around the world.

One of the world's largest hybrid solar-thermal plants can be found at IAMGOLD's off-grid Essakane gold mine in Burkina Faso. The first phase of the project saw 130,000 photovoltaic modules installed, reducing the consumption of fuel oil by approximately 5 million litres and CO2 emissions by about 15,500 tonnes as of December 31st, 2019.

And in neighbouring Mali, Resolute Mining has commissioned a new 40MW thermal power plant and a 10MW battery storage system for its Syama gold mining complex. A further 20MW of solar power is planned in 2023, which is estimated to reduce electricity costs by 40% and cut carbon emissions by approximately 20%.



Responsible operations, energy and the environment

7 AFFORDABLE AND CLEAN ENERGY

13 CLIMATE ACTION

Powering school computers with solar energy

Agnico Eagle have donated and installed solar energy systems at 18 schools in six communities that surround their La India mine site in Mexico. This has introduced a sustainable energy supply that has helped power up the schools' newly donated computers while also helping to modernise community schooling in the area at preschool, elementary and high school levels.

Agnico Eagles is also advancing its 'Power Line' project with the Federal Electricity Commission. This will eventually supply electricity to the nearby communities of Batería de Rodríguez and Jesús del Monte.

When completed, this joint energy project between the La India mine and the Municipality of Ocampo will benefit over 120 families.

Gold mining, waste management and land restoration

One of the central concerns of SDG 12 (Ensure sustainable consumption and production patterns) is reducing waste generation, both from consumers and industry.

Mining activities generate significant quantities of waste materials, and often use of controlled chemicals.

Gold mining companies have been contributing to SDG 12 by driving many improvements in sustainable consumption and production. World Gold Council Members have taken the lead on this by developing and launching initiatives like the Responsible Gold Mining Principles (RGMPs). A number of these are relevant to SDG 12 as they set out expectations for responsible waste management and custodianship of the natural environment.

Gold mining companies are also contributing to SDG 12 by taking pains to ensure the waste management processes are improved. Gold mining companies, for example, carefully manage chemicals and waste products throughout their life cycle, in accordance with many international frameworks, including the International Cyanide Management Code. These steps significantly reduce the risk of releasing chemicals to air, water and soil; thereby minimising their adverse impacts on human health and the environment.

In addition, a recent World Gold Council study indicated that re-refining gold from a high-quality waste stream utilised a fraction of the energy required to mint new gold, which has sparked a keen interest in recycling gold waste. In addition, the recycling of metals from electronics waste streams has grown significantly in recent years, with large European and US companies specialising in the recovery of precious metals from spent electronics.

Responsible operations, energy and the environment

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Technological innovation at Eldorado Gold's new facility helps accelerate land restoration in Greece

'Tailings' is a common term in the mining industry – it refers to the mixture of water, waste rock and chemicals that are left behind when mined ore is processed to separate valuable metals from the surrounding rock using water-based solutions.

In recent years, across the mining industry, there have been a number of tailings dam failures. This led to a wide-ranging review to establish an international standard on tailings handling, which was published in August 2020, to ensure sustainable and responsible management of these waste products. New technologies are being introduced at some operations, including dry stack tailings facilities. This involves the removal of water through filter-press technology. The resulting material can then be stored at a Tailing Management Facility (TMF), preventing any leaching directly into the soil or surrounding water sources.

In Greece, a state of the art US$ 100 million tailings unit was recently constructed by Eldorado Gold near its Kassandra mines. This innovative new facility, makes use of water diversion channels, multi-layer liners, and advanced 24/7 monitoring technologies to maintain the integrity and stability of tailings materials.

Eldorado is also committed to reclaiming and restoring land that was left polluted by previous operators. At its Olympias mine, it is in the process of reclaiming three separate areas that have produced acid rock drainage. Reprocessed tailings and other contaminated materials are safely stored at the Kokkinolakkas TMF. In order to re-vegetate reclaimed land at the Kassandra mines, Eldorado has also constructed the Olympias nursery, a 15-hectare home to over 250 plant species, which provides the vegetation for the company's reclamation projects in Greece.

Protecting Biodiversity

Recent times have seen an unprecedented level of extinctions and loss of natural habitats and biodiversity. This is the challenge that SDG 15 (Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss) is primarily focussed on combatting.

Gold mining companies contribute to SDG 15 by planning for minimal impact, conducting ongoing environmental assessments, and investing in post-closure rehabilitation to ensure the preservation of biodiversity at their operations. Companies also work closely with communities, NGOs and governments to ensure, wherever possible, that their operations produce no net loss of critical habitat. In fact, many gold mining companies are able to ensure that their operations ultimately result in an overall net gain in biodiversity.

Protecting species in and around mine sites is also a part of these overall planning processes. Many companies are taking active measures to increase the population of native, and especially vulnerable, species.

Another way that mining companies are advancing SDG 15 is by using innovation to reduce the amount of land their mining and processing operations use.

Some mining companies focus their contributions to SDG 15 on minimising the impact of mining operations on forests by working with partners to prevent deforestation. Typically mines will plant significant numbers of trees as part of their efforts to rehabilitate worked-out mining areas.

Another priority area for all responsible gold mining companies is mine closure at which point they work to restore the habitat, ecosystem and soil quality of their sites. This often results in a more biodiverse ecosystem than was previously in place.

Responsible operations, energy and the environment

Building new rock habitats for the local lizards at Oceana's New Zealand site

In New Zealand, Oceana Gold has established a project at its Macraes operation to protect local lizard species. In order to commence mining in the site's Coronation Pit, the broader permitting process requires the construction of an additional lizard habitat on the outer boundaries of the new pit. The new habitat consists of deep rock piles, which were constructed by excavating ten areas of approximately 100 square metres in size and up to one metre in depth.

The team at Oceana's Macraes operation has also partnered with University of Otago to conduct research into increasing the populations of native lizards, including the McCann's Skink, Southern Grass Skink and the Korero Gecko. This partnership focuses on three areas for study and research:

- The first is to gain an understanding of the elements of the natural habitat, and their importance to lizards.
- The second involves collecting baseline data to establish the current population of lizards and their habitats before the new rock stacks are constructed. This will assist in being able to tell if there is any change in the lizard population (positive or negative) following the introduction of the new surrogate habitat.
- The final stage entails the design and construction of a surrogate habitat (also referred to as 'lizard hotels'!), replicating their natural environment.

15 LIFE ON LAND

How Agnico Eagle's Mexico team is boosting flora and fauna diversity by producing topsoil

Protecting and investing in one part of a closely connected ecosystem can have a whole series of positive knock on effects. In Mexico, a project by Agnico Eagle's Pinos Altos team has demonstrated the opportunities that come from using effective environmental and sustainable practices in the mining sector.

When it comes to environmental reclamation, topsoil is key to reclaiming barren industrial sites – such as mine waste rock dumps. Agnico Eagle's state-of-the-art soil regeneration initiative – Ultra High-Density Grazing (UHDG) – means the company is able to produce its own topsoil.

This agricultural technique consists of herding cattle at regular intervals in a specific grazing pattern as well as using a special livestock feed that improves the cow's digestion. When the cow leaves its dung and saliva on the ground, it transfers nutrients and microorganisms into the soil, this improves soil health and eliminates the need to use supplementary topsoil for environmental reclamation. Additionally, this also provides productive employment for the local community.

After more than a year of utilising this method, pastures are literally greener, with the return of fauna, improved soil quality and a greater density of flora and analyses have shown a substantial increase in soil nutrients such as phosphorus, potassium, nitrates, manganese - all promoting the reproduction and diversity of plants as indicated by 44 new plant species.

As flora begins to grow, wildlife returns. The previous waste zones of the Oberon Weber Rock Storage Facility now welcome whitetail deer, wild turkey, mountain lions, various species of migratory birds and squirrels, among other animals. Achieving impressive results in its first year, this project has caught the attention of the Mining Chamber of Mexico and the Association of Mining Engineers Metallurgists and Geologists of Mexico, who are interested in implementing this method at different mines across the country.

Responsible operations, energy and the environment

15 LIFE ON LAND

To ensure commitment, Yamana Gold links biodiversity management to executive compensation

Yamana Gold wanted its commitment to preserving biodiversity to be taken seriously throughout the organisation – so that since 2018 the company has linked a proportion of executive compensation to the completion of biodiversity risk assessments.

Regular identification and assessment of the biodiversity on and around its operations is undertaken to ensure up to date data is available, and sites develop and maintain biodiversity management plans which include - but are not limited to - progressive reclamation, protection of sensitive areas and biodiversity offsets.

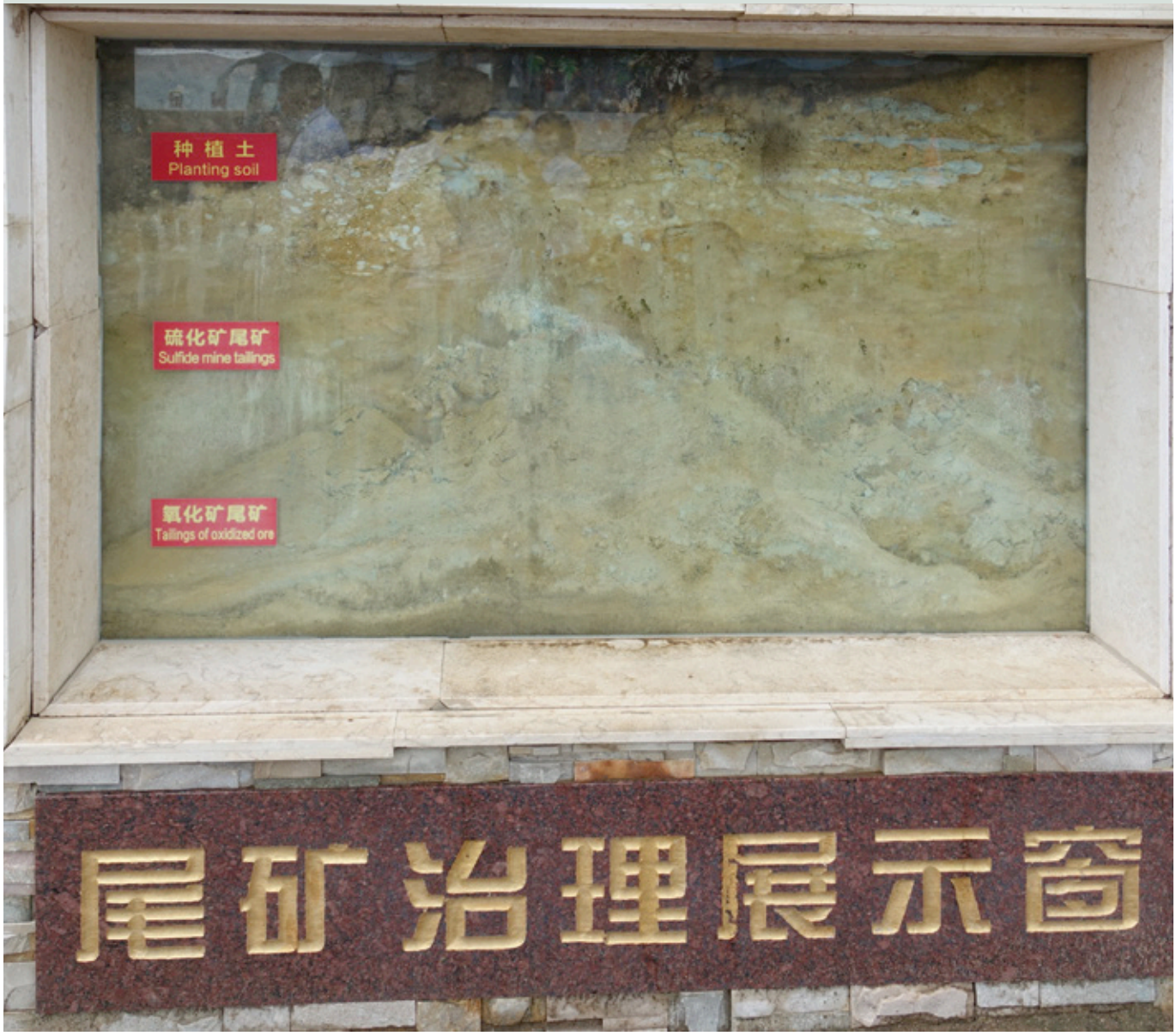
In addition, site-specific biodiversity targets have been included in Yamana's plans, and these targets are then linked to both site and executive compensation. By including these leading indicators in compensation packages, biodiversity management is properly tracked.

Yamana's Florida operation In Chile is located within the Cordillera de Cantillana conservation area. In recognition of the status of the region, Yamana has developed a comprehensive biodiversity conservation plan, which includes continuous reforestation of the Cantillana region and offsetting more than 100% of the footprint of its Florida operations. An education plan for the local community has also been developed, which includes research, environmental improvement, species conservation and environmental education.

From tailings to tourism – reclamation and reforestation in the Shandong peninsula

In China's north-west, the Shandong Gold Group (SD Gold)'s Sanshandao gold mine is located in the lush and mountainous Shandong peninsula. Historically, tailings were discharged near the mines in coastal areas. Over the years, tailings transported by wind or water contaminated the surrounding area. With greater awareness of the need for environmental protection, from 2005 onwards SD Gold invested over US$ 4.3 million (30 million RMB) in mitigating the environmental impact of tailings, in partnership with the municipal government of Laizhou City.

SD Gold's ecological restoration and soil reclamation programme has seen more than 70,000 evergreen trees planted, and 400,000 square metres of turf and 700,000 cubic metres of soil restored. The Sanshandao tailings storage facility has now become a coastal resort, and the newly established attraction has received more than one million tourists, and generated over US$ 14.4 million (100 million RMB) in revenue.



Spotlight topic

Gold's role in building a sustainable future

In this report, we have illustrated how responsible gold mining helps to drive sustainable development around the world, materially impacting a majority of the SDGs. However, gold itself also plays an important, but often over-looked, role in society that helps progress some of the SDGs from a slightly different perspective.

Gold is an important industrial metal. In 2019, over 300 tonnes were used in a range of applications critical to many technologies that we all take for granted. The electronics industry accounted for the vast majority of this demand (~80%), and here, gold's unique chemical and physical properties combine to make the metal indispensable to the industry. Its excellent conductivity means small quantities of the metal can be used to ensure the efficient operation of a wide range of devices. Additionally, gold is very stable, which means it doesn't degrade or rust over time, making it very reliable and dependable in a range of ambient conditions (cold/heat/damp). As such, it finds unique application in critical safety functions such as automotive braking systems and in-vehicle airbags. Gold's reliability continues to play a major role in improving road safety globally, a critical target of SDG 11 (Make cities and human settlements inclusive, safe, resilient and sustainable).

Electronics demand has built and evolved over the last 30 years, and this is certain to continue in the future. Improved technologies always require better and more diverse functionalities; which in turn demands innovative sensors and chips. The ongoing electrification of society relies on high-quality chips containing gold that will significantly increase access to information and communications technology. Again, this is particularly true of high-end and safety-critical systems that demand reliable operation combined with longevity, something only offered by gold. These are key indicators of SGDs 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation and 11: Make cities and human settlements inclusive, safe, resilient and sustainable. with improved connectivity being critical to advancements in communities around the world.

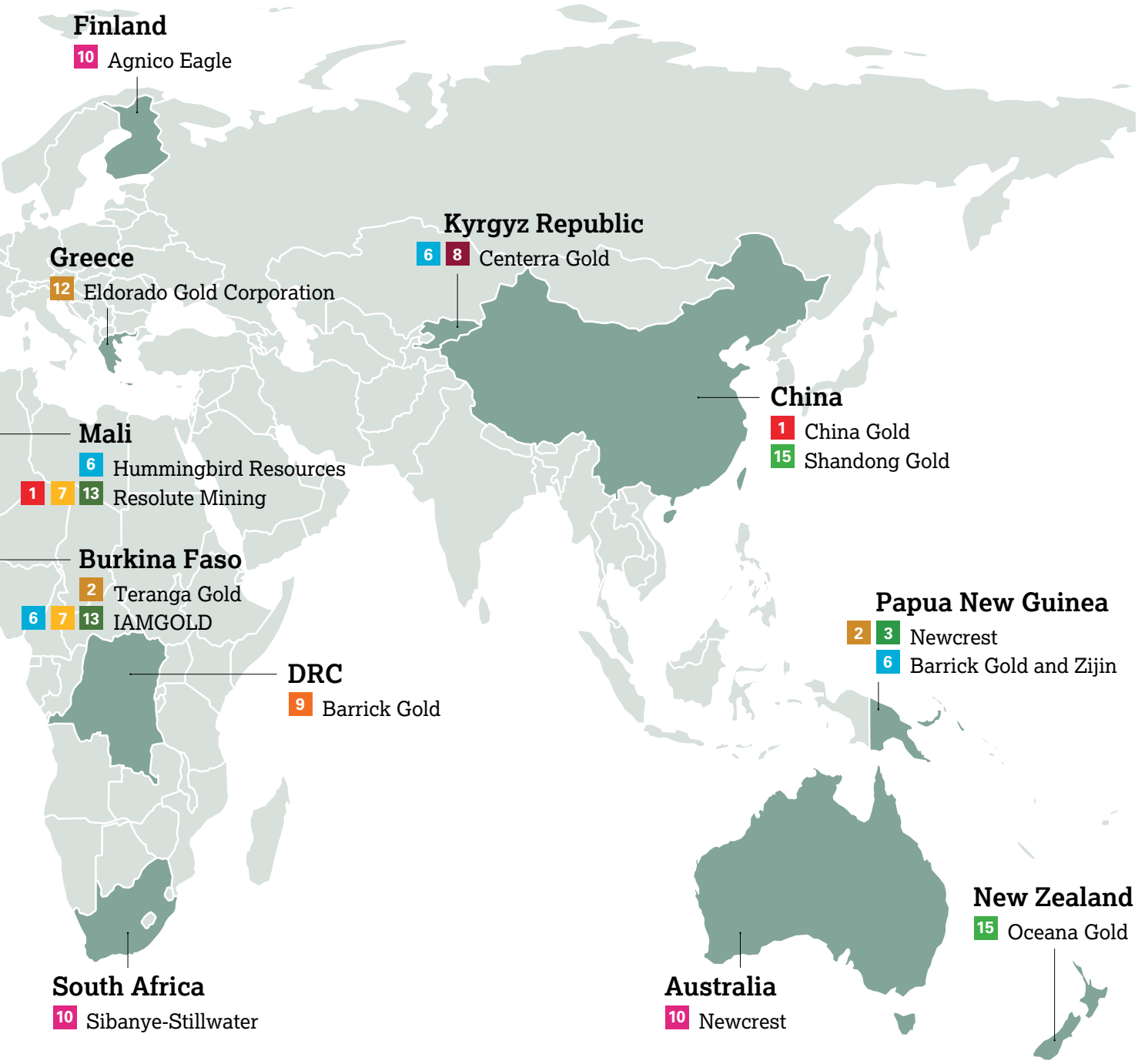
The growth of electric and hybrid-electric vehicles on our roads is another example of electrification. Looking to the future, the development of autonomous vehicles (AVs) may offer a way of improving the efficiency of road network utilisation by removing the largest variable out of the equation – the human driver. As with hybrid and electric vehicles, AVs will require considerable electronics infrastructure, both in and ex-vehicle. Quantifying this impact is currently challenging, but it's reasonable to assume an increase in gold loadings in line with higher semi-conductor usage in AVs: a fully electric battery electric vehicle may contain 3-4 times the dollar value of semiconductors found in a standard internal combustion engine vehicle. There will be far more safety critical systems in tomorrow's AVs; without gold guaranteeing their reliable operation, this would be a considerably larger challenge. As a consequence, this will help to accelerate progress for both SDGs 11: Make cities and human settlements inclusive, safe, resilient and sustainable and SDG 13: Take urgent action to combat climate change and its impacts.

While the electronics industry accounts for the largest proportion of demand for gold within technical applications, there are a number of other industries that use smaller quantities of the metal in a range of technologies. Gold is a highly efficient catalyst and is used in industrial processes in the chemical industry. Such catalysts act to limit the amounts of energy required to make a range of feedstock chemicals critical to the manufacture of plastics. The gold used in this important application is fully recyclable, positively impacting SDG 12: Ensure sustainable consumption patterns and 13: Take urgent action to combat climate change and its impacts.

Finally, gold itself is a crucial component in a range of commonly available medical technologies, many of which play a particularly important role in the developing world. Gold and medicine have been linked for millennia, but in recent years a host of diagnostic tools and treatments have been approved by the regulatory authorities worldwide. Auranofin, a drug which contains a small quantify of gold in its structure, was originally developed and marketed as a treatment for rheumatoid arthritis in the mid-1980s. It is currently experiencing a renewed surge of interest, with clinical trials underway to test its efficacy against a range of diseases such as ovarian cancer and dysentery. Gold-based diagnostics remain the most commonly used technology in low-resource settings for diagnosing a range of conditions. For example, according to the World Health Organisation, over 400 million tests containing gold were distributed in 2019, primarily in Africa and Asia, to aid in the diagnosis of malaria alone. In total, it's likely that over 1 billion gold-based diagnostics are manufactured and distributed annually, including tests for Covid-19, HIV/AIDS, TB, strep and even pregnancy. This is a hugely important technology making a considerable contribution to SDG 3: Ensure healthy lives and promote well-being for all at all ages, especially in the developing world.

Gold is so often dismissed as an industrially unimportant metal; this assumption is far from the truth. On the contrary, its unique properties link it closely to progress in some of the most challenging SDGs.

Geographical overview of SDG case studies


Finland
10 Agnico Eagle
Kyrgyz Republic
6 8 Centerra Gold
Greece
12 Eldorado Gold Corporation
China
1 China Gold
15 Shandong Gold
Mali
6 Hummingbird Resources
1 7 13 Resolute Mining
Burkina Faso
2 Teranga Gold
6 7 13 IAMGOLD
Papua New Guinea
2 3 Newcrest
6 Barrick Gold and Zijin
DRC
9 Barrick Gold
New Zealand
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9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
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16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS

Case study quick index

Page number	SDG	Member	Location	Title
Global partnerships				
11	17	Newmont	Global, Suriname, Peru	*"Newmont's strategic partnering for long-term and sustainable impact"*, Newmont has established three global partnerships to advance SDG 17 and create shared value
12	17	AngloGold Ashanti	Ghana	*"Fighting malaria in Ghana with AngloGold Ashanti"*, AGA commissioned a wide-ranging malaria outreach programme and is now in partnership with GlobalFund to address diseases (Malaria, TB, AIDS)
13	17	Wheaton Precious Metals	Brazil, Mexico, Peru	*"Wheaton Precious Metals' Partner CSR Programmes"*, Wheaton joins forces with partner mines to finance environmental and social initiatives
Social inclusion				
16	5	Endeavour Mining	West Africa	*"Women take the driver's seat at Endeavour Mining's operations"*, Endeavour's Women in Mining programme is committed to creating more diverse workforce with long-term skills development and career path mapping
17	5	Kinross	Mauritania	*"Putting Mauritian women at the centre of Kinross' initiatives"*, Kinross supports a local health centre that focuses on improving reproductive and paediatric health
18	5	Golden Star	Ghana	*"Golden Star rapidly building a more gender inclusive workforce"*, Golden Star has set an ambitious target to increase the company's female employee representation across the business by 2025
20	10	Sibanye-Stillwater	South Africa	*"Employees take control of chronic debt through Sibanye-Stillwater's financial literacy efforts"*, Sibanye-Stillwater's CARE for iMali employee initiative was designed to improve financial literacy and understanding
21	10	Newcrest	Australia	*"Driving programme solution opens up opportunities for Newcrest's Indigenous employees to pursue"*, Newcrest's transport support programme for 102 employees from remote locations to mines opens up work opportunities
22	10	Agnico Eagle	Finland, Canada, Mexico	*"Agnico Eagle's emphasis on employing 100% local"*, AE has an ambitious goal to hire 100% of workforce (including management) from the country/region in which its mines operate
23	16	AngloGold Ashanti	Global (companywide)	*"Creating a company-wide culture of respect for human rights"*, AGA has set in place a progressive Human Rights framework requiring all sites to undertake assessments and trainings

Page number	SDG	Member	Location	Title
Economic development				
29	1	Teranga Gold	Senegal	*"Stimulating local economic activity in Senegal through targeted investments "*, Terenga Gold has donated US$1mn+ to local communities under its Sabodala Gold Operations including educational infrastructure and a grain mill
30	1	China Gold	China	*"Local communities benefit from jobs and new income sources"*, China Gold has invested heavily in their Zhengfeng operation to foster sustainable industries, infrastructure, education and investment
31	1	Resolute Mining	Mali	*"Prioritising self sufficiency"*, Resolute is committed to sharing the benefits of its operations through investment in sustainable development initiatives
32	2	Barrick Gold/ Shandong Gold	Argentina	*"By strengthening local linkages, companies are supporting Argentine farmers"*, BG launched an Agricultural Procurement Plan in conjunction with Aramark to further local food security and help farmers share benefits of the mine
33	2	Newcrest	Papua New Guinea	*"Women are driving innovative farming supply partnerships in the Pacific Island region"*, at its Lihir mine, Newcrest has an innovative supply deal with 2,000 local women farmers to supply their produce to the mine's canteen
34	2	Teranga Gold	Burkina Faso	*"Seeking to turn a resettlement into a development opportunity"*, TG is implementing a large-scale restoration plan to support those in the local communities displaced by mine activities
35	3	Newcrest	Papua New Guinea	*"Bringing down mortality rates in Papua New Guinea with nursing and midwifery training"*, a public-private partnership with the Government allows Newcrest to provide sponsorship for nursing, education and maternity care skills
39	4	Endeavour Mining	Côte d'Ivoire	*"Empowering local talent in Cote d'Ivoire"*, Endeavour is aiming to nationalise mine positions and reduce dependency on expatriate staff by focusing on local training and skills transfer
39	4	Alamos Gold	Mexico	*"Alamos Gold is supporting equitable education in Mexico"*, since 2009, Alamos has run an educational scholarship programme for local students from elementary to university, including books, uniforms, as well as supporting municipal and community sporting events
40	4	Golden Star	Ghana	*"A focussed investment in education on the Ashanti gold belt"*, Golden Star's Development Foundation has helped children stay in school through classroom, dormitory and bus stop building, as well as power and solar lamps to communities
41	4	Buenaventura Mining	Peru	*"School students in Peru translate Buenaventura Mining's 'Learning to Grow' programme into improved academic results"*, since 2013, BM has sponsored a teacher training programme focused on teaching elementary and middle school skills in remote locations

Case study quick index

Page number	SDG	Member	Location	Title
Economic development				
42	8	Centerra Gold	Kyrgyz Republic	*"Local linkages in the Kyrgyz Republic boost Centerra's supplier network"*, Centerra makes a point of purchasing goods and services in the local market to promote income development and job growth
43	8	Golden Star	Ghana	*"In Ghana, local companies upskill to grow their businesses"*, GS undertook an extensive programme to improve business skills of 18 interested local companies and has donated equipment to several more local SMEs as part of a needs-based assessment in partnership with local government
44	9	Agnico Eagle	Canada	*"Agnico Eagle is building all season roads in remote northern Canada"*, AE financed road building in remote village to connect its mines, the all-season roads are available for community use
44	9	Alamos Gold	Mexico	*"Collaborating with communities to modernise farming practices in Mexico"*, Alamos provides support for basic needs (water, education, nutrition) and farming assistance in the local community
45	9	Barrick Gold	DRC	*"Generating hydroelectric power on a Congolese river"*, Barrick Gold developed a Hydropower Project to support the power demands of its Kibali mine, a portion of the mine's power grid capacity is provided free to local communities and will ultimately become a legacy asset for these communities once the mine has closed.
Operations, energy and the environment				
49	6	IAMGOLD	Burkina Faso	*"Providing safe water for over 100,000 people in the Sahel"*, IAMGOLD has a four-year project aimed at increasing drinking water supplies and sanitation
50	6	Barrick Gold/Zijin	Papua New Guinea	*"Harnessing the power of rain in Papua New Guinea"*, Barrick Gold/Zijin has assisted in harvesting rainfall and installing water tanks for local communities without access to municipal water supply
51	6	Centerra Gold	Kyrgyz Republic	*"Upgrading vital local water infrastructure in the Kyrgyz Republic"*, Centerra has worked with local organizations to upgrade or install clean water supply infrastructure
52	6	Hummingbird Resources	Mali	*"Providing comprehensive water supply systems to Hummingbird's host communities in Mali"*, Hummingbird has provided water supply systems (boreholes, pumps, tanks) to three host communities
54	7, 13	Newmont	Canada	*"The 'mine of the future' is in Northern Canada"*, in October 2019, Newmont officially began commercial production on the world's first all-electric underground gold mine

Page number	SDG	Member	Location	Title
Operations, energy and the environment				
55	7, 13	Kirkland Gold	Canada	*"Improving air quality by cutting emissions at Kirkland Gold"*, Kirkland Gold's Macassa mine relies heavily on battery electric vehicles, now recording better air quality and lower emissions overall
55	7, 13	IAMGOLD	Burkina Faso	*"Using sunlight to help power gold mines in West Africa"*, IAMGOLD recently received TSM Environmental Excellence award for contributions to addressing climate change by having one of the world's largest hybrid solar-thermal plants at its off-grid Essakane mine.
55	7, 13	Resolute Mining	Mali	Additionally, Resolute Mining has commissioned a 40MW thermal power plant and battery storage with further 20MW of solar power planned for 2023
56	7, 13	Agnico Eagle	Mexico	*"Powering school computers with solar energy"*, Agnico Eagle has donated and installed solar energy systems at 18 schools in 6 local communities, as well as advancing a Power Line project to supply electricity to communities
58	12	Eldorado Gold Corporation	Greece	*"Technological innovation at Eldorado Gold's new facility helps accelerate land restoration in Greece"*, EGC makes use of water diversion channels, monitors tailings materials and is committed to restoring land left polluted by previous operators
60	15	Oceana Gold	New Zealand	*"Building new rock habitats for the local lizards at Oceana's New Zealand site"*, Oceana Gold is constructing additional lizard habitat on the boundaries of new pit to mitigate the habitat loss and is supporting university research into increasing the native lizard populations
61	15	Agnico Eagle	Mexico	*"How Agnico Eagle's Mexico team is boosting flora and fauna diversity by producing topsoil"*, AE utilises its state-of-the-art soil regeneration initiative to produce top soil for use in environmental reclamation
62	15	Yamana	Chile	*"To ensure commitment, Yamana Gold links biodiversity management to executive compensation"*, YG undertakes regular biodiversity risk assessments and to offset its operational footprint, sets site-specific biodiversity targets which are then linked to compensation
63	15	Shandong Gold	China	*"From tailings to tourism – reclamation and reforestation in the Shandong peninsula"*, to mitigate the impacts of tailings, SD Gold invested in ecological restoration and soil reclamation programmes to turn its storage facility into a coastal resort generating local revenue

Mapping the Responsible Gold Mining Principles on to the Sustainable Development Goals

Sustainable Development Goal	Relevant Responsible Gold Mining Principles	Potential Gold Mining Contribution to the realisation of the SDGs
1. No poverty	1.6 Taxes and transfer pricing; 3.2 Local procurement; 6.1 Wages and benefits; 6.4 Freedom of association and collective bargaining; 7.3 Creating local benefits;	• Provide jobs and training • Local procurement and SME development opportunities • Payment of taxes to fund public services • Good wages and benefits • Community Social Investment
2. Zero hunger	7.3 Creating local benefits; 9.3 Land-use and deforestation;	• Social investment to support agricultural productivity • Minimising use of productive land • Collaborative use of water with local farmers • Raising incomes in vicinity of mines
3. Good health and wellbeing	2.4 Impact assessment; 4.1 Safety; 4.3 Occupational health and safety; 4.4 Community health and emergency planning;	• Maintaining strong workplace safety culture • Social investment projects • Occupational health programmes • Community health programmes (e.g. malaria, ebola and HIV) • Baseline monitoring data through ESIAs
4. Quality education	7.0 Working with communities; 7.3 Creating local benefits;	• Training opportunities • Scholarships • Social investment in education
5. Gender Equality	6.2 Preventing discrimination and bullying; 6.5 Diversity; 6.6 Women and mining; 7.2 Understanding communities;	• Career opportunities • Advancement of women in workplace • Ensuring that women's voices in the community are listened to and their challenges understood
6. Clean water and sanitation	2.4 Impact assessment; 10.1 Water efficiency; 10.2 Water access and quality;	• Ensure project development is based on strong impact assessment and mitigation measures • Improve water efficiency • Co-operate with other water users • Avoid adversely affecting water quality
7. Affordable and clean energy	10.4 Energy efficiency and reporting;	• Improve energy efficiency • Increase communities' access to electricity through infrastructure investment/upgrades

Sustainable Development Goal	Relevant Responsible Gold Mining Principles	Potential Gold Mining Contribution to the realisation of the SDGs
8. Decent work and economic growth	1.6 Taxes and transfer pricing; 3.1 Supply Chain; 6.1 Wages and benefits; 6.2 Preventing discrimination and bullying; 6.3 Child and forced labour: 6.4 Freedom of association and collective bargaining;	• Decent pay and conditions • Insist on workplaces free of bullying • Capacity building and training • Upholding core international labour rights • Payment of taxes to help fund public services • Insist on high social and environmental standards in supply chain
9. Industry, innovation and infrastructure	3.1 Supply chain; 3.2 Local procurement; 7.3 Creating local benefits;	• Local procurement and local SME development • Jobs and training • Supporting the improvement of social and environmental practices amongst responsible artisanal miners • Opening opportunities for local communities from improved infrastructure
10. Reduced inequalities	3.1 Supply chain; 6.6 Women and mining; 6.1 Wages and benefits; 6.2 Preventing discrimination and bullying; 6.6 Women and mining: 7.2 Understanding communities; 7.3 Creating local benefits;	• Create well paid jobs • Create opportunities in remote communities • Show respect for workforce and insist on high standards in workplace • Local procurement and SME development • Capacity building for improving delivery of better public services
11. Sustainable cities and communities	2.4 Impact Assessment; 3.2 Local procurement; 7.3 Creating local benefits; 7.8 Resettlement;	• Creating good quality jobs and training • Creating supply chain opportunities for SMEs • Social investment to improve livelihoods and public services • Capacity building for individuals and institutions • Understand the mine's impacts and take steps to avoid or mitigate potential damage
12. Responsible consumption and production	5.4 Conflict; 8.1 Managing environmental impacts; 8.2 Tailings and waste management; 8.3 Cyanide and hazardous materials; 8.4 Mercury; 10.1 Water efficiency; 10.2 Water access and quality; 10.3 Combating climate change; 10.4 Energy efficiency and reporting;	• Implementation of Conflict-Free Gold Standard to ensure that gold mining does not fund or support conflict • Observe recognised international standards for the management of cyanide and hazardous chemicals and storage of tailings • Use water responsibly and efficiently • Seek to reduce GHG intensity and, where possible, decarbonise operations • Support responsible artisanal mining groups in moving away from mercury use and improving social and environmental practices

Mapping the Responsible Gold Mining Principles on to the Sustainable Development Goals

Sustainable Development Goal	Relevant Responsible Gold Mining Principles	Potential Gold Mining Contribution to the realisation of the SDGs
13. Climate action	10.3 Combating climate change; 10.4 Energy efficiency and reporting:	• Increase energy efficiency and reduce greenhouse gas intensity • Decrease reliance on fossil fuels (e.g. move away from diesel generation) • Ensure resilience of operations to extreme weather events and contribute to greater resilience for local communities
14. Life below water	8.2 Tailings and waste management;	• Large-Scale, regulated gold mining has limited impacts on life below the sea.
15. Life on land	2.4 Impact assessment 8.5 Noise and dust; 9.1 Biodiversity; 9.3 Land-use and deforestation;	• Minimise use of productive land • Be considerate in managing noise and dust • Aim for co-operative use of water resources • Aim to work with others to increase biodiversity • Responsible mine closure
16. Peace, justice and strong institutions	1.0 Ethical conduct; 1.1 Legal compliance; 1.3 Combatting bribery and corruption; 1.5 Transparency; 1.7 Accountabilities and reporting; 2.2 Stakeholder engagement; 2.3 Due Diligence; 2.5 Resolving grievances; 5.1 UN Guiding Principles on Business and Human Rights; 5.3 Security and Human Rights; 5.4 Conflict; 6.7 Raising concerns; 7.1 Community consultation; 7.2 Understanding communities; 7.6 Indigenous Peoples;	• Contribute to host societies by observing high ethical standards and opposing corruption • Ensure that gold mining does not fund illegal armed conflict • Practice high standards of social and environmental due diligence • Consult with and listen to communities and act with consideration • Respect human, labour and indigenous rights • Champion transparency and disclosure of payments to governments as a contribution to accountability and better use of mining revenues
17. Partnerships for the Goals	1.5 Transparency; 3.3 Market access for ASM; 9.1 Biodiversity; 10.1 Water efficiency;	• Aim to work closely with governments and civil society to improve governance, including through increasing transparency around resource revenues • Work with others to improve social and environmental standards amongst responsible artisanal miners • Recognise the power of partnerships in improving local public services and environmental resources

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