



# SUSTAINABILITY REPORT 2021

**IVANHOE MINES**  
NEW HORIZONS

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Indicates further information on our website,  
[www.ivanhoemines.com](http://www.ivanhoemines.com)





"Global climate change is real, and we see ourselves as an integral part of the solution by providing the copper the world urgently needs for an all-electric future."

**Robert Friedland**

Founder, Executive Co-Chairman



# Sustainability reporting framework and cycle

## REPORTING CYCLE AND PERIOD

Annual, January 1, 2021 to December 31, 2021

## REPORTING FRAMEWORKS

Frameworks, reporting guidelines and good practice standards that inform our approach to sustainability and the identification of material matters include the following:

- CDP (formerly Carbon Disclosure Project);
- Global Reporting Initiative (GRI) Reporting Principles and Core Option Standards;
- International Council of Mining and Metals' (ICMM) 10 Principles: A Best Practice Framework for Sustainable Development;
- International Finance Corporation's Performance Standards;
- International Labour Organization;
- Local Procurement Reporting Mechanism (LPRM);
- Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises;
- Responsible Mining Foundation's Responsible Mining Index;
- Task Force for Climate-related Financial Disclosures (TCFD);
- United Nations Guiding Principles on Business and Human Rights (UNGPs);
- United Nations Declaration of Human Rights (UNDHR);
- United Nations Global Compact (UNGC);
- United Nations Sustainable Development Goals (UN SGDs);
- Voluntary Principles on Security and Human Rights; and
- World Economic Forum's International Business Council Stakeholder Capitalism Metrics (WEF SCM).

**The information in this sustainability report has been prepared and presented in accordance with the GRI's Core Option Standards.**

## MATERIAL TOPICS

Subjects are prioritized for inclusion in the sustainability report based on significance to Ivanhoe Mines' stakeholders and the mining and minerals sector in general, as well as significance of the organization's economic, environmental, and social impacts, as approved by the Sustainability Committee of the Board.

## INDEPENDENT ASSURANCE

The Company previously engaged the auditing firm PricewaterhouseCoopers Inc. (PwC) to perform an assurance readiness assessment on a limited number of key performance indicators (KPIs), as well as to provide advice on the Company's processes to support an assured report. The Company is implementing the recommendations of this report, as well as systems and other steps towards achieving full third-party assurance of its sustainability report.

## REVIEW

This sustainability report has been reviewed and approved by Ivanhoe Mines' Sustainability Committee of the Board and executive management, including the President; EVP Sustainability and Special Projects; EVP Technical Services; CFO; Group Finance Manager; and Group Legal and General Counsel.

## REPORT SCOPE

This sustainability report discloses information only on our material projects over which Ivanhoe Mines has direct or joint management control. The following are our four principal projects in Southern Africa, namely:

- 1 the **Kamoa-Kakula Mining Complex**, formerly known as the **Kamoa-Kakula Project**, Lualaba Province, in the Democratic Republic of the Congo (DRC)
- 2 the **Platreef Project** in Limpopo Province, Republic of South Africa (RSA)
- 3 the **Kipushi Project** in Haut-Katanga Province, DRC
- 4 the **Western Foreland Exploration Project** Lualaba Province, DRC

Corporate data, as well as data for the Western Foreland Exploration Project, has only been provided where relevant.

We disclose sustainability on a 100%-project basis, as if the Company owned 100% of all operations, even though each project has individual shareholding structures.

For occupational health and safety statistics purposes, "total workforce" in this sustainability report means the average of 12,374 employees and contractors who are eligible for induction and/or medical surveillance and contributing to the safety statistics, as at December 31, 2021.



## 1

# Our approach to sustainability reporting

## About this report

Ivanhoe Mines Ltd. (the Company) has published an annual sustainability report since 2017. The reports provide updates on our economic, health and safety, environmental and social issues, activities and performance that are of greatest interest, importance and impact to our internal and external stakeholders on local, regional and global levels. Stakeholders include the communities near our operations and host governments in the countries where we operate, our employees, our suppliers, and our investors.

This 2021 sustainability report is our fifth annual public report published in accordance with the Global Reporting Initiative (GRI) Core Option Guidelines. It augments filings and public disclosures made by Ivanhoe Mines Ltd. under applicable securities laws and stock exchange rules, copies of which can be found under the Company's profile on the System for Electronic Document Analysis and Retrieval (SEDAR) at [www.sedar.com](http://www.sedar.com). Detailed information regarding our nature of ownership, legal form, financial and operational results for the reporting period can be found in our Annual Information Form (AIF), 2021 Annual Management's Discussion and Analysis (MD&A) and Financial Statements. This sustainability report reinforces the Company's objective of transparency in reporting on its sustainability initiatives, taking cognizance of the OECD Guidelines for Multinational Enterprises on disclosure practices, and consists largely of information about the Company's sustainability management approach, policies, practices and performance for the reporting period. Information for preceding years has been provided only where available and applicable.

**This sustainability report aims to provide relevant disclosures and information that meet the needs of individuals and groups across various stakeholder groups, investment analysts and investors.**

BENEDICTE NZOLANTIMA, SENIOR OFFICER, CORPORATE DEVELOPMENT, KAMOA-KAKULA MINING COMPLEX.





# Our journey

Discovering, developing, and mining world-class assets requires tenacity and grit, and Ivanhoe Mines' efforts over the past 29 years have demonstrated to the world that perseverance and commitment. Through the unwavering support from our shareholders, the dedication and loyalty of our passionate teams, as well as the support from our local stakeholders, we realized a significant milestone in our journey in 2021.

The commencement of production at Kamoakakula marks the start of a new chapter, setting us on a path to become the world's next major, diversified mining company. Ivanhoe Mines aims to be a long-life supplier of critical metals that the world requires for a greener future, while creating and sustaining innovative partnerships with our host communities that foster strong, long-lasting relationships built on a foundation of mutual respect, shared benefit, and open communication.

We have rallied together through the many challenges on our journey, including the impacts of a global pandemic. This has enabled Ivanhoe Mines to deliver a landmark performance marked by exceptional achievements in both mine development and sustainability. We look forward to writing this next chapter in our story, and ultimately leaving a legacy that will last for generations.



ROBERT FRIEDLAND, IVANHOE FOUNDER AND EXECUTIVE CO-CHAIRMAN.

## 1997-1998

- Exploration permits (DRC and South Africa) acquired

## 2008

- Ivanhoe's geologists discover major, high-grade copper deposit in DRC (Kamoa)

## 2011

- 68% interest acquired in Kipushi Zinc Mine
- Itochu acquires 8% additional interest in the Platreef Project
- Memorandum of Understanding (MOU) for Mwadingusha hydropower plant upgrade concluded with DRC state-owned power company

## 2012

- Mining licence for the Kamoa-Kakula Mining Complex awarded
- Successful initial public offering on the Toronto Stock Exchange

## 2013

- Kipushi Mine dewatering completed

## 2014

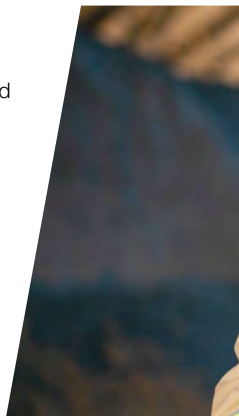
- Construction begins on a box-cut and decline for the Kansoko Mine on the Kamoa Deposit
- Platreef B-BBEE structure established and mining right awarded

## 2015

- Kipushi drilling program completed
- Landmark agreement concluded with Zijin for Kamoa development
- Ivanhoe's geological team receives the prestigious Thayer Lindsley International Discovery Award (Kamoa discovery)

## 2016

- Ivanhoe Founder, Robert Friedland inducted into Canadian Mining Hall of Fame
- Second major high-grade copper discovery made by Ivanhoe's geologists (Kakula)
- Kamoa demonstrated by Wood Mackenzie as largest ever copper discovery on the African continent
- Ivanhoe and Zijin transfer an additional 15% interest in the Kamoa-Kakula Mining Complex to the DRC government in a landmark agreement
- Kamoa received first power from Mwadingusha hydropower plant
- Colin Spence Award (Flatreef Discovery)







## 2017

- Ivanhoe issues prefeasibility study for the rebirth of Kipushi Mine
- Kakula box-cut completed and Kakula West deposit discovered

## 2018

- Strategic C\$723 million equity investment in Ivanhoe by China-based CITIC Metals
- Rock hoisted successfully to surface by upgraded Kipushi Shaft 5
- Platreef secured long-term supply of treated bulk water
- First corporate sustainability report issued
- Former South African President Kgalema Motlanthe appointed as an Ivanhoe director

## 2019

- Full-scale construction of Phase 1 mine and concentrator operation at Kamoa-Kakula commenced
- 27km road linking Kamoa-Kakula with the Kolwezi airport constructed

## 2020

- Platreef shaft 1 sinking completed
- Company veteran, Marna Cloete, promoted to the role of President
- Two distinguished female business leaders, Nunu Ntshingila and Martie Janse van Rensburg, appointed as Ivanhoe directors

## 2021

- Commercial production at Kakula begins on 1 July
- Agreement with DRC state-owned power company extended to include Inga II hydropower complex turbine 5 upgrade
- Robert Friedland inducted into American Mining Hall of Fame
- David van Heerden promoted to the role of Chief Financial Officer
- Emissions-free, battery-electric equipment purchased for Platreef underground mine development
- Three-year collective agreement concluded with Platreef workforce

**“The world’s epic energy transformation absolutely requires us to succeed, and we invite everybody to join us on our journey.”**

May 3, 2021

**Robert M. Friedland**  
Founder, Executive Co-Chairman

**Yufeng (Miles) Sun**  
Non-Executive Co-Chairman



**Sustainable development has always been top of mind for Ivanhoe and at the forefront of our corporate approach.**

Ivanhoe Mines makes concerted investments in the host communities where we operate, through our community enhancement initiatives, local procurement opportunities and the stakeholder agreements concluded with our host governments, host communities, local entrepreneurs and employees. In excess of **\$1.1 billion** of total value was created and distributed in 2021.

Nunu Mtshingila



# Message from the Chair of our Sustainability Committee

## To our valued stakeholders

The global paradigm shift towards a new way of thinking about value creation and a greater than ever focus on organizational accountability, disclosure and transparency of environmental, social and governance (ESG) performance, is reshaping the mining landscape. This in turn is demanding a shift change from mere reporting practices to firmly embedding these issues into organizational culture, strategy and process. Becoming an “impact organization” is crucial to long-term success and we acknowledge that industry and business, as key role players in society, must take the lead in responding to global challenges and national development agendas.

Sustainable development has always been top of mind for Ivanhoe and at the forefront of our corporate approach. We appreciate the long-term, shared value yielded by sustainable development, as well as the organizational benefits, which include risk reduction, greater shareholder demand, improved valuation, and an advantageous cost of capital. We therefore welcome the opportunity to embrace exemplary ESG practices as an integral part of our culture, core purpose and strategy. We recognize that maintaining our social license to operate is dependent upon our ability to honour our commitments and improve our ESG integration and performance. Greater identification, articulation and disclosure of ESG data and performance leads to opportunities for enhanced performance and social trust. As such, we embrace the myriad of ESG ratings opportunities which only serve to bolster our commitment to being a leader in sustainable development further encouraging us to strive for continual improvement in the performance areas of the metrics underlying these scores.

Nations across the globe are in absolute agreement about one thing – the urgent need for the world to align meaningfully around the 1.5 °C global temperature rise scenario. This places decarbonization prominently as a significant driver of value for metals and mining. This fully aligns with Ivanhoe’s core purpose, which is to responsibly provide the metals needed today to fuel the green revolution required to build a better world for tomorrow (see page 10).

Ivanhoe Mines sees good governance as a competitive advantage and we strive to maintain the highest standards of ethics, corporate governance, honesty and accountability in all that we do. We acknowledge the ICMM imperative to implement good practices

and innovation to improve social, environmental and economic performance, while also enhancing shareholder value. Our approach to the creation of shared value for our shareholders and society is underpinned by the WEF’s four pillars for stakeholder capitalism – principles of Governance, People, Planet and Prosperity – which are aligned to the UN SDGs.

The foundations of corporate citizenship and respect for human rights are essential drivers of the pursuit of the underlying business objective of building shared value. We embrace an intrinsic sense of respect for fundamental human rights, and affirm our commitment to prevent, mitigate and remediate negative human rights impacts, by conducting ongoing human rights due diligence, and embedding human rights management plans into our operations (see page 42).

We are pleased to present our fifth sustainability report which defines our strategic approach and policy imperatives, provides insight into the opportunities, challenges and risks associated with our business, and highlights our sustainability performance at our key projects. We are determined to build and operate our mines as true showcases for responsible environmental stewardship, transformative social performance and ethical, transparent governance. We strive for the social and economic benefits of our discoveries to be shared as widely as possible. We are committed to progressing diversity, equity, and inclusion across all our operations, and to achieving a level of diversity across all levels of our organization, reflective of our host communities. Ivanhoe will thus continue to advance both gender and local participation in our mining projects, with targeted programs that provide high-quality educational initiatives, training programs and employment (see page 50).

Pursuant to our commitment to our local stakeholders, Ivanhoe Mines makes concerted investments in the host communities where we operate, through our community enhancement initiatives, local procurement opportunities and the stakeholder agreements concluded with our host governments, host communities, local entrepreneurs and employees. An excess of \$1.1 billion of total value was created and distributed in 2021 (see page 92).

As we evolve from one of the world’s finest explorers to a leading producer of important green metals, we will strive to push the envelope of our ESG agenda, reaffirm our commitment to our host African nations and look forward to a bright future of shared prosperity.

Sincerely,



**Nunu Ntshingila**

Independent Director, Chair of Sustainability Committee and Member of Compensation and Human Resources Committee

**We acknowledge the dedication, efforts and teamwork of our diverse workforce who work tirelessly to advance the organizational mandate, recognizing every role as an essential cog in the wheel of Ivanhoe's success.**

We value our role as a cosmopolitan, global corporate citizen in the international market and continually strive towards a social compact between government, labour, business and communities underpinned by stakeholder capitalism.



Marna Cloete



# Message from our President

## To our valued stakeholders

In 2021 Ivanhoe Mines realized the culmination of 29 years of hard work in Southern Africa. The attainment of our vision has been made possible by outstanding, targeted exploration, and methodical mine planning and development – supported by visionary leaders and shareholders with a measured appetite for risk. With great risk comes great reward and we are now on the cusp of an exciting new horizon. We are here to heed to the call for a net zero world because the energy transition starts with mining. Copper is an irreplaceable element for advanced energy technology including EV's wind turbines and solar panels. Platinum group metals, nickel and zinc are also critical components of green energy technologies.

We are incredibly proud of the immense accomplishments of the Kamoakakula joint venture Mining Complex, which began producing copper in May 2021 and achieved commercial production on July 1, 2021. Kamoakakula produced a total of 105,884 tonnes of copper in concentrate in 2021, which significantly exceeded the initial 2021 production guidance range of 80,000 to 95,000 tonnes, as well as the raised guidance of 92,500 to 100,000 tonnes. Kamoakakula is already charging ahead with phased project expansions including the recently commissioned Phase 2, putting it firmly on track to become one of the world's largest copper producers (see page 12).

Creating a safe working environment and the culture, conditions and opportunity to foster the holistic health and well-being of our people is paramount to Ivanhoe Mines. At the end of 2021, Kamoakakula had reached 2.7 million work hours free of a lost-time injury, Kipushi had reached 3.96 million work hours free of a lost-time injury, and Platreef had reached 677,450 work hours free of a lost-time injury. It has been more than three years since the last lost-time injury occurred at the Kipushi Project (see page 71).

It is with deep regret, however, that we reported a fatality which occurred on May 31, 2021 at our Kamoakakula Mining Complex. Mr. Kafundilwa Delphin Kabamba, a contractor's employee was cherished by his colleagues as an attentive, cooperative, calm team member, who could be relied on for guidance, but also to lighten the mood owing to his animated nature. Our condolences, thoughts and prayers are with Delphin's family and loved ones.

Acknowledging this loss and that our people are our true wealth, we affirm our commitment to occupational health and safety and we will continue to strive to relentlessly protect the health and safety of our employees and our local communities.

We acknowledge the dedication, efforts and teamwork of our diverse workforce who work tirelessly to advance the organizational

mandate, recognizing every role as an essential cog in the wheel of Ivanhoe's success. We strive to be an employer of choice, where our people are fully engaged and provided with the platform and opportunities to attain their full potential and perform at their peak. Local employment and gender inclusion remains at the top of our agenda. We have responded to this commitment by creating local employment opportunities, supporting skills development for employees and host communities, implementing workforce and recruitment management processes, supporting initiatives to continue to diversify our workplace, and launching programs and initiatives to build a strong pipeline of talent for management succession, such as Kamoakakula's Kipaji Development Program (see page 79).

We significantly progressed our "green agenda" in August 2021 through an extension of the existing financing agreement with the DRC state owned power company, La Société Nationale d'Electricité (SNEL), to upgrade turbine 5 at the Inga II hydropower complex. Turbine 5 is expected to produce 162 MW of renewable hydropower, providing the Kamoakakula Mining Complex and the planned, associated smelter with abundant, sustainable electricity for future expansions (see page 114). We have also placed an initial order with Epiroc of Stockholm, Sweden, for the Platreef Project's primary mining fleet consisting of emissions-free, battery-electric jumbo face drill rigs and load haul dump (LHD) vehicles (see page 130).

Ivanhoe was committed to being a modern leader in sustainability, environmental stewardship and responsible mineral production long before Environmental, Social, and Corporate Governance (ESG) metrics went mainstream. As an organization that seeks to remain resilient and retain our competitive advantage, we have the appetite to continue to strategically integrate these drivers which are shaping the future of mining into our organization, especially as stakeholders increasingly insist that, ESG and climate change considerations feature in a company's value creation story.

We value our role as a cosmopolitan, global corporate citizen in the international market and continually strive towards a social compact between government, labour, business and communities underpinned by stakeholder capitalism. We believe that the foundations of this compact have been progressed during this reporting year. We invite you to read our fifth sustainability report which details our health and safety, environmental, social and governance performance in 2021. This report also contains a number of success stories, in the form of 'special reports', as well as interviews with local stakeholders, which we are incredibly proud to showcase.

2021 was truly a momentous year, but the best is yet to come. We look forward to a bright future of shared value.

Sincerely,



**Marna Cloete**  
President

## 2

OUR BUSINESS  
AT A GLANCEOur Company and the metals to  
fuel the green revolution

Ivanhoe Mines is a mining, mineral exploration and development company seeking to build a leading, global commodity-diversified mining and exploration company, operating world-class assets. Ivanhoe strives to create value for shareholders by earning and distributing profit, as well as create shared value for society, by investing in infrastructure and contributing to inclusive economic growth and sustainable jobs, paying tax and sharing value with local communities.

We are attaining this through responsibly advancing our four key assets in Southern Africa that will produce many of the metals that the world urgently needs for cleaner air and water, and a low-carbon future: (1) The operation and continued development of new underground major, world-class mines at the Kamoakakula Mining Complex in the DRC; (2) The Platreef palladium-rhodium-nickel-platinum-copper-gold discovery in South Africa; (3) The extensive redevelopment and upgrading of the historic Kipushi zinc-copper-germanium-silver mine, also in the DRC; (4) The Western Foreland Exploration Project in the DRC, adjacent to Kamoakakula.

Kamoakakula began producing copper concentrates in May 2021 and began commercial production on July 1, 2021. Through planned phased expansions, Kamoakakula is positioned to become one of the world's largest copper producers. High grade copper ore and an underground mine presents opportunities for both low-cost production and a lower environmental footprint.

Advancing the Kipushi and Platreef Projects to production are key near-term objectives. At the Platreef Project, this includes shaft equipping and changeover, lateral underground development to establish access to the orebody, and construction of a processing facility on the surface. At the Kipushi Project, existing underground infrastructure has been refurbished to facilitate a return to production and the Company's focus has been on the recent completion of the project's feasibility study, as well as project studies for the construction of surface infrastructure. Major strides forward were taken for both projects in 2021. In December 2021, the Platreef Project secured a \$200 million gold stream financing and additional \$100 million palladium and platinum stream financing, providing the majority of the capital required to fast-track Platreef into production by means of a phased development pathway. A new memorandum of understanding (MOU), concluded between Ivanhoe Mines and La Générale des Carrières et des Mines (Gécamines), entitles the ultra-high-grade Kipushi Mine to return back to commercial production.

Exploration continues to play a key role in the Company's business strategy, primarily at the highly prospective Western Foreland Exploration Project.

Metals and minerals are vital components of clean energy technologies – from wind turbines and electricity networks to electric vehicles. As calls for decarbonization continue to drive global economies and clean energy transitions gather pace, the demand for these crucial metals and minerals is set to increase. Through our portfolio of assets, Ivanhoe Mines is perfectly poised to be a long-life, responsible producer of critical green metals, which the world needs desperately for global decarbonization and the electrification of its economy.





### Kamoa-Kakula

Copper discoveries and mine development  
DRC's Central African Copperbelt

**39.6% owned**

Zijin Mining 39.6%, Crystal River 0.8%,  
DRC Government 20%

### Kipushi

Zinc, copper, silver and germanium  
at upgraded, historic, high-grade mine  
DRC's Central African Copperbelt

**68% owned**

Gécamines 32%

### Western Foreland

Copper exploration  
DRC's Central African Copperbelt

**90 to 100% owned**



### Platreef

Platinum-group metals, gold, nickel and copper  
South Africa's Bushveld Complex

**64% owned**

Japanese consortium 10%,  
Broad-based Black Economic Empowerment  
Partners 26%

## COPPER



We are on track to becoming a leading global copper producer. Our Kamoa-Kakula Joint-Venture Mining Complex began producing copper in May 2021, with planned phased expansions underway. We also have an extensive copper exploration program ongoing in the DRC on our highly prospective, 90% to 100%- owned Western Foreland exploration licences, adjacent to the Kamoa-Kakula Mining Complex.

Copper, the king of "green metals", is a crucial metal for the energy transition. With superior electrical and thermal conductivity, copper has become one of the most valuable metals for building the world's next generation of renewable technology, such as zero-emission electric vehicles, solar power, wind power and hydro power. Copper is used in electric motors, batteries, inverters, wiring and in charging stations. Buildings with automation need approximately 10% copper. Copper, which is naturally antibacterial, is known to kill viruses and superbugs. It is now used in hospitals to coat bed rails, call buttons, intravenous drip poles, taps and door handles. It also inhibits the spread of harmful bacteria in water and air distribution systems. Copper can be 100% recycled without any loss in performance.



## PLATINUM GROUP METALS

We expect to become one of the world's largest producers of platinum group metals (PGMs) – namely platinum, palladium and rhodium – through phased expansion at our Platreef joint-venture underground mine in South Africa to reach full production, with production scheduled to begin in Q3, 2024.

Platinum, palladium and rhodium are critical metals used in vehicle pollution-control devices, where they help turn toxic pollutants into less-harmful carbon dioxide and water vapour. Platinum is also vital for zero-emission, hydrogen fuel cell technology. Chromium, commonly occurring with PGMs, is required for steel production – about 85% of wind turbines around the world are manufactured primarily from steel.



## NICKEL

When our Platreef Project in South Africa begins production, it is expected to be a significant producer of nickel. We are working with potential concentrate-processing partners to study ways to incorporate an upgrading step to produce battery-grade nickel sulphate.

Nickel is a key metal needed for electric-vehicle batteries. There is growing market realization that the new era of electric vehicles will be a disruptive, long-term force that will have a material impact on nickel demand. Nickel is also used in wind turbines.



## ZINC

Restoration of commercial production at the past producing Kipushi mine in the DRC would make our Kipushi joint venture the world's highest-grade major zinc mine.

Zinc is used in solar panels and wind turbines. Zinc is also an essential micronutrient that is crucial for growth and brain development, and helps fight dangerous infections, especially in children. Zinc is most commonly used for coating of other metals to protect them from corrosion, and is an important ingredient in fertilizer.

# Our principal projects

## The Kamo-Kakula Mining Complex

The Kamo-Kakula Mining Complex, formerly known as the Kamo-Kakula Project, a joint venture between Ivanhoe Mines, Zijin Mining, and the DRC Government has been independently ranked as the world's fourth-largest copper deposit by international mining consultant Wood Mackenzie.

The Kamo-Kakula Mining Complex is approximately 25 kilometres west of the town of Kolwezi and about 270 kilometres west of Lubumbashi. Ivanhoe and Zijin Mining each hold an indirect 39.6% interest in the Kamo-Kakula Mining Complex, Crystal River holds an indirect 0.8% interest and the DRC Government holds a direct 20% interest.

The Kamo-Kakula Mining Complex began producing copper in May 2021 and achieved commercial production on July 1, 2021. Kamo-Kakula **produced** a total of **105,884 tonnes of copper in concentrate in 2021**, which significantly exceeded the initial 2021 production guidance range of 80,000 to 95,000 tonnes, as well as the raised guidance of 92,500 to 100,000 tonnes.

Kamo-Kakula's **Phase 2, 3.8-Mtpa** concentrator plant declared commercial production on April 7, 2022. This will see a **doubling of Kamo-Kakula's nameplate milling** throughput to **7.6 million** tonnes of ore per annum (Mtpa). Kamo Copper now expects to hit the **upper end** of its 2022 copper production guidance of between **290,000 and 340,000 tonnes of copper**.

Engineering and early works for the Phase 3 expansion, including a new box-cut and twin declines to access new mining areas, is progressing quickly. Early works and engineering on the planned direct-to-blister flash smelter at Kamo-Kakula adjacent to the Phase 1 and Phase 2 concentrator plants are underway. The smelter is designed to use technology supplied by Outotec Oyj of Helsinki, Finland, and has been sized to process the bulk of the **copper concentrate forecast to be produced by the Phase 1, Phase 2 and Phase 3 concentrator plants, with a production capacity of 500,000 tonnes per annum of blister copper**.

After successfully operating the Phase 1 concentrator for more than eight months, the Kamo-Kakula team identified a number of relatively minor modifications that are expected to increase ore throughput from the current design of 475 tonnes per hour to 580 tonnes per hour. These modifications include increasing the diameter of a number of pipes, replacing a number of motors and pumps with larger ones and installing additional flotation, concentrate-thickening, concentrate filtration and tailings-disposal capacity. These modifications will allow the team to consistently operate the concentrator plant at the increased throughput without compromising plant availability, copper recovery or copper concentrate grade. Engineering design is underway and procurement of long-lead items already has started. This debottlenecking project is expected to cost approximately \$50 million and will increase Kamo-Kakula's combined processing capacity to 9.2 Mtpa by Q2, 2023.



Copper concentrate in 2021

**105,884 tonnes**

Phase 1 and 2 producing by Q2, 2023

**450,000 tonnes annually**



KAMO-KAKULA PHASE 1 AND 2 CONCENTRATOR PLANT.





Phase 2 steady state production rate of

**5.2 MTPA**

The phased development pathway enables

**Production in Q3, 2024**



PLATREEF SHAFT 1

## The Platreef Project

The Platreef Project hosts an underground deposit of thick, platinum-group metals, nickel, copper and gold mineralization on the Northern Limb of the Bushveld Igneous Complex in Limpopo Province – approximately 280 kilometres northeast of Johannesburg and eight kilometres from the town of Mokopane.

The project is owned by Ivanplats (Pty) Ltd, which is 64%-owned by Ivanhoe Mines. A 26% interest is held by Ivanplats' historically-disadvantaged, broad-based, black economic empowerment (B-BBEE) partners, which include 20 local host communities consisting of approximately 150,000 people, project employees and local entrepreneurs. A Japanese consortium of ITOCHU Corporation, Japan Oil, Gas and Metals National Corporation, and Japan Gas Corporation, owns 10%.

The changeover construction at Shaft 1 is progressing to plan and is on schedule for commencement of rock hoisting early in 2022. **Shaft 1 will initially be used to access the orebody and is approximately 450 metres away from a high-grade area of Flatreef that is planned for bulk, mechanized mining.** The three development stations on the 750-, 850-, and 950-metre levels, as well as the 996-metre-level station at the bottom of Shaft 1, have also been completed. This will provide initial underground access to the high-grade orebody.

Shaft equipping commenced in May 2021 and was completed by the end of March 2022. Following the completion of the changeover work in the shaft, underground stations, and establishment of the ore and waste passes, lateral underground mine development will commence toward high-grade ore zones.

The Shaft 2 headframe construction, from the hitch to the collar level, is progressing well with the sixth and seventh headgear lifts completed and the eighth and final lift well advanced.

**In February 2022, Ivanhoe Mines announced the results of a new independent feasibility study for the Platreef Project that builds on the alternate scenario to expedite production, based on a steady state production rate of 5.2 million tonnes per annum (Mtpa), confirming the viability of a new phased development pathway to fast-track Platreef into production in Q3, 2024.**

## The Kipushi Project

The existing Kipushi Mine is located on the Central African Copperbelt in the DRC's southern Haut-Katanga province, one of Africa's major mining hubs.

The mine, which operated between 1924 and 1993, is approximately 30 kilometres southwest of the provincial capital, Lubumbashi, and less than one kilometre from the DRC-Zambia border. Ivanhoe Mines holds a 68% interest in Kipushi; the state-owned mining company, La Générale des Carrières et des Mines (Gécamines), holds the remaining 32% interest.

**Kipushi Holding and Gécamines have signed a new MOU to return the ultra-high-grade Kipushi Mine back to commercial production.** Kipushi will be the world's highest-grade major zinc mine, with **an average grade of 36.4% zinc over the first five years of production.**

**On February 14, 2022, Ivanhoe Mines announced the positive findings of an independent, feasibility study** for the planned resumption of commercial production at Kipushi. The redevelopment of Kipushi is based on a **two-year construction timeline**, which utilizes the significant existing surface and underground infrastructure to allow for substantially lower capital costs than comparable development projects. The estimated pre-production capital cost, including contingency, is \$382 million. At a long-term zinc price of \$1.20/lb, the **after-tax net present value (NPV)** at an 8% real discount rate is **\$941 million**, with an after-tax real internal rate of return (IRR) of 40.9% and project payback period of 2.3 years. Concurrent with the release of the feasibility study, Ivanhoe Mines is finalizing Kipushi's development and financing plan, together with Gécamines.

The 2022 feasibility study focuses on the mining of Kipushi's zinc-rich Big Zinc and Southern Zinc zones, with an estimated **11.8 million tonnes of Measured and Indicated Mineral Resources grading 35.3% zinc**. Kipushi's exceptional zinc grade is more than twice that of the world's next-highest-grade zinc project, according to Wood Mackenzie, a leading, international industry research and consulting group.

The 2022 feasibility study envisages the recommencement of underground mining operations, and the construction of a new concentrator facility on surface with annual processing capacity of 800,000 tonnes of ore, producing on average 240,000 tonnes of zinc contained in concentrate.



After-tax NPV

**\$941 million**

Estimated measures and indicated mineral resource

**11.8 million tonnes grading  
35.3% zinc**



DAILY SAFETY MEETING AT KIPUSHI PROJECT'S  
MAIN PRODUCTION SHAFT, SHAFT 5.





Exploration licences

## Adjacent to the Kamoa-Kakula Mining Complex

Combined exploration area

2,550km<sup>2</sup>, 90%-100%- owned



GEOPHYSICS SURVEYS, WESTERN FORELAND EXPLORATION PROJECT.

## The Western Foreland Exploration Project

Ivanhoe's DRC exploration group is targeting Kamoa-Kakula-style copper mineralization through a regional exploration and drilling program on its Western Foreland exploration licences, located to the north, south and west of the Kamoa-Kakula Mining Complex.

Ivanhoe's Western Foreland Exploration Project consists of **17 exploration licences** that cover a combined area of approximately **2,550 square kilometres**, the majority of which are **90% to 100%-owned** by Ivanhoe. The remaining 10% of the licences is held by individuals of Congolese nationality in accordance with the DRC Mining Code. Exploration models that successfully led to the discoveries of Kakula, Kakula West, and the Kamoa North Bonanza Zone on the Kamoa-Kakula joint-venture mining licence are being applied to the extensive Western Foreland land package by the same team of exploration geologists responsible for the previous discoveries.

Exploration progress continues through the mapping of the South Western permits and the ongoing interpretation thereof, as well as airborne and ground gravity survey work. **Data from geophysical airborne surveys, such as magnetics, gravity and electromagnetics, will enhance the target delineation program for drill testing and soil sampling, as well as provide a better understanding of the structural domains of the area.** Magnetics and gravity were completed by the end of 2021 with the electromagnetic survey and additional gravity survey 46% completed by the end of the year.

Construction of the access spine road across the western permits now has a total length of 69.4 km. Container based bridges were installed along the entire length of the road to provide all season access to the full extent of the southwest foreland. Some additional wet season access roads were completed to allow additional drilling during the wet season. Additional road building will be required during 2022.

An extensive 95,000 metre drilling program is planned for 2022, commencing with the onset of the dry season in the DRC.



**At Ivanhoe we are all one big family, committed to each other and to the organizational mandate, which is rooted in a deep commitment to our agenda for sustainable development.**

Our culture is one of caring for others, and therefore of operating with the best interests of our key stakeholders in mind. Our culture is one of “ubuntu”.



Patricia Makhesha



# Message from our Executive Vice President, Sustainability and Special Projects

## To our valued stakeholders

The Southern African concept of “ubuntu” – “I am because you are” – encapsulates the quintessence of humanity’s oneness. An appreciation for this concept compels us to contemplate how everything we do has an impact on others and on society and to further reflect on whether true self-actualization can be attained through sharing ourselves with others, and caring for those around us.

Ivanhoe Mines is determined to share the benefits of our magnificent discoveries as widely as possible, ensuring that host communities benefit from an enduring and sustainable local economy arising from the mines on their doorstep. We want to make a meaningful, positive impact on our collective social, economic and environmental well-being because we are inextricably intertwined. We believe that meaningful change for the long-term must start with the youth, our future generations of leaders. We regard education as one of the strategic objectives underpinning our sustainability agenda and have implemented a number of initiatives across our projects focusing on ensuring access to quality education (see page 110).

The Sustainable Development Goals (SDGs) were adopted by all United Nations Member States in 2015. They are a universal call for action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030. These goals call for great change in our society and firmly embedding the concept of ubuntu at their core. Building on the work done over the past two years, together with PricewaterhouseCoopers Inc., we have kicked off the detailed strategic activities that will focus Ivanhoe Mines on how to effectively respond to the SDGs as a business driver. This in turn will inform the development of a detailed implementation plan (see page 44).

As the organization grows and develops, and we evolve from explorers and mine developers to producers, we believe it is pertinent to take stock, realign and redevelop our vision, mission and values. In this period of rapid change, it is imperative to us that we retain our culture, which is the heartbeat of our organization and is integral to everything that we do. At Ivanhoe we are all one big family, committed to each other and to the organizational mandate, which is rooted in a deep commitment to our agenda for sustainable development. Our culture is one of caring for others, and therefore of operating with the best interests of our key stakeholders in mind. Our culture is one of ubuntu.

It is against this backdrop that we are developing our new vision, mission and values, both at a corporate and project level, which we believe embody the ethos of ubuntu, caring not only for people, but also the planet that sustains us.

We proudly share the new vision, mission and values for the Kamoia-Kakula Mining Complex and Platreef Project and we look forward to finalizing our new Kipushi Project and Corporate vision based on all pillars of our sustainable development agenda- Governance, People, Prosperity and Planet. We are optimistic about the promise that the future holds for us all.

Sincerely,



**Patricia Makhesha**

Executive Vice-President, Sustainability and Special Projects



### VISION

To be a tier one copper producer, creating prosperity for all our stakeholders.

### MISSION

- Create one of the largest copper mining complexes in the world.
- Contribute to the sustainable transformation of the DRC and its people.
- Pioneer a new standard for environmentally and socially responsible mining in the DRC.

### VALUES

- Sustainable growth
- United in diversity
- To thrive



### VISION

Championing a new age of responsible mining.

### MISSION

To transform lives through shared value and to mine in harmony with nature and people.

### VALUES

- Innovation
- Proficiency
- Care

**The ESG landscape is a dynamic and pertinent one, and the road toward broad-based stakeholder capitalism and the disclosure thereof should be regarded as a journey.**

We are committed to cultivating and executing a systematic, world-class approach to ESG, continually evaluating and enhancing our ESG priorities, and bolstering our corporate disclosures.



Jasmine Abrahams



# Message from our Group Manager, Sustainability

## To our valued stakeholders

The coronavirus pandemic has highlighted the significance of genuine human connections. For over 20 years, Ivanhoe Mines has invested in our social license to operate through an approach underpinned by respect, reliability and trust. We engage and we listen – to both our internal stakeholders, our employees, as well as our external stakeholders which include our community stakeholders, who are best placed to advise us on their own developmental goals and needs. We pride ourselves on our inclusive stakeholder engagement and community development approach, which we are continually working to enhance and improve (see page 36).

The ESG landscape is a dynamic and pertinent one, and the road toward broad-based stakeholder capitalism and the disclosure thereof should be regarded as a journey. We are committed to cultivating and executing a systematic, world-class approach to ESG, continually evaluating and enhancing our ESG priorities, and bolstering our corporate disclosures. We strive to attain ESG imperatives beyond our compliance conscripts, and embrace the opportunities enabled through the use of innovative software and technological solutions, which will equip us to more

effectively track, monitor and meaningfully demonstrate our ESG performance (see page 88).

We are cognizant of the numerous ESG indices and their potential impact on our reputation, as well as access to international financial markets, and we strive for continual improvement across these various ESG ratings. In line with this undertaking, we have commenced with an extensive gap analysis of global frameworks, standards, principles, reporting mechanisms and ratings methodologies, following which we intend to redevelop our sustainability management system. During 2021, we were upgraded to an ESG rating of A by MSCI. (see page 21 and 22).

We acknowledge the need to enhance on our assessment tools and efforts in respect of supply chain due diligence and commit to making this a priority for 2022. We will also continue to constantly seek out ways to enhance our environmental performance, as well as to seek opportunities for collaboration with partners in order to multiply the effects of our shared value creation.

We thank and acknowledge our teams on the ground who work tirelessly to advance our sustainable development agenda.

Sincerely,



**Jasmine Abrahams**

Group Manager, Sustainability



OUR ENTHUSIASTIC WOMEN IN MINING, KAMOA-KAKULA MINING COMPLEX.

# Our sustainability strategy, key priorities and approach to reporting

Ivanhoe Mines is committed to contributing towards a better world by fostering global prosperity, increasing resilience in local communities and preserving ecosystems through discovering, developing and responsibly operating mines. We acknowledge that sustainability is fundamental to all phases of our operations from exploration to closure. We therefore assess potential impacts and risks associated with our activities across the entire lifecycle of our projects and operations.

We are committed to implementing standards of practice that have been crafted based on international frameworks, principles, codes and programs. Our sustainable development policies are geared towards our commitment across the range of sustainability elements – including health and wellness, meaningful climate action, the protection of human rights, good corporate governance, minimizing the risks associated with the management of water, waste and tailings, ecosystem integrity – and their interdependency, resulting in broad-based socio-economic prosperity.

While we regard sustainability as a discrete discipline, we continue to embed multi-disciplinary sustainable development priorities and purpose-led sustainable development considerations into our business strategy, as well as in the way we plan and manage our activities. We have developed goals to help build environmental resilience, promote diversity

and inclusion and foster inclusive growth and sustainable livelihoods in our host countries and communities.

We promote **a culture of excellence** that encourages our employees to continuously improve their skills and performance in order to meet regulatory requirements and international best practice standards for health, safety and the environment.

We acknowledge that becoming an “impact organization” is crucial to secure the full benefits of long-term success and we believe that these efforts will also drive value for the Company, because when our communities thrive, our business thrives. We also work to support and contribute to the achievement of the UN SDGs and appreciate the need to focus our efforts where we can have the greatest impact. As such we are working towards embedding a number of priority SDGs in our business strategy and processes, focusing on which are most actionable in our operational environments (see page 44).

Our sustainability strategy and the external factors that affect our performance and reporting are periodically reviewed and evaluated to measure performance in relation to the established goals. Our strategy sets short-term goals for 2022, medium-term goals for 2025 and long-term goals for 2030. Our short-term goals are focused on addressing the most significant sustainability risks as determined by our materiality assessment. Our medium- and long-term goals seek to address a wider range of sustainability risks facing Ivanhoe, together with the opportunities associated therewith. These goals are underpinned by our vision, mission, values and key priorities, with a particular focus on “conscientiously” as determined from our mission statement.



PITLES CONSTRUCTION, A LOCAL CONTRACTOR, RESPONSIBLE FOR THE REMOVAL OF THE SUB-SOIL STOCKPILE, PLATREEF PROJECT.



## IVANHOE'S SUSTAINABILITY PRIORITIES 2030



E

## Three pillars for conscientious production

- A **mine of the future**, enabled through digitalization and technology
- Environmentally conscious operations, targeting **net-zero emissions**, efficient water stewardship, circular economy waste practices and concurrent rehabilitation
- Safely designed and operated, **low-impact tailings** storage facilities

S

## Three pillars for conscientious relationships

- **Safe operations**, targeting zero fatalities and a year-on-year reduction in lost time from incidents, as well as effective emergency response planning
- **Diversity and inclusion**, targeting **gender** inclusion and participation across all organizational levels and in the supply chain
- Social progress through **community development**, focused on the provision of access to water, access to education, community health, the enhancement of livelihoods and local procurement

G

## Three pillars for conscientious governance

- **Ethical conduct** through absolute compliance with our Code of Conduct and sustainable ESG practices across our **value chain**
- Enhancing **transparency** through the expansion of verified ESG disclosures and index inclusion
- A **social license to operate**, maintained through ongoing stakeholder engagement, effective grievance management and the protection of human rights

Our approach to sustainability reporting is underpinned by the GRI Core Option Guidelines and in 2020 we adopted the framework of World Economic Forum's International Business Council Stakeholder Capitalism Metrics (WEF SCM) against which to disclose our sustainability approach and performance. This model, which is aligned with the SDGs and principal ESG domains, encapsulates the vision for true stakeholder capitalism, organized into four highly interdependent, interlinked pillars – Principles of Governance, Prosperity, People and Planet. It recommends disclosures, based on universal, material ESG indicators, that can be used by organizations to align their mainstream reporting on performance against, and further track their contributions towards the SDGs on a consistent basis. Each

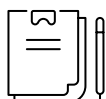
of these pillars has an important bearing on the capacity of the Company to generate shared and sustainable value. Moreover, the corporate community's performance across all of the pillars has an important influence on the pace at which society advances towards the broader aspirations enshrined in the SDGs.

Non-financial corporate reporting is becoming increasingly important. Indicators, reporting processes and data monitoring and assurance are key aspects to ensure alignment to best practice standards. These in turn rely on operational systems to manage, collate, report and continuously improve on ESG indicators. Since 2017, Ivanhoe Mines has reported on a wide range of ESG topics in order to provide our stakeholders with greater visibility on how we are working to

fulfill our sustainability commitments. We continually evaluate and enhance our ESG imperatives and corporate performance reporting to consider and keep abreast with a complex, rapidly evolving discipline comprised of a plethora of global standards, sector frameworks, policy drivers, targets, new agendas, as well as divergent, often competing, concerns from stakeholder groups.

We are currently undertaking an extensive gap analysis of multiple global frameworks, standards, principles, reporting mechanisms and ratings methodologies, following which we will redevelop our streamlined sustainability management system, having regard to its context, underlying principles and guidance, scope and interconnectedness. This process entails a number of steps.

## REDEVELOPING IVANHOE'S SUSTAINABILITY MANAGEMENT FRAMEWORK



Mapping the ESG landscape



Select and integrate applicable frameworks, standards, third party certifications, and reporting mechanisms to be integrated into Ivanhoe's current sustainability management framework



Gap analysis, mapping Ivanhoe's current practices against the new sustainability framework



Developing an action plan for implementation



Integrating this into the framework underpinning our existing digital sustainability management system through system configurations, etc.

Enhancements to Ivanhoe's current policy framework, objectives and targets, programs, plans, operational controls and monitoring procedures will be outlined in the final action plan which will stipulate the detailed approach and actions necessary for the required redevelopment of our sustainability management framework. This process will enable Ivanhoe to attain our objective of greater transparency and accountability, as well as truly showcasing our ESG efforts to exhibit their true worth.

The sustainability report covers our approach to assessing several of the issues most material to our business and outlines the commitments we have made and the progress we are making against the goals we have set for ourselves. It also provides an overview of how our governance and policies support the inclusion of these commitments in decision-making processes and the way we do business to adhere to the highest standards of business integrity and ethics. Our reporting framework takes into consideration key non-financial indicators and guidance from frameworks such as the Global Reporting Initiative (GRI) Standards, the UN Guiding Principles reporting framework, the Task Force on Climate-related Financial Disclosure (TCFD) and the relevant UN SDGs. We also participate in external programs such as CDP, a global disclosure system.

We are committed to continue refining our approach, following inclusive and collaborative stakeholder engagement models, and to setting targets that will enable us to achieve our long-term strategic objectives and priorities, truly equipping us as a positive "impact organization" with an enduring legacy in the areas where we operate.







DR GUY MUSWIL, EXECUTIVE HSE AND SUSTAINABILITY, KAMOA-KAKULA MINING COMPLEX, LEADING MEMBERS OF IVANHOE'S BOARD AND EXECUTIVE MANAGEMENT ON A SOCIAL TOUR.



# Our 2021 sustainability objectives and targets



Determine the strategic frameworks and index inclusion that would be value accretive to Ivanhoe and commence with the implementation of the preliminary frameworks and requirements for inclusion.



Continue embedding the top seven relevant United Nation Sustainable Development Goals (SDGs) through a strategic road map that ties into project sustainability efforts.



Publish 2020 Sustainability Report by May 2021.



Achieve a target of TRIFR less than 3.28\* for project safety using Total Recordable Injury Frequency Rate ("TRIFR") as a measure which is calculated as the number of recordable injuries per 1,000,000 labour hours.



Achieve a project safety target of LTIFR less than 0.92\* using Lost Time Injury Frequency Rate ("LTIFR") as a measure which is calculated as the number of lost time injuries per 1,000,000 labour hours.



Achieve compliance at the Kamoia-Kakula Mining Complex, with socially linked requirements according to the Environmental and Social Action Plan (as compiled by independent specialist on behalf of the lender group for the equipment financing) deliverables in accordance with IFC standards.



Implement a culture and diversity intervention and develop a roadmap with clear targets for inclusion of DRC nationals and females in key management positions.



Obtain DMR approval for the second Social and Labour Plan for the Platreef Project.



Maintain or improve B-BBEE scorecard compliance for the Platreef Project.



Obtain agreement on the development plan with Gécamines, including revising the Joint Venture Agreement.



Achieve compliance at the Kamoia-Kakula Mining Complex, with environmentally linked requirements according to the Environmental and Social Action Plan (as compiled by independent specialist on behalf of the lender group for the equipment financing) deliverables in accordance with IFC standards.



Advance implementation of an integrated water strategy towards optimum water use and recycling of Shaft 2 water at Platreef.



Develop a strategy for green energy (solar) as part of the feasibility study execution plan.



Commission CO<sub>2</sub> emission study for the Platreef Project.



Design and implement an arbor program for implementation in local schools near the Kipushi Project.



Launch a waste management campaign in communities surrounding the Kipushi Project.



\*An operations related fatality decreases the health and safety relating to zero



Achieved



On track



Delayed



Not achieved



# Tracking our key metrics

## Governance



## People



## Prosperity



## Planet



### Material impact: Ethical behaviour

Key performance indicators	2019	2020	2021	Trend
Confirmed incidents of corruption	*	–	–	👍

### Material impact: Stakeholder engagement and grievance management

Number of stakeholders engaged	10,052	10,861	10,645	👍
Number of grievances	81	69	56	👍

### Material impact: Health and safety, including physical and mental well-being

Key performance indicators	2019	2020	2021	Trend
LTIFR (workforce)	0.28	0.27	0.79	👎
Work-hours free of a lost-time injury	4,688,507	5,618,429	7,357,563	👍
Number of fatalities	1	5	1	👎
Number of occupational medicals conducted	1,563	3,529	8,309	👍
Number of patients accessing occupational health services on site	10,396	16,667	16,677	👍
Number of malaria tests conducted	3,148	4,822	5,523	👍
Number of patients tested positive and treated for malaria (per 1000 workforce)	329	228	97	👍
Number of HIV screening tests conducted	624	1,143	2,193	👍

### Material impact: Training and education opportunities

Number of employees in programs for upgrading employee skills, including skills transfer related to succession planning	209	190	450	👍
Number of community beneficiaries in training interventions	2,070	976	1,884	👍

### Material impact: Social compliance and investment

Key performance indicators	2019	2020	2021	Trend
Value created in the local community	*	\$547,253,000	\$907,433,114	👍
Total socio-economic development spend	\$15,661,146	\$10,942,873	\$9,500,052	👍
Proportion of spend on local suppliers	*	\$401,610,000	\$594,063,436	👍
Number of formal and informal local enterprises supported	*	53	91	👍

### Material impact: Environmental compliance

Key performance indicators	2019	2020	2021	Trend
Number of environmental spills (non-significant)	*	2	5	👎
Number of environmental spills (significant)	*	0	0	👍

### Material impact: Water and sanitation management

Water consumption	2,310 MI	-12,734 MI	-5,794 MI	👎
Number of community boreholes installed and/or maintained	*	14	33	👍

\*Data not available/not previously measured or disclosed

# Our 2021 performance at a glance

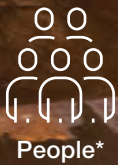


Governance



UNGC Principles 1, 2, 4, 5, 10

- 80% grievances resolved and closed-out
- 633 stakeholder meetings
- 10,645 stakeholders engaged
- SDG vision pledge developed
- Human Rights Impact Assessment undertaken at Kamoakakula



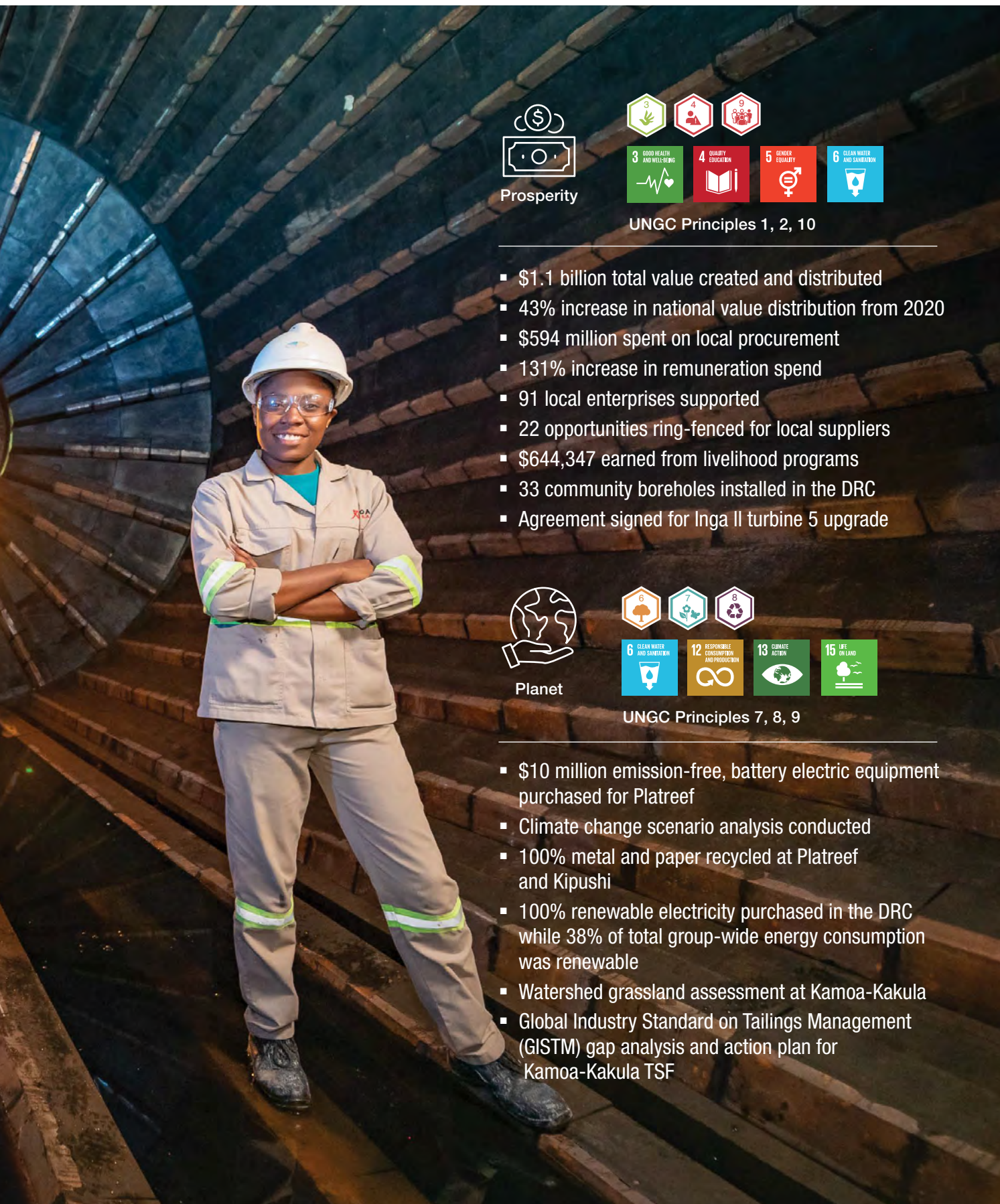
People\*



UNGC Principles 3, 4, 5, 6

- Total workforce of 12,374
- 3,551 new hires
- 9% female employees
- 120 new female hires
- 97% local employees
- Zero strikes or lockouts
- 10,259 safety inductions at Kamoakakula
- Three years free of LTIs at Kipushi
- 1,915 employees vaccinated against Covid-19
- 16,678 consultations at site clinics
- 1,884 beneficiaries of training interventions





Prosperity



UNGC Principles 1, 2, 10

- \$1.1 billion total value created and distributed
- 43% increase in national value distribution from 2020
- \$594 million spent on local procurement
- 131% increase in remuneration spend
- 91 local enterprises supported
- 22 opportunities ring-fenced for local suppliers
- \$644,347 earned from livelihood programs
- 33 community boreholes installed in the DRC
- Agreement signed for Inga II turbine 5 upgrade



Planet



UNGC Principles 7, 8, 9

- \$10 million emission-free, battery electric equipment purchased for Platreef
- Climate change scenario analysis conducted
- 100% metal and paper recycled at Platreef and Kipushi
- 100% renewable electricity purchased in the DRC while 38% of total group-wide energy consumption was renewable
- Watershed grassland assessment at Kamoa-Kakula
- Global Industry Standard on Tailings Management (GISTM) gap analysis and action plan for Kamoa-Kakula TSF



# 3

# OUR GOVERNANCE



**“Strong governance – corporate integrity, transparency and accountability – and the consistent application of strategies that treat people and the environment with respect, form the cornerstone of our objective of building value for all stakeholders.”**

**David van Heerden**  
CFO, Ivanhoe Mines Ltd.



**10,645** stakeholders  
engaged

**633** stakeholder meetings

**Kipushi Human Rights Award**  
for good collaboration with host communities

**SDG vision pledge** developed

Alignment with Ivanhoe's  
priority SDGs



## Our commitment and approach to governance

The definition of governance is evolving as organizations are increasingly expected to define and embed their purpose at the centre of their business. That said, the principles of agency, accountability and stewardship continue to be vital for truly “good governance”. Ivanhoe Mines strives to maintain the highest standards of ethics, corporate governance, honesty and accountability as directed by our Code of Business Conduct and Ethics.

**We strive to adhere to a strict anti-corruption policy by enacting robust corporate governance processes and by providing our employees with appropriate training thereon.**

We regard governance as the cornerstone for setting our purpose and appreciate the role that governance plays in our performance on the other three pillars, namely Planet, People and Prosperity. Governance is the pillar that provides oversight for a company's activities which contribute to stakeholder capitalism.

**We are committed to strong governance – corporate integrity, transparency and accountability** and to the consistent application of strategies and practices that treat people and the environment with respect, while pursuing the underlying business objective of building value for all stakeholders.

**We strive to build and maintain an effective, diverse and appropriately skilled board and to provide our board with adequate tools to fulfill their mandate.**

In seeking to align with the WEF's “Principles of Governance” pillar, Ivanhoe Mines **strives to ensure that its governance model and processes play a central, core role in identifying and managing risk and opportunity**; making decisions; setting strategy and adding to the Company's competitive advantage – holistically and ethically.

**We acknowledge that good governance and sound corporate citizenship are fundamental to maintaining our social license to operate.** We strive to maintain effective stakeholder engagement strategies and practices that enable our stakeholders to understand our activities and priorities and vice versa. We strive to maintain an “open-door” approach for all our stakeholders, and to ensure that the right of access to information is respected. We are committed to maintaining effective feedback and grievance mechanisms which help us to understand and address our stakeholder's concerns.

We appreciate that organizations have a responsibility to respect human rights, as well as to mitigate and remediate any negative human rights impacts, whether caused directly or indirectly.

**We strive to take an active approach to respecting human rights in our operations and across our value chain**, including through embedding human rights due diligence processes as part of our operational approach.

We appreciate the value of truly embedding ESG into our strategy, culture, processes and operations, thereby contributing to international developmental frameworks such as the SDGs, ICMH principles and UNGC principles, and we strive to attain this objective.

Our governance approach is further informed by country-specific regulatory requirements.

## Governing body

The foundation of a public company's corporate governance is its Board of Directors. The stewardship and governance of Ivanhoe Mines is the responsibility of our Board of Directors (the Board). The Board promotes Ivanhoe's success for the benefit of all and determines the purpose, vision and associated strategic direction of the organization. We are committed to assembling a strong and effective Board. Our Board is comprised of women and men of diverse cultures and professional backgrounds, with a broad-range of skills and experiences that enhance the Board's performance and productivity.

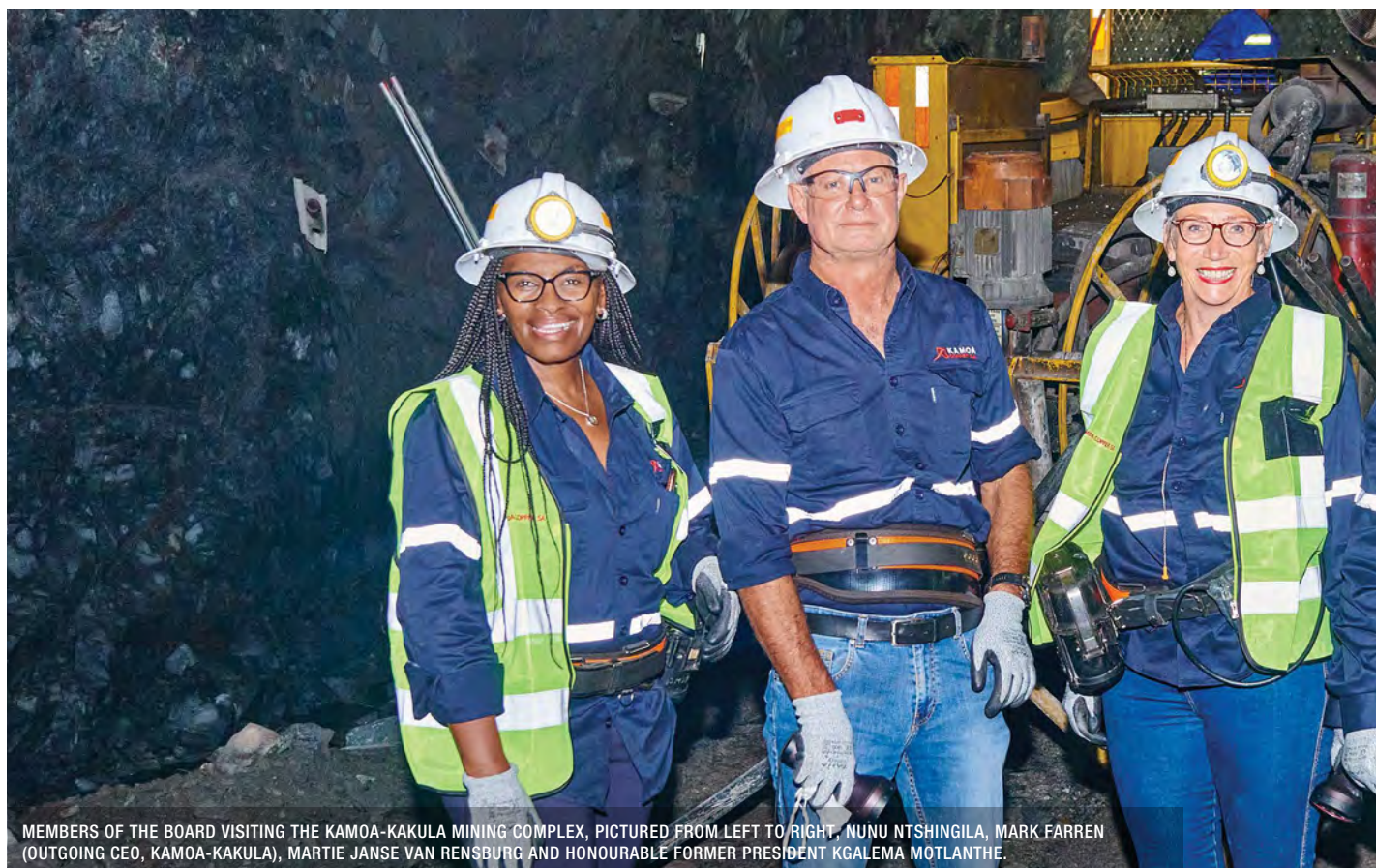
The Board fulfills its mandate of protecting shareholder interests and good corporate citizenship either directly or through delegation to its committees, as indicated below, at regularly scheduled meetings or as required. Our Board is comprised of 11 members, six of whom are considered independent as at December 31, 2021. The Board has four standing committees and one advisory committee. Comprehensive details of the composition of the Board committees may be found on Ivanhoe Mines Ltd.'s website at <https://ivanhoemines.com/about/board-of-directors/>.

Various committees have been established by the Board, such as the Audit Committee which is responsible for financial oversight and risk management. The Board regards ESG as a cross-functional discipline encompassing a wide range of issues, making it relevant to all committees. The committees work together with management to identify ESG issues most pertinent to the Company's business and its key stakeholders, and help the Board develop the policies and processes to integrate ESG into the Company's long-term strategy and risk management responsibilities. A more detailed discussion of our approach to corporate governance and the activities of the various Board committees can be found in the Company's most recently filed **management proxy circular**.

Many of the aspects and performance disclosures covered in this sustainability report fall within the ambit of the Sustainability Committee. The Sustainability Committee is primarily responsible for establishing and overseeing our sustainability and ESG practices and policies relating to safety, health and the environment. It also monitors the effectiveness of these policies and our compliance with them, and receives results and reports from management on our sustainability performance. It also reviews our sustainability-related disclosures.

#### This Committee is charged with:

- annually determining the Company's priorities relating to its principal economic, social and environmental stewardship.
- developing policies, strategies and management practices that achieve and integrate coordinated ESG and sustainability performance.
- considering and implementing measures to adequately manage sustainability impacts, risks and opportunities.
- climate governance.
- promoting a safe and healthy working environment as a primary objective which is fundamental to the Company's business operations.
- driving proactive human rights management.
- promoting robust stakeholder engagement.
- striving for the maintenance of a healthy corporate culture.
- advocating for responsible supply chain management.
- driving local economic development.



MEMBERS OF THE BOARD VISITING THE KAMOA-KAKULA MINING COMPLEX, PICTURED FROM LEFT TO RIGHT, NUNU NTSHINGILA, MARK FARREN (OUTGOING CEO, KAMOA-KAKULA), MARTIE JANSE VAN RENSBURG AND HONOURABLE FORMER PRESIDENT KGALEMA MOTLANTHE.



The Sustainability Committee reviews our business and sustainability strategies and activities at least twice each year to ensure that they meet the needs of the organization and our stakeholders while protecting, sustaining and enhancing human and natural resources, both present and future. At the time of writing, the Sustainability Committee is comprised of four members, 25% of which are female. During 2021, the Sustainability Committee held two meetings which dealt primarily with the following matters:

#### Policies and standards

- Oversaw the review and release of the Ivanhoe Mines Sustainability Report (2020).
- Approved position statements: Biodiversity and protected areas; Workplace diversity and inclusion; Health and safety.

#### International frameworks and conventions

- Approved Ivanhoe Mines participation as signatories in the United Nations Global Compact.

#### Health and safety

- Received immediate updates on serious workplace accidents, as well as periodic updates on general health and safety across the organization.

#### Committee operations

- Reviewed the 2021 sustainable development strategy.
- Received bi-annual updates on sustainable development, including an ESG update.
- Approved organization gender targets.
- Approved a new committee charter.



The Board, while retaining ultimate responsibility for all matters relating to the Company and its business, delegates the responsibility for managing the day-to-day affairs to the executive committee and other senior management personnel. In discharging this responsibility, the Board retains a supervisory role and oversees and monitors significant corporate plans and strategic initiatives, including quarterly budget reviews and approvals, and discussions with management relating to strategic and budgetary issues. At least one meeting per year is devoted substantially to the review of strategic plans proposed by management. The executive committee is responsible for implementing strategy as approved by the Board, as well as the management of risks and the determination of Company priorities relating to our principal economic, social and environmental impacts, risks and opportunities.

Our President chairs the executive committee and bears the ultimate responsibility for sustainability together with the Executive Vice President, Sustainability and Special Projects. Sustainability is regarded as a cross-functional discipline and the Executive Vice President, Sustainability and Special Projects is also responsible for convening and coordinating employees in other corporate functions or business units in support programs or activities that reinforce Ivanhoe's focus on ESG matters. Ivanhoe's sustainability strategy is also integrated into decision-making by embedding it into executive performance and remuneration, as well as into corporate and operational annual key performance areas (KPIs), and the annual KPIs of senior management personnel and various other personnel as may be required.



MAFAMANE NKUNA, COMMUNITY RELATIONS OFFICER, PLATREEF PROJECT.

## MATERIAL TOPIC

# Ethical behaviour

Our Code of Business Conduct and Ethics (the Code) underpins our governance approach and guides everything that Ivanhoe does.

### The code sets out:

- Ethical standards with which everyone is required to comply.
- Our commitment to a culture of honesty, integrity, accountability and respect for the communities in which we operate.
- Governance for interactions with third parties.
- Compliance with all laws.
- Disclosure of any relevant conflicts of interests.
- Always acting in the best interests of the Company.
- Conducting all dealings in an honest and ethical manner.
- Confidentiality of information.
- Limits on the offering or acceptance of gifts or entertainment.
- Appropriate use of the Company's property.



For more information on Ivanhoe's ESTMA reports, please refer to Ivanhoe's ESTMA reports on our website <https://www.ivanhoemines.com/investors/estma/>

Ivanhoe Mines is committed to embedding a culture of ethical conduct, shaping it through the exemplary leadership, governance, and policies that guide our management personnel, employees and operations, and inform the development of site-level procedures and plans. We have implemented governance mechanisms and global policies to adhere to the highest standards of business integrity and ethics and to embed our approach to sustainable development in the way that we work from leadership through to all levels of our organization, as well as to our consultants, advisors and contractors. Through our code we aim to foster and maintain the highest standards of corporate governance, ethical conduct and transparency. We have established broad-based communication and training programs to ensure that all individuals working on our projects take cognizance of how they conduct their duties. We ensure that the Code is included as part of contractual agreements with our consultants, advisors and contractors. All employees are required to affirm their commitment to the Code on an annual basis. Non-adherence to the Code for employees may lead to disciplinary action up to and including termination of employment. For contractors, it may lead to the termination of their contracts. Our Code is regularly reviewed to ensure that it remains on par with industry standards, regulatory amendments and our operating environment. We provide training on the Code, which is reviewed from time-to-time to determine the effectiveness thereof.

Pursuant to our commitment to integrity, we have established internal grievance mechanisms at all our places of business, as well as external grievance mechanisms at our projects (see page 39). We also provide an anonymous whistle-blowing system, overseen by the Audit Committee, and encourage our colleagues and stakeholders to raise concerns or report actual or suspected violations of law or policies.

The Extractive Sector Transparency Measures Act (ESTMA), 2015, requires mandatory reporting of payments made to foreign and domestic governments by all Canadian participants in extractive industries (mining, oil and gas). Ivanhoe has been submitting ESTMA reports annually since 2016.



# Our risk management

Stakeholders across the globe are increasingly calling for companies to take more responsibility for their impact on communities and environments, and to go well beyond their regulatory obligations. These stakeholder trends are likely to intensify, and will require a well-coordinated response. This paradigm shift, which includes a number of key drivers, e.g. diversity and inclusion, decarbonization, adds another layer of risk to the mining landscape.

The successful delivery of Ivanhoe's strategic objectives depends on effectively identifying, understanding and mitigating our risks, as well as identifying and prioritizing any associated opportunities.

The Board reviews the principal risks in our business, including financial risks, through regular reports from management. It reviews operations and relevant risk issues at each Audit Committee and Board meeting and discusses with management the systems in place to manage those risks. The Board also assesses the integrity of the internal financial control and management information systems directly and through the Audit Committee. Certain responsibilities have been delegated to the

Sustainability Committee including the review of our safety, health and environmental policies and compliance, and oversight of our sustainability performance and risk.

Ivanhoe has an established risk management framework and wider system of internal controls which both connect our Board and group-level risk oversight to site-level risk ownership, as well as responsibly inform our decision-making in support of management of these risks in line with creating shared value in a sustainable way. Site-level risk registers at each of our projects are updated quarterly and submitted to the executive management for review and consideration, ranking the top risks for presentation to the Audit Committee.

## ESG risks considered in 2021 include:



Ivanhoe continues to remain abreast of the risk landscape and the fast evolving interplay between the interconnected risks factors – economic, environmental, geopolitical, societal and technological – as well as their likelihood and potential impact on our business.



JACOB THAKO, STAGEHAND AND GEORGE MOKITLANA, ELECTRICAL ARTISAN, PLATREEF PROJECT.



## Our strategic stakeholder management

### Our approach to stakeholder engagement

It is imperative that our site teams liaise with local communities from the outset to prevent challenges that arise during the project life cycle. We are cognizant that a project's success is dependent on long-term relationships with all its stakeholders, based on trust and mutual respect. This is attained by transparent and ongoing dialogue that builds through encouraging constructive collaboration, acknowledging that consultation is not equivalent to mere information sharing, but rather to truly listening.

We recognize that achieving and maintaining social acceptability, often referred to as a social license to operate (SLO), is challenging for all mining companies, and is dependent on relationships established and built on deep, sustained trust from stakeholder groups. We are committed to an open-door policy. We learn from our mistakes and our continuous engagement with our stakeholders guides the Company's long-term strategy and decision-making. These engagements help us gain a deeper understanding of our stakeholder's perspectives and enhances

our mutual understanding of interests, concerns and objectives, ensuring outcomes based on more reflective stakeholder views and input.

Our teams liaise with national, regional, local, and community stakeholders – focusing on aligning the challenges between all stakeholders. Through this transparent approach, challenges can be tackled in a more efficient and stronger way where all involved stakeholders have a pertinent voice and information is shared timeously and equally, thereby defusing potential misinformation and mistrust.

Our site-based Stakeholder Engagement Plans (SEPs), which are annually reviewed and updated, target direct engagement with local stakeholders at each of our projects. Our SEPs aim to provide a structured framework for the stakeholder engagement process and ensure that we remain open and accountable for our actions, thereby bolstering our SLO. We strive toward attaining the overarching goal of free, prior and informed consent and adopt engagement principles to meet international standards as determined in the Equator Principles (Equator Principles, 2012), IFC Performance Standards (IFC, 2012) and best-practice guidelines for stakeholder engagement as prescribed by the International Association for Public Participation (IAP2, 2004). Our SEPs are updated to align with the growth of our stakeholders, in and around our mine sites, as well as changes in international stakeholder engagement principles. Since 2020, we have adapted our engagement approach to ensure adherence to COVID-19 prevention protocols, therefore masks are required and social distancing during meetings is strictly applied.



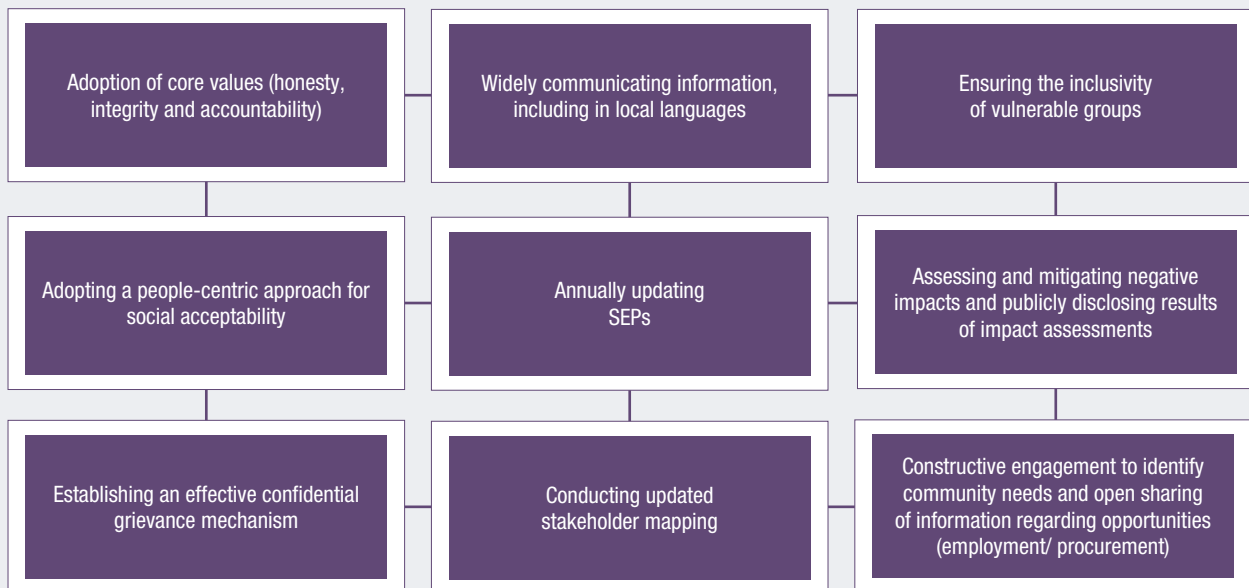
NATHALIE KIKABA, SOCIO-ECONOMIC DEVELOPMENT MANAGER, ENGAGING WITH PARENTS OF THE KIPUSHI-SPONSORED BURSARS.





ALBERT SEAMA, CONCRETE HAND FOR LOCAL CONTRACTOR, KHAZAMOLA CONSTRUCTION, PLATREEF PROJECT.

## Ivanhoe Mines' key engagement principles



We use a group-wide web-based electronic system to manage our social engagements and sustainability practices. Our system is being progressively implemented across all our sites. The system is used for data collection, record keeping and the generation of reports. It also enables the allocation of tasks, which can be managed digitally. All engagements, stakeholders, stakeholder groups, stakeholder platforms (such as Kamo'a's Community Development Committees and Resettlement Working Groups), engagement techniques, frequency of engagements and discussion content are uploaded onto the system where they can be easily accessed and tracked for efficient management of key challenges.

While we practice an open-door policy, which affords our local stakeholders the opportunity to engage with any of our management, personnel or teams, it is primarily our site-based community relations teams at the various projects who are responsible for the day-to-day engagement with local community and government stakeholders. We always endeavour to engage in a transparent and accessible manner, reinforced by open dialogue, information sessions and our active presence in the communities.

## Stakeholder mapping and engagement

Our “*stakeholders*” are people, communities, organizations, and governmental departments or agencies, interested or concerned in, or affected by, our mission, strategy, operations and actions. They may be internal – such as our workforce – or external, such as shareholders, communities, our investors or analysts, our suppliers, our host governments and non-governmental organizations.

Each of our projects has a unique project footprint with unique geological characteristics, geographical settings and key stakeholder groups. Each project has a team dedicated to stakeholder relations. We respect and value all of our stakeholders, and appreciate the non-static nature of the stakeholder landscape. As such, we update and improve our stakeholder mapping processes at the sites annually in order to ensure all critical groups, including the vulnerable, are included in our engagement platforms.



STAKEHOLDER ENGAGEMENT MEETING HELD FOR LAUNCH OF ALFA CONGO LITERACY PROGRAM, KAMOA-KAKULA MINING COMPLEX.

### The Kamoa-Kakula Mining Complex

**The Kamoa-Kakula Mining Complex is situated in the Southern Lualaba Province of the DRC, approximately 25 kilometres west of the mining hub of Kolwezi.** The project is located in a rural

area, which is home to approximately 20,000 people in 41 villages governed by two traditional authorities. Kamoa's community relations team is comprised of six members dedicated to maintaining the SLO and the newly developed Cahier de Charge through robust stakeholder engagement. There is also a team dedicated to the development of sustainable livelihoods through agricultural initiatives, as well as teams dedicated to local economic development, as well as to enterprise and supplier development.

The Kamoa-Kakula Mining Complex, conscious of its rapid development, is actively looking to increase the capacity of its stakeholder engagement teams to ensure that all stakeholders' needs are efficiently managed and that all stakeholder concerns regarding project impacts, whether caused directly or indirectly, are timeously addressed. In striving to meet this need, Kamoa-Kakula appointed a grievance officer, in 2021.

**The number of stakeholder engagement meetings decreased by 31% in 2021 to 479 while the number of participants also decreased by 23% to a total of 7500.** This decrease can be

attributed to the closing out of the phase one and two relocation process. Phase three of Kamoa's relocation process is planned to ramp-up in 2022, which may see a rise in stakeholder meeting and participant numbers. Key engagement themes in 2021 included local employment and procurement opportunities, resettlement, livelihood restoration, the Cahier de Charge, queries regarding environmental impacts, social development initiatives, project development and public participation for an environmental and social impact assessment update.





KHAZAMOLA BALOYI, STAKEHOLDER RELATIONS MANAGER, ENGAGING WITH THE MASODI TRADITIONAL COUNCIL.



LEADING THE CHARGE FOR THE KIPUSHI PROJECT'S STAKEHOLDER ENGAGEMENT – EMMANUEL MASANGU, CSR AGENT, (LEFT) AND SHIKO KEBONTE, HEAD OF STAKEHOLDERS MANAGEMENT (RIGHT).

### The Platreef Project

**The Platreef Project is situated in the Limpopo Province of South Africa, close to the town of Mokopane.** The region is characterized by semi-urban development and its 20 host communities comprise a total of approximately 150,000 individual residents. The Platreef Project has a community relations team of 11 staff members dedicated to maintaining our SLO through continual engagement with local stakeholder groups, including traditional authorities, local government, civic groups, youth organizations, the project's broad-based black economic empowerment (B-BBEE) partners, local suppliers and individual local residents.

During 2020, the number of engagements were significantly lower than normal due to the extended lock-down period for several months of the year. **As such, the number of stakeholder engagement meetings at Platreef increased by 149% in 2021 to 132, while the number of participants engaged also increased four-fold to a total of 1763.** While the pandemic made an impact on stakeholder engagement, this increase in both engagement activities and participants can also be attributed to Platreef's ramp up of Shaft 2 and other operational activities, as well as increased activities regarding negotiations for land access and livelihood restoration. Some key engagement topics in 2021 included: opportunities for employment and procurement, B-BBEE community trust processes and projects, surface lease process, project progress, heritage (grave relocations), water queries, livelihood restoration, safety, and social development initiatives contemplated in terms of the project's proposed regulatory social development plan, the Social and Labour Plan. In 2021, public participation was also undertaken for an updated environmental and social impact assessment.

### The Kipushi Project

**The Kipushi Project is situated in the Haut-Katanga Province of the DRC, right in the middle of the town of Kipushi.** Kipushi is home to approximately 180,000 individual residents and surrounded by widespread rural communities. The Kipushi Project has a community relations staff complement of four members dedicated to maintaining our SLO through continual engagement with local stakeholder groups including traditional authorities, local government, civic groups, artisanal miners, project partners and individual local residents. The most discussed topics in 2021 include opportunities for employment and local procurement, project development, community health safety and security, and artisanal mining.

**The number of stakeholder engagement meetings at Kipushi decreased by 27% in 2021 to 22, owing to the reduced activities on site. Kipushi engaged a total of 1382 stakeholders during 2021. The Kipushi team also hosted an inauguration ceremony for the local traditional chief, where 2500 people were in attendance.**

As we look forward to 2022 and beyond, we will strive to maintain our SLO across all our project sites through continual application of sound engagement principles.

## Key engagement topics



### OUR WORKFORCE

#### Key topics

- Remuneration – salary scales, wage negotiations, bonuses (see page 62)
- Job grading (see page 62)
- Recognition for collective bargaining (see page 49)
- Working and living conditions and health and safety (see page 63)
- Training (see page 79)
- Scheduling of working hours (see page 49)
- Company development and progress (see page 12)



### OUR SUPPLIERS

#### Key topics

- Vendor portal (see page 98)
- Supplier compliance, including contractor's packs (see page 95)
- Upcoming local procurement opportunities (see page 94)
- Human rights (see page 42)
- Registration on the supplier database (see page 98)



### REGULATORY BODIES AND GOVERNMENTS

#### Key topics

- Mine progress (see page 12)
- Women in Mining (see page 54)
- Regulatory social plans – Cahier de Charge, Social and Labour Plan (see page 100\*)
- Land access and lease agreement (see page 115, 116)
- Community development (see page 100)
- Employment (see page 50)
- Licenses and permits (see page 121)
- Tax and royalties (see page 92)



### OUR INVESTORS AND ANALYSTS

#### Key topics

- ESG approach, performance and reporting (see page 20)
- Safety (see page 71)
- Energy and climate change (see page 127)
- Water risk (see page 122, 126)
- Tax (see page 92)
- Labour relations (see page 49)
- Diversity policy and targets (see page 50)



### OUR COMMUNITIES

#### Key topics

- Land access, surface lease agreement, resettlement and livelihood restoration (see page 115)
- Consultation and access to information (see page 34)
- Health: COVID-19, HIV/AIDS, malaria (see page 69)
- Community development (see page 100)
- Environmental awareness: arbor day, climate change, recycling (see page 133, 135)
- Grievances (see page 39)
- Water and sanitation (see page 101, 104)
- Employment (see page 58)
- Education (see page 110)
- Cultural and spiritual needs (see page 139)



### NON-GOVERNMENTAL ORGANIZATIONS

#### Key topics

- Women in Mining (see page 54)
- Artisanal and small-scale mining (see page 37, 74)
- Human rights (see page 42)
- Environmental awareness: Arbor Day (see page 133)
- Health: Covid-19, HIV/AIDS, malaria (see page 64)



## MATERIAL TOPIC

# Tracking community feedback, issues and grievances

Effective stakeholder engagement is the foundation of our social license to operate, and we ensure that we appoint community relations teams who engage extensively with local stakeholders.

We appreciate that all stakeholders are unique and have their own preferred method of engaging with us and we strive for continuous engagement with local communities from the onset, devoting appropriate time and resources to obtain stakeholder feedback, address concerns, defuse misinformation and resolve issues. However, we acknowledge that our employees and contractors are human and don't always get it right. Therefore, we need adequate mechanisms that provide access to remedy, and a means to raise concerns or grievances with the organization outside of the normal channels. We define a "grievance" as a notification, concern or complaint raised by an individual or group affected by our projects' activities averring that they have suffered some form of offence, detriment, impairment or loss as a result of our business activities and/or employee or contractor behaviour.

In order to cater for all our stakeholders, we have established an array of channels for engagement and/or feedback, including in person, at public or community liaison meetings, community portals, via phone, SMS or email, or through our website and anonymous whistleblower hotline. Functional, accessible multi-lingual and widely-published external grievance mechanisms are in place at our projects. Grievances are managed by the community relations teams at the respective projects, and recorded and tracked through a web-based stakeholder management system.

We acknowledge that both concerns and complaints can result from either real or perceived impacts of our business, and we treat all grievances as legitimate. Our mechanisms are widely communicated through local platforms and accepted techniques and the process for grievance resolution entails several steps that need to be completed in a timely manner. Although we strive to handle all grievances internally, our process allows for escalation and we accept the right of the complainant to access judicial remedies.

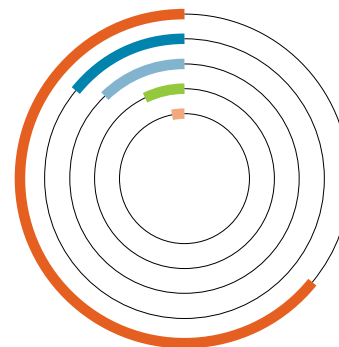
In 2021, we received a total of 56 grievances, 45 (80%) of which were resolved by the end of the year. The number of grievances recorded at Kamoa-Kakula Mining Complex are commensurate with the scale of the project and the number of project activities being undertaken. In 2021 Kamoa-Kakula recorded 50 grievances, the rate dropping by 24%, compared to 66 in the previous year. The number of open grievances at Kamoa-Kakula by the end of the year, was 11, however, upon analysis, only two grievances remain under investigation, with the remaining nine resolved and being at the final stage of close-out.

Platreef holds a 100% grievance close-out rate for 2021, with six grievances recorded and all resolved by the end of the year, however, compared to the previous year, the number of grievances doubled from three to six. This correlates to increased activities and engagement at Platreef, compared to 2020, which was much quieter due to lock-downs owing to the coronavirus pandemic.

At Kipushi, where activities are significantly less than our other sites, no grievances were recorded.

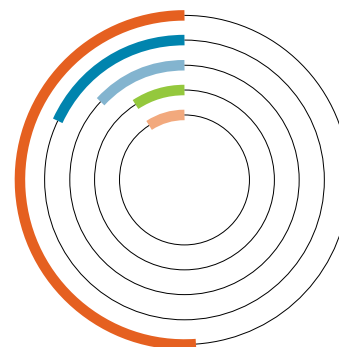
Several of the grievances that were lodged during 2021 were related to access to opportunities (employment/ procurement), resettlement and compensation, the nuisance of mining activities (water-related pollution), health and safety (road traffic). The nature of grievances are indicative of a shift in focus by local stakeholders to a greater emphasis on environmental issues, while land use and compensation remained primary areas of concern.

### Complaints received by category, 2020



2020	
Land use and compensation	64%
Employment	14%
Health and safety	12%
Environmental	7%
Economic opportunities	3%

### Complaints received by category, 2021



2021	
Land use and compensation	51%
Environmental	18%
Health and safety	13%
Employment	9%
Economic opportunities	9%

We remain committed to continually improving our social acceptability performance, ensuring that we analyze the trends and root causes of the issues raised, and implement action plans to address these root causes. We also analyze year-on-year trends of issues to ensure that we adequately focus our efforts, implementing additional mitigation measures to prevent the ongoing reoccurrence thereof where required and monitoring the effectiveness of these efforts.

# Materiality assessment

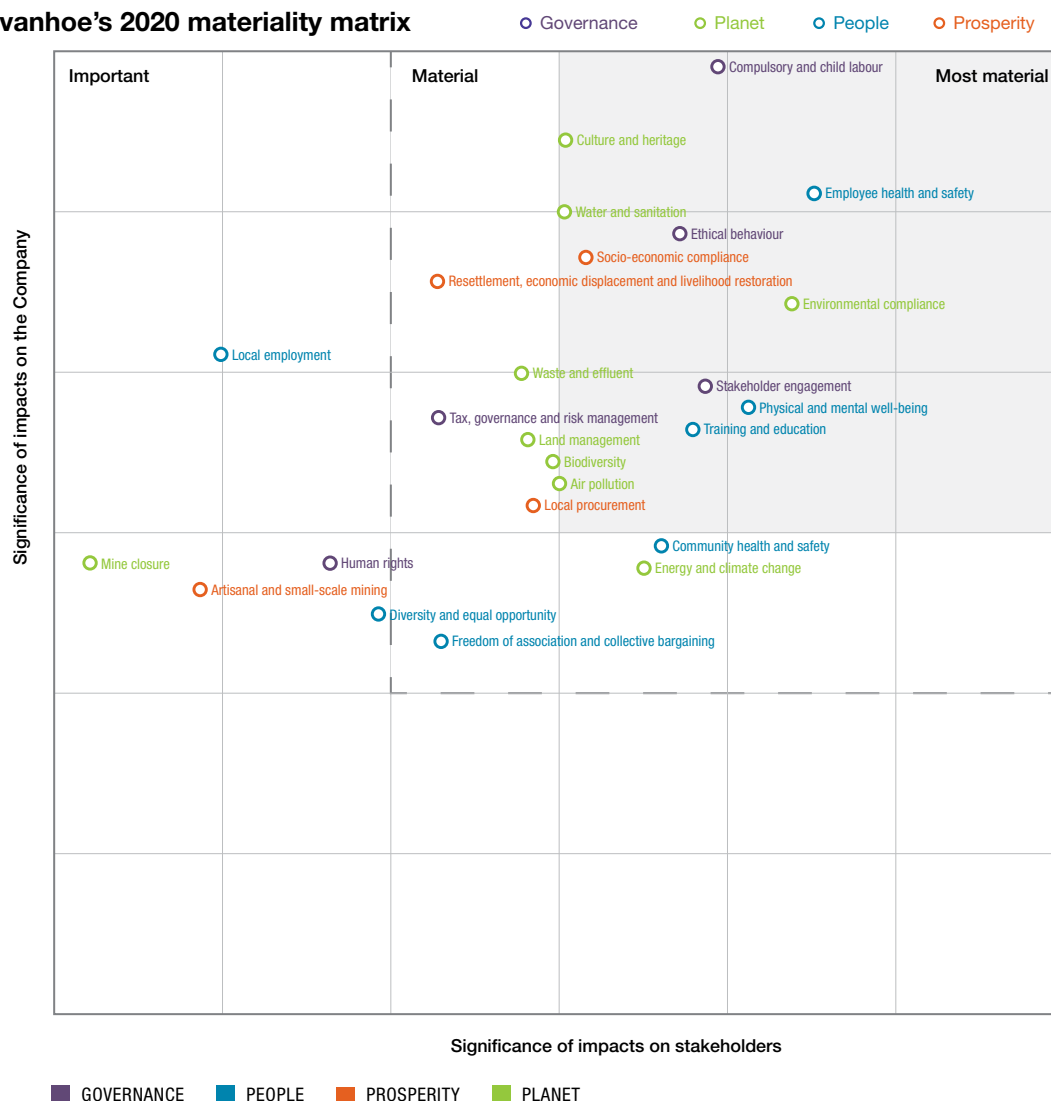
The GRI defines materiality as: “Those topics and indicators that reflect the organization’s significant economic, environmental, and social impacts or that would substantively influence the assessments and decisions of stakeholders.” A strong governance model needs to be driven by the impacts, influences and issues which are most important to the Company’s critical stakeholders, in order to ensure that we are operating responsibly and with accountability.

We acknowledge that we have a diverse portfolio of stakeholders, with varying interests and needs. The nuances of the varying operating environments of different jurisdictions also add to the complexity of these topics. It is thus important for us to understand our material impacts on the economy, environment and society in the contexts of where we operate, and our stakeholders’ material interests or issues in the mining and minerals sector in general, as well as in our operations specifically.

These identified material impacts inform our sustainability strategy and approach to sustainability disclosures. They also help us better focus our efforts towards the Sustainable Development Goals, which we prioritize to create maximum positive impact.

Having conducted an extensive materiality assessment late in 2020 (see Ivanhoe Mines 2020 Sustainability Report), – wherein we mapped key economic, social and environmental issues on a matrix based on the degree of stakeholder interest and potential business impact, we did not implement a completely new materiality assessment in 2021. Instead, we conducted a dipstick survey across a cross-section of stakeholders to determine whether the relative priority of the material issues identified in 2020 remain relevant. As both the sustainability landscape and our Company are quickly evolving, a comprehensive materiality assessment is planned for 2022.

## Ivanhoe’s 2020 materiality matrix





## Management of Ivanhoe Mines' Top 10 most material impacts

### Compulsory and child labour

Seeking to ensure that our projects and supply chains do not violate any human rights and assess for modern slavery and child labour.

\*See page 42 for more

### Health and safety

Prioritizing the health and safety of our employees and communities and continuing to improve our practices.

\*See page 63 for more

### Environmental compliance

Ensuring compliance with all environmental laws in our countries of operation.

\*See page 121 for more

### Ethical behaviour

Promoting ethical behaviour through our internal policies, including our Code of Business Conduct and Ethics.

\*See page 32 for more

### Physical and mental well-being

Moving beyond health and safety, to also look after the physical and mental well-being of our employees.

\*See page 63 for more

### Stakeholder engagement and grievance management

Maintaining effective stakeholder engagement plans and grievance mechanisms at all sites.

\*See page 39 for more

### Social compliance and investment

Regarding investment in our host communities as critical to our social license to operate and valuing the contribution we can make to the prosperity of communities.

\*See page 100 for more

### Water and sanitation management

Promoting responsible water stewardship that we can be proud of and managing the resource together with our stakeholders.

\*See page 122 for more

### Culture and Heritage

Protecting and respecting culture and heritage through appropriate policies, procedures and programs.

\*See page 139 for more

### Training and Education Opportunities

Investment in training opportunities for host communities is core to our investment strategy.

\*See page 79 for more



ACCESS TO WATER TRANSFORMS LIVES FOR PEOPLE OF ALL AGES NEAR KIPUSHI PROJECT.

\* Information regarding the affected stakeholders, boundary and risk mitigation measures for each material topic may be found in the relevant sections of this report. The GRI Standards Boundary descriptions require a description of where the impact occurs for each material impact and the organization's involvement with the impacts for example, whether the organization caused or contributed to the impacts, or is directly linked to the impacts through its business relationships.

## MATERIAL TOPIC

# The human rights lens

Human rights provide the foundation for humanity to lead a dignified life, to freely express independent beliefs and to live free from abuse. Our commitment to and respect for human rights is the foundation of Ivanhoe Mines' corporate culture, which underpins everything that we do.

Human rights are inherent to all individuals, regardless of nationality, place of residence, sex or sexual orientation, national or ethnic origin, colour, religion, language, economic status, political affiliation, or any other status. Respect for human rights wherever we do business, and recognition of the equality and dignity of the people with whom we interact every day is a fundamental operating principle embedded in our Statement of Values and Responsibilities and our Human Rights Position Statement. We believe that respect and support for human rights are imperative for the preservation of healthy, thriving, resilient communities, as well as for the ongoing acceptability of the organization in the form of a social license to operate. We use our experiences and the guidance from our engagement with stakeholders to continually progress our approach to respecting human rights.

Our approach to human rights is informed by the broad corpus of international human rights laws, declarations, covenants, principles, standards, and guidelines, as well as by the legislative prescripts in the countries where we operate. Our approach to human rights applies at every level of the organization to all employees, independent service providers, clients and visitors. Every organization has a responsibility to maintain a working environment that reflects respect for human rights, and that is free from all discrimination and harassment, as well as to respect and protect the communities and environment in which they live and work.

The United Nations Guiding Principles on Business and Human Rights (UNGPs) reaffirms states' existing duties under international law to protect against human rights abuses by third parties, including business enterprises. Alongside this, organizations have a responsibility to respect human rights through making policy commitments to prevent, mitigate and remediate negative human rights impacts, conducting human rights due diligence, and provide access to remedy for any harm done.

We acknowledge that effective management of human rights entails embedding human rights management into strategy and operations across the organization, providing multi-disciplinary accountability for proactive and effective human rights management. These rights imply a wide array of themes, from direct environmental and social impacts, working conditions, labour, security and responsible business conduct, to the review of the supply-chain. We have established procedures regulating



CHILDREN PLAYING NEAR ONE OF THE SOLAR-POWERED COMMUNITY POTABLE WATER STATIONS INSTALLED BY THE KIPUSHI MINE.

our security service providers, to which they are contractually bound and we ensure that they are trained on the Voluntary Principles on Security and Human Rights and our procedures, which include guidance on the use of force. We are committed to the ongoing assessment of potential human rights risks associated with our activities, as well as across our broader value chain. We appreciate that human rights due diligence is an incremental process of continuous improvement – identifying, prioritizing, assessing, acting upon, monitoring and reporting on human rights impacts – using building blocks such as human rights impact assessments, which inform the development of strategic human rights management plans.

In 2021, Ivanhoe requested Synergy Global Consulting to undertake a human rights impact assessment to identify and assess potential human rights impacts that the Kamoakakula's project activities may cause, contribute, or be linked to, as well as to consider the project's relationships to these impacts and its capacity for leverage. The intent of the human rights impact assessment is to progressively support Kamoak in managing human rights risks by (i) complementing ongoing due diligence efforts, (ii) embedding human rights risk management systems across the business, and ultimately (iii) integrating human rights considerations into the business strategy and operations. A prioritization of salient human rights risks and impacts was undertaken, resulting in the following risk areas: communities; security management; labour and working conditions; responsible business conduct; and supply chain. A human rights management plan has been developed, as a dynamic management tool, for implementation over a two-year period, following which a new human rights impact assessment would be undertaken.





Moreover, continuous monitoring of the plan as well as amendments to the relevant management systems, and other elements of the overall human rights due diligence approach – such as capacity-building and training, stakeholder engagement and access to remedy – have been identified as focus areas for 2022.

In 2021, we also progressed our human rights approach by publishing informational human rights materials at our Kamo-Kakula Mining Complex. We also trained our security personnel and service providers at this project on the Voluntary Principles on Security and Human Rights. At our Platreef Project we developed a standard operating procedure for security management. On November 16, 2021, the Ebenezer Foundation, through its human rights and development-training centre, awarded six diplomas of excellence to members of Ivanhoe's Kipushi team. These certificates were awarded to the General Director, Head Stakeholders Manager, Human Resources Manager, and CSR (corporate and social responsibility) department agents for good collaboration with the host communities.

Ivanhoe has recently applied for membership of the United Nations Global Compact, and we are looking forward to our participation therein. Looking ahead at 2022, Ivanhoe intends to develop and implement a Child and Forced Labour Policy at our Platreef Project and to conduct a human rights impact assessment at this project. We also intend to implement a group wide human rights training program, revise and publish our supplier code of conduct, and develop a robust supplier due diligence toolkit for implementation across all projects.

## SPECIAL REPORT



# Ivanhoe's Kipushi team acknowledges human rights and brings dignity to those forgotten in detention

In October 2021, a solar-powered water well was constructed outside the Kipushi Prison to provide the inmates with a reliable supply of potable water for cooking, washing and sanitation.

The borehole has supported the prison crops, maintained by the inmates, and has truly transformed their quality of living. Prior to the installation of the borehole, the situation was dire, as water had to be trucked in and was not always available. Ivanhoe's Kipushi team would often transport and deliver trucks with water supplies.

The new water well, not only sustains the prison, but also supplies plenty of potable water to a group of military wives living in close proximity to the prison. These ladies use to travel at around 2am to collect and carry water from far away sources. For them the addition of the borehole has not only provided drinking water and a means to safely prepare food, clean, and bath, but also a form of security, as they

no longer have to travel late at night with the danger of being attacked and hurt. These ladies each fill up to 20 containers of water a day and support a family of roughly six members each across 100 families. They have noticed a drastic change in diseases caused by poor quality water such as cholera and diarrhoea. "Bless KICO!", they say with grateful hearts.

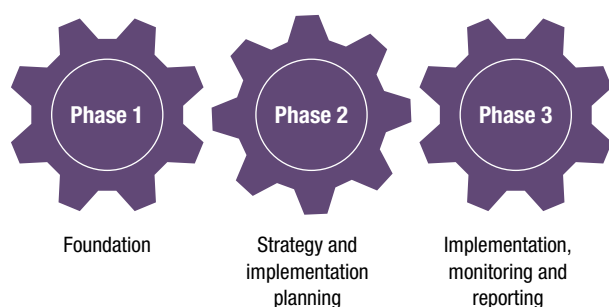


DONATION OF 20 MAIZE MEAL BAGS TO THE KIPUSHI PRISON BY THE KIPUSHI PROJECT.

# Ivanhoe Mines and the United Nations Sustainable Development Goals

Ivanhoe Mines appreciates that an effective response to the United Nations Sustainable Development Goals (SDGs) provides an opportunity to both shape our long-term strategy, as well as to further embed sustainability within our core business strategy. It can also improve our management of risk and realization of new opportunities, enhance dialogue with stakeholders, and support our social licence to operate through attaining our goal of long-term value creation.

We have thus embarked on a journey to embed a strategic response to the SDGs in the longer term. PricewaterhouseCoopers Inc. (PwC) has helped Ivanhoe Mines along this journey. This included identifying and prioritizing the main SDGs which the business focuses on, and then to ascertain the strategy, tools and culture needed to transform those commitments into tangible business actions. In so doing, Ivanhoe Mines will be, and is able to, demonstrate to investors, peers and its own employees how and why the SDGs are helping improve our overall business now and sustaining it for the long term, thereby enabling us to address the SDGs effectively.



In the first phase of our journey in 2020, the foundation phase, we conducted a SDG mapping exercise, guided by PwC, based on their knowledge of good practice and relevant reporting guidance. We then conducted a management workshop, facilitated by PwC, to prioritize the most critical SDG goals and targets to Ivanhoe and our key stakeholders. By the end of this first phase in our journey, we had identified our most important SDGs and developed a high-level road map for the next steps.

We have now moved into the second phase of our SDG journey, strategy and implementation planning. We have kicked off the detailed strategic activities that will enable us to effectively respond to the SDGs as a business driver and inform the development of a detailed implementation plan. During this stage we conducted a workshop with key personnel representing ESG both from a corporate perspective, as well as across all our projects. This process entailed:

- Discovering the “art of the possible” for our prioritized SDGs – a series of “discovery chatrooms” where the Ivanhoe team was inspired by different, innovative ways to approach the embedding of the seven prioritized SDGs, facilitated by various subject matter experts; and
- Developing a vision for our prioritized SDGs in breakout groups – sketching the context for each SDG in the DRC and South Africa to envisage what Ivanhoe aims to do and outlining the themes contributing to our vision statements.

**30 participants**

**7 SME's**

**10 consultants**

**16 breakouts**

**1 Experience Centre**

**7 SDG's**

**All to collaborate on a vision and a commitment to make a difference**

Now that we have developed the vision of where we want to go, we need to take stock and determine where we are now. Looking forward we plan to conduct a “Current State Analysis”, building on the work completed to date, with a view to mapping out the best path to help us attain our SDG vision.



## Ivanhoe SDGs Vision Pledge



We strive to contribute to the eradication of extreme poverty by improving accessibility and stimulating local economies to create sustainable change.



We strive to be catalysts for access to educational opportunities, allowing for all ages, and collaborate with partners to ensure access to quality education by addressing contributing factors.



We strive to provide equal access to digital and economic opportunities and to become a catalyst for cultural diversity and inclusion, as well as a safe space, where people are treated like human beings and specific gender-based vulnerabilities and historical inequalities are addressed.



We strive to promote responsible water stewardship, while partnering in empowering dignified communities through providing access to potable water, sanitation and wastewater management.



We strive to contribute to the green economy, embedding the principles of responsible consumption across our value chain, remaining net positive\*, and thereby inspiring our stakeholders.

*(\*Net positive: reducing waste, recycling and replenishing biodiversity and the environment. Reducing the need for virgin resources by designing waste-out and buy-back logistics).*



We strive to be agile in adapting to climate change by internalizing climate-related risks and opportunities and engaging in pertinent conversations, while enabling independent, resilient communities.



We strive to demonstrate respect for biodiversity and natural habitats, to sustain ecosystem goods and services and to help restore and repurpose the land entrusted to us, as well as to create spaces for education and appreciation.

At Ivanhoe, we strive to embed sustainability in everything we do and focus on those areas where we can make a net positive impact by contributing towards the advancement of the UN SDGs.

In order to achieve this, we sign this Pledge to commit ourselves to working towards the SDG visions outlined and prioritized by the company.

### By taking this pledge, we will:

- **DEMONSTRATE** our commitment to the SDGs vision as a top priority.
- **NEVER COMPROMISE** our contribution to the SDGs vision.
- **ACTIVELY LOOK** for opportunities to align our work and projects to the SDGs vision.

**Marna Cloete**  
President



# 4

# OUR PEOPLE



**“At Ivanhoe we feel like it is our home away from home. It’s an environment where we all feel valued and know that we have a bright future ahead of us. We feel incredibly proud and blessed to be a part of the Ivanhoe family.”**

**Nozimilo Sekete**

HR Manager, Ivanhoe Mines



**3,551**

new hires

**120**

new female hires

**16,678**

consultations at site clinics

**9%**

female employees

**7,166**

new hires in 3 years

**97%**

local employees

**1,884**

beneficiaries of training interventions

**3 years**

free of lost time injuries at Kipushi

Alignment with Ivanhoe's  
priority SDGs



## Our commitment and approach to people

We acknowledge that our success relies greatly on our people. Our people help drive wealth creation through significant mineral discoveries and mine developments, through the application of disruptive technologies and innovative products and services, as well as by supporting the communities in which they live and work.

The UN's 2030 Agenda for Sustainable Development aspires to end poverty and hunger, in all their forms and dimensions, and to ensure that all human beings can fulfill their potential in dignity and equality and in a healthy environment. Ivanhoe Mines aligns with the WEF's 'People' pillar and recognizes that people are at the centre of our economic prosperity (as well as of global economic prosperity).

We recognize that a well-trained, diverse, and financially secure workforce is a key driver of an organization's ultimate success and resilience. Ivanhoe Mines therefore **strives to be an employer of choice**, where people are proud to work, as well as to provide an inclusive, fulfilling, safe and high-performing work environment.

The International Labour Organization's (ILO) definition of "decent work" goes beyond the mere attainment of stable employment, encompassing additional factors, which are intrinsically linked to workers' human rights. According to the ILO, decent work should also satisfactorily address matters of equality of treatment and opportunity for advancement for all workers, freedom for workers to express their concerns, organize and participate in the decisions that affect their lives, work that provides a fair income, workplace health, safety and security, and social protection for families. Ivanhoe is committed to upholding the ILO core conventions.

As an equal-opportunity employer who takes pride in our diverse, talented, cosmopolitan workforce, we seek to enable decent work and economic growth, and encourage diversity of gender, background, religion, culture, disability, age, among many other things, as we regard this as a competitive advantage and vital to our innovation and success. Our approach to people is underpinned by the principles of equality and dignity and we continually strive to foster a culture founded on mutual respect, fairness, integrity and compassion. **We endeavour to provide equal opportunity by employing, training and promoting employees on the basis of merit, and do not tolerate any form of discriminatory conduct, or harassment, in the workplace.** Our policy on non-discrimination prohibits discrimination across all grounds of personal characteristics.

**We are committed to the principle that the overwhelming majority of employment opportunities at our projects are made available to local people from our host communities**, or nationals of our host countries. **We are also committed to providing training, which further contributes to skills development**, which in turn becomes enduring assets in the development of sustainable livelihoods, communities and economies. **We endeavour to prioritize women and the vulnerable in these communities**, such as people living with disabilities, including by affording these marginalized groups with opportunities for training and development.

**We strive to inclusively consult with our workforce and to provide open communication channels and a fair, non-discriminatory employee grievance system**, as well as to uphold workplace rights by recognizing the right of employees to freedom of association and collective bargaining. Acknowledging that workplaces are likely to impact on certain human rights, we fundamentally respect the right to work for fair wages, as well as the right of our workers to establish or join trade unions and representative organizations of their own choosing. Labour relations are, accordingly, an important facet of our social capital management processes.

As technological innovation, digitization and automation continue to take centre stage and the evolving occupational landscape calls for a new type of highly skilled workforce, we believe that the mining industry is perfectly positioned to play a pivotal role in social and economic development by providing high-paying jobs and promoting the development of a more skilled local workforce. This can be achieved through investing in technological research and development, as well as in the development and training of skills for the future. **We strive to enhance the economic and emotional well-being of our employees by providing fair and competitive compensation and benefits.** We offer appropriate training and development opportunities and safe, well-equipped, inclusive workplaces, where innovation can thrive and our people can grow and advance. We endeavour to create an environment where our people feel personally valued and can attain professional fulfilment, and where they can become personal ambassadors for Ivanhoe Mines' vision, mission and values.

We acknowledge the inherent dangers of mining and aim to maintain a safe and healthy work environment that is injury- and fatality-free. **We are committed to ensuring that our worksites are designed to protect the health and safety of our workforce.** We strive to enhance the physical and emotional well-being of employees, contractors and communities by identifying, preventing, eliminating or mitigating the risks to health, safety and by establishing effective programs for these critical areas. Employees have the right to withdraw from unsafe conditions, or refuse to work in unsafe environments, and are encouraged to immediately report unsafe equipment, practices

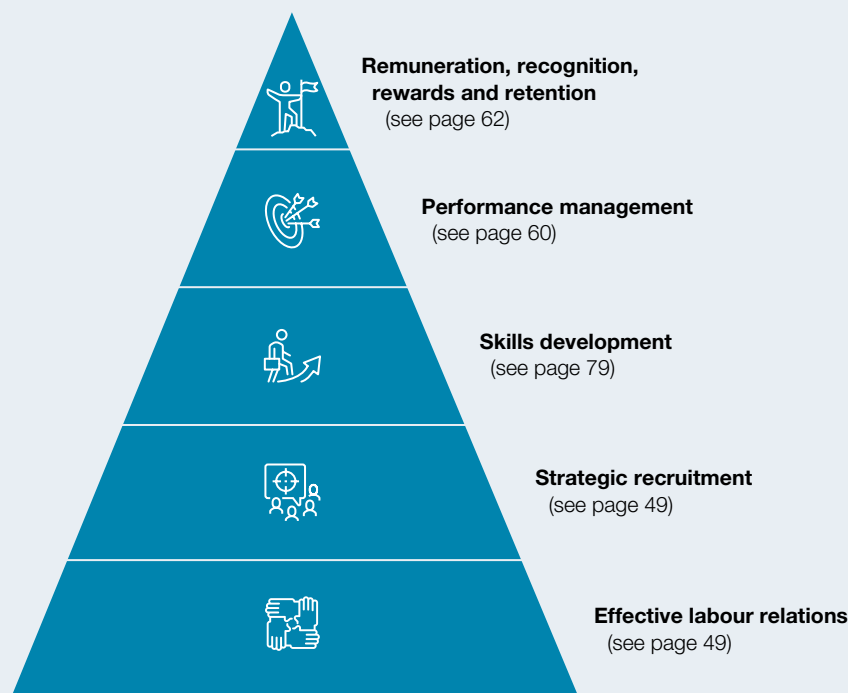
or unsafe workplaces on site. We also strive to maintain a high degree of emergency preparedness to effectively respond to emergencies.

Ivanhoe Mines advocates a holistic approach to well-being. We ensure that our employees take annual leave, as well as any leave that may be required for illness, study or family responsibility. We recognize that workers must be both physically and mentally healthy, as well as pursue their career for a purpose in return for financial security. Mining projects that are able to better understand and address the holistic needs of their workforce are better equipped to foster a culture for a safe and productive environment to flourish, wherein higher worker productivity may be experienced, and personnel, as well as investors, may be more effectively attracted and retained.

As we rapidly transform from exploration and development to mining operations, the ground beneath us is shifting and the landscape is changing, signaling a new chapter in our story. The new chapter ignites a period of significant change, accelerated growth, and immeasurable opportunities. However, throughout this progression, what is imperative, is that we maintain our corporate culture and values. We must continue to ensure that each person is treated with respect, dignity and appreciation, and valued as a unique individual with their own lives and aspirations. We therefore maintain our commitment and dedication to excellence, innovation and compassion and we accordingly progress the development and implementation of strategic and valuable human resource, health and safety, and technological strategies, policies, programs and initiatives.

## Our workforce

Skills, education, capacity and attributes all have an impact on the productive capacity and earning potential of employees. The value of our organization's human resources cannot be overstated. Employee job satisfaction is supported by strategic and effective human resource management, and further supported by our value-driven objectives, which include fair remuneration, accountability and responsibility. Strategic human resource management is underpinned by five elements:



As of December 31, 2021, our workforce (comprising employees and contractors), totaled 12,374, compared to 8,884 in 2020 and 5,298 in 2019. This significant increase is attributable to the commencement of operations at the Kamoā-Kakula Mining Complex, as well as the expansion thereof, and to increased activities at our Platreef Project.

Our commitment to promoting equal opportunities for all employees in our projects, within the local regulatory frameworks of the countries in which we operate, is captured in our fair, transparent and inclusive employment equity, recruitment, and skills development policies and procedures.



# Our labour relations

Ivanhoe Mines' organizational pulse is inextricably linked to its people; therefore we strive to preserve constructive relationships with our employees and their trade unions. We value and respect the rights of our employees, including the right to freedom of association and collective bargaining, as well as fair working hours.

Employees are made aware of their workplace rights and trade unions are afforded the statutory rights associated with their representation and/or as agreed through the Collective Bargaining Agreements at all our project sites. In 2021, approximately 25% of the Company's workforce was unionized and an additional 23%, while not unionized, of our workforce was covered by collective bargaining agreements.

The human resources department at our Kamoakakula Mining Complex has a close relationship with the workforce, as well as, with associated trade unions, ensuring fair and transparent management of working conditions. This ensures ownership and responsibility for all employee grievances that arise. Kamoakakula ensures regular engagement with the five representative trade unions under the collective bargaining agreement. Meetings with the union delegates are held on a quarterly basis. Internal grievances are communicated by Kamoakakula employees either directly through human resource representatives or through the trade union representatives. These grievances are then investigated and escalated, in accordance with their level of importance and urgency. This allows for a multi-entry approach to lodge internal grievances, so that employees may feel a greater sense of trust. The regular engagements with the trade unions further enhances this trust and enables stronger relationships to be formed. Monthly roadshows are conducted to ensure that the human

resources team is accessible to the workforce and that communication flows freely.

The human resources department conducts internal daily meetings to work through all employee grievances, as well as to foster trust and build stronger relationships between themselves, employees and trade unions. In 2021, 12% of Kamoakakula's workforce was unionized.

Rather than a trade union, all workers in the Patterson Band A, B and C, at the Platreef Project (around 80% of the workforce), bargain collectively through a Worker's Forum, established in 2021. Following the conclusion of a recognition agreement and the election of committee members, the Worker's Forum negotiated with the Company on a number of issues, including training, health and safety, bonuses, and project updates. In 2021, a three-year wage agreement was also concluded.

At the Kipushi Project, 44% of the workforce was unionized in 2021. Throughout the year, engagements with the trade unions included discussions regarding the proposed collective bargaining agreement, company rules, job grading and remuneration.

There were no protests, strikes or lockouts at any of our projects during 2021.

## Our recruitment

Ivanhoe Mines recognizes that strategic recruitment is a key function of human resources which should reflect the organization's business objectives, strategy and culture, by aiming to attract the most suitably qualified candidates through organized, transparent and fair two-way recruitment processes. Moreover, an effective recruitment and selection policy not only fulfills the requirements of a job, but also ensures that an organization will continue to maintain its commitment to providing equal opportunity to employees. Ivanhoe Mines embraces the values of equality, diversity and inclusion.



MEMBERS OF THE PLATREEF WORKFORCE, RECRUITED FROM LOCAL COMMUNITIES NEAR THE MINE.

# Diversity, inclusion, and local employment

Having greater representation of diverse perspectives will enable us to better innovate and transcend the boundaries of mining as we know it.

In addition to the need to address key issues, such as fairness and equity, diversity is a key driver of business performance and innovation which enables improved decision-making. It also helps us to identify effective solutions for challenges and a broad range of issues by viewing them from multiple perspectives across a broader talent-pool.

We are tremendously proud of the growing diversity of our workforce; we strongly believe that diversity is the key to nurturing talent and driving innovation at our operations. Our ambition is to continue fostering an inclusive workplace, which affords equal opportunities, in order to ensure that underrepresented groups across our projects are not only represented, but can also succeed and thrive in our organization. We make every effort to ensure that our people feel respected and confident to bring their authentic selves to work every day and we support our people to develop and to grow at the pace of their talent, ultimately excelling and being the best that they can be.

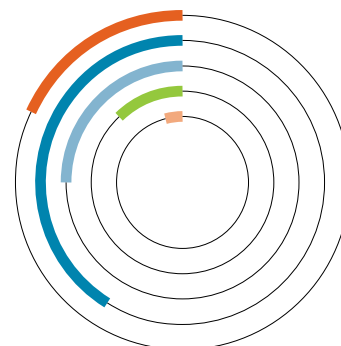
We recognize that diversity is an integral component of an effective and skilled Board of directors, as such, our Board diversity policy requires the Board to consider diversity, including the representation of women, diverse backgrounds and other attributes, when identifying and nominating director candidates. It also considers background, experience and skillset relative to the balance of skills required by the Board and committees to meet their respective mandates, and any regulatory requirements.

We are continually refining our reporting approach because we believe that providing more transparency and updates on our annual efforts and progress, in respect of diversity and inclusion, both holds us accountable and creates opportunities for us to learn and prioritize our efforts to ensure greater diversity and inclusion. We track a number of diversity and inclusion indicators, both for our internal employees and those of our contractors. These include gender (see page 54), age, local employment and local employees in management (see page 58).



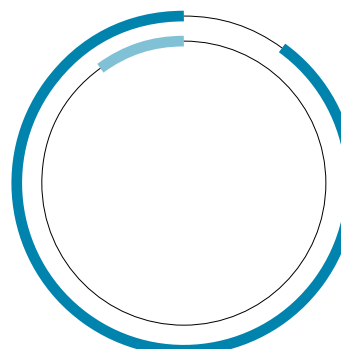
LEAH PHIRI, SHE REPRESENTATIVE AND MARTHA MESO, SITE ENGINEER, MEMBERS OF THE FEMALE WORKFORCE EMPLOYED BY LOCAL CONTRACTORS AT THE PLATREEF PROJECT.

## Employees by age group



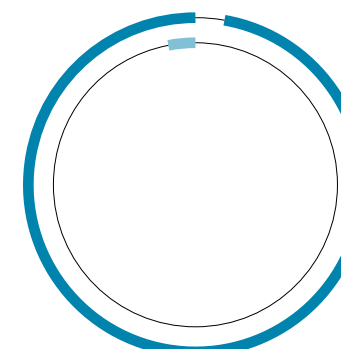
	2021
<30 years	18%
30 to 40 years	41%
40 to 50 years	25%
50 to 60 years	12%
60 years and older	4%

## Employees by gender



	2021
Male	91%
Female	9%

## Local employees



	2021
Local employees	97%
Non-local employees	3%



MAX MOLOMO, TRAINING FILING CLERK, PLATREEF PROJECT.













## Gender inclusion

Ivanhoe Mines is committed to playing a prominent role in addressing the issue of low female representation across all levels in the mining sector.

We continue to work toward greater gender parity across all organizational levels, particularly seeking to mitigate systemic barriers to the participation and advancement of women in the mining sector in the DRC. We believe in equal pay for equal work and promote the diversity of teams and perspectives that bring innovative ideas to the table, in order to deliver and transform our organization.

As part of the Company's commitment to promoting gender diversity, the Board commits to (i) a Board composition in which women comprise at least 30% of all directors by no later than July 1, 2023 and thereafter to maintain that percentage, and (ii) maintain not less than 20% of executive management positions held by women. Women currently represent 18% of the Board's directorship, with women having been appointed as chairs of the Sustainability Committee and the Compensation and Human Resources Committee of the Board of Directors.

At the end of 2021, women comprised 33% of our executive team and 9% of our employee workforce. Our President, and Executive Vice President, Sustainability and Special Projects, are women and NEOs. We consider the representation of female executives in our succession planning and in the process for the appointment of executive and senior officers. While the workforce at our South African operations and corporate offices comprised 30% women during the reporting period, we are working to increase female participation across our workforce and have both set targets for gender inclusion, as well as implemented a range of gender inclusion initiatives.



MARY KAYOMBO, KIPUSHI PROJECT

In 2021, Ivanhoe Mines adopted aspirational groupwide targets for gender inclusion across all levels of the organization. These targets, which have been set for 2030, range between 20% and 30% across various Patterson grades, also striving to attain 15% inclusion across all levels by 2025. In pursuit of our commitment towards gender inclusion, we achieved a 77% increase in the number of female employees year on year. Ivanhoe's gender inclusion initiatives also include a Women in Mining (WiM) program at Kamo-a-Kakula and Platreef, where we seek to ensure that women are adequately represented in technical positions, as well as that issues affecting women in the mining environment are adequately identified and addressed. Working hard to overcome historic barriers to entry for women in the mining sector in the DRC, in 2021, Kamo-a-Kakula's new hires comprised of 6.5% females.

In order to improve opportunities for women and young girls in our communities, our development projects place an emphasis on opportunities for this group and we offer bursaries and scholarship projects including; science, technology, engineering and medicine projects; and information and computer technology projects (see page 82).

Ivanhoe Mines acknowledges the role of women by aligning with international and national Women's Day programs. These celebrations seek to uphold women's achievements, recognizing their challenges, and celebrating female empowerment.

The Kamo-a-Kakula WiM team hosted an event in 2021 to mark international Women's Day, interacting around a range of topics. Attendees appreciated the opportunity for women to come together and collectively remember all the rights they've gained through previous struggles associated with women, as well as to share ideas and discuss what has been achieved and what still needs to be achieved through their collective effort.

Women's Day in South Africa marks an important moment for women of all races and backgrounds, recognizing the importance of commemorating the women who marched the streets on August 9, 1956 for women's rights. In 2021, our head office and Platreef Project team collaborated to hold an interactive virtual event in celebration of Women's Day, followed by a luncheon at the respective workplaces. As a result of the event, a number of special connections, synergies and integrations were initiated.



MEMBERS OF KAMO-A-KAKULA'S FEMALE WORKFORCE ATTENDING A WOMEN IN MINING CELEBRATION AT THE KOLWEZI LODGE.





## SPECIAL REPORT

## Diversity is key to transformation in mining

Hendrietta Sarila, a natural scientist, environmental coordinator, chairperson of the Women in Mining (WiM) Committee at Ivanhoe's Platreef Project, and treasurer of the regional WiM Committee, shares her experiences and hopes for a more gender inclusive future.



Hendrietta Sarila

It's 24 years since the promulgation of the Employment Equity Act (No. 55 of 1998) in South Africa, however, a lack of diversity and inclusive workplace environments remain a key issue for the mining sector. One of the challenges in creating a diverse and inclusive workplace is the failure to employ women from diverse backgrounds across all levels of decision-making within organizations. The mining sector has come a long way, but there remains much to be done. As an industry, we need to keep creating workplaces that are free of any form of discrimination and to provide equal opportunities in order to ensure that those who are under-represented, particularly women and people living with disabilities, are not only represented, but can succeed and thrive.

Ivanhoe strives to provide safe, inclusive workplaces where growth and progression are fostered and everyone feels important and needed.

In 2015, Platreef established a WiM initiative with the mandate to promote development, growth, and sustainable transformation

of women. This program sets development and training targets, measures the number of women in our workforce, and seeks to ensure that women are adequately represented in technical positions, and are developed and afforded procurement opportunities. We are encouraged by the words of our executive co-chairman of the Board, Robert Friedland, who says: "We are proud of our women, women underground, and women in management building the biggest new mine in South Africa".

The business case for diversity is well established. Workforce diversity also enables companies to look at challenges from multiple perspectives, better equipping them to identify innovative solutions. Any organization that strives for success must set implementation parameters for diversity and inclusion by asking three questions: Why diversity? What kind of diversity? And how much diversity? Once these parameters have been set, they should be turned into action through documented policies and targets.

**The Platreef team comprises a number of inspiring women, who lead, motivate and encourage others to keep striving to achieve their dreams. Some of these include:**

### Tshifhiwa Netshirando

Production manager, who joined the team in 2021 and is currently focused on equipping Shaft 1 for production in just over two years. She is passionate about mentoring and developing talented youth to realize their full potential and achieve their dreams against all odds.



*"It's a man's world (for now) but we're here too!"*

### Alinah Mawilah

HSE data administrator, who started her career as a negotiator in the finance and credit management sector, and is part of the Company's dynamic safety and risk management team. When she's not working at the mine, she volunteers at Lebene Special School.

### Kholofelo Maleka

Artisan assistant, a local electrical engineering graduate from the Company's host communities of Mokopane, who received an internship opportunity from Ivanhoe and is now part of its team of engineers and artisans.

### Mmasaku Mohale

Senior manager, community relations, who is passionate about community development and stakeholder engagement, and is the voice of the Company's host communities and champion for skills development of women and young girls. She implements skills development projects with an emphasis on inclusion and local employment, as well as continued opportunities for women and girls.

### Helen van der Nest

Accountant, who joined the Platreef Project 14 years ago as a bookkeeper, and was promoted to accountant in 2021. Helen believes that no role is too small or too big, and that everyone plays an important part in the organization's success.

The WiM forums were established to fast-track the transformation of the mining sector. In 2021, only 12% of mining sector employees were women. The South African Mine Health and Safety Council (MHSC) wants this ratio to be at least 50% by 2030. As WiM forums, we are working hard to make mining attractive to women by ensuring that an inclusive workspace is created and that women choose to remain within the mining sector. Research shows that women tend to exit mining at a senior management level. We need to determine the root cause of this and respond to it.

In 2021, we worked to ensure that the WiM foundations for the future were firmly in place. An election was held to elect new WiM committee representatives; all female employees and contractors had the opportunity to elect the leadership candidates. Key leadership positions, including a chairperson, deputy chairperson, skills and training head, safety and health coordinator and secretary, were filled. We also ensured that all the legal requirements, procedures, and checklists (as required

by the various regulators) are in place. WiM key objectives were developed and the WiM plan drafted and approved. We also attended various industry conferences during the period and we participated in tripartite meetings with Department of Mineral Resources and Energy.

*As the WiM, we strive to play an advisory role to our employer in promoting security, health and safety for women in mining, by still remaining in line with existing and new policies and procedures. Our aim is to embrace diversity management, which is an important pillar of the Culture Transformation Framework and to build a WiM structure with proper governance for equitable, economic empowerment. Owing to this, all women within our organization in all occupational categories and levels will be profiled and individual development plans for them will be established or refined, enabling them to be fit for management levels and core technical skills. Ultimately WiM will also look into health, safety, such as women's PPE, and the future working environment for women in mining.*



TSHIFHIWA NETSHIRANDO, PRODUCTION MANAGER, PLATREEF PROJECT, WITH MEMBERS OF PLATREEF'S WiM FORUM DURING A WiM MEETING HELD AT THE SHAFT 1 SAFETY MEETING AREA.



Q

A



## WOMEN IN MINING

A conversation with **MBALI NKWALI**,  
Transformation Superintendent, Kamoakakula

Q

**What prompted the WiM movement at Kamoakakula?**

A

As a group of female employees we felt we needed more representation in the Company and wanted to ensure that the voices of women are heard. The President of the WiM committee, Micheline Nyenge, initiated a movement by presenting a proposal to the executive team – after that, the process really took off.

Q

**What is WiM?**

A

WiM is the movement of creating inclusion and diversity through women in the workplace and specifically breaking stereotypes about women within the mining industry. Furthermore, it revolves around growing the numbers in female representation and making the work environment more conducive for women. WiM looks at making sure that women are happy and comfortable at work and are represented in all levels within the organization.

“If we could influence change in overall perceptions around women working in the mining industry and be able to show just how much value women add, it would help in eliminating some of the challenges faced in recruiting women to work in the mining industry.”

**Mbali Nkwali**

Q

**What measures are you taking to implement WiM?**

A

Currently we're looking at recruitment, as well as training and development. We haven't looked into procurement and supply chain yet, but as we grow, we definitely intend to look into supporting women-headed businesses. The first goal, given to us by the executive team was to recruit more women and to develop women from the talent pool across all levels within the Company. Going forward, as we refine and formalize our goals, we need to look beyond just recruitment and development, making sure that we retain key female employees by ensuring a rewarding career in mining. We will be diving deeper into issues regarding women's living conditions on site, appropriate personal protective equipment and whether women are in fact being listened to and heard. We will monitor to ensure that there are no instances of gender-based violence and how to prevent and address these issues.

Q

**What are the current goals for WiM at Kamoakakula?**

A

We are aligned to the Ivanhoe group targets, striving for 15% of the total workforce to be women by 2025. Also, 10% of all development programs need to have female candidate representation. We are also developing a WiM talent program exclusively for women.

Q

**What measures are being taken to ensure the sustainability of the movement?**

A

We're ensuring that we have targets in place and that we're held accountable against those targets. We will also review the targets and extend them. It is definitely sustainable. The fact that it has already started and there's so much more to be done, shows that we still have a lot to achieve. By starting with our focus on recruitment, we will grow female employee base and ensure we are delivering results.

Q

**What is the ultimate end result for WiM at Kamoakakula?**

A

We want women to be represented at every level and in every discipline in the organization. Ultimately, we'd like to ensure that they have fair representation. We want women to have a voice. We want women to truly be present.

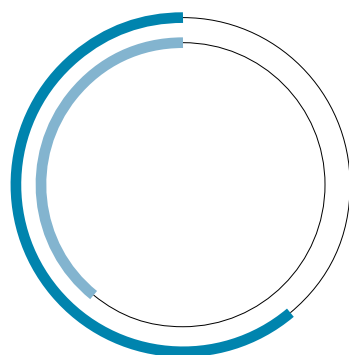
## Local employment

Ivanhoe Mines' recruitment policy also fosters diversity through the prioritization of recruiting and retaining local people from our projects' host communities. We strive to maximize local employment. To this end, we have local recruitment procedures in place that ensure that all positions are advertised internally and locally first, and are subsequently filled externally and by non-local candidates only if a suitable local candidate cannot be found. All opportunities for casual labour, or which do not require specific skills, are filled locally. We ensure that all on-site contractors comply with these local recruitment policies and procedures. We have developed extensive training programs that are designed to prepare candidates from the local communities for work at our respective operations. In accordance with our skills transfer and development program, and South African regulatory requirements, an increasing number of management positions (Paterson D band and above) are also being filled by local employees.

We are further improving our internal systems, structures and approaches to ensure inclusion and diversity in our workforce and our human resource development programs. We have placed continual and strengthened emphasis on capacity building, both within our workforce and in our host communities.

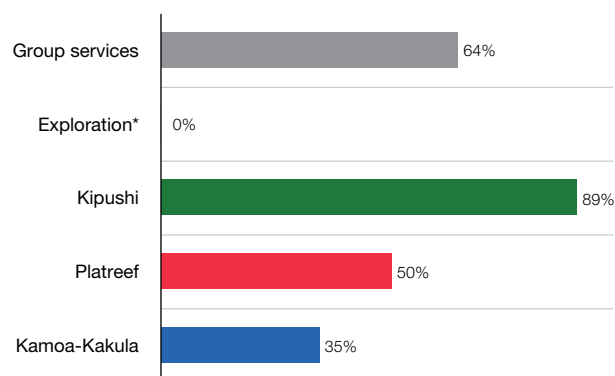
Owing to the increased demand for highly skilled and senior managerial employees at the Kamoia-Kakula Mining Complex during the final ramp-up to production, as well as the need to mix the mining crews to balance the crews on both day and night shifts with our newly trained local miners and experienced miners, we anticipate that the proportion of non-local employees will increase in the short to medium term. However, at our Kamoia-Kakula Mining Complex and Kipushi Project, we have a skills transfer program between expatriates and Congolese nationals in management. We plan to implement active management development programs, and expect that these interventions will normalize the proportion of local- and non-local employees in management at Kamoia-Kakula in the long-term.

### Local employees in management



2021	
Locals	61%
Non-locals	39%

### Local employees in management



\*Exploration is reflected as 0% because the workforce is currently comprised only of contractor employees.



CHERRY PICKER TRAINING AT KANSOKO TRAINING CENTRE PRESENTED BY EDDY KAMBARE, INSTRUCTOR FOR AUXILIARY MACHINES, KAMOIA-KAKULA MINING COMPLEX.





## SPECIAL REPORT

## Drilling assistant turns Masterchef, Maurice Tshinyemba has the recipe for success

After working as a drilling assistant on a temporary contract, Maurice starting working as a cleaner for Kamoa-Kakula's external facilities service provider, IFS, in 2019, gradually working himself up to become the Head Chef at the Kamoa Village.

Maurice was born in the DRC but grew up in Zambia, in his early years he dreamt of becoming an agricultural officer.

Maurice started his career as a drilling assistant (on a temporary contract) and in 2019 Maurice took on the role as a cleaner for Kamoa-Kakula's external facilities service provider, IFS. After joining IFS, he soon grew interested in becoming a chef. With the help of Chef Bashford, he obtained three years of culinary training in Lubumbashi. Now, as the Head Chef at Kamoa Village and Kukula, Chef Maurice leads a team of between nine and 18 in the kitchen. His day starts at 4am, as breakfast needs to be prepared early. Chef Maurice also prepares lunches and dinners each day. He takes delight in cooking nutritious meals for both employees and those attending functions at the site. His favourite dishes to prepare include oxtail, ossobuco and curry. His bakery team prepares delicious desserts every day, such as swan-shaped chocolate éclairs or delicious cakes, as well as mouth-

watering freshly baked bread and rolls. When employees have special dietary needs, such as Halaal, Chef Maurice ensures that their meals are cooked individually.

Kamoa Village sources its food from Lubumbashi and the surrounding communities. The communities supply a variety of vegetables such as cabbage, okra, lengalenga, eggplants, tomatoes, peppers, kasava leaves and onions. Eggs are sourced from the local female co-operative established by Kamoa-Kakula's sustainable livelihoods initiative.

Chef Maurice's passion for hospitality and good food make him an invaluable asset to the Kamoa Village, and he has big dreams – with support from IFS, he is currently training to become the catering manager.

*"We have many functions for guests such as ministers or investors and I like to cook for them", he says.*



Maurice Tshinyemba



CHEF MAURICE AND HIS TEAM PREPARING THE LUNCH SERVICE AT THE KAMOA CAMP.

# Our performance management

Performance management entails the act of engaging with an employee to review their ongoing workplace performance and development, through routinely reviewing performance against a number of key performance indicators. If conducted effectively, this process creates an open relationship, where information can flow both ways, and also enables managers to spot and address problems quickly and keep employees on track. Effective performance management systems both support employee performance, productivity and well-being, as well as advance the organizational mandate. Some key benefits of effective performance management include:



Enhanced employee engagement and productivity



Enhanced needs-based employee development strategies



Enhanced atmosphere of trust, support and encouragement



Enhanced exchange of feedback



Employees align to the direction of the Company or team

The performance of our executive management is measured by way of a corporate scorecard based on Ivanhoe Mines' annual corporate strategy. This scorecard includes ESG indicators. Key Performance Indicators (KPIs) within this scorecard inform the scorecards for each site, which, in turn, inform the objectives and scorecards for our employees. Ivanhoe Mines has implemented performance management systems across our operations. All employees have well-defined job descriptions and a clear understanding of their required work output as determined by their key performance indicators. Performance reviews are conducted twice per annum. This structured performance management approach provides accountability, and enables our workforce to measure their performance relative to their objectives and associated KPIs through bi-annual performance

assessments. In 2021, the Company launched a digital performance management scorecard, linked directly to the human resources database on the Sage system.

Effective performance management provides a useful tool whereby employees' successes, strengths, talent, potential for growth, and developmental needs can be assessed. Ivanhoe Mines' workforce training needs are determined following the outcome of the performance review process. Employees are provided with the opportunity to grow and develop through Individual Development Plans (IDPs) and associated career progression plans, which are discussed together with the performance assessments. Through these plans, our employees are also identified for training, study or other development programs (see page 79).

We are gradually increasing the number of workers covered by full performance reviews.

**In 2021, 754 performance reviews were conducted:**

**312** at Kamoakakula

**246** at Platreef

**118** at Kipushi

**78** at corporate

Performance management also serves as a catalyst for employee promotion, which in turn encourages even better performance. Internal promotion encourages employees to continue to pursue their career goals, as well as provides employees with a sense of recognition for their efforts, thereby aiding in employee engagement, boosting morale and productivity, and reducing absenteeism. New employees are attracted to the organization as they appreciate the potential for career growth.

**During 2021, 213 were promoted:**

**174** at Kamoakakula

**21** at Platreef

**18** at corporate



THAPELO KADI, SENIOR MANAGER SAFETY AND LEGAL COMPLIANCE, PLATREEF PROJECT. SAFETY IS A KEY DRIVER OF OUR CORPORATE STRATEGY AND EMPLOYEE KEY PERFORMANCE INDICATORS.





NICK JAMES, SENIOR PROJECT MANAGER, AND RUPERT, AT THE UNDERGROUND PUMP CHAMBER, KAMOAKAKULA MINING COMPLEX.

## SPECIAL REPORT



# Antonio Kanduri promoted to take over the reins at the Kamoakakula Training Centre

The Kamoakakula Training Centre has been entrusted to the highly capable hands of Antonio Kanduri, Antonio took on this role in December 2021.

Antonio is well experienced with work of the Training Centre having been assigned the role of Training Coordinator for Mining Operations in 2020. He was responsible for overseeing all machine operator training at this time and over the period, and was given more responsibility from his mentor, Stuart Hargreaves, and proved himself more than capable at every opportunity.

Antonio has already made a significant impact in the livelihoods of crews and locals, expanding personnel training and helping individuals to further develop themselves. He, along with Stuart Hargreaves, and fellow Training Coordinator, Corrie Smith, have put great effort into establishing the training curriculum, training resources and records management system for the centre. He also played an instrumental role in forming the new mining crews between 2020 and 2021. Antonio and Stuart also initiated

the recruitment of mining engineering graduates as trainee drill rig operators. Nine graduates were successfully recruited and are currently performing very well in their roles. With time and hard work, these graduate recruits could up-skill to become miners, shift supervisors and later enter the managerial ranks of mining. Antonio was instrumental in this initiative through his past association as a University Lecturer (in mining engineering) and his contact with the various university chancellors.

Confident in Antonio's vision for the Training Centre, Stuart has now proudly passed on his job responsibilities as Training Centre Manager to Antonio, commending him on how he has proven himself capable and resourceful in dealing with numerous challenges that have arisen at the Training Centre, and wishing him the best for his new role.



Stuart Hargreaves congratulating Antonio Kanduri.

# Our remuneration, recognition, rewards and retention

Dignity and equality in a workplace require that all employees feel valued and respected and receive fair treatment with appropriate compensation and benefits. This is further supported by the basic human right to work for fair wages. Ivanhoe Mines strives to pay a living wage which both meets employees' basic needs for a decent standard of living and also includes some discretionary income.

DRC law has set the local monthly minimum wage in the formal sector to USD 3,50 per day or \$80,00 per month for a five-day week. According to a November 2021 report based on a study conducted through extensive field research in and around Kolwezi by UK-based corporate watchdog Rights and Accountability in Development (RAID) and the Centre d'Aide Juridico-Judiciaire (CAJJ), a Congolese legal aid centre specialized in labour rights, the minimum living wage in the local town of Kolwezi, is around \$402 per month. Kamoa pays wages three times above the DRC minimum wage and includes additional benefits, such as the provision of medical care, payment of school fees, and provision of maize meal to employees to ensure that their total package meets the requirements for a living wage. In South Africa, the local minimum wage is \$286 per month and the average living wage is between \$380 pm and \$657 pm. Our South African corporate and mining personnel all receive remuneration that is in excess of both the minimum wage and the national average living wage.

To ensure that the employees are well compensated for work performed and that the wage is favourably comparable to the current prevailing market, Ivanhoe periodically performs market-based bench marking studies with internationally recognized companies. Ivanhoe uses the Paterson Job Grading System to evaluate each job; thereby ensuring that equal pay for equal work is maintained.

Ivanhoe Mines strives to uphold their commitment to not only attract top talent, but also to retain such talent in our workforce through fair and competitive remuneration. This includes other benefits for full-time employees, including retirement fund and medical cover contributions, life insurance and funeral cover, and paid annual, maternity and parental leave. Certain employees are also eligible for participation in share-based programs. Bonuses are paid annually and are linked to employee performance.

To aid our strategic agendas, we further track permanent employee turnover to ensure that we understand workforce dynamics and changes. Employee turnover refers to an employee exiting employment through dismissals, resignations or company reorganization. During 2019, the Company's turnover was, on average, less than 3%, however, an organizational restructure undertaken to mitigate the impact of Covid-19 on our mine development operations in 2020 resulted in a higher than normal turnover of 7%. In 2021, we once again managed to regain our average of less than 3%, by minimizing our turnover rate to 2%.



JACQUES MICONGA, BAGGING OPERATOR, KAMOA-KAKULA MINING COMPLEX.



## MATERIAL TOPIC

# Health, safety and well-being

Working in complex mining working environments poses a potential physical risk to health and safety, as well as a potential mental health risk.

Workplace fatalities, accidents and injuries, as well as occupational illnesses, such as noise-induced hearing loss, or diseases, resulting from exposure to heat, radiation, chemicals, toxins, metals and particulates, have long been synonymous with the term “mining”. These risks also pose potential reputational and financial risks, as organizations may encounter costs associated with accident investigations, onsite mitigation measures, worker compensation payments, increased insurance premiums and litigation, as well as suffer losses related to factors such as a loss of revenue due to “down time”, a decline in market capitalization,

or an inability to access finance. We therefore affirm the significance of this issue, which has been identified as a material impact by our stakeholders and employees. We place immense value on our commitment to occupational health and safety. We ensure the provision of leadership, resources, and a sound management system, as drivers for our strong safety culture and our performance. Our safety targets are included in our corporate scorecard and linked to executive remuneration.

Our approach to health and safety risk management is further tailored to address the site-specific circumstances and requirements at our projects, as well as the needs of vulnerable groups within our workforce, such as women and people living with disabilities. We include female safety representatives in our health and safety structures and committees, so that their specific health and safety needs are not overlooked,

e.g. inappropriate PPE items. We are particularly cognizant of the risk of gender-based violence and ensure the provision of safe, gender-appropriate sanitation facilities for our female workforce.

We are committed to a goal of zero harm, and seek to continuously improve our health and safety performance, thereby ensuring a safe and healthy working environment for our workforce and neighbouring communities. We practice visible leadership and our ethos is that we each carry personal responsibility to proactively manage our own safety, along with the safety of everyone around us. Our commitment to health and safety includes both our own employees, as well as contractors. We care, and together we aspire towards a happy, healthy workforce, working towards continuous improvement and having every job, every day, completed safely.



In order to mitigate workplace health and safety risk and keep our people safe, we have implemented an integrated occupational health and safety (OHS) management system whereby our health and safety risks are actively managed. This structured response to health and safety risk is comprised of several interconnected components:

- ▶ Compliance with all applicable regulatory requirements in our host countries.
- ▶ Alignment with industry best practices and standards.
- ▶ Development and continuous review and updating of health and safety policies, risk management plans, and standard operating procedures for safe work practices.
- ▶ Continuous health and safety risk assessments.
- ▶ Workplace monitoring and surveillance.
- ▶ Routine inspections to identify and remove, or minimize, potential hazards.
- ▶ Internal or external health and safety audits, including regulatory audits.
- ▶ Reporting and investigation of incidents.
- ▶ Disclosure of high potential incidents, serious injuries and fatalities among our workforce, together with and the implementation of corrective action to address the root cause and prevent reoccurrence.
- ▶ Setting and continuously monitoring objectives and targets.
- ▶ Evaluating leading indicators to inform our performance management.
- ▶ Free provision of appropriate and effective personal protective equipment (PPE) to our workforce.
- ▶ Ongoing health and safety inductions and training for our workforce, contractors, suppliers and visitors.
- ▶ Basic safety-awareness briefings and the provision of information materials for employees, contractors, suppliers, visitors and host communities.
- ▶ Worker health surveillance.
- ▶ Worker participation in health and safety management and decision-making.
- ▶ Stakeholder engagement in respect of health and safety topics.
- ▶ Prescreening of contractors for health and safety performance risks.
- ▶ Contractor compliance with mine safety procedures mandated through contractual agreements and routinely monitored.

## Our health performance and initiatives

Our employees' health and wellness are of the utmost importance to us, therefore, through our integrated OHS management system, we systematically anticipate, identify, evaluate, control and monitor occupational health hazards and exposures.

Continued exposure to occupational health risks may result in harmful health conditions, which could have a detrimental long-term effect on health. Therefore, we also provide occupational health services with the aim of protecting the health of our workers in relation to their work environment. Pursuant to this commitment, in 2021, 100% of our workforce were covered by occupational health and safety programs.

Each of our projects has access to a fully-equipped medical team, comprised of qualified and highly experienced doctors and nurses, as well as an emergency medical response team, available during working hours for routine occupational health consultations and 24/7 for emergencies.

In 2021, construction of the Kakula trauma unit also progressed well, while the Kamoia hospital was completed. The Kamoia hospital is a world-class healthcare facility, which proudly showcases an emergency casualty ward, intensive care unit and infectious diseases unit. Located at the Kamoia residential camp, the 15-bed hospital facility is ready to stabilize and comfortably

care for patients. Development of the x-ray facility and trauma theatre unit are underway and expected to be ready by 2022. Modern medical equipment, including two digital x-ray machines and ventilators, has been procured and are expected to arrive early in 2022. In its plight to go green, the hospital has adopted a paperless system that will enable doctors to digitally access information worldwide, as well as better secure confidential patient information.

As the Kamoia-Kakula Mining Complex is located in a malaria zone, reliable laboratory-diagnostic services are necessary to ensure an early and appropriate treatment response. Highly specialized laboratory equipment at the Kamoia hospital provides accurate malaria and typhoid fever diagnostics for patients. The hospital also has a four-bed Covid-19 isolation ward, where all infectious diseases will be treated. This ward will be equipped with negative pressure technologies, for better control of infectious diseases. Once the Kamoia hospital has been completely equipped, the current Covid-19 hospital will be repurposed as an on-site occupational health clinic.

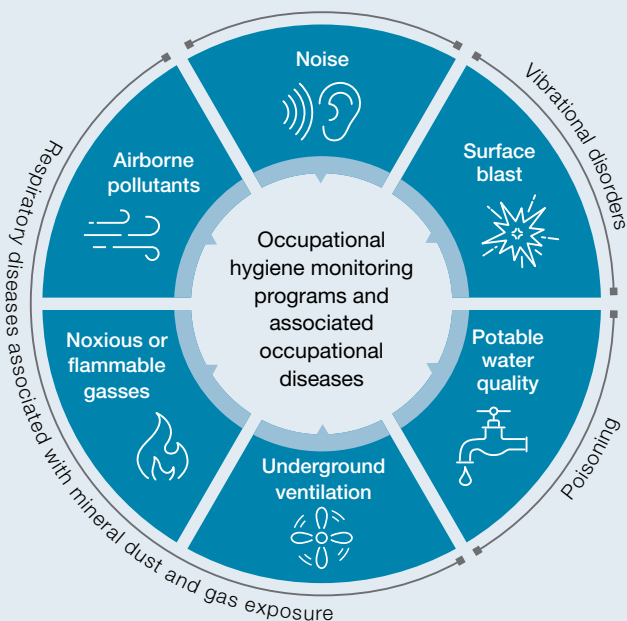
Ivanhoe regularly conducts voluntary occupational wellness campaigns that support employees' capacity to look after their own health and well-being. Through these campaigns, markers for chronic conditions, such as cholesterol and diabetes, are timeously observed, and preventative measures implemented. We evaluate our performance and the effectiveness of these services, and the related awareness initiatives, through key performance metrics, some of which are reported below (See page 67).

Our occupational health program requires that baseline health checks are conducted prior to employment and then routinely updated in order to both track employee health and well-being





against pre-employment levels, as well as, to evaluate the efficacy of occupational health controls and programs. We implement and continually review our occupational hygiene surveillance program and we conduct job-specific risk assessments to gain better insight into the exposure levels across all our projects. Corrective measures are implemented to address any deviations found. Our occupational hygiene surveillance program at our Kamo-Kakula Mining Complex currently includes potable water, underground ventilation and flammable gasses. Underground ventilation monitoring yielded 17 deviation reports, while noxious/flammable gasses monitoring yielded two deviation reports, prompting operational and engineering changes in respect of the underground and surface fans to address these findings. During 2021, Kamo-Kakula progressed occupational hygiene surveillance efforts by conducting baseline risk assessments for noise and airborne pollutants, with ongoing work planned to implement these programs in 2022. Comprehensive occupational hygiene surveillance programs are also in place at both our Platreef and Kipushi Projects. Platreef reported no deviations, while Kipushi reported two deviations in respect of noise monitoring, following which a noise deflector was installed in order to reflect the noise upward.



We ensure the provision of appropriate high-quality PPE for our workforce, as well as any visitors entering operational areas of our projects. These items include steel cap safety boots, hard hats, high visibility/reflective clothing, safety glasses, dust masks, gloves and hearing protection devices. Collectively, these programs provide our project teams with timely information to institute preventative measures that mitigate health and safety risks.

In compliance with the relevant labour and mine health and safety regulations applicable to our projects, we also provide access to basic medical care to all our employees and, where applicable, to their dependents. The Kamo-Kakula Mining Complex and Kipushi Project have concluded service-level agreements (SLAs)

with local hospitals, to ensure that employees and their direct family members always have access to healthcare professionals. In South Africa, our employees and their immediate family members are provided with medical insurance.

Since the onset of the Covid-19 pandemic in 2020, our health efforts have been intensely focused on the prevention, preparation, and mitigation in managing the risks associated with Covid-19. We have adopted a specific adjusted risk-based health protocol for managing the coronavirus pandemic at all our sites, which includes the creation of informative Covid-19 data portals, as well as focused preventative measures, such as vaccinations, regular testing, sanitization, screening and masks, thereby ensuring that positive cases were quickly identified, isolated, and treated, with cross contamination kept to a minimum. We have also placed infrared thermal scanners at strategic locations at our project sites to serve as an early warning system for anyone with a high fever. We continue to remain vigilant and maintain a high standard of risk management, adjusting our protocol determinant upon the potential health risk to our people at any given time.

Throughout 2021, the medical team at the Kamo hospital continued reviewing and updating the Covid-19 risk-mitigation protocols, ensuring that the necessary preventative measures were implemented as required. The onslaught of the third wave of the coronavirus pandemic spurred a sudden spike in positive cases, jumping from 165 to 332, however, the majority of patients only experienced minor symptoms, and the recovery rate is 100%. While testing remains integral to Kamo-Kakula's strategic response, when vaccines became available, the medical team focused intensively on rolling out vaccinations across the workforce. Vaccine uptake was initially very slow, however, through the efforts of the medical team and an intensive awareness campaign, branded as "#rollupyour sleeve", championed by senior leadership, vaccine trust gained momentum, and by December 31, 2021, a total of 1,124 employees had at minimum received their first dose of the vaccine. Kamo-Kakula will continue the promotional campaign, as well as make the vaccine easily accessible by rotating nurses to administer vaccines across all work sites. Plans are also underway for Kamo-Kakula to provide the booster shot to vaccinated members of its workforce.

As malaria remains a threat to employee health, ongoing efforts are implemented to manage this risk and malaria awareness remained a key engagement topic throughout the year, sensitizing employees about the necessary preventative measures to lessen the chances of contracting malaria. Employees are furnished with long-sleeve shirts and mosquito repellent for their rooms and office corridors. Workers, especially those that travel regularly, are supplied with a malaria testing kit containing a rapid malaria test and malaria medication. Regular biodegradable malaria fogging is also undertaken at the residential camps and offices. Owing to these ongoing efforts, malaria infections went down 49% from last year, with a total of 704 cases reported.

In 2021, Kamo-Kakula conducted a four-week HIV awareness and prevention campaign. It focused on HIV prevention, HIV counselling and voluntary screening and was successfully executed across all sites within the mining complex.



## SPECIAL REPORT

## Spearheading a successful HIV/AIDS campaign

Dr. Patrick Kosongo has been the driving force behind Kamoa-Kakula's occupational health programs for the past 12 years. Dr. Kosongo was born in Lubumbashi and grew-up in central DRC. He completed his medical degree in 2003, following which he worked in hospitals in central and south-western DRC.

He spent more than 14 years working in the mining sector, setting up occupational health departments and clinics *de novo*, and ensuring their compliance with both Congolese and mining legislation. Dr. Patrick was appointed as an Occupational Doctor by the Congolese Ministry of Health, he keeps abreast of developments in the field of occupational health. He is also skilled in "Advanced Life Support" through the American Heart Association Southern African Academy. Dr. Patrick joined Ivanhoe in 2010, gradually building up the health department from the early exploration days, through to the construction phase, and managed it almost single-handedly until 2020 when additional resources were brought in to help manage the Covid-19 pandemic.

Kamoa-Kakula implemented a HIV counselling, voluntary screening and awareness campaign in October – November 2021. A total of 7,105 members of the workforce were sensitized via meetings and safety talks regarding the importance of knowing their status, as well as regarding preventative measures and causes, and employees were encouraged to get tested with the assurance that they would have access to world-class treatment facilities and support in the case of testing positive. Following pre-test counselling sessions across the various sites, a total of 1,667 employees were tested. Following the 30-minute testing period, employees participated in a second counselling session and received a certificate of HIV test completion. It is encouraging that the infection rate was very low, and that owing to the campaign, those who were previously unaware of their positive status were provided with counselling support, as well as presented with treatment options. To further support the campaign, 58,776 male and female condoms were distributed across all the sites.



DR PATRICK KASONGO, SENIOR SUPERINTENDENT, HEALTH ALONGSIDE DR JACK KWETE BOSHIABO, PROVINCIAL COORDINATOR OF THE NATIONAL MULTI-SECTORIAL PROGRAMME OF RESPONSE AGAINST HIV/AIDS, AND DR JOHN BOTOMWITO, SENIOR SUPERINTENDENT I, HEALTH, DURING THE KAMOA-KAKULA HIV/AIDS CAMPAIGN LAUNCH.



Dr Patrick Kosongo

"The HIV campaign was a big success. Many employees, including contractors, have not previously received important information about HIV/AIDS. Now, the awareness of HIV protection has improved tremendously. The testing acceptance rate was good (23%), considering that it was the first time that many new employees were being exposed to HIV/AIDS awareness. People are hesitant to test because they think that they are going to lose their job if they test positive for HIV, or that HIV is a death sentence. The HIV/AIDS awareness campaigns that we develop aim to change this misconception."

**Dr Patrick Kosongo**

In December 2021, the National HIV/AIDS Conference was held in Goma. This conference, which takes place every two years, is a forum for public and private organizations to share their experiences regarding their HIV/AIDS approach and initiatives, as well as to collectively evaluate the effectiveness of the response in the fight against HIV/AIDS. The Lualaba Minister of Health attended the important event. Kamoa-Kakula, who has been participating in this conference since 2012, was represented by two peer-educators, with the delegation led by Dr. Thierry Ngoie Wa Kanda, the Kanzenze Health Zone Manager. The successes and learnings of Kamoa-Kakula's HIV/AIDS campaign were shared, highlighting the role and support of management in the campaign.

Looking ahead to 2022, Kamoa-Kakula's health team, in collaboration with the National Program of the Multisectoral Fight Against HIV, plan to launch a campaign that will raise awareness by sensitizing, testing, and providing adequate treatment and support programs.

"People think that when you have HIV it's a death-sentence. It used to be like that, but it has changed a lot. The management of HIV is changing. We have exceptional drugs to treat patients to lead a normal life, given that the treatment is taken every day. Knowing that there is the necessary support, people will be more open to getting tested."

**Dr. John Botomwito**





THE PLATREEF AMBULANCE IS EQUIPPED AND READY FOR ANY MEDICAL EMERGENCY.



MWANA MWAMBA AND SELEYA ELIANE, MEMBERS OF KIPUSHI'S EMS TEAM.

At the Platreef Project, through continual review and optimization of the Covid-19 protocols, several measures to prevent and mitigate the escalation of infections were identified and implemented. Those measures included the mass testing of employees and visitors, restriction of non-essential visitors to site, provision of transport to employees and a workforce vaccination rollout. In support of the National Department of Health's national vaccine rollout strategy, Platreef launched an on-site Covid-19 vaccination campaign that has administered 470 vaccine doses by December 31, 2021, thereby covering approximately 70% of the Platreef Project's employees and contractors working. Other employee health and wellness interventions included a number of campaigns, covering the following topics: tuberculosis, HIV/AIDS, diabetes, breast cancer, and prostate cancer.

The Kipushi Project's efforts in respect of workforce health and wellness remained focused on combatting the coronavirus pandemic in 2021. Alongside measures to remind people not to become complacent about the corona virus and to ensure that basic measures such as hand washing and mask wearing remain in place, the Kipushi Project's Covid-19 task team worked tirelessly to promote the vaccine through monthly talks with the staff and advertisements across the premises. Ivanhoe partnered with the Kipushi Senkantene Hospital to administer vaccines on site. While the workforce response was initially hesitant, a marked difference in sentiment was noted after the management team had been vaccinated.

By December 31, 2021, 170 employees, and 123 contractors have at minimum received their first dose of the vaccine.

At the corporate office in Sandton, vaccinations were made accessible and 80 employees were fully vaccinated in 2021. Booster shots will be made available to corporate employees in 2022. In addition to the Covid-19 initiative, the corporate office held a "Wellness Experience" initiative in March 2021, in partnership with a leading medical insurance provider, to participate in interactive screening where key body metrics and blood tests are performed in order to identify all current health and lifestyle risks and receive advice for how to manage those risks. Assessments undertaken during this screening include: glucose, cholesterol and blood pressure tests; a postural assessment; an eye assessment; and weight, height and body mass index (BMI) measurements. Voluntary, confidential HIV tests are also available, together with counselling both before and after the test.

#### Ivanhoe Mines' workforce health performance, 2021

	Kamoa-Kakula	Platreef	Kipushi
Number of occupational medicals conducted	663	193	413
Number of patients accessing occupation health services on site	13,258	887	2,532
Number of health inductions conducted	6,318	833	12
Number of patients tested for Covid-19	6,359	6,413	1,326
Number of employees vaccinated (Covid-19)	1,124	470	321
Number of patients tested for HIV/AIDS	1,667	526	0
Number of patients tested for malaria	3,571	–	1,952
Total number of chronic patients seen and treated on a monthly basis (employees)	142	50	63



## SPECIAL REPORT

# Platreef got the shot!

## Building a Vacci-“nation” at Ivanhoe Mines’ Platreef Operation

In waging the war against the coronavirus pandemic, Ivanhoe took a number of proactive steps, thereby ensuring minimal disruptions to our activities and keeping our mining development on track through all waves of the pandemic.

With agility and supportive risk guidance, Ivanhoe put in place Covid-19 policies, mandatory codes of practice, standard operating procedures, transport and quarantine/isolation initiatives, health readiness measures, training programs and emergency response procedures, thereby making strides in policy creation, awareness and capacity building for the sake of operational continuity and the health, safety and security of our people.

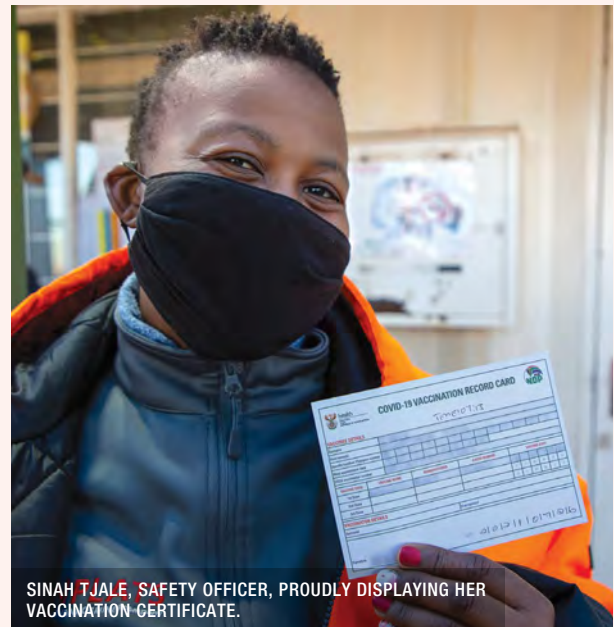
Our people, as part of mining communities, were also greatly impacted. Early on, many feared the uncertainty of what the virus could possibly do to them, as well as the fear of being stigmatized over having been infected. Added to this, the pressure of having to adapt to new ways of working, new ways of engaging with stakeholders and new ways of interacting in the workplace. Having regard to all these challenges, the Platreef Project adopted an employee-centric approach, underpinned by four principles:



Ivanhoe partnered with NGO, Ndlovu Lab Services, to vaccinate the Platreef operation’s workforce over a two-day period in July 2021. 293 employees received vaccinations during this time. The second vaccination program took place in September 2021; second vaccinations were offered to those previously vaccinated and first vaccines for those that

missed the initial opportunity. Today, the Platreef Project boasts a 97% vaccination rate.

The health and safety of our people remains paramount and we believe that through proactively working together, we have overcome one of the greatest health challenges faced in our lifetime. We commend the dedication of the Platreef Project team in helping drive vaccination uptake at the site.





## Our community-based health initiatives

The community relations and development teams at our projects prioritize engagement and support initiatives focused on community health and safety. We recognize community health and safety as a material matter, and therefore implement a number of community health initiatives across our mining projects. While our primary focus in 2020 was on the coronavirus pandemic, in 2021 we were able to once again address other important community health needs and issues.

Kamoa-Kakula significantly progressed the construction of the Muvunda Clinic in 2021, which should be completed in 2022. Health and safety focused stakeholder engagement was also conducted within the local communities and a HIV/AIDS and Covid-19 awareness campaign, benefitting 1123 people, was implemented. A number of health-related donations were made to local communities, benefitting approximately 766 people. Supplementary to its internal vaccination campaign, Kamoa-Kakula also facilitated access to Covid-19 vaccines for local community members.

In the community in which Platreef Project operates, HIV/AIDS continues to affect the community and child-headed homes are a commonplace. Despite the availability of antiretroviral drugs, many people, ashamed of the stigma associated with the disease, choose to ignore or hide their symptoms. Several

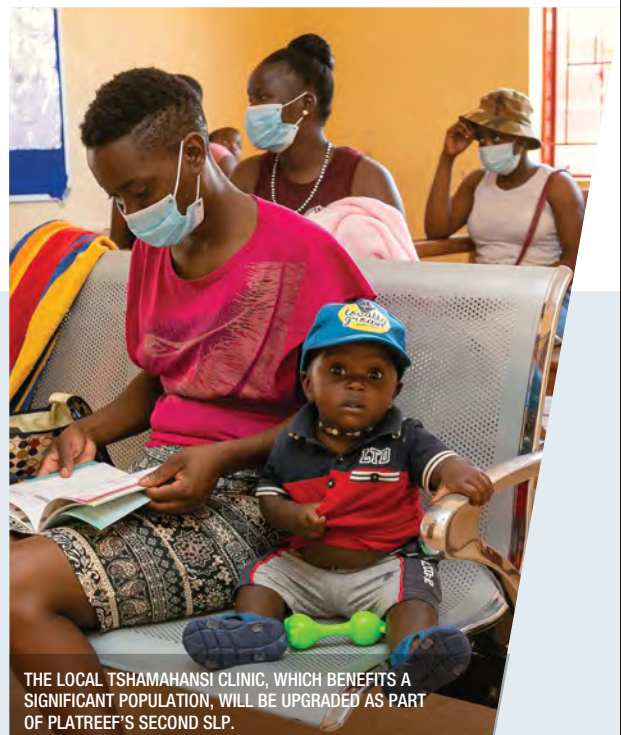
families lost both parents or their only parent, leaving the burden of care to fall on the eldest children. These orphaned children are deprived of both parental care and financial support, compelling them to leave school with little hope of completing their education or finding work in the future. Recognizing this ongoing issue, the Platreef team partnered with the local Tshamahansi Clinic to implement a HIV counselling, voluntary screening and awareness campaign in December 2021. The intention was to educate people about preventing HIV infection and to create more openness about the disease, so that the community is more supportive of people living with AIDS. It would also help identify AIDS orphans in dire need of assistance.

The government sponsor for the project was the Waterberg District Municipality; where the community has approximately 7.1% of its population living with HIV/AIDS. Non-governmental organizations, such as the Red Cross, also participated in the event. The event, themed “End Inequality; end Aids; end Corona”, was held on World Aids Day. While the key focus was HIV/AIDS, Covid-19 also featured. At the event community members were offered an opportunity to get tested for HIV and were screened for other health issues.

The Kipushi Project focused their 2021 community health and safety efforts on tackling the Covid-19 pandemic. They worked closely with the Kipushi Health Zone to drive awareness around the pandemic, donating face masks and working to promote vaccination advocacy by sponsoring advertisements on the local community radio. They also provided vaccinations to a number of community members. The Kushona Sewing Centre, a local sewing training centre initiative established by the Kipushi Project, produced cloth face masks, and approximately 2,000 masks were donated each month to host communities.



PLATREEF HIV COUNSELLING, VOLUNTARY SCREENING AND AWARENESS CAMPAIGN.



THE LOCAL TSHAMAHANSI CLINIC, WHICH BENEFITS A SIGNIFICANT POPULATION, WILL BE UPGRADED AS PART OF PLATREEF'S SECOND SLP.



## ENHANCING COMMUNITY HEALTH

An interview with **DR. DELLILES**, Director of the Kipushi Health Zone

**Q** Have you experienced any change following the implementation of Ivanhoe's Kipushi Project's water wells initiative?

**A** I have noticed a significant and positive impact across the community since the 12 boreholes were installed, and there is a notable positive change in water-borne disease numbers, such as cholera.

**Q** What are the health challenges facing the town residents and communities within and around Kipushi?

**A** In Kipushi we struggle with cholera. We know that the best treatment to combat this disease is to have access to clean water and sanitary conditions.

In 2008-2009, a large number of cholera infections and deaths were reported in the community. While a water pumping station had been installed previously, it could not be relied on as a continuous water source, and it was only directly accessible to a handful of Kipushi residents. Through Ivanhoe's intervention, we have secured access to clean water in several areas. The Kipushi area has been structured into five focused sanitary areas and Ivanhoe has installed 12 boreholes. These boreholes were drilled in areas where the need for water was the greatest and where the greatest impact will be felt by the community.

While another cholera outbreak affected the Lubumbashi community in 2009, this time Kipushi was less severely affected and no deaths were recorded. We believe that it was due to Ivanhoe's water wells project. Since then our last cholera case was reported in 2021.

**Q** Have you considered partnering with other organizations for greater impact of these initiatives?

**A** Prior to Ivanhoe, we partnered with UNICEF to establish waterholes; however when the project concluded, the waterholes were not maintained and as a result fell into disuse. These boreholes were also powered manually and were thus harder to operate.

The Ivanhoe boreholes however are powered by solar power and do not rely on the limited supply of electricity that we have from the national grid.

From this experience we believe that Ivanhoe has set the standard for any other borehole donations, since the water quality and maintenance support are of great value and ensure that the waterholes continue to be operational.

In addition to the boreholes that Ivanhoe installed, we also managed to fix and maintain three other previously sponsored water wells by electrifying them.

**Q** What are your future plans and aspirations for this and other projects in the area?

**A** The Health Zone has started a project wherein it works alongside the government to sponsor families with cement to build a base for toilet facilities. Alongside this, UNICEF has helped educate the community on sanitary toilet usage. This helps to maintain the disease spread and causes. So far, UNICEF have supported 10% of the construction of these bases, which will continue alongside the KICO water wells project.



## Our safety performance and initiatives

The timely, effective identification and assessment of workplace hazards and risks is a fundamental component of our project site OHS systems.

We apply a layered risk management process comprising of baseline risk assessments, issue-based risk assessments, routine and non-routine risk assessments and continuous risk assessments, and we maintain risk registers at all our projects, which are reviewed on a quarterly basis by the group executive team. We complete routine inspections and audits, and report and record all incidents, including near misses. We evaluate and seek to enhance our performance based on lagging indicators from these inspection and audit outcomes, and incidents, as well as leading indicators.

Our safety culture encourages workers to report all incidents and near misses, so that we can identify the root cause and implement the necessary mitigation measures, which may include actions being sent to the responsible persons/departments for close-out, equipment changes, or amendments to the related operating procedures. Such changes may also be necessitated on a non-routine basis, for example, when new equipment is obtained, or to comply with revised regulations or instructions following inspections by authorities. Hazard notifications are distributed after all incidents to raise awareness and prevent reoccurrence.

Our project sites have established joint management-worker health and safety committees, wherein representatives from trade unions in the case of Kamoakakula and Kipushi, or the employee forum and Women in Mining (WiM) committee in the case of Platreef, are entitled to both participate in meetings, and decision making.

To ensure our employees meet our workplace health and safety standards, we place a particular emphasis on health and safety training and awareness. Health and safety training needs are assessed based on occupation and area, and captured on a training matrix, the outcomes of which are periodically reviewed in order to evaluate its effectiveness. We make use of monthly talk topics and safety shares to drive the key messages of our safety culture, as we seek to foster a deeper understanding of any workplace health and safety risks. While each of our project sites are guided by the same OHS management system, they have all adopted their own safety brand and management style, tailored to suit their specific circumstances and reflective of their culture, vision, mission and values.

**At the end of December 2021, the Kamoakakula Mining Complex reached 2,696,794 work hours free of a lost-time injury**

Regrettably, a fatality occurred on May 31, 2021 when a contractor's employee, Mr Kafundilwa Delphin Kabamba, was hit in the leg by a loose falling rock while working at one of the mine's underground faces, this caused Delphin to fall backwards, striking his head. Despite immediate first-aid assistance by his colleagues, he passed away at the accident scene. Since the fatality, remedial safety interventions, including engineering changes, have been implemented. Further an educational campaign was undertaken to raise awareness regarding fall of ground incidents, which are a significant risk underground at Kamoakakula. These interventions included: geotechnical and structural mapping training on the hazards of geological features and loose rocks. Enhanced monitoring was implemented to assess compliances of barring on the face and back area; and the development and implementation of a lesson plan on strata control training was undertaken. Further additional planned task observations were implemented and additional production supervisors were appointed. In addition the revised smooth wall blasting technique for bad ground conditions was reviewed. Additional lights were installed and the re-engineering of the Charmec basket canopy was undertaken.



The safety team at Kamoakakula focused their efforts in 2021 on reviewing their governance structures, policies and program framework and addressing any gaps therein. The team also identified and are working on the development and role out of fourteen fatal risk control protocols. A renewed focus was placed on incident investigations and ensuring that adequate learnings ensue from these investigations. The continuous implementation and user-uptake of the IsoMetrix system remained a key priority, building on the work undertaken during 2020. An important system enhancement was the development of a mobile-based application. The application enables employees, or contractor employees, to log incidents or observations in real-time and simultaneously upload any related incidents.

Recognizing that systems are only as effective as the people that use them, and that people are ultimately the custodians of their own safety and that of their colleagues, Kamoakakula adopted their new, inspirational safety brand

in 2021. The safety brand named “Kuwa Salama”, a Swahili term which means “Be Safe”, is a call to action to work together for a safe environment. A monthly newsletter Tarifa La Kamoia is also published in both French and English and made available to the entire workforce. While this newsletter also includes human resource focused content and ESG topics, the majority of the content is

safety-focused, and also features a safety comic strip designed to resonate with the greater workforce. Mr. Antoine Kapondo Muteba, Majengo Safety Manager, wrote a poem about Kamoia’s Kuwa Salama. Born and raised in Lumbumbashi, Antoine, who holds Honours Degree in Law from the University of Lumbumbashi, joined Kamoia-Kakula as a safety officer contractor in January 2020. He was

promoted to safety manager due to his hard work and dedication, as well as his commitment to safety. He is a poet with several published poems in the Katanga province. For him, safety is a brand worth adopting. Kuwa Salama shows Kamoia Copper’s effort to practice safety and it encourages the active and voluntary participation of workers.



ANTOINE KAPONDO MUTEBA

**The Kamoia-Kakula Mining Complex continues to strive toward its workplace of zero harm to all employees and contractors.**

- K** Kamoia, Kamoia, Kuwa Salama, be safe,
- U** Understand the idea behind this brand
- W** Work, walk, live every day accordingly and
- A** Acknowledge it as a call to action for life.
- S** Starting our days and ending them with no injury
- A** Adhering to best principles and rules that are compulsory
- L** Leading by example by doing the right thing at the right time,
- A** Acquiring the necessary skills and knowledge every time,
- M** Must stay a rallying cry for every one of us;
- A** And an inspiration to keep safety top of mind and to focus.



*Mr. Antoine Kapondo Muteba*

## SPECIAL REPORT



# A new shaft for communication at Kamoia, Tarifa La Kamoia magazine

September 2021 saw the introduction of Kamoia-Kakula’s first employee magazine issue.

A communication tool aimed at achieving inclusivity and increasing employee engagement was launched at Kamoia in 2021. This magazine showcases Kamoia-Kakula’s best practice operations including health and safety, mining, waste management, environment, local procurement, employee and community wellness along with other mining and business protocols.

The newly adopted magazine, named Tarifa La Kamoia, meaning “Kamoia News”, has achieved engagement in all areas on site, having created a platform for informational updates as well as the opportunity for various departments to showcase their progress,



Brett Watson

exciting plans, and to promote the embodiment of Kamoia’s vision, mission and values. It also reaches out to readers at Ivanhoe and the global community who wish to see the month-to-month happenings at Kamoia. A new issue of Tarifa La Kamoia is available every month in French and English, in print and digital format.

“Tarifa La Kamoia continues to inspire, by sharing access to company, departmental and individual employee achievements, with emphasis on key health and safety messaging on site.”

**Brett Watson, Managerial Leader of Business Services, Kamoia-Kakula**



## SPECIAL REPORT



## Platreef rising up to the Jerusalema challenge

Following one of the most challenging times the world had ever seen in 2020, a melody rose up from the southern-most point of Africa – a song, Jerusalema, about hope and solidarity, created in South Africa by DJ and producer Master KG and female vocalist, Nomcebo. The Jerusalema dance challenge became a national and worldwide phenomenon, even catching the attention of the mining sector, with various mines answering the call. Platreef's vibrant workforce did not disappoint when they took part in the challenge.

Acknowledging that life contains challenges and opportunities in equal measure, and seeking to unite and re-galvanize our people

through a dance and a spirit of comradeship, Platreef embraced this opportunity and pledged their commitment to humanity in taking up the Jerusalema challenge, setting the tone for a brighter 2021. The team also sought to engrain the Khumbul'ekhaya safety drive with this same spirit. Khumbul'ekhaya really means "remember home", instilling the message that we must remember that we must come to work and go back home unharmed, every day without fail. Embedding the words of the song into our safety culture to remind us that we are all responsible for our own safety, as well as that of our colleagues, **"Guide me, take me with you, do not leave me here."**

USING DANCE TO SET THE TONE FOR A BRIGHTER 2021.



The Platreef Project reached a total of 677,450 lost-time, injury-free hours worked as at the end of December 2021.

Platreef has adopted two safety slogans, which underpin the team's safety approach; "Khumbul'ekhaya" meaning "remember home," striving to bring everyone "home without harm, everyone every day" and "Hlokomela", which means "take care". The "Safe House" campaign was implemented in 2021 and builds on the Khumbul'ekhaya initiative. As part of the program, a green card system was introduced which is based on reward and positive re-enforcement for good safety behaviour.

An Engconomics safety intervention also sought to empower employees to be champions of their own safety and to ensure good sustainability performance. Through a continued focus on safety throughout the year, as well as the implementation of these interventions, recordable accidents reduced from five in 2020 to one in 2021.

Safety focused stakeholder engagements for the Platreef Project took place with the regulator in the period; project developments and changes to procedures or equipment were addressed in these sessions.



**SUSAN COETZEE, EMS COORDINATOR CONDUCTING ALCOHOL TESTING DURING A SAFETY CAMPAIGN.**

Road safety is a pressing issue in the area as the N11, which is the road to the Platreef Project and a national route connecting South Africa to Botswana and into central Africa, has incrementally experienced a significant increase in traffic over the past few years. The increased traffic has regrettably resulted in increased motor accidents and pedestrian fatalities for communities living directly adjacent to the N11. Platreef Project hosted a road safety awareness day on December 7, 2021 at the Ga-Magongoa sports ground. Held in partnership with a neighbouring mine, the local municipality, the provincial government and the local community focused on encouraging road users and pedestrians to obey traffic rules and remain safe on the road. Local transport providers such as Great North Bus Services and local taxi operators also participated in the event.



**SAFETY CAMPAIGNS REINFORCE PLATREEF'S ETHOS OF "KHUMBUL'EKHAYA".**

The Department of Transport and Community Safety also launched their 2021 Festive Season road safety campaign, using the event to share their key messages. The Platreef team shared with the community members the safety slogan of "Khumbul'ekhaya" and encouraged people to return home safely as they drive, walk along and cross the N11.

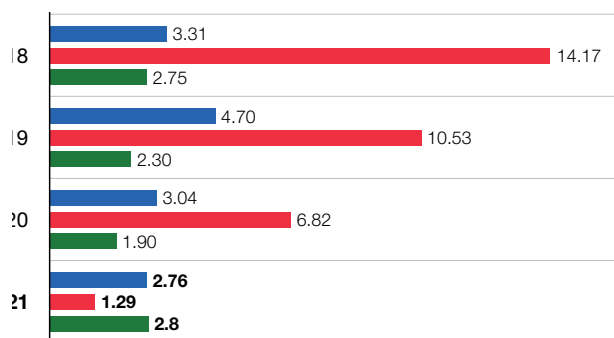
At the end of December 2021, the Kipushi Project reached a total of 3,983,319 work hours free of lost-time injuries. Kipushi has an exemplary safety record, as it has been more than two and a half years since the last lost-time injury occurred at the project. The health and safety team at the Kipushi Project attribute this success to their approach, which broadly assigns the responsibility for safety to all supervisors at the mine, rather than appointing a handful of safety officers. Pursuant to this approach referred to by the Kipushi Project as the "Supervisors Accountability System", the mine has more than 500 disciplined safety practitioners that continually identify and assess all the potential risks associated with each task undertaken at the mine. The responsibilities of these accountable supervisors includes: workplace inspections, a minimum of two quality planned task observations per week to measure employees knowledge against a prescribed procedure of training, chairing and participating in daily safety meetings and detailed issue-based risk assessments for non-routine tasks, to eliminate or manage any potential hazards that might harm people or damage equipment. The Kipushi Project's safety office play a governance and oversight role, following up on action items and close-out inspections, as well as ensuring that the accountable supervisors remain honest.

Health and safety focused stakeholder engagement took place with the Kipushi Health Zone covering topics such as malaria, Covid-19, etc. Local artisanal miners were also engaged to sensitize them to the risks associated with uncontrolled mining in dangerous situations, as well the local police in respect of electric cable theft risks, and the community regarding risks associated with water leaks.

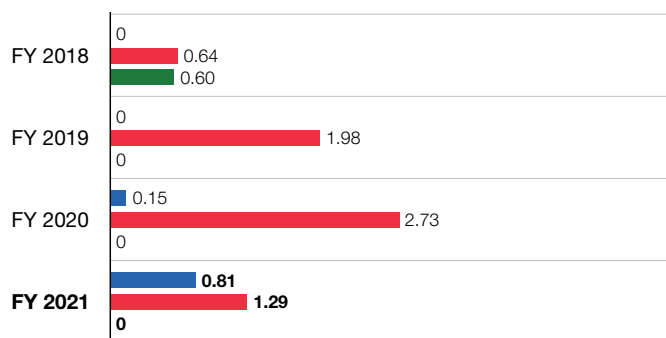


## Ivanhoe Mines' workforce safety performance, 2021

	Kamoa-Kakula	Platreef	Kipushi
Lost-time injury frequency rate – total workforce	0,81	1,29	0
Lost-time injury frequency rate – employees	2,37	3,09	–
Lost-time injury frequency rate – contractors	0,41	0	–
Total recordable injury frequency rate	2.76	1.29	2.8
Number of medical treatment cases	34	3	3
Number of lost time injuries - workforce	15	1	0
Number of lost time injuries - employees	9	1	0
Number of lost time injuries - contractors	6	0	0
Number of fatalities – employees	0	0	0
Number of fatalities – contractors	1	0	0
Number of safety inductions conducted - employees	3,137	776	21
Number of safety inductions conducted - contractors	7,297	33	38
Number of safety inductions conducted - visitors	87	0	0
Number of safety-related training interventions	6	4	5
Number of employees who benefitted from safety-related training	1,117	776	225



■ Kamoa-Kakula ■ Platreef ■ Kipushi



■ Kamoa-Kakula ■ Platreef ■ Kipushi

Definitions: Lost-time injury frequency rate (LTIFR) =  $LTIs \times 1,000,000 / \text{hours worked}$

Total recordable injury frequency rate (TRIFR) =  $(\text{Fatalities} + LTIs + RWIs + MTIs) \times 1,000,000 / \text{hours worked}$



LOCAL CONTRACTORS, KHAZAMULA CONSTRUCTION, CONDUCTING THEIR MORNING SAFETY MEETING, PLATREEF PROJECT.

## Our employee wellness

Our care for our employees' health and well-being is one of Ivanhoe Mines' top priorities. We advocate a holistic approach to well-being and recognize that workers must be both physically and mentally healthy, as well as able to pursue their career for a meaningful purpose in return for sound financial security.

Our sustainability materiality assessment highlighted employee wellness as a material topic and we will continue to prioritize our efforts towards employee well-being.

We aim to provide the highest standard of on site food and shelter. All on-site accommodation is well equipped and comfortable. The nutritious food that we serve in our facilities is partly sourced from the food program in our host communities and caters for the varied tastes of our multinational workforce. We understand health as a human right and ensure the standards at our projects meet the highest standards for accommodation and healthcare. Gyms and other recreational facilities are available to ensure workers' physical fitness and to offer respite from the work environment.

At our Kamoa-Kakula Mining Complex our people use sports as a means to keep fit, and socialize. The Kamoa football team, known as, Kamoa Discovery FC, plays against other mining companies in the region of Lualaba Province, as well as private club-based teams. Kamoa supports the team by supplying uniforms and equipment and provides financial assistance for away games. Kamoa Discovery FC has ambitions to participate in the local championship and nationally. Plans are now underway to construct a football pitch at Kamoa.

The cycling club was established in 2020 and interested employees were given bicycles. Initially there were 15 cycling enthusiasts, this has grown to over 40 active cyclists who explore the local surroundings of the mine. The routes are created by the cycling club themselves and meander through river beds, up tough hill climbs and along far stretches of newly created mining and community roads. Mark Farren, outgoing CEO of Kamoa, holds the long-distance record, having clocked the furthest distance of 154km in September 2021, setting the bar high for healthy rivals. In 2021, due to the popularity of the sport, Kamoa procured 46 new mountain bikes, 120 new bikes will be ordered in 2022. "Cycling at Kamoa brings people together, raises our spirits, creates new friendships and gets people fit," says Johan Kritzing, a Kamoa employee in charge of warehouse logistics.

A brand-new action cricket facility was installed at Kakula Village in 2021. Since then, 11 league teams have been formed by Kamoa-Kakula employees and contractors. League matches are played weekly and have captured the interest of people who have never been exposed to, or played cricket before. Plans for 2022 include the establishment of mixed-women's teams, as well as coaching practices for people who wish to learn and get involved.

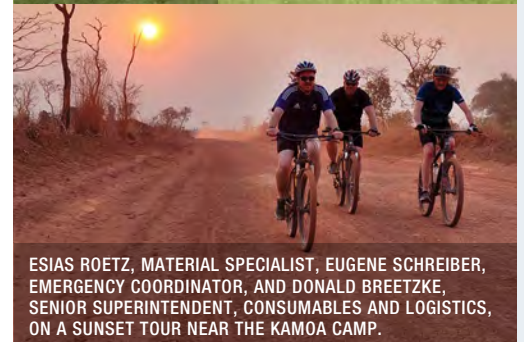
Our corporate office holds annual "health awareness days" where employees are voluntarily screened for potential health issues, and provided with information on healthy lifestyles. Our employee emotional assistance program, launched in 2020, remains available for employees and their immediate families to access confidential specialist advice and counselling services. The program also offers managerial training and support for dealing with employees' personal issues, which may be inhibiting their performance. The 24-hour service is available through various channels and may take place either telephonically or face-to-face. Recognizing the benefits of exercise to well-being, we have also introduced a running club, which caters for all ability levels.



KAMOA'S WOMEN'S SOCCER TEAM PLAYING AT THE DIUR STADIUM IN KOLWEZI.



KAMOA DISCOVERY FC.



ESIAS ROETZ, MATERIAL SPECIALIST, EUGENE SCHREIBER, EMERGENCY COORDINATOR, AND DONALD BREETZKE, SENIOR SUPERINTENDENT, CONSUMABLES AND LOGISTICS, ON A SUNSET TOUR NEAR THE KAMOA CAMP.



KERRY XIAOXIA HE, SUPERINTENDENT FINANCE, ON A "TOUR DE KAMOA".



ACTION CRICKET FESTIVITIES AT KAKULA VILLAGE.



ANITA NGXUMZA (LEFT) AND MAMY MUJINGA, MEMBERS OF KAMOA COPPER'S EMERGENCY RESPONSE TEAM.



## Crisis management planning and emergency preparedness

Climate change, urbanization and the degradation of natural ecosystems are drivers of more frequent natural disasters such as droughts and floods. These catastrophic events often have devastating consequences for people, organizations and property, exposing already vulnerable communities to even greater risk.

Geopolitical and social unrest also pose a risk to people and infrastructure at mining operations around the globe. Therefore, we see it as a business imperative to assess and identify potential disaster risk, to mitigate the potential impact of such risk and to play a positive role in building communities that are more resilient to disasters, as well as to ensure that we are adequately prepared, resourced and equipped to respond to all forms of emergencies

Each of our mining operations has its own Emergency Response Plan and has personnel trained to respond safely and expeditiously to medical, fire and environmental emergencies. Protocols for crisis communication have also been established. Each mine also has all the required response equipment. We have trained our security personnel for the unlikely event of social unrest, and provided clear guidelines regarding the use of force in such situations.

Our emergency response teams conduct regular drills across different areas to test response time and efficiency. During 2021, the Kamo Copper Mining Complex conducted five drills underground, four drills on surface, three drills at the plant, and four community drills. The Platreef and the Kipushi Project conducted one underground and one surface drill per month throughout 2021.

## SPECIAL REPORT



## Superheroes don't always wear capes!

### A Kamo-Kakula's emergency medical services team twice triumphantly turns tragedy to tranquility

Motorcycles, which are often used as taxis in the rural areas near to our Kamo-Kakula Mine, provide an essential form of travel, connecting people from rural communities with essential services, such as healthcare facilities, as well as family and friends in the peri-urban town of Kolwezi. These motorcycle taxis provide a form of employment and are enablers for local economic development, however it is a predominantly informal and unregulated sector.

Kamo-Kakula has identified the potential safety risk that motorcycle drivers pose to our people whether they are pedestrians or in vehicles; motorcyclists often display dangerous driving habits and often transport multiple passengers at a time. Consequently, Kamo-Kakula has implemented a traffic management plan and very stringent speed limits, as well as fitted all vehicles with tracking devices, which monitor speed and reckless driving habits, such as harsh braking.

In 2021, whilst en-route to Kolwezi to collect a consignment of Covid-19 vaccines, the Kamo-Kakula ambulance crew, together with one of our resident paramedics, Prince Hlongwane, and Dr. John Botomwito, witnessed a motorcycle accident.

The motorcycle, carrying three passengers, was speeding and suddenly lost control and crashed. The team stopped to help and discovered that a pregnant passenger was in labour. The team helped deliver the baby in the ambulance, stabilized the mother and transferred them safely to the hospital. They also helped assess and treat the other two passengers requiring assistance.

In 2021, the Kamo-Kakula emergency medical response team was called to assist a semi-conscious female patient who had been bitten by a snake in the Kamisange village, near Ivanhoe's Western Foreland exploration activities. The patient had been bitten the day prior to them being called and was in a critical condition. The team stabilized the patient, however while in transit to Kamo-Kakula's intensive care unit she stopped breathing. The team quickly sprang into action and administered advanced life support treatment, before placing her on a ventilator. After receiving treatment in hospital, the patient made a full recovery, which was made possible through the excellent work of the team involved, who were able to correctly identify the type of snake and ensure the correct anti-venom was administered.

While snakes keep our natural ecosystems functioning effectively, indigenous venomous snakes, inhabiting the dense savannah areas around the Kamo-Kakula Mine, pose a health and safety risk to our employees, and particularly to our host communities. Kamo-Kakula has trained and equipped various employees as "snake handlers", they are responsible for carefully catching and safely releasing any snakes found on site. Snake awareness is a regular subject covered in monthly health, safety and environment awareness topics.



We salute the Kamo-Kakula emergency medical services team for these heroic, life-saving efforts!

KAMO-KAKULA'S EMERGENCY MEDICAL SERVICES TEAM.



## MATERIAL TOPIC



KABILA KELANGA DENARY, A LOCAL CADET, KAMOIA-KAKULA MINING COMPLEX, HAVING RECEIVED A CERTIFICATE OF COMPLETION FOR THE BASIC OPERATOR TRAINING PROGRAM. THE NEXT STEP IN HER TRAINING JOURNEY IS A TEN-MONTH PRACTICAL TRAINING PROGRAM FOR "HANDS-ON" EXPERIENCE IN THE PLANT.



CARLOS KABUTWA, A SPRAYING TRAINEE, KAMOIA-KAKULA MINING COMPLEX USING VIRTUAL REALITY GOGGLES AT THE KANSOKO TRAINING CENTRE.

# Skills for the future

## Employee skills development

Ivanhoe Mines is committed to developing our most precious resource – our people who work passionately and tirelessly to advance the organizational mandate. In order to harness the skills necessary for the organization's current and future needs, we have implemented strategic, comprehensive human resource development programs which are aimed both at employees, as well as host community members. At our mine sites, we focus on developing training initiatives to develop skills of the local workforce, and prepare our employees for future demands. We recognize training and education as a material issue for our internal and external stakeholders and therefore prioritize these opportunities. We also hold our main contractors accountable to these principles of skills development and expect them to comply with our employment standards, as regulated by the contractor and vendor frameworks established at each project.

At an operational level, sustainable development requires us to engage a diverse workforce to ensure that we have the right people, supported by the right tools and equipment, procedures and systems, and leadership. We ensure our employees have these tools and skills that they need in order to efficiently and safely perform their jobs and to achieve their full potential. We focus especially on building the capacity of local employees through continual skills development that enhances employees' personal and career development opportunities, such as on-the-job coaching and mentoring, augmented by study assistance in line with Individual Development Plans (IDPs) and associated career progression plans. In 2021, 180 employees across various organizational levels were enrolled in a wide range of educational development programs, such as certificate or diploma courses, degrees, etc. We recognize star performers as part of a talent pool and fast-track their development. Skills transfer programs are also in progress. We are actively expanding our female workforce at our DRC projects and are providing our existing female employees with opportunities for development and career growth, in compliance with local legislation and best practice.

Our human resources development program at our Kamoia-Kakula Mining Complex takes cognizance of the relatively remote setting of the project, the multi-cultural workforce, our commitment to local employment and gender inclusion, the expansion of the mineral resources, and the need for a future, skilled, local workforce. To achieve our objectives, our Kamoia-Kakula human resources department focuses on identifying and assisting high-potential Congolese nationals through training, mentoring, skills transfer programs, study assistance and active succession planning. In 2021, Kamoia-Kakula launched the Kipaji program. This program is crafted to fast-track a talent pool of Congolese employees to management roles. In 2021, 128 key positions were identified for succession planning for identified local employees, all of whom are enrolled in a skills transfer program.

128 key positions identified

56 local candidates enrolled in internships

30 employees enrolled in the Kipaji career development and mentoring program

135 local employees promoted in 2021

## SPECIAL REPORT



## This little light of mine, I'm going to let it shine...

### Kamoa's Kipaji Development Program

Kamoa-Kakula's recruitment and development strategy is underpinned by a deeply rooted commitment towards cultivating a highly skilled workforce.

"Kipaji" is a Swahili word which means brilliant or talented, and is the name ascribed to the latest skills development initiative established with the aim of developing Kamoa's most precious resource, its people.

The Kipaji Development Program, launched on October 16, 2021, is aimed at advancing qualifying local employees to become future leaders of the organization and wider industry. At the launch, 30 young talented Congolese employees were welcomed into the program, and given the opportunity to meet and network with members of senior management, who have volunteered to serve as mentors. Kipaji will play a significant role in ensuring that Kamoa pursues and prioritizes professional development so as to keep up with the ever-changing business landscape, especially when it comes to adopting new technologies, processes and models.

Kamoa's outgoing CEO, Mark Farren, initiated the program, having participated in a development program in the early stages of his career. The program will be governed by the organization's transformation panel and will seek to nurture talent within the organization. A number of employees will be selected to participate in the program and will be equipped with the necessary skills and knowledge required to move into higher level positions within the company and to meet the future demands of the industry. They will be provided with Individual Development Plans, career development interventions, coaching, mentoring and succession planning, all designed to meet the needs of the participants as well as the needs of the business.

While the Kipaji program currently focuses on internal candidates, there are longer-term plans to open the opportunity to external participants such as Congolese students who will embark on uniquely tailored transformation programs.



Launch of the Kipaji Development program.

A world-class mining training centre has been established at the Kamoa-Kakula Mining Complex in Kansoko. The centre inducts around 200 contractors and employees every week and provides technical skills training for the rapid deployment of Mining Crews within the Kakula, Kansoko and recently Kamoa one crew. In 2021, Kansoko Training Centre successfully trained and deployed three operational crews for the Kakula Mine and two operational crews for the Kansoko Mine. In total, more than 450 mining crew personnel have been trained, with another 350 planned for the deployment of additional crews.

The cadetship program offered at the training centre is targeted at a career progression program making use of a clear development plan. It is part of Ivanhoe Mines' continued strategic effort to empower a new generation of highly skilled women and men. The centre has also assisted in providing career opportunities for locals who initially fell short of employment criteria. Thanks to the joint effort between the training centre and the Sustainability Department, ten people (50% male and 50% female) have completed the Basic Process Operator Training program. They were subsequently

deployed to the Concentrator in October 2021 for a 12-month cadetship. The trainees have performed so well that they were permanently employed in January 2022 as part of the Concentrator Phase 2 workforce expansion. The Training Centre provides opportunities for equal representation, and therefore actively assists in the WIM program, providing training for Process Operation and Trainee Operator roles.



Our Platreef Project is guided by operational requirements and those mandated by the Project's Social and Labour Plan (SLP), as well as the requirements of the Mining Charter and Employment Equity legislation. The SLP is crafted, implemented and reviewed in five-year intervals and is regulated by South African mineral legislation. The 2021 reporting year was the first year of implementation of the Project's second SLP. In 2021, 17 key positions were identified for succession planning for 12 male and five female local employees, all of whom are enrolled in a skills transfer program. Two local female candidates were enrolled in learnerships, three in internships, and three in operator training. 21 local employees were promoted.

17 key positions were identified in 2021

2 local female employees enrolled in learnerships

3 female employees enrolled in internships

3 local female employees enrolled in operator training

21 employees promoted

At our Kipushi Project, the employee skills development program is based on the progressive need for a variety of skills as the mine readies for production. A formal skills transfer program is underway, through which expatriate workers and highly skilled nationals build the skills of local employees. In 2021, 50 key positions were identified for succession planning for local employees, all of whom are enrolled in a skills transfer program.

50 key positions were identified in 2021

21 employees enrolled in educational assistance programs

40 employees participating in management training



JOHN RAPULANA TESTING THE SIMULATOR DURING A VISIT FROM GÉCAMINES. KAMOA-KAKULA HAS ESTABLISHED A STATE-OF-THE-ART TRAINING CENTRE. AS PART OF THE PROJECT'S EXTENSIVE TRAINING PROGRAM, APPRENTICE MINERS LEARN THROUGH HANDS-ON EXPERIENCE, AND AUTOMATED MINING EQUIPMENT ON COMPUTERIZED SIMULATORS.

## Community skills development

Ivanhoe Mines prioritizes training and education opportunities for host communities. We recognize that our projects are situated in emerging economies where discrepancies exist between the skill and educational levels of a significant portion of individuals in the communities. Further, the skills required for employment at the mining projects or for establishing and growing a successful local business are often

lacking. The 2020 Materiality Assessment undertaken further highlighted the importance of this issue to our stakeholders. In order to close the gap, we invest in adult literacy and education programs and offer scholarships and bursaries to suitable candidates.

The livelihood projects, and training interventions that we are part of enable community members to improve their living conditions and socio-economic status.

Pursuant to the Kamoa-Kakula Mining Complex's phased ramp-up, our 2021 community skills development initiatives focused largely on providing **26 core-to-mining training opportunities** at our Kamoa-Kakula Training Centre. Other community skills development investments included **283 non-core-to-mining training opportunities**, focused largely on agricultural training and adult literacy.

### SPECIAL REPORT



## Kamoa-Kakula's adult literacy program aims to equip readers as leaders

Kamoa-Kakula's Community Relations Department, led by Senior Community Relations Superintendent Leon Tshikuta, is committed to ensuring that its host communities have access to improved education, healthcare and clean water. Part of this commitment is reflected in the rollout of a new adult literacy program in partnership with Alfa Congo.

Alfa Congo is a Congolese organization affiliated to ALFALIT international, an international Christian organization with experience in literacy programs (non-formal education), early childhood development, health and disease prevention, food security and nutrition, community development, microfinance, and the production of educational materials.

A Zone Supervisor, with experience in literacy programs, has been appointed to monitor and evaluate the progress of the project. A coordinator will manage the project on a day-to-day basis and will be responsible for the implementation of the project. After running the Alfa Congo program in Kamoa's host communities with external trainers for several years, the first 'train the trainer' process took place at Kamoa in July 2021. A select group of facilitators were chosen from the community, they underwent training, followed by an exam, to earn their official facilitator certificate.

The next phase of the project will target 300 adults, aged between 15 and 60 years, with the intention to address the specific problem of illiteracy, identified as a principal cause of poverty. Apart from these direct beneficiaries, the project will target a total population estimated between 1000 and 5000 in the villages

which surround Kamoa's facilities. To accommodate a number of learners with ease of access to the program, courses will be administered in more than 15 communities. The Community Relations Department, community leaders and the facilitators will be actively engaged across communities to promote awareness of the literacy program and related activities.

To ensure the sustainability of the project, reading clubs will be organized for the beneficiaries. ALFALIT's methodology enables each learner to teach others. Beneficiaries will learn how to create a small library in their homes to improve their reading skills, information sharing with civil society and monitoring of project implementation by government officials in the project's area of intervention will ensure ownership and contribute to sustainability.

By the end of the project, the beneficiaries will have been empowered to become leaders within their communities and will have gained the necessary skills to generate income. Knowing how to read, write and perform the four basic mathematical operations, they will have the skills to manage their own businesses. Kamoa appreciates that knowledge unlocks new opportunities, and is thus committed to creating sustainable legacies for future generations.



Graduates of Kamoa's adult literacy training group.



Our community skills development efforts at Platreef Project in 2021 focused on providing **110 non-core-to-mining training opportunities** and **55 core-to-mining training opportunities** for local community members. This was facilitated through collaboration with sector implementation partners, as well as an adult literacy and school completion program, which benefitted six male and 13 female community members. Educational efforts undertaken included a **scholarship program for 97 learners** from 27 local schools, a **bursary program** providing financial educational support for two qualifying tertiary students from host communities and an **internship program** providing practical field experience for three tertiary students from host communities.

The permanent training academy will officially be launched in 2022 when the facility is fully equipped. Classrooms and offices at the training academy have been installed and the training and e-learning program has already been instituted. A cadetship program, providing learnership opportunities to 50 local students was launched, offering a national certificate in health and safety, as well as mining competencies, such as utility vehicle operations from the Murray & Roberts Training Academy. The cadetship program seeks to enhance gender diversity, with 54% of the students being female.

Investment in education forms a core part of the Kipushi Project's socio-economic strategy. In 2021, Kipushi's community skills development efforts focused on the provision of **adult education and literacy**, implemented in collaboration with Alfa Congo, a local non-profit organization. The program benefitted **330 community members**, of which 60 were male and 270 female, one of whom is a person living with disabilities.

Further investments in educational initiatives include the **bursary program for 11 students** and **scholarship program for 81 scholars** from 13 local schools. The Kipushi Project also afforded an internship training opportunity in the field of mine processing in 2021.

Leveraging off the current phase of the Kamoa-Kakula Mining Complex, Kamuanya Malonga, a metallurgy bursar from Kipushi's 2018-2019 bursar program was afforded the opportunity to work at Kamoa-Kakula for a month to obtain enough experience to complete her thesis.



NATHALIE KIKABA, SENIOR ECONOMIC DEVELOPMENT MANAGER, ENGAGING ABOUT THE TRAINING CONTENT WITH A LEARNER BENEFICIARY OF THE KIPUSHI PROJECT'S ADULT LITERACY PROGRAM.

## SPECIAL REPORT



# Kipushi scholarship laureates hold promise of academic excellence in France

The Kipushi Project established a scholarship program as a view to promote a culture of excellence, and to support the upliftment of families in the communities surrounding the mine.

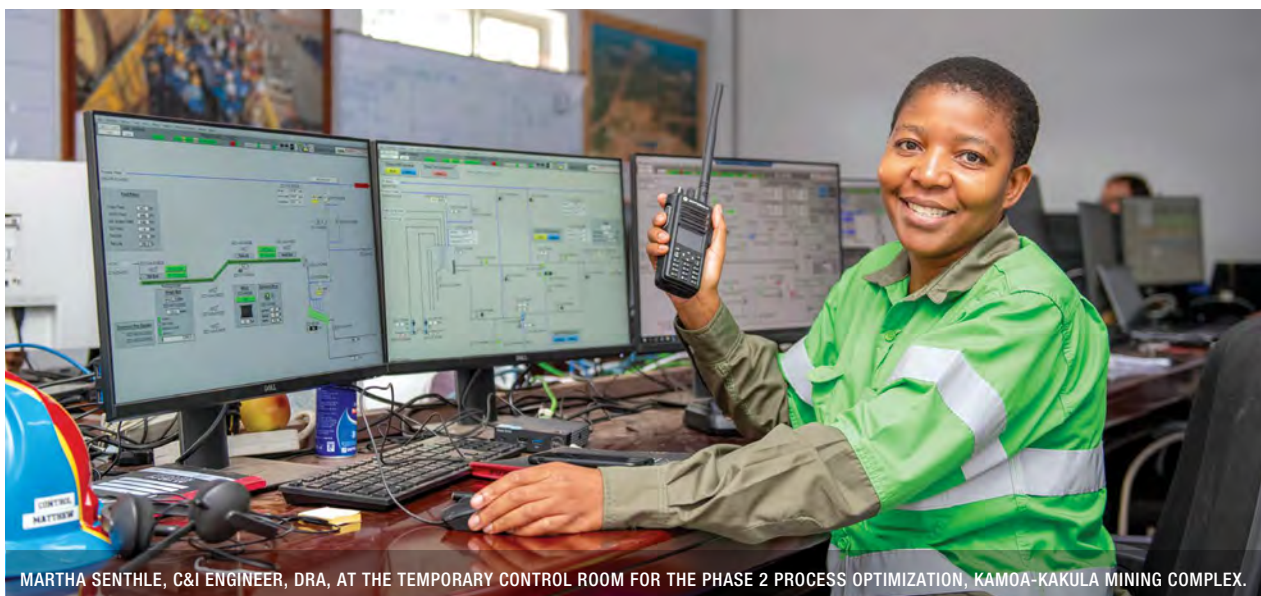
The program, which was established in 2020, provides tuition fees for students.

Two beneficiary students from the Kipushi Project's scholarship program were awarded the "Excellentia" Scholarship Award by the First Lady of the DRC, Her Excellency Denise Tshisekedi in 2021. The Excellentia Scholarship is an initiative of the Denise Nyankery Tshisekedi Foundation and seeks to promote academic excellence. In 2021, Marc Kabemba Tangie and Herve Nyandwe Kabongo from the Uhuru and Kamarenge Kipushi districts, respectively, were among ten graduates awarded

this achievement after completing their 2018/2019 academic school year with remarkable test results. Through this initiative, Congolese students are afforded the opportunity to complete their tertiary qualifications at universities in France.

Marc will be attending the University of Paris Nanterre to study Thermal- and Energy Engineering, he dreams of contributing to the sustainable development of the energy system of his country. Herve will be attending the University of Caen Normandy to commence a five-year course in Chemical- and Process Engineering. He hopes to develop his country through the contribution of new technologies.

Marc is very grateful for Ivanhoe's support, which has given him both a springboard to a prestigious degree and an opportunity to live in France where he hopes to build a network of friends with shared interests such as, rock climbing, piano and guitar which he pursues in his free time.



MARTHA SENTHLE, C&I ENGINEER, DRA, AT THE TEMPORARY CONTROL ROOM FOR THE PHASE 2 PROCESS OPTIMIZATION, KAMOA-KAKULA MINING COMPLEX.

## Building intellectual capital through quality education and industry innovation

We recognize the host of opportunities for Ivanhoe Mines to broaden the scope and increase the effectiveness of our innovation agenda throughout the business, from mining exploration, technology and information systems, to people management and research and development. We regard education and innovation as critical business imperatives.

Ivanhoe Mines defines “intellectual capital” as knowledge that can be used to produce stakeholder wealth. This knowledge is encapsulated in the human capital of the Company and carefully considered in our recruitment, retention, and training strategies. The structures supporting employees in their work, such as information management systems, are also considered as an important part of intellectual capital. Through our intellectual capital, as well as collective learning through sharing best practices and developing innovative solutions that takes place when projects are implemented successfully, we seek to contribute towards people and prosperity, and to a cleaner planet fueled by the green metals that we will produce.



THABANG NKHUNA, SYSTEM ADMINISTRATOR, PLATREEF PROJECT.



## Resource development

Ivanhoe Mines' willingness to support mineral resource development, and to take the necessary risks has allowed the Company to realize the wealth inherent in its intellectual capital and it prides itself on the discovery and development of three world-class mineral deposits which bear the "green metals" needed for the transition to a lower carbon economy.

Our geological experts come from varied backgrounds with experience in a wide range of environments, deposition styles and ore types. This broad base of experience provides a distinct competitive advantage that is used to drive and support mineral resource development within the Company.

This experience base is further supplemented by consultants that are considered to be the best in their field, and by significant involvement of academia

(individuals and academic institutions), which further enhances the intellectual capital of the Company.

This wealth of knowledge is being passed on to local employees at our projects, through various skills transfer programs and on-the-job training, as well as specialized training at Canadian institutions.

Significant volumes of data are collected using a variety of techniques to provide insights into our geological controls. Underground exposures have further enhanced the understanding of geological controls on mineralization. Employees are driven to understand these controls, and exploration is guided with great success by the insights obtained. Natural systems are difficult to understand and model, and are harder still to predict. Targeted exploration at Kakula West, Kamoanga North and the Western Foreland are testimony to the success of our proprietary exploration model.

International contractor teams and mining experts, who bring diverse development and operational experience, have been specifically tasked to recruit and train local mining crews and build intellectual capital. World-class orebodies, mined by these trained local teams using innovative techniques and state-of-the-art equipment, ensures that Ivanhoe Mines continues to build the knowledge-based assets required to realize the wealth of its many discoveries.



TSHEPO SEGAPELA, SENIOR MINE PLANNING MANAGER, PLATREEF PROJECT.



## MINE OF THE FUTURE

An interview with **BENJAMIN SEKANO**,  
General Manager, Platreef Project

### Q Why do you refer to the Platreef Project as a “Mine of the Future”?

**A** The orebody that we will be mining is flat and thick. In fact, in some places it's in excess of eight-stories thick, which suits high volume mechanized extraction strategies very well. We will be using big, automated equipment that can eventually become robotic and with this, the material will be brought up to surface safely and converted into these precious metals that the world needs for a plethora of technologies. It will make mining exciting again. In general, narrow reef platinum and gold mining have not been the most exciting areas to mine. This mine aims to be in a totally different category, by deploying the latest proven technology on the mine, with control systems in place so that we know exactly what's happening “real time”, all the time in the mine and this will enhance safety and productivity. The Platreef mine is poised to **champion a new age of responsible mining** to really make this mine a mine of the future.

### Q Why does the world need Platreef's mine of the future?

**A** In recent years global warming has been threatening our home, earth. It is common knowledge that the global warming phenomenon has been driven mainly by the burning of fossil fuels which majority of the planet's inhabitants depend on to live. However, studies have shown that the current trajectory of increasing global temperature will spell disaster for all who live on this planet. Consequently, efforts have been made by a lot of countries to curb the use of fossil fuels by looking to other renewable sources of energy. Carmakers have invested heavily in battery electric vehicles and hydrogen fuel cells technology. The technologies mentioned above rely on minerals such as nickel and PGMs to be realized. The demand for the green metals will only go higher considering that hydrogen fuel cell cars require approximately ten times the amount of platinum compared to diesel vehicle catalytic converters. As the “new kid in the block”, Platreef has a world class PGM deposit with high content of nickel and copper, producing a basket of metals. In order to meet the anticipated demand, additional supply will be required, enter Platreef.

### Q What makes Platreef unique?

**A** Mining when you look at it, sounds like a very hard, industrial business, but it's human business, it's a people business. When you start to indulge yourself with people who brought all those metals out of the ground, you have more meaning attached to the metals. So, when you see the copper, or zinc, or platinum, that's being refabricated into electricity or copper raw, all of a sudden you feel like you have an emotional attachment to these utilities. At Platreef, we are not only very fortunate to have an orebody with an array of economic minerals which allows us to buffer metals price fluctuations, but we also have a highly diverse management team and workforce, supported by diverse shareholders. This diverse knowledge sets us apart. We look at problems from different angles and have an in-depth experience in terms of managing the diverse stakeholders. We have had quite a learning curve over the years, one moment dealing with the highest office in our land, the Presidency, and the next dealing with the broad stakeholders, sitting under a tree, listening to the challenges that make everybody tick to bring both sides of the story forward and meet somewhere in the middle.

Another special feature of the Platreef Project is the fact that it is established in a rural setting surrounded by communities and a beautiful landscape. Despite being the largest PGM mine in development in the world, we recognize that our roots are deeply embedded in Mokopane. Consequently, the mine is being developed in such a way that it can transform lives of the various stakeholders through shared value and mining in harmony with nature and people.



Q

### How will this mine of the future transform lives?

A

The ownership structure is one of the most progressive and transformative in the country. It complies with the requirement from the Black Economy Empowerment charter which requires that 26% of equity in mining companies should be owned by local entities. A Black Economic Empowerment Holding company, comprising of the communities, owns 20% of the 26%. The remaining 6% is owned by local entrepreneurs and their employees. We also believe that employment should be from our host communities, people who wake up in the morning and walk to work, people who have a sense of ownership because they hold 26% of the shares in the company.

Skills development is core; it's at the heart of everything that we do. In terms of our social development plan, we have three key areas: skills development, enterprise development and supplies management and we believe that in this we are a learning organization. We have a young workforce and everything depends on their empowerment, in making sure that our workforce is highly skilled and can translate what they learn into action. We're very proud of what we've achieved in terms of skills development and skills transfer during the sinking of shaft 1. From the outset, we decided to integrate more than 50% of our shaft sinking, mining and engineering teams from the local community and therefore recruited novices, with no mining skills, and integrated them with more experienced shaft sinkers to form an effective team. In preparation for our mine of the future's prospective workforce, the education initiatives we have focused on have been largely to support science, mathematics, engineering and technology (STEM), such as assisting with building science labs and computer labs in our local high schools.

Q

### Do women have a role to play in a mine of the future?

A

The digital mine of the future will not only usher in new opportunities for women, but the corporate sustainability agenda will attract new generations to the mining industry. We're proud of the contribution of women working underground, as well as those whom are managing the operations, both now and in the future.

Q

### What are the expectations for a mine of the future?

A

A "mine of the future" title comes with a lot of expectations. The mine is a trail blazer by being the first underground PGM mine in the northern limb of the Bushveld Complex and by taking a bold step to use advanced battery electric vehicles underground. This ingenuity stems from the fact that **"innovation"** is one of our core values and it runs deep within us. Being a mine surrounded by rural poverty-stricken communities brings challenges and opportunities. The Platreef Project has identified the high number of unemployed youth within the neighbouring communities. Our **"care"** for the community has led us to turn the challenge into an opportunity by providing skills training in order to create a **"proficient"** workforce for the mine.

Q

### When can we expect to see this mine of the future in operation?

A

We're very close now to putting the first phase mine into production. It took 28 years of drilling and discovery, but we are now tenaciously working towards our first phase commissioning in 2024.



MAVA JIKIEZWA, ROCK DRILL OPERATOR, PLATREEF PROJECT.

## Information management systems, information communication and technology

Ivanhoe Mines continues to place a premium on the integrity and security of information that comprises its intellectual capital. Comprehensive, specialist data management systems have been implemented to manage the functions of Enterprise Requirements Planning (ERP), finance, risk, health, safety, HR, payroll, environment and mine planning. Dynamic information sharing and stakeholder engagement with internal and external stakeholders are enabled via company portals.

Ivanhoe Mines has established support teams, consisting of both permanent employees, as well as external, specialist suppliers, to create a hybrid support service aimed at continuous improvement. Individual applications are supported by different teams, while the suite of business applications is managed as an integrated information layer. Feedback and requests from support services are used as input to the project portfolio. Structured recruitment to fill a number of vacancies will finalize this support structure in 2022.

During 2021, a number of information technology policies were reviewed and aligned with the corporate policy standards. A significant investment into information technology and management systems is planned for 2022 and 2023, aimed at developing and delivering further strategic solutions. IT strategy updates are provided to the Audit Committee on a quarterly basis for information, input and guidance.

Although existing applications provide meaningful information to the Company on its principal projects, implementation work will continue on specialist information management systems to reach the desired application architecture, as well as reduce the complexity thereof. Successful implementations of applications at a particular project will be evaluated to standardize on certain applications across the group where appropriate. Enhanced reporting will be delivered on key performance indicators, through a project to provide management information in the areas of mining, production, quality, finance, safety, environmental, social and exploration.

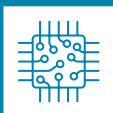
Ivanhoe Mines recognizes that we have a responsibility to protect both our own and third-party data, either held or processed by the organization, and that by protecting this data we can ensure that we maintain our reputation as a trusted employer and partner, enabling us to grow as a business and deliver on our strategic objectives. To demonstrate our commitment to information security we implement industry best practice security controls and assure the effectiveness of our controls, which are aligned to ISO 27001, the global standard for managing information security.

It is the responsibility of all our staff, regardless of their role within the organization, to become familiar with our security management processes and to comply with all information security and privacy policies and the procedures that underpin them. In turn, we commit to ensure that our security management systems and processes are efficient, effective and that Ivanhoe will strive for continuous improvement in respect of the protection of our data assets. Our commitment towards data security and privacy is driven by our executive management, who require all our employees, whether permanent or temporary, partner organizations, suppliers and contractors to do the same.

Ivanhoe Mines is committed to a "green ICT approach"; therefore we continuously review our programs and implement optimization strategies to achieve this objective.



Review and reduce power consumption when upgrading ICT hardware.



Adopt newer operating systems and technology, which allow computers and other hardware to be put into sleep mode during periods of inactivity.



Promote the implementation of server virtualization.



Explore desktop virtualization using ultra small and thin clients on the desktop to reduce power consumption.



Deploy integrated telephony by replacing stand-alone handsets with soft phone clients on computer workstations.



Digitize manual processes to reduce paper consumption.



Promote the use of efficient virtual platforms to reduce the need for travel, effectively reducing GHG.

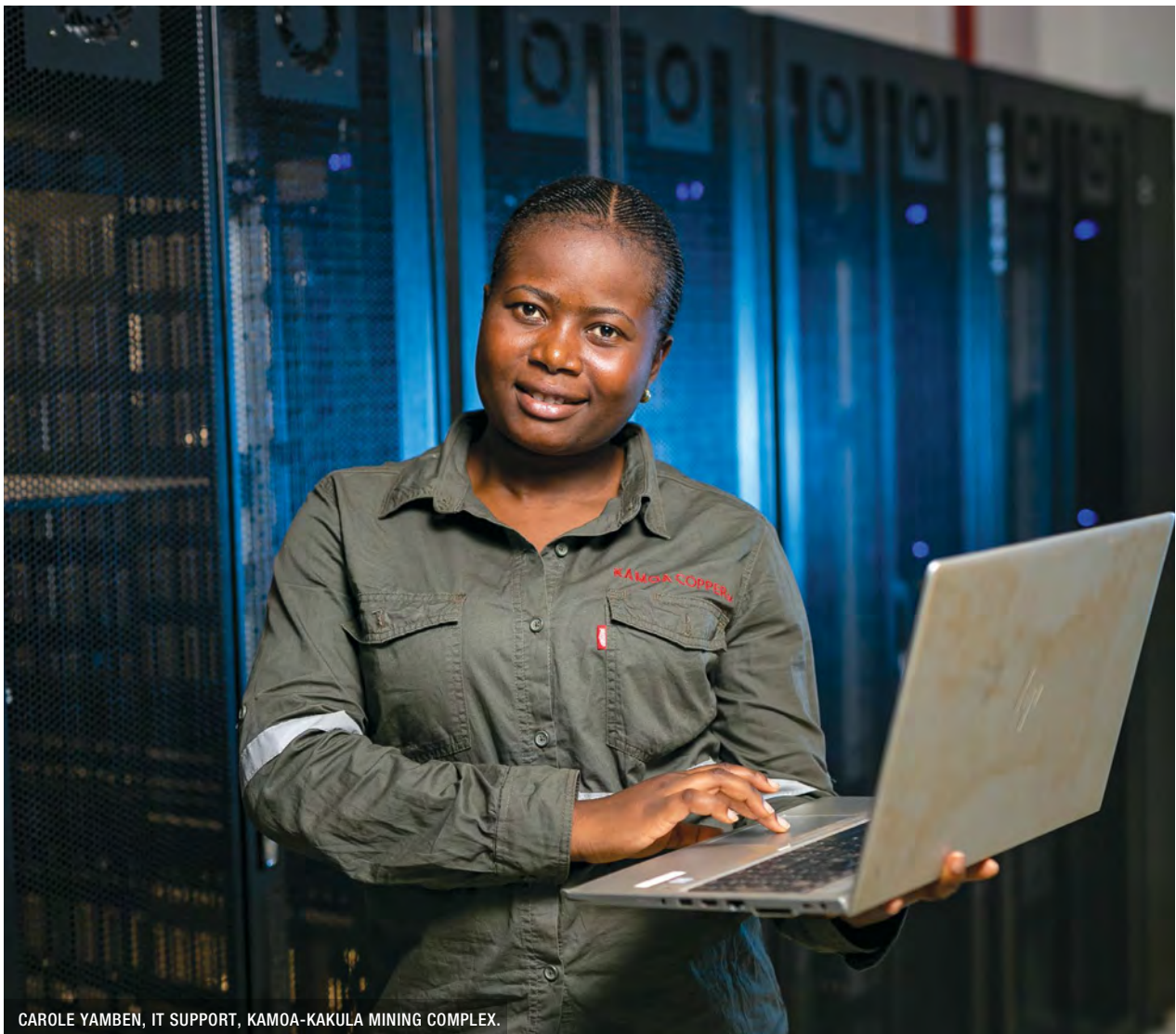


In order to protect the organization against the threat of cyber security, a thorough data security assessment of the potential risks and vulnerabilities of our systems is performed annually by a third-party security assessment firm, providing it with the potential to act swiftly to mitigate any identified risks and vulnerabilities. Our network infrastructure and servers are protected by high-availability firewalls and are configured for the detection and prevention of various network security threats. Firewalls are used to restrict access to systems and networks from external networks and between systems and networks internally. By default, all access is denied and only "business needs" based access is allowed. We use third party software solutions to enhance our encryption capabilities and to guard against unauthorized access to our systems and data that is transmitted through email.

We have also implemented a number of controls to identify, authorize, authenticate and manage individuals' access to our systems and information assets. In 2022, we plan to embark on an improved cyber security awareness training program to ensure that our workforce maintains awareness of evolving cyber threats and relevant counter-measures.



BERTHOLLET LUBANDA, SENIOR IT TECHNICIAN, KIPUSHI PROJECT.



CAROLE YAMBEN, IT SUPPORT, KAMOA-KAKULA MINING COMPLEX.

# 5

# OUR PROSPERITY



**“By creating shared prosperity and inclusive growth for all our stakeholders, we aim to leave an enduring legacy – touching lives, building nations, shaping global thinking.”**

**Rochelle de Villiers**  
Co-CFO, Kamoakakula Mining Complex

In loving memory (1975-2022)



**\$1.1 billion**  
total value created and distributed

**33**  
community boreholes installed

**162 MW**  
of renewable hydropower from Inga II upgrade

**43% increase**  
in national value distribution from 2020

**\$644,347**  
earned from livelihood programs

**45 communities**  
benefitting from agricultural support programs

## Alignment with Ivanhoe's priority SDGs



## Our commitment and approach to prosperity

Ivanhoe Mines strives to create stakeholder capitalism – prosperity, shared value and inclusive growth for all our stakeholders. Our efforts are aligned to the UN's 2030 Agenda for Sustainable Development which seeks to ensure that all human beings can enjoy prosperous and fulfilling lives and that economic, social and technological progress occurs in harmony with nature.

The WEF Stakeholder Capitalism Metrics (SCM) approach highlights the importance of prosperous societies and the role of businesses in fueling economic growth, innovation and shared wealth. A company's value is increasingly reflected in the off-balance sheet intangible assets and value drivers associated with economic and social prosperity. Now, more than ever before, it is critical that miners translate corporate policies and ideals into real on-the-ground initiatives that result in tangibly better outcomes for their workforce, host communities surrounding their sites, and host countries. Ivanhoe Mines **strives towards pursuing continual improvement in social performance, and contributing to the social, economic and institutional development of host countries and communities.**

Social compliance and investment were identified in the 2020 Materiality Assessment as being significant to our stakeholders and business. We appreciate that the most crucial building blocks of a sustainable mining operation are based on the ability to create inclusive, shared value by contributing to the social, economic and institutional development of the host countries and communities in which we operate. Moreover, we recognize that the foundations of our social license to operate are reinforced by economies which are equitable and inclusive. **We seek to create significant economic value for employees, stakeholders and wider society through job creation and investing in the productive capacity of the economy.**

**We create positive economic impacts through the value we create and distribute.** This includes tax revenues, salaries, and capital and operational expenditure allocated through our socio-economic development programs and local procurement. This fosters the creation of equal opportunities for quality education, decent work and economic growth, which, in turn, build educated workforces and sustainable cities and communities. **We strive to consciously and continuously increase these positive impacts and to further multiply their benefit through collaboration** with government and partnerships with like-minded private sector peers, philanthropic organizations, suppliers, industry peers, host governments and academics.

**We strive to engage with local suppliers for all phases of the mining life cycle, to foster local procurement by strengthening the small businesses in our value chain and buying goods and services from locally based suppliers,** as well as to play an active role in becoming a catalyst for formalization and growth of micro-, small- and medium-sized enterprises (SMMEs). In doing so we stimulate entrepreneurship and indirectly generate employment and contribute towards community development and innovation.

**We strive to implement sustainable development initiatives in our host communities.** This enables them to benefit from economic development in their region, even after mining ceases, as well as to contribute towards the development of infrastructure for sustainable cities and communities of the future. Moreover, **we strive to attain optimum return on our investments in strategic infrastructure, education and capacity-building initiatives, measured through outcomes-based assessments.**

Our financial performance is primarily affected by the operational results at the Kamoakakula Mining Complex, that has been generating cash from mining operations since achieving commercial production on July 1, 2021, as well as ongoing exploration and development at our three other projects. In December 2021, stream-financing agreements for an aggregate of \$300 million were concluded for the Platreef Project, with the proceeds to be used to advance the first phase of the Platreef Project's mine development. From an innovation, and specifically research and development, perspective, we are proud of the work done in resource development where we have a distinct advantage. This section details Ivanhoe's contribution to local and national economic growth in the countries in which we operate.



For more information regarding our financial results for the year ending December 31, 2021, please refer to Ivanhoe Mines Ltd.'s Management Discussion and Analysis (MD&A) and AFS at [www.ivanhoemines.com](http://www.ivanhoemines.com) and [www.sedar.com](http://www.sedar.com).

# Employment and wealth generation

## Operational employment

Ivanhoe has consistently been creating opportunities for operational employment through the development of our projects. Our workforce increased by 39% from 2020 to 2021, totalling 12,374 as at December 31, 2021, comprised of 2,806 employees and 9,568 contractors. In just three years, our workforce has increased significantly by 135% from 5,269, to 8,884, to 12,374.

## Total value created and distributed

Ivanhoe Mines' principal projects are being developed in emerging economies. We seek to maximize the value of our economic contributions to create enduring social and economic benefits, and leave a lasting legacy in the countries and communities where we are active. We acknowledge the importance of monitoring and disclosing the impact our projects have on regional and national economies in our footprint areas. Our economic contributions include taxes paid to local and national governments, payments to parastatals, salaries, investment in socio-economic development, and procurement. Our sustainable development strategy seeks to

provide a platform for economic growth and diversification in order to create thriving, self-sustainable communities beyond life of mine. We recognize the importance of regional economic development and continually seek opportunities to maximize our economic impact through collaboration with different spheres of government, and various corporate and philanthropic organizations, role players and industry peers.

In 2021, Ivanhoe Mines created, distributed and provided a total value of **\$1,141,199,055**

**\$169,668,449** royalties and in taxes

**\$84,711,856** in wages and benefits

Although we do not measure the direct and indirect economic impact of employee wage spending on local goods and services, it is an important factor in our economic contributions to our host communities. The tables that follow show the total value created and distributed by Ivanhoe Mines during 2021, as well as 2020.

### TOTAL VALUE CREATED AND DISTRIBUTED 2021\*\*

Project	Government					
	Payroll tax	VAT paid/ (net refund)	Royalties	Other tax	Parastatal Companies	Employees
Kamoa-Kakula*	26,318,056	70,755,982	26,653,149	30,356,602	44,961,044	56,619,405
Ivanplats	3,135,022	(5,170,551)	–	–	370,731	7,954,022
Kipushi	4,124,786	1,004,378	–	895,065	4,128,822	7,458,053
Exploration	–	–	–	704,399	2,698	956,590
Group Services	9,019,136	1,482,654	–	389,771	26,026	11,723,786
<b>TOTAL</b>	<b>42,597,000</b>	<b>68,072,463</b>	<b>26,653,149</b>	<b>32,345,837</b>	<b>49,489,321</b>	<b>84,711,856</b>

### TOTAL VALUE CREATED AND DISTRIBUTED 2020\*\*

Kamoa-Kakula*	18,120,424	44,677,302	–	3,909,268	28,574,124	18,235,786
Ivanplats	1,748,907	(4,557,572)	–	–	453,102	4,214,468
Kipushi	4,904,922	1,499,760	–	70,548	3,914,208	8,825,797
Exploration	–	–	–	197,555	–	1,045,222
Group Services	7,095,027	106,916	–	183,553	–	3,945,513
<b>TOTAL</b>	<b>31,869,280</b>	<b>41,726,406</b>	<b>–</b>	<b>4,360,924</b>	<b>32,941,434</b>	<b>36,266,786</b>

\* Total value created and distributed for the Kamoa-Kakula Mining Complex is reported on a 100% basis (and not just on Ivanhoe's 39.6% interest in the Project).

\*\* The 2021 amounts in the table have been translated to US Dollars at the average exchange rate for the 2021 year of assessment where applicable. The 2020 amounts in the table have been translated to US Dollars at the average exchange rate for the 2020 year of assessment where applicable.





PARTICIPANTS AT THE KIPUSHI-SPONSORED SEWING TRAINING CENTRE.

Socio-Economic Development	Procurement			National Value Distribution	South Africa	Democratic Republic of Congo	Other African
	DRC	South Africa	Other African				
7,509,542	527,276,771	197,276,515	19,990,448	<b>1,007,717,514</b>	197,276,515	790,450,551	19,990,448
1,190,969	–	36,037,462	–	<b>43,517,655</b>	43,517,655	–	–
568,244	6,626,823	2,405,955	381,320	<b>27,593,446</b>	2,405,955	24,806,170	381,321
–	13,949,881	3,852,432	–	<b>19,466,000</b>	3,852,432	15,613,568	–
231,297	2,195,412	17,836,358	–	<b>42,904,440</b>	38,090,967	4,813,473	–
<b>9,500,052</b>	<b>550,048,887</b>	<b>257,408,722</b>	<b>20,371,768</b>	<b>1,141,199,055</b>	<b>285,143,524</b>	<b>835,683,762</b>	<b>20,371,769</b>
9,485,540	352,051,298	190,150,958	40,274,679	<b>705,479,379</b>	190,150,958	475,053,743	40,274,678
715,403	–	30,078,666	–	<b>32,652,974</b>	32,652,974	–	–
534,183	7,428,383	2,601,319	1,022,253	<b>30,801,373</b>	2,601,319	27,177,801	1,022,253
–	3,327,762	1,213,527	–	<b>5,784,066</b>	1,213,527	4,570,539	–
207,747	920,537	12,442,181	–	<b>24,901,474</b>	20,829,595	4,071,879	–
<b>10,942,873</b>	<b>363,727,980</b>	<b>236,486,651</b>	<b>41,296,932</b>	<b>799,619,266</b>	<b>247,448,373</b>	<b>510,873,962</b>	<b>41,296,931</b>

## Local procurement

The Mining Local Procurement Reporting Mechanism (LPRM), developed by the Mining Shared Value initiative of Engineers Without Borders Canada, is a set of disclosures that seeks to standardize how the global mining industry and host countries measure and talk about local procurement, with a view towards maximizing the benefits thereof.

As reported in our previous sustainability reports, Ivanhoe Mines adopted the standards of practice as published in the LPRM with a view to standardizing our procurement practices across all of our projects, identifying any potential gaps at specific project locations and streamlining our group procurement as well as ensuring that we can monitor and control the risk of forced and compulsory labour, as well as child labour, and material impacts resulting from our materiality assessment. The tool further provides crucial impact and risk management functions which Ivanhoe Mines relies significantly on in managing these material impacts.

Our local procurement commitment and approach seeks to encompass the following:

- Group level supplier code of conduct.
- Group-level policies covering appropriate business practices (e.g. anti-corruption, human rights protection).
- Local supplier databases and registration protocols.
- Supplier portals.
- Supplier grievance and dispute mechanisms.
- Local procurement and preferential scorecards to inform tender processes.
- Supplier training programs and capacity-building initiatives.
- Local procurement incentive schemes and ring-fencing opportunities.
- Engaging major suppliers to prioritize local suppliers.
- Evaluating our major suppliers local spend and performance.
- Local procurement targets.

**For purposes of this sustainability report, we define “local procurement” to be in-country procurement in our specific countries of operation, the DRC and South Africa.**

**In 2021, our projects spent \$594,063,436 on the procurement of goods and services in the local context**

We set internal targets to ensure that the development of our projects bring direct benefit to local businesses through our supply chain, and implement measures to ensure that our commitments to local procurement are passed onto our contractors and suppliers.

Based on the OECD guidelines, Ivanhoe’s group supply chain policy outlines the vetting process that must be undertaken at the onboarding and existing relationship stages of suppliers, addressing anti-corruption and money laundering, human

rights abuses and HSE issues. Although this is applicable to all suppliers, small local suppliers are expected to comply with the minimum requirements, while larger suppliers are expected to be fully compliant, including on issues such as social and environmental stewardship.

As all our projects are being developed close to neighboring communities, we are committed to supporting localized procurement in our host communities within each project site’s social area of influence. Each project applies their own methodology for purposes of categorizing suppliers for local procurement, as well as implements a unique local procurement strategy.

To promote and facilitate access to business opportunities, we have instituted enterprise and supplier development (ESD) programs through which we provide workshops, entrepreneurial training and assistance to local suppliers. We seek to preferentially engage and support these community local suppliers, and to create opportunities for community suppliers to partner with established suppliers for skills transfer and shared wealth generation. Our local procurement strategy, comprised of our ESD programs, ring-fencing of procurement opportunities, the encouragement of joint venture initiatives and the unbundling of contracts, is geared to enable us to attain our long-term ambition of helping people find a way out of poverty, earn a living and begin the journey to enduring economic growth for themselves, their families and their communities.

Ivanhoe supports 29 formal and 89 informal local enterprises. This support includes skills training; technical, legal and business-orientated guidance and facilitation; and financial assistance. We have created significant opportunities for local enterprises and all associated valued supply chain members, which continually contribute towards the achievement of SDG 8 by nurturing decent work for all women and men, including young people and people living with disabilities. Furthermore, we have ring-fenced 22 categories of work opportunities specifically for local suppliers including, but not limited to, waste services, catering services and construction supply.

Fostering a strong relationship with our suppliers is important to us. As part of the building blocks needed for a strong supplier relationship, Ivanhoe undertakes training for our suppliers. In 2021, we undertook four due diligence training sessions.

We have employed additional resources on our procurement and ESD teams and we look to enhance our assessment tools and efforts in respect of supply chain, which we intend to prioritize in 2022.

We are continually improving our relationships with suppliers through training methods, as well as increasing the frequency of quality communication. This has ensured reliability, safety and compliance throughout our procurement cycle.

### DRC projects: Kamo-a-Kakula and Kipushi

At Kamo-a-Kakula and Kipushi, our local procurement strategy is guided by the applicable DRC regulatory framework.

Kamo-a-Kakula and Kipushi are updating and aligning the local procurement requirements as per procurement-related provisions of the amended DRC mining code.



**Kamoa-Kakula uses four pillars to rate suppliers up to a maximum of 100% – each pillar accounts for 25% of the score:**

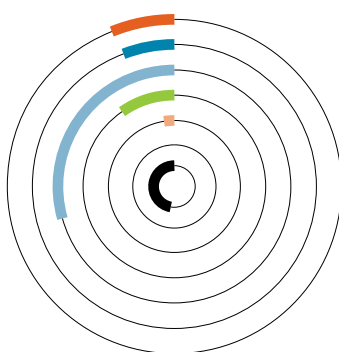
- DRC registered entity
- Majority (50+) Congolese nationals owned
- Majority Management positions (50+) held by DRC nationals
- Majority (50+) of DRC employees.

Suppliers meeting the requirements for all four pillars are classified as 100% compliant. Based on the above pillars, the spend analysis for qualifying local suppliers is as follows:

#### Spend analysis on local suppliers based on level of compliance

Compliance level	100% compliance	75% compliance	50% compliance	25% compliance
% of local supplier spend	44%	6%	6%	41%

Kamoa-Kakula currently categorizes local procurement spend into six categories. The local procurement spend per category for 2021 is indicated below: category for 2021 is indicated below:



**4 enterprises graduated from the program into Kamoa's supply chain in 2021.**

	2021
1 Catalogs – contract suppliers	5.91%
2 Consulting contracts	5.65%
3 Direct purchases	29.19%
4 Goods supplied	9.61%
5 Capital purchases	2.49%
6 Contractor first fill	0.00%
7 Other	47.15%

Kamoa-Kakula's local procurement strategy, launched in 2021, seeks to empower local suppliers and boost the economy, by affording local businesses the opportunity to become suppliers to Kamoa. This strategy, which aims to form relationships with local suppliers, as well as to offer opportunities for business development and training, is built on three elements:

- 1 Local supplier preference** – a local procurement committee will drive Kamoa's strategy and set the criteria for suppliers, as well as establish a scoring system and preferential payment terms.
- 2 Local supplier access** – all systems are in place to make the application process easy for our local suppliers and to provide a platform for training and ongoing communication.
- 3 Local supplier development** – suppliers will be supported and guided through the tender process, and workshops will be held to address any difficulties or concerns.

**At our Kipushi Project, suppliers are categorized by geographical location:**

- **Local** – suppliers registered as domiciled in Kipushi and surrounding areas reporting under the Kipushi territory
- **National** – suppliers registered within DRC but not in the Kipushi territory
- **Foreign** – all other suppliers who are not DRC registered entities but are part of the Kipushi supplier address book.

#### South African project: Platreef

Our procurement strategy at our South African project, Platreef, is guided by the South African Mining Charter and the Department of Trade and Industry's (DTI) B-BBEE Codes of Good Practice.

The Platreef Project has expanded implementation of the requirements of the mine's SLP by creating focused awareness for contractors and suppliers to locally source and procure.

**The Platreef project's suppliers are categorized by five geographical locations:**

- Local community
- Local (all suppliers within 50 km radius from the mine)
- Provincial (all suppliers in Limpopo)
- National (outside Limpopo but within RSA)
- Foreign.

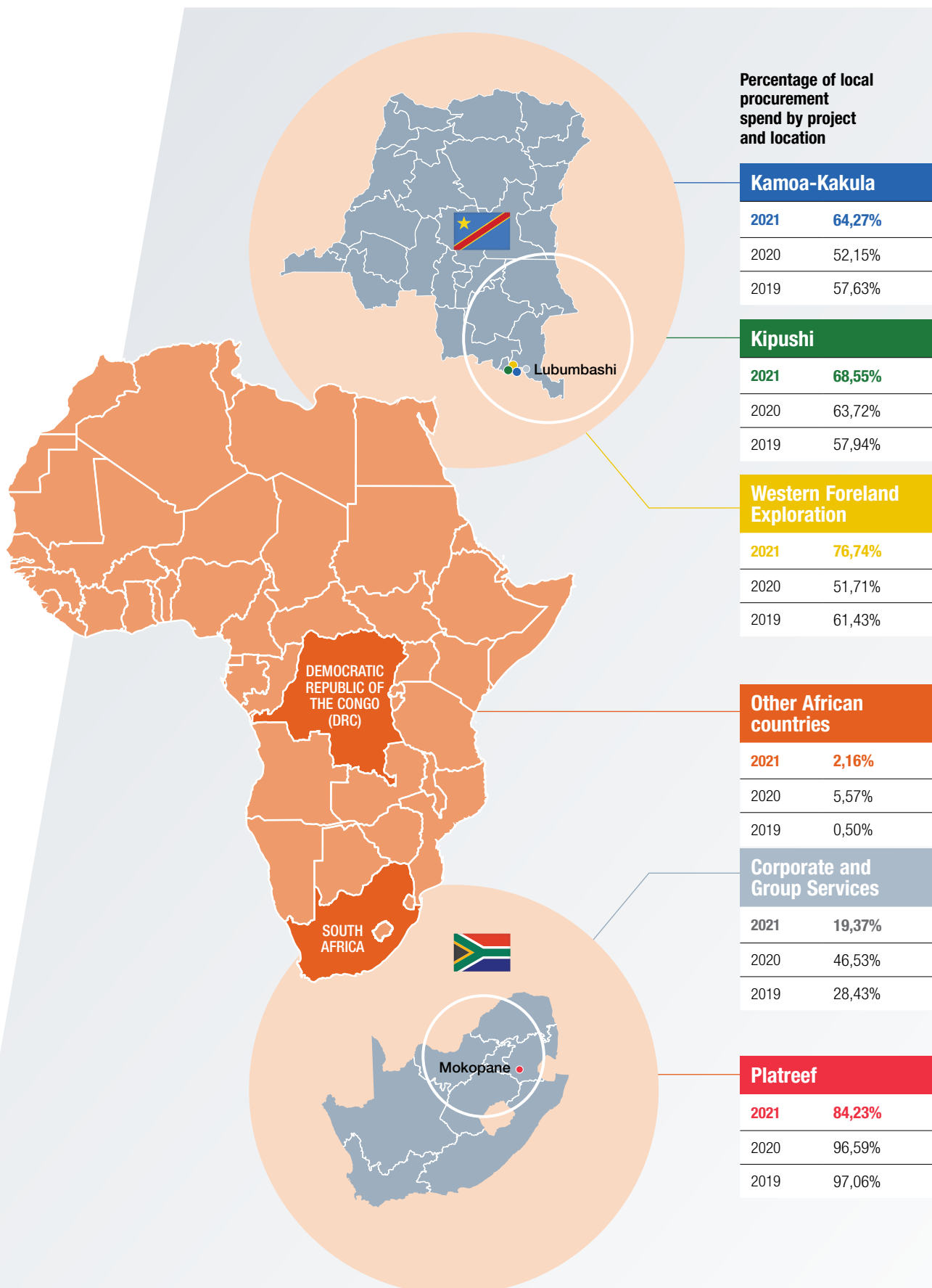
Suppliers are further categorized in terms of their ownership as defined in the Mining Charter and B-BBEE scorecard: black owned; women owned, youth owned; and people living with disabilities; disabled. Preference is afforded to local community suppliers within these categories. In 2021, Mining Charter compliance on local procurement was as follows:

#### Mining services procurement spend analysis

Description	Target	% Achieved
Local owned businesses	80%	96%
HDSA owned	50%	50%
Women owned	15%	5%
Youth owned	5%	4%
B-BBEE compliant	10%	10%

#### Mining goods procurement spend analysis

Description	Target	% Achieved
Local owned businesses	70%	100%
HDSA owned	21%	21%
Women and youth owned	5%	5%
B-BBEE compliant	44%	44%





## SPECIAL REPORT



## Platreef partners with Phakamani Impact Capital to support local entrepreneurs

In response to the persistent challenges faced by our local entrepreneurs in securing access to the finance and funding required to grow their businesses, the Platreef Project established a strategic partnership with Phakamani Impact Capital in 2019, and continued this partnership throughout 2021.

The purpose of Ivanhoe's enterprise and supplier development program is to engender a vibrant ecosystem of entrepreneurship, innovation and inclusiveness within our host communities and thereby contribute to meaningful economic growth and poverty alleviation. This involves enabling the integration of local SMME's into the supply chain by building their financial and operational capabilities through targeted ESD interventions.

Phakamani Impact Capital's holistic approach provides both a transformative and innovative financing solution, as well as hands-on business support to local enterprises. Implementing this integrated business training, business accelerator and SMME financing platform, has allowed the Platreef Project to realize significant positive impacts in the number of preferential loans granted to local SMMEs, jobs created, and in the reach extended to vulnerable groups of entrepreneurs, such as women and the youth. A total of 19 loans were granted during the reporting period, leading to the creation of 75 direct jobs. Through Phakamani's unique Business Accelerator Program, a total of 11 SMMEs were trained. This intervention aligns with our policy of enhancing the financial and operational capabilities of historically disadvantaged entrepreneurs to drive meaningful economic growth in the community. In particular, we strive to address entrepreneurship, creativity and innovation targets and the formalization and growth of micro-, small- and medium-sized enterprises; this includes access to financial services.

In 2021, the Phakamani Impact Capital program supported 15 youth entrepreneurs and 10 female entrepreneurs in learnership training interventions for new venture creation. Furthermore, Platreef's Acceleration Program enabled 48 companies to undergo a five-day training workshop. Of these companies, 17 were female-owned and 20 were youth-owned. The objective of the workshops was to enable entrepreneurs to be able to manage their cash flow and determine whether they are making a profit or a loss when applying for tenders, contracts and when submitting an order.

The outcome of this workshop was for

entrepreneurs to understand and be able to apply the following in their own businesses: how to identify their market, how to calculate a profit/loss, do comparative costing, calculate cost components and how to add a reasonable (market related) mark-up, how to do a cost-benefit analysis, how to tender for a project and how to write professional business plans and proposals. The workshops were interactive and practical, with real-life examples and exercises to enable a deeper understanding of the concepts. This approach was chosen given that the knowledge level of the attendees ranges from elementary to intermediate, with different learning styles (verbal, logical, visual, and interpersonal).



SOMUTHWA TRADING ENTERPRISE, A LOCAL SUPPLIER AT THE PLATREEF PROJECT.

## Transformative innovation through enterprise and supplier development

The contribution that small- and medium-sized businesses make to local economies and job creation cannot be overstated. We recognize the role that these enterprises play, as well as the innovation that comes from small businesses. We therefore prioritize our ESD programs and seek to create opportunities for community suppliers to secure skills transfer and sustainable wealth generation.

Our supplier development programs entail working with certain suppliers on a one-to-one basis to improve their performance, preparing them to take advantage of opportunities within our supply chain. Our supplier development programs have been designed to support different groups of suppliers in our supply chain, and we have adapted our programs to their local context and their needs. Our supplier development teams support both large and small businesses. Our enterprise development programs entail investing time and capital to help people establish, expand or improve businesses, with a view to graduating these enterprises into our supply chain.

The empowerment of small businesses and entrepreneurs across our supply chain to help promote their success is imperative. We therefore have a critical role to play in supporting their development and growth by providing skills training, mentorship, opportunities to scale and access needed resources like digital tools, financing and other critical inputs. Particular attention is paid at site level to supplier and enterprise capacity building. Suppliers already in Ivanhoe's supply chain are supported through various group and individual training sessions. Existing enterprises in the formal and informal sectors are strengthened to increase business capacity and are gradually integrated into our supply chain where relevant. The aim of our strategy is to form relationships with local suppliers, offering developments and training for their businesses. We're committed to working according to fair market principles, and to providing growth-focused support.

At Kamoa-Kakula, our ESD initiatives during 2021 focused on 25 training interventions. Enterprise development interventions covered training on company registration, shareholding selection, entrepreneurship, cash flow management, community recruitment, outsourced payroll, and audit and accounting procedures, with four enterprises joining the development program and four enterprises having graduated to Kamoa-Kakula's supply chain. From a supplier development perspective, 23 suppliers attended training on business management and regulatory compliance practices. Kamoa's ESD programs aim to elevate local talent by entering an agreement to provide one another with beneficial services.

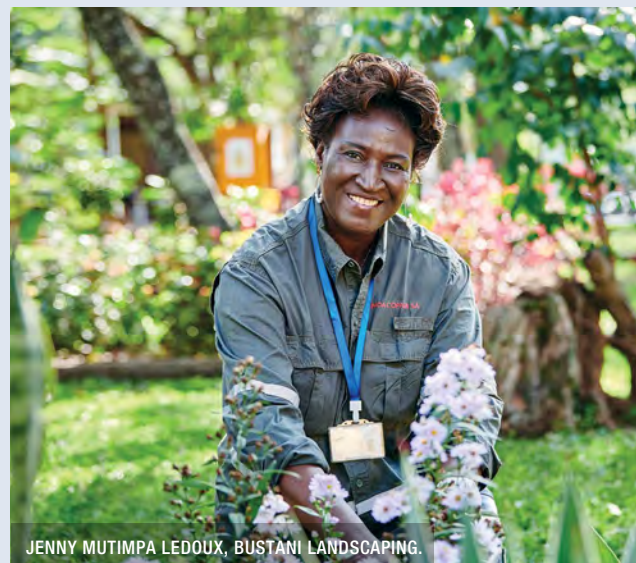
Appreciative of the role that technology can play in catalyzing the growth of small- and medium-sized businesses, in 2021, Kamoa-Kakula developed a digital supplier portal. This free multi-lingual portal is available for all suppliers to register their businesses on our vendor database, and provides guidance in respect of the compliance frameworks and associated documents for the projects. The second phase of the portal development includes the development of an application for digital supplier training which aims to provide training on topics including contractors' packs, financial management, people management and operational management.



VERO KAHILO, SEAMSTRESS, CHATUTA SEWING.



KAJIMANA MULUBA, ENTREPRENEUR-BRICKMAKER, TUJENGE.



JENNY MUTIMPA LEDOUX, BUSTANI LANDSCAPING.



## SPECIAL REPORT



## Kamoa-Kakula: enhancing livelihoods by supporting local enterprises

### Chatuta Sewing

Having identified an opportunity for the supply of uniforms at Kamoa, a local sewing enterprise, Chatuta (previously known as Salamah), was established in 2018. The name Chatuta is derived from a nearby waterfall and simply put means “sacred place”.

Kamoa-Kakula equipped the enterprise initiative with equipment, materials, training and start-up capital, as well as business premises adjacent to the Kamoa camp, thereby enabling access to the grid. Kamoa-Kakula also reached an agreement for the supply of uniforms to Kamoa, thereby graduating the enterprise into the mine’s supply chain. Chatuta produced 750 uniforms by December 2021, which provided a good basis for quality analysis. Currently the workforce produces around 10 uniforms per day, aiming to ramp-up to meet increasing demand, providing 2200 uniforms to Kamoa in 2022. Chatuta’s staff complement is currently 28 members (21 women and 7 men) from local communities, and is expected to expand to 50 in 2022.

Kamoa supplies the material for the uniforms, which is then cut and sewn by Chatuta according to an agreed pattern. Afeca, a local Kolwezi sewing company, have trained the team to sew and brand uniforms using embroidery machinery, which can be applied to any clothing items, including caps. Chatuta is working towards servicing others companies in order to build their business and work independently of the mine. Their aim for 2022 is to upskill their workers in quality control and stock management.

Chatuta Sewing company has changed lives across several communities, enabling workers to support their families:



“Since starting this work we have made good progress and we’re reaching new heights. This job has allowed me to upskill myself in sewing, but also to receive a salary that sustains my family.” – **Simon Illunga**



“Thanks to Afeca’s training, I can use electrical scissors and accurately cut sizes for uniforms, something I didn’t know how to do.” – **Yanick Kadima**



“I have a family of six kids that I can now support with my salary. I used to be a teacher, but this has enabled me to be an entrepreneur.” – **Wazia Francoise**



### Tujenge Brickmaking

The local brickmaking enterprise, Tujenge (Swahili for “Let’s Build”), established four years ago by Kamoa-Kakula, is now an independent registered business which offers services to a wide range of clients. The enterprise engages an owner-workforce of 19 men and women, and has been able to employ additional casual workers from the community.

Currently Tujenge produces 7,000 bricks per day and has an agreement in place with Kamoa to supply at least 45,000 bricks per month. An order has been placed for an imported brick-making machine that will enable them to diversify their type of brick, improve quality and enable them to make even more bricks. Smaller bricks will be used for paving walkways and other areas, while larger bricks are suitable for more efficient construction of buildings. The introduction of the new machinery will provide increased employment opportunities. Brick by brick Tujenge has grown from small beginnings, to establishing a thriving business within the mining and community environment.



### Bustani Landscaping

Bustani is a small business initiative that was created to honour the late Chief Muvunda and his family. This community-owned initiative is led by Jenny Mutimpa LeDoux, a passionate advocate for developing the environment as well as its surrounding communities. Jenny spent three years studying landscaping in Belgium before returning to her home country. Now she is involved with greening the Kamoa offices and residences and in multiple skills-building initiatives, including gardening and beekeeping.

The partnership between Kamoa and Bustani has proven to be a fruitful one. Lives are being impacted for the better thanks to a commitment to sustainable practices.



### Mwaiseni Restaurant

Construction is currently underway for a truck-stop restaurant that will be established at the truck station adjacent to the Kakula Mine. Mwaiseni, which means “welcome” in the Bemba language, plans to open its doors, in early 2022, offering a variety of hot meals to sustain travel-weary truck drivers. This initiative forms part of the compensation program of the Muvunda relocation project and is headed by ten owners from the impacted communities. As part of an economic ecosystem, Chatuta was contracted to provide uniforms for the restaurant’s workforce, a project that’ll boost both of their business agendas. In addition, Kamoa has partnered with its site hospitality service provider, IFS, to provide a three-month training program and support from the IFS catering team to train and develop the Mwaiseni workforce.

## MATERIAL TOPIC

# Community and social vitality

## Broad-based black economic empowerment at our Platreef Project

In previous sustainability reports, we reported on the ownership structure at the Platreef Project, which includes a 26% interest transferred to a broad-based black economic empowerment special purpose vehicle (B-BBEE SPV). This is in compliance with South Africa's mining laws and in fulfillment of the requirement of the Company's Mining Right. In terms of this transaction, the B-BBEE shareholding is comprised of 3% local non-managerial employees, 3% local entrepreneurs (as well as a limited number of managerial employees), and 20% in a trust, established for the benefit of the 20 communities that surround the Platreef Project area.

The Bonega Communities Trust (the Trust) is operational and is registered with the South African Revenue Service as a Public Benefit Organization (PBO). This PBO status exempts the Trust from the payment of tax, provided that certain criteria are met, including that the Trust only funds philanthropic, non-profit-making initiatives. The community have requested that the governance structures and manner in which projects are approved be reconsidered and reconstituted. Therefore in 2021, the Trust activities focused only on closing out existing projects.

## Community development and support

The dynamics, needs and expectations of host communities in the mining sector have changed dramatically in the last decade. Fostering positive, transparent and collaborative relationships with local communities is essential for building the foundations of a successful project, obtaining and maintaining social acceptance and trust – our SLO – and delivering socio-economic benefits. We act in a socially responsible manner and contribute to the communities in which we operate in order to make a positive difference in their everyday lives.

We are committed to working with our employees, other stakeholders and rights holders to create growth and prosperity and enabling shared benefit from our mining experience. Failure to acknowledge and address community concerns and grievances poses a real risk to operations and is harmful to the industry as a whole, let alone to the impacted interests of the communities at stake. Acting in a socially responsible manner and delivering on sustainable development objectives requires companies to go beyond acceptability and work in partnership with others to leave a positive legacy for host communities.

We have strengthened our internal policies, procedures and practices to maintain high standards in stakeholder engagement, handling of grievances, accountability and transparency, and socio-economic development project design and delivery (see page 36). We strongly believe in partnering with our communities and key external stakeholders to find solutions to pertinent

socio-economic challenges. Our Group Sustainability Strategy includes our goals and targets for social development, and aligns our social projects with country regulatory frameworks and international frameworks, such as the SDGs. We are setting annual targets while working towards the medium- and long-term goals determined by the plans for community development – the Cahier des Charges in the DRC and the SLP in South Africa (both of which are valid for five years at a time), and our priority SDGs (see page 44). We are working towards the development of comprehensive monitoring programs for our community development initiatives. Currently progress on these projects is discussed with executive management at our monthly review meetings.

At the Kamoakakula Mining Complex, we have focused on the critical needs of food security and access to potable water, educational infrastructure, and job creation, while at our Platreef Project, we have ensured compliance with the regulatory requirements of the SLP and the B-BBEE codes of best practice. We focus our spending on the following areas: local economic development (LED); employee and community skills development; and local procurement. At the Kipushi Project, we continued to invest in the town's water infrastructure through the maintenance of the pumping station, as well as the installation of solar supported water wells. The educational projects have been strengthened with a greater number of bursaries and scholarships to high-performing students, as well as refurbishments at the local high school.



NGOY WANRULUERNEST, A LOCAL FARMER BENEFICIARY OF THE KAMOA-KAKULA SUSTAINABLE LIVELIHOODS PROGRAM, HARVESTING BRUSSEL SPROUTS, KAMISANGE COMMUNITY.



## Community infrastructure and support

Ivanhoe Mines has contributed significantly to community infrastructure which we consider as critical to the creation of functional and prosperous local economies. The sustainability of our community development projects is critical, and we work towards the hand-over, longevity and independence of projects from the start. We achieve this by identifying and appointing local champions in projects, supporting existing community-led initiatives and increasing partnerships in our work. We also ensure that the infrastructure of these projects is maintained and kept in good condition, and in the case of water infrastructure that potable water is routinely tested.

### Kamoa-Kakula Mining Complex

In 2021, 28 solar-powered water wells were installed, completing the planned community borehole project at Kamoa-Kakula, with all 35 boreholes drilled using local contractors, providing approximately 12,000 community members with easy access to clean water. Construction on the new Muvunda Clinic, an initiative to improve health care in local communities, also progressed throughout the year.

Ivanhoe Mines founded the Sustainable Livelihoods Program in 2010 to strengthen food security and farming capacity in the host

communities near Kamoa-Kakula by establishing an agricultural demonstration garden to support farmers at community level. Today, approximately 900 community farmers are benefiting from the Sustainable Livelihoods Program, producing high-quality food for their families and selling the surplus for additional income. The Sustainable Livelihoods Program, which commenced with maize and vegetable production, now includes fruit, aquaculture, poultry and honey. The construction of 100 new fishponds was completed in 2021, bringing the total number of fishponds to 138. The project will significantly contribute toward local entrepreneurship and enhanced regional food security. A group of community participants took part in, and graduated as facilitators for, an adult literacy training program.

### Platreef Project

In 2021, the Platreef Project constructed a gravel road connecting two of the communities adjacent to the mine, in order to assist learners who travel to school in neighbouring villages, especially affected during the rainy seasons when the access road would become so muddy that movement of both pedestrians and vehicles would be impeded. The work was undertaken by a community-based contractor. During 2021, the Platreef Project continued providing free Wi-Fi at hotspots throughout the local community.

### Kipushi Project

A bridge in the Kamarenge district was rehabilitated by the Kipushi Project, as it previously posed a safety risk to community members, especially school children who were unable to cross the bridge easily on their way to school. The Kipushi team also supported the community through hosting an event for women's month, benefitting a group of community ladies involved in various projects supported by Ivanhoe. The occasion included a discussion led by women in leadership positions regarding the importance of women's involvement in mining and society.

Throughout 2021, the Kipushi Project continued upkeep of the new potable water station which provides a free daily supply of water to the municipality of Kipushi. This daily supply to the Kipushi municipality community members includes power supply, disinfectant chemicals, routine maintenance, security and emergency repair of leaks to the primary reticulation to the benefit of an estimated 100,000 people, excluding those from rural areas. Approximately 1,000 cubic metres of potable water is pumped hourly and continuously to consumers on a daily basis.

A target of 50 boreholes for potable water has been set. These will be drilled around the Kipushi district over five years, to reach areas not served by the current distribution reticulation. In 2021, five additional water wells were drilled at the Mungoti High School, Prison, Methodist Church, Mosque and Kaponda Court. To date, 12 solar-powered potable water wells have been drilled and are operating throughout the district. The team continues to work alongside the Health Zone in Kipushi to identify hotspots for future installations.



Q A



## SUSTAINING LIVELIHOODS, GROWING COMMUNITIES

A conversation with **PAUL KABENGELE**,  
Community Projects Superintendent, Kamo-Kakula

Q

### What is your role at Kamo-Kakula?

A

My role at Kamo-Kakula Copper is to teach skills to my livelihoods staff, create sustainable communities and coordinate livelihood activities for the communities residing within the mine's footprint. The overall goal for this role is to uplift the standard of living of the communities through different livelihood activities ranging from poultry/livestock, aquaculture, apiculture, maize, vegetable and fruit production. This department empowers communities with sustainable practices and economic skills that go beyond mining. It also seeks to uplift the standard of living at a household level. I have been working at Kamo-Kakula for eight years. What I like about working at Kamo-Kakula is the spirit of teamwork among the workers and the passion the company has towards uplifting the standard of living for the communities within the mine's footprint.



SOCIAL TOUR AT THE MUMBA FARMS DURING THE MINISTER OF PORTFOLIO VISIT, KAMO-KAKULA MINING COMPLEX.

Q

### How did these projects perform in 2021?

A



#### Maize

14 communities  
212 beneficiaries  
347,000 kg produced  
\$138,800 earned



#### Vegetables and fruit

18 communities  
69 beneficiaries  
304,961 kg produced  
\$478,639 earned



#### Poultry

2 communities  
9 beneficiaries  
1,620 kg broiler poultry produced  
124,200 eggs produced  
\$5,994 earned from broiler poultry  
\$16,146 earned from eggs



#### Fish

9 communities  
27 beneficiaries  
1,789 kg produced  
\$6,262 earned



#### Honey

1 community  
5 beneficiaries  
450 kg produced  
\$4,500 earned



Q

**What inspires you about Kamoa?**

A

Kamoa management has been an inspiration to me because they are very supportive and always want me to do more for the communities. It also inspires me to be making a real impact in local communities. My proudest moment was when I saw the up-scaled projects like fish farming, vegetable and poultry adding value to the lives of the communities, especially when they are able to pay for school and medical fees and the general enhancement of their lifestyles.

Q

**Are there any agricultural livelihood initiatives that have been ring-fenced for women?**

A

Kamoa-Kakula established a banana plantation for 27 female beneficiaries. While a few teething issues were experienced in 2020, production boomed in 2021, after the introduction of a new reticulation system which provides the 11 hectares with a continuous supply of irrigation throughout the dry season. The pumping system uses a transformer for its power supply. Water from a nearby local river is pumped through an efficient drip system, ensuring that the plantation receives the necessary amounts of irrigation for a productive, reliable harvest. Fertilizer for the start of the new harvest cycle was also provided to the female cooperative in 2021.

Q

**Are there any particular standouts paving the way forward for future initiatives or beneficiaries?**

A

The Mumba family forms a beautiful example of the collaborative work between Kamoa and its communities to mutually benefit one another. After starting off with just one self-constructed fish pond and vegetable gardens, Mr Mumba had many obstacles to get his business off the ground as he struggled with leakage problems and had to water his crops by hand.

Mumba then approached Kamoa to assist him in learning about agriculture and aquaculture, as well as to enhance and upscale his operations. Kamoa assisted by installing a water pump and constructing two additional fish ponds to support his business. Technical agronomic advice, including the practice of sustainable farming, were also provided. As his skillset and knowledge improved, Mr Mumba's business started booming and he started supplying produce to Kamoa's catering company, IFS.

Kamoa taught Mumba the art of patience in fish breeding. After a six month wait, Mumba caught his first eight kilogram Tilapia fish and after his first harvest all the fish were successfully supplied to IFS. With the first harvests' income Mumba reinvested in his business, constructing an additional five ponds. He also was able to cover the schooling expenses for his children, build a house and purchase a minibus for more convenient travel. The support from Kamoa has drastically changed life for the Mumba family. Mumba now employs a number of workers under him and provides for a family of eight kids, aged between 31 and 11. Mumba now owns 12 fishponds, cattle and a variety of vegetable plots and he aims to grow as much as possible.

Seeing the fruitful result of Mumba's business, Kamoa was inspired to construct an additional 100 fish ponds in 2021. These ponds were divided among 20 business owners who will harvest their first crops in March 2022. An additional 100 ponds are planned for 2022. The commitment and success of the Mumba family truly inspire Kamoa to strive towards significantly upscaling our initiatives.

"Livelihood projects are the cornerstone of providing true value, security and prosperity for communities within our mining footprint. We are proud to be part of such a momentous movement to ultimately enable community members to uplift themselves independently."

**Paul Kabengele**

PAUL KABENGELE AND KAZADI MUMBA, A LEAD FARMER, FEEDING THE FISH AT THE MUMBA FARM NEAR THE KAMOA-KAKULA MINING COMPLEX.

## SPECIAL REPORT



# Ivanhoe's Kipushi water initiatives case study

## Context setting

### Background

Prior to the Ivanhoe investment into the Kipushi Project, Gécamines was responsible for the provision of water for the Kipushi town and its population of 100,000. When Ivanhoe invested into the Kipushi Project in 2011, the company took over the provision of water into the town.

Following significant growth in the population in the Kipushi area to 200,000 due to in-migration and urbanization trends, Ivanhoe identified an opportunity to provide access to water to communities with no potable water access. The construction of 12 solar powered boreholes/ water wells in key locations around Kipushi District was undertaken from 2018. The focus of the case study being on the 5 water wells installed in 2021.

In addition, refurbishment of the pump station supporting the provision of water within Kipushi town was completed in 2021 to replace the existing aging infrastructure. This supplies 1 million litres of potable water per hour to Kipushi town residents.

As a result of COVID-19, the importance of having running water for hand washing has increased and is key for healthy communities in preventing the spread of diseases. Whilst the borehole projects were conceptualized prior to the start of the pandemic, they have supported in controlling the disease.

### Water wells project

Working with its local partner the Department of Health, Haute-Katanga division (Kipushi Health Zone), Kipushi Mine identified areas under "water stress", e.g. with no potable water access, across the Kipushi District where boreholes could be sited. Following a collaborative stakeholder engagement process around borehole site identification and establishment of the solar powered water wells by the Kipushi Mine, twelve boreholes were constructed across communities and handed over to the Health Zone for ongoing ownership and management. Each potable water well is comprised of two 5,000-litre water tanks, solar panels and a well drilled at varying depths of around 80 metres. Informal programs to educate communities around responsible water use were also conducted, whilst more formal education sessions are likely going forward.

The focus of the case study are the five water wells installed in 2021, as listed below:



COMMUNITY MEMBERS COLLECTING POTABLE WATER FROM A KIPUSHI SPONSORED SOLAR-POWERED WATER WELL AT THE KAMARENCE CHILDREN'S HOME.



Water well	Location	Approximate beneficiaries
Methodist Church	Avenue Mobutu	1,500
Mungoti School	Kampemba/Mobutu	1,500
Kaponda cheffery	Kaponda court	1,500
Kipushi Prison	Maylamene	500
Mosque	Tshatshatsha	1,500

There are multiple locations for the boreholes in differing contexts including a school, churches, and a prison. At the school, the borehole is linked to the latrines which has supported with improved sanitation, in addition to general access to water for drinking and cleaning of the facilities. At the prison, the borehole has taken away the previous reliance on container deliveries from the mine. The only exception to solar panels was at the Mungoti school borehole, which is powered by the national grid, which is hydroelectricity based. The grid electricity infrastructure was already in place at the Mungoti School prior to the development of the boreholes

**The focus of this case study is to identify and assess the impact of the water wells within the Kipushi community.**

## Theory of change

The Theory of Change defined for this project is presented below. This is focused on the installation of the solar powered water wells and the stakeholders that have experienced a significant impact through the project implementation which include women in households and their broader families, learners and teachers, and prisoners.



### INPUTS

- Capital investment – **\$81,100** capital investment for five solar-powered water wells installed in 2021
- Ongoing engineering support from Kipushi Mine teams to provide ad-hoc maintenance support
- Kipushi's Social Team and Ivanhoe's sustainability team time and engagement with the Health Zone and Kipushi District stakeholders.

The investment into the solar water wells has been made as part of a broader program around water which is run by Kipushi Mine that has included:

- Capital investment in solar powered wells since 2018, including **\$124,600 capital investment** in 7 water wells installed between 2018 and 2020, and **\$380,000 upgrades** to Kipushi Town pump station.
- Installation of **7 solar water wells** in the Kipushi District from 2018 to 2020 which reached **10,000 beneficiaries**. (Total **12 boreholes** installed since 2018, reaching **16,500 beneficiaries** in total).
- Refurbished pump station in Kipushi Town, supplying **1 million litres of potable water** per hour to Kipushi Town's residents were made as part of the broader water access project.



### OUTPUTS

- Five solar powered water wells** (one grid-connected water well) were installed in the Kipushi District **with a capacity of 10,000 litres**
- 6,500 beneficiaries** receiving access to potable water that were previously underserved in 2021, including **700 learners and 500 prisoners**
- For school, installed latrines used by **700 learners**
- Communities trained in responsible and safe water use



### OUTCOMES

#### Quality of life and livelihood

- Reported four hours additional time for women in communities to spend on new activities
- Significant reported improvements in quality of life and energy
- Improved livelihoods with the ability to expand income through crop production and other activities

#### Health and well-being

- Significant reduction in frequency of reported illness, especially for children
- Identified impact on health and well-being of orphans, prisoners and church members
- Decreased use in charcoal and related costs/pollution factors

#### Education

- Reported improvements in attendance and participation of learners
- Improved awareness and understanding of hygiene by community and learners
- Covid-19 and other basic hygiene processes are enabled



YOUNG COMMUNITY MEMBERS COLLECTING POTABLE WATER FROM A SOLAR-POWERED WATER WELL.



## Quality of life and livelihoods

- Reported four hours additional time for women in communities to spend on new activities
- Significant reported improvements in quality of life and energy
- Improved livelihoods with the ability to expand income through crop production and other activities

“Women and girls are responsible for water collection in eight out of ten households with water off premises, which means reducing the population with limited drinking water services will have a strong gender impact. While supplying almost half of all agricultural labour in low and middle-income countries, women’s agricultural productivity is on average 20-30% lower than male farmers”.

Gender | UN-Water ([unwater.org](http://unwater.org))

Traditionally, women in the rural communities within the Kipushi District have always been responsible for collecting water from the lake for use within their households. The provision of water wells in closer proximity to these communities has had a significant impact on women as the effort to collect water has been significantly minimized, enabling women to have additional time to apply to other activities including new livelihood activities and empowering them to play a stronger role within the household.

### Women engaged in focus groups reported

#### Improvement in their quality of life

- Prior to the installation of the water wells, water had to be collected from a nearby lake. This was done almost every day of the week, and would take from four to five hours to collect.

- With the new water wells, it now takes less than an hour to collect water. The time not spent collecting water can be spent on other activities or with their family
- Women reported having more energy
- Women reported having improved quality of life

#### Reported improvements – on a scale of 1 to 5



#### Improved livelihoods

- The clean water can now be used to grow crops. This has contributed to improved nutrition for the households, as well as additional income in some instances.
- Previously, charcoal was sometimes used to boil water from the lake for drinking which led to additional expenses for the household. As the water from the wells is always reliable and clean, households do not have to spend any time or resources to boil water.
- The improvement in health and well-being also means less frequent visits to clinic or time unwell from other activities.



PHILÉMON MULUBWA, PUMP STATION ATTENDANT, KIPUSHI PROJECT.





## Health and well being

- Significant reduction in frequency of reported illness, especially for children
- Identified impact on health and well-being of orphans, prisoners and church members
- Decreased use in charcoal and related costs/pollution factors

One in three people do not have access to safe drinking water, two out of five people do not have basic hand washing facility with soap and water, and more than 73 million people still practice open defecation. The Covid-19 pandemic has demonstrated the critical importance of sanitation, hygiene and adequate access to clean water for preventing and containing diseases.

Prior to the installation of the water wells, households in the rural communities of Kipushi District were reliant on water collected from the nearby lake for all their needs, including for drinking, washing clothes/ homes/ cars, cooking, as well as irrigating vegetable gardens and subsistence food crops. Sometimes the water would be boiled with charcoal prior to drinking, though reported costs of \$10 per week for this limited the use of this approach. A range of health issues including waterborne diseases and general illness were reported throughout the community. The installation of the water wells is reported to have had significant health and well-being benefits for stakeholders.

### Women engaged in focus groups reported

- Before the water wells, it was reported that members of the households were sick two to five times a year due to waterborne diseases, with children more affected than adults and often sick more than five times a year. Following the installation of boreholes families are less sick which also has related benefits tied to attendance to school, unpaid leave from work and costs of medical care.

#### Reported improvements – frequency in illness in a year



- In addition, women reported that there was no need to use charcoal for boiling water anymore, which has impacts on costs and pollution related to fumes. Whilst it was reported that charcoal was not always used previously to boil drinking water due to costs, this is another benefit of being able to access clean water directly from the wells.



YOUNG KIPUSHI MEMBER REFILLING HER WATER BOTTLE AT A SOLAR WATER WELL.

### Other stakeholders engaged reported

- At the orphanage where the water well was constructed on the premises, the 12 children in care have benefitted from the supply of potable water and diarrhoea, cholera and typhoid have decreased considerably since installation of water wells.
- At the prison, the water well was constructed outside the prison facility to provide inmates with water for cooking, washing and sanitation. The primary benefit is distribution of the water through the prison sections (i.e. men's and women's sections, kitchen area and agricultural areas). The borehole has provided a reliable source of water to support prison crops, maintained by the inmates, and has changed the quality of living for the prisoners. The warden has noted a drastic change in diseases such as cholera and diarrhoea, caused by poor water quality. The military wives of the guards at the prison reported an improvement in well-being as they do not have to wake up at 2am anymore to travel to collect water which was an unsafe journey.
- At the Methodist Church, all community members have also been positively impacted by the water wells. Water for the church is generally used for cleaning purposes, but has really made a difference to the priest who lives on the property.
- Other than the general community use, water at the Mosque has been extremely beneficial for ablutions for prayer.

"We thank you (KICO) for this project as it has brought a greater peace to our community. We encourage our people to take care of the water so that we can sustain it and not go against KICO's vision."

**Methodist Church Minister**



## Education

- Reported improvements in attendance and participation of learners
- Improved awareness and understanding of hygiene by community and learners
- Covid-19 and other basic hygiene processes are enabled

Education enables upward socio-economic mobility and is a key to escaping poverty. In 2020, as the Covid-19 pandemic spread across the globe, a majority of countries announced the temporary closure of schools, impacting more than 91% of students worldwide. By April 2020, close to 1.6 billion children and youth were out of school. Education - United Nations Sustainable Development.

Prior to the installation of the water wells, the school, which hosts 696 learners, had no access to drinking water and there were no latrines or facilities for washing hands. With the installation of the water wells, the water can now be used for drinking as well as cleaning classrooms and offices. In addition at the school, Ivanhoe also installed latrines connected to the water wells which has had further hygiene benefits.

### The Mungoti School principal reported

**The quality of the educational experience for students and teaches has increased significantly, including:**

- The quality of the educational experience for students and teachers has increased significantly, including:
  - Attendance at the school has improved
  - Learners are more able to focus and participate in the curriculum
- The water well has also allowed Covid-19 protocols to be followed
  - Washing of hands has become more frequent
  - Health and hygiene can be prioritized
- Education around toilet usage, sanitation and hygiene has been implemented to help students. This has had a positive impact on the young generation and has supported the community to be better educated on hygiene and toilet usage.

“The teacher's role has been enhanced by the fact that they can teach hygiene with 'real' life examples. The nearby communities have benefitted as they can grow vegetables in their compound, plant trees and keep their home cleaned.”

**Mungoti School principal**







NATHALIE KIKABA, SENIOR ECONOMIC DEVELOPMENT MANAGER, KIPUSHI PROJECT ENGAGING WITH LOCAL COMMUNITY MEMBERS COLLECTING WATER AT THE KAPONDA SOLAR-POWERED WATER WELL.





## Educational infrastructure and support

Delivering towards SDG 4: Quality Education is a business imperative for us, since the education, skills, qualifications and literacy levels in the surrounding communities not only affects our ability to hire future labour from the local context, but also influences the future economic potential of the regions where we operate.

Education unlocks opportunities in all critical areas of well-being, and we are committed to improving the quality of education throughout the stages of progression, including early childhood development, schooling, tertiary education and work readiness. Over the last few years, we had invested in educational infrastructure, which includes the construction of schools, renovation of classrooms, installation of science centres and computer rooms, and the provision of access to running water. We have also provided educational support programs, where learning was enhanced through direct training interventions with teachers or students. The impact of the coronavirus pandemic in 2020 resulted in a shift away from a focus on education infrastructure with increased focus on health-related projects (see page 69).

We strive to raise the quality of education across all stages, from Early Childhood Development (ECD) through to schooling and tertiary education levels. Our key education focus in 2021 remained on the investment in young people through educational support and enrichment such as scholarships, bursaries, internships and learnerships, as well as through the upkeep of Wi-Fi hotspots, and managing the spread of the pandemic in schools. 4,522 scholars benefitted from the educational infrastructure support programs conducted during the reporting year.

### Kamoa-Kakula Mining Complex

Kamoa-Kakula continued investing in a number of educational infrastructure and enrichment initiatives in 2021. Construction, landscaping and equipping of the Kaponda Primary School was completed by Kamoa-Kakula in 2021. The Muvunda school was constructed by Kamoa in 2018 in accordance with an obligation related to resettlement activities, as well as to meet the educational needs of children around Muvunda, where children were previously limited to a grade two level of primary school education, and to increase the school attendance. Following delays related to the appointment of the managing partner, the school commenced teaching in 2021, with student enrollment growing from 130 to 182 students by the end of the year. The Muvunda School welcomes students from Muvunda, Samukoko, Cité Maseka and Kamisange villages, of which 90% of children come from the Kakula phase I relocation project. The successful growth in student numbers may be attributed to an increased awareness of parents who have broken the stereotype of unequal treatment for school-age girls, economic development of parents, who are employed through Kamoa's activities, enabling them to pay for their children's schooling, and significant involvement of local leader, Mr. Kalembe, a local leader, from Muvunda. Muvunda Primary School has brought a positive change in the lives of most children in Muvunda. For the end-year national test the school obtained the best laureate in the Mutshatsha Region. One particular student, Mwanza Tresor, achieved 84%, the highest mark to ever be recorded in the region. Due to the efforts of improving study conditions and a good level of education, an increased number of student enrollment constitutes a challenge in accommodating a plethora of pupils. Furthermore, a challenge has now arisen in respect of the standards of the UNESCO recommendations in only having 50-55 students per class, providing an opportunity for Kamoa-Kakula to expand the project.





## ENRICHING TOMORROW'S LEADERS

A conversation with **ILUNGA KATAKI FRANCOIS**  
Headmaster of the Kaponda Primary School

**Q** How have Kamoa's community programs impacted the lives of the local children?

**A** Kamoa is enhancing the lives of children, particularly through the construction of schools. Previously, learners attended classes in shacks but today, thanks to Kamoa, we have lovely structures where our children can attend school and the learners are thriving. What's more, having sufficient school material, such as books and stationery, also inspires our learners to do better. Kamoa is doing even more for students in the villages by paying college tuition for the top five students and by covering the expenses of all the girls in secondary schools in full.

**Q** Have you seen any changes in the pass rates?

**A** Yes, absolutely. The pass rate has increased and so has the intake of the number of students. When I started working at Kaponda Primary School, the school had 210 students. With Kamoa's help, we had 724 students for the 2020 school year. We were looking forward to having even more students in 2021 but unfortunately many parents withdrew their children from school due to the Covid-19 vaccination requirement. As a result, we stand at 533 students today.

**Q** Have you seen a change in the school's academic performance?

**A** Without a doubt! Learners who took the TENAFEP (Test of the End of Primary Studies) examinations achieved a 100% pass rate for two consecutive years. In 2018, 18 learners in 6th grade sat for the exam and they all passed. In 2019, all 25 students who wrote the exam passed. In 2020, a total of 24 learners sat the exam and 19 passed (three failing French and two failed Mathematics). We have achieved greatly improved results compared to the years before Kamoa became involved.

**Q** What has been the biggest enabling factor for better academic performance?

**A** The first factor that has contributed towards better education, in my opinion, is the calibre of the teachers working at our school. We have teachers who are qualified and passionate about their jobs. They are dedicated to empowering our learners with knowledge. Hence, their salaries need to be fair so that they feel encouraged to go even further. Another factor is the learning material – having the appropriate textbooks, stationery and resources has improved the level of learning amongst students as they are able to work more efficiently.

**Q** How do you think Kamoa has created opportunities for employees and/or host communities?

**A** In the past, people were limited to working in the fields. However, many young and elderly people are now working at Kamoa and enjoy numerous benefits that have significantly improved their standard of living. In addition, people in our communities are now able to build houses where previously only huts existed. When it comes to education, I can confidently state that Kamoa is making a vast difference through its contributions to education. There were no schools in the past, and the majority of our youngsters were unable to learn. However, with Kamoa's help, we will soon have graduates in our communities. The future seems bright.

A DAY IN THE CLASSROOM AT THE NEW KAPONDA PRIMARY SCHOOL, KAMO-KAKULA MINING COMPLEX.





A STUDENT AT THE MANGOTI SCHOOL IN KIPUSHI.

## The Platreef Project

The Platreef Project implemented the educational enrichment programs planned in the SLP, supporting scholarships, bursaries and practical field training for local learners throughout 2021. Educational efforts undertaken included a scholarship program for 97 learners from 27 local schools and a bursary program providing financial educational support for two qualifying tertiary students from host communities.

Schooling disruptions arising from the coronavirus pandemic have had a significant impact on learners in the communities surrounding the Platreef Project, as many of these learners have very little or no access to internet. Ivanhoe thus supported educational camps for 339 matriculants of the Mogalakwena District and surrounding communities, assisting learners in their preparation for their final examinations.

## The Kipushi Project

At our Kipushi Project, renovations at the Mungoti School, which currently has 696 learners, continued throughout 2021. Originally built by Gécamines, Ivanhoe set about transforming in various phases as part of a multi-year refurbishment plan. The project commenced in 2019 with the school wall-fence, which was constructed by a local service provider, Chekina Group. In September 2021, a borehole was drilled at Mungoti school.

This is the only one in Kipushi to run off the electric grid instead of solar. The choice to go electric was made due to the already existing electricity supply in the area and the cost benefits. The borehole has enabled the school to use water for cleaning classrooms, offices and toilets. With the addition of the borehole and the previously constructed fence at Mungoti High School, the principal has recognized an increase in school attendance as students feel safe and protected within the school environment.

Many students, especially girls from the communities, have never had access to proper toilet facilities. Many are afraid to use a toilet as it's a new experience and they don't understand how it works. The school therefore implemented a sanitation project wherein girls are educated on the theory of self-hygiene and then physically accompanied to the bathroom with a designated lady to teach them how to use the bathroom in a sanitary way. Out of the 482 female students, 380 girls are from townships without toilet facilities and therefore the project has a major impact on their generation. The borehole has allowed the Mungoti High School and surrounding communities to provide facilities for drinking, washing and effective sanitation.

Other educational efforts undertaken included a scholarship program for 81 learners and a bursary program providing financial educational support for 11 qualifying tertiary students from host communities.



# Infrastructure for sustainable cities and communities of the future

Ivanhoe Mines understands the responsibility of companies working in emerging economies to contribute towards infrastructure development. Our commitment to contributing to and delivering against the SDGs, focuses on developing quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure.

We deliver infrastructure such as electricity and roads, as well as the benefits related thereto. We are also investigating the viability of other bulk access infrastructure options, such as trans-border rail options, and we continually engage towards fostering productive public-private partnerships in our host countries.

Bulk infrastructure is vital to a country's economic development and prosperity. Developing mining projects in emerging economies poses a unique set of challenges, such as ensuring access to crucial infrastructure and infrastructural facilities. However, Ivanhoe Mines has not only positioned itself as a leader in public-private partnerships for bulk and access infrastructure development in Africa, but also demonstrated a proven track-record as successful implementers thereof.



REPRESENTATIVES FROM BOTH SNEL, JEAN-BOSCO KAYOMBO, AND IVANHOE, LOUIS WATUM, FROM THE STEERING COMMITTEE OF THE MWADINGUSHA REHABILITATION PROJECT, RECEIVING AN AWARD FROM THE HONOURABLE EVE BAZAÏBA, DEPUTY PRIME MINISTER, DRC FOR THE "BEST PUBLIC-PRIVATE PARTNERSHIP PROJECT OF THE YEAR."

## Bulk power

### Connecting our DRC operations to the national power grid

In 2016 and 2018, Kamo-Kakula constructed approximately 30km of 120kV power lines to provide construction power to the project from the national grid. The Kansoko Mine, Kakula Mine and Kamo camp have been connected to the national hydroelectric power grid since the completion of a 20km 120 kV single circuit power line from the national grid to Kansoko in October 2016, and 12km 120 kV dual-circuit power line between Kansoko and Kakula in December 2017. For the production phase, a 220kV substation named NRO was successfully completed and integrated into the national grid in Q4, 2021. The construction of a 35km 220 kV dual-circuit power line from NRO to Kakula is completed and feeds the 220 kV Kakula Consumer Substation (KCS), which in turn is feeding the existing Kamo-Kakula Mining Complex.

A temporary connection at the end of 2020, enabled by the newly constructed 35-kilometre-long double circuit 220-kilovolt (kV) power line connected Kamo-Kakula to the national electrical grid. Work on the New Western Dispatch (NRO) substation in Kolwezi was completed towards the second half of 2021, and forms the permanent connection between the mine and the national grid. Kamo-Kakula's main 220-kV substation was energized with 220-kV power from the national power grid on March 25, 2021 and the first of two 33-kV transformers on March 29, 2021, with the second on April 3, 2021. The 33kV substations were all successfully energized, and provided the power reticulation for the Kakula Concentrator's Low Voltage (LV) substations. The plant was successfully commissioned during April and May 2021.

Ivanhoe Mines strives to use renewable power sources. Kamo-Kakula and Kipushi are already using hydropower-generated electricity. At Kamo-Kakula, a 220 kV dual supply line has been installed, and at Kipushi a 120 kV, to remove the risk of power failures.

### Upgrade of Mwadingusha hydropower plant

Ivanhoe Mines is a key partner in an initiative focusing on upgrading work at the Mwadingusha hydropower plant in the DRC. The work at Mwadingusha was conducted by engineering firm Stucky of Lausanne, Switzerland, under the direction of Ivanhoe Mines and Zijin Mining, and in conjunction with the DRC's state-owned power company, La Société Nationale d'Electricité (SNEL). The power station was historically shut down to replace sections of penstocks that were found to be in an advanced stage of corrosion. The progressive re-commissioning of the turbines, fully refurbished and modernized with state-of-the-art control and instrumentation, commenced in 2020 and has been completed in August 2021, ensuring that Kamo-Kakula's power requirements are secured ahead of the commissioning of the concentrator plant, in addition to meeting the national power demands. All six new turbines at the Mwadingusha hydropower plant were synchronized to the national electrical grid, with each generating unit producing approximately 13 megawatts (MW) of power, for a combined output of approximately 78 MW.

### The upgrade of turbine 5 at Inga II hydropower complex

In August 2021, Kamoa-Kakula's energy company signed an extension of the existing financing agreement with SNEL to upgrade turbine 5 at the Inga II hydropower complex. The Inga II hydropower plant is located in the southwest of the DRC, on the Congo River. The Congo River is the deepest river in the world and the second longest after the Nile, with a flow rate second only to the Amazon River. Measured along with the Lualaba, the main tributary, the Congo River has a total length of 4,370 kilometres. It is the only major river to cross the equator twice. The Congo River is unique in that it has large rapids and waterfalls very close to the mouth, while most rivers have these features upstream. The rapids and waterfalls give the Congo River huge hydropower potential. The Congo Basin covers an estimated total area of 3.7 million km<sup>2</sup>, approximately 13% of the entire African landmass.

Originally equipped between 1977 and 1982, Inga II has been running for approximately 40 years. Four of the eight turbines at Inga II have been refurbished. Turbine 5 is one of the four remaining turbines awaiting an upgrade.

SNEL and Ivanhoe Mines Energy DRC have appointed Voith Hydro, a leading engineering group, as the contractor to lead the consortium of equipment manufacturers for the turbine upgrade. For more than 80 years, Voith has successfully constructed and modernized hydropower plants on the African continent. Approximately 25% of currently installed turbine capacity in Africa has been supplied by Voith. The company also has successfully rehabilitated two turbine generators at the adjoining Inga I hydropower plant, a project that was financed by the World Bank.

**Turbine 5 is expected to produce 162 MW of renewable hydropower**, providing the Kamoa-Kakula Mining Complex and the planned, associated smelter with abundant, sustainable electricity for future expansions. The surplus power produced from the upgraded turbine will be distributed on the national power grid to increase access to electricity for the citizens of the Democratic Republic of Congo.

### Securing power for our Platreef Project

At the Platreef Project, our management team negotiated partnerships with ESKOM, the public electricity utility in South Africa, as well as with local government and communities, to bring a five mega volt amp (MVA) power line to the mine development site to provide electricity during the construction of the mine. This current facility is being upgraded to 8MVA, in order to cater for the ongoing development.

The Platreef-ESKOM partnership, supported by local government and communities, which was negotiated to bring the above power line project to the mine development site, continues to be the base for bulk power supply to the Platreef Project. An additional 100MVA permanent electricity supply was secured through negotiating a self-build option. This will see Ivanhoe build the required power line infrastructure. The power line construction, which is anticipated to take 18 months, commenced in November 2021. Energy efficient design and planning was applied throughout the feasibility study to ensure efficient use of resources.

As energy regulation and mindsets shift in South Africa, amended legislation enables the possibility for renewable energy projects such as solar to be considered. The project team is currently assessing the possibility of constructing of a 5MVA solar on the mining site, as well as the possibility of partnering with a third-party Independent Power Producer (IPP) starting off with a 30MVA solar project upgradable to a 100MVA independent power facility.

### Access infrastructure

The provision of reliable and safe infrastructure to the mining development areas is essential for efficient development work. Ivanhoe Mines' operational teams have active partnerships with the relevant authorities in their areas of operation to ensure that employees and contractors can access their workplace easily and safely. In addition, ongoing engagements and collaboration with strategic partners will help enable efficient haulage of minerals when the mines go into production. During 2021, as per the agreement with the Province of Lualaba, Kamoa maintained a 19km portion of the 27km road linking Kamoa-Kakula with the Kolwezi airport.

THE KAMOJA ACCESS ROAD, CONNECTING THE KAMOJA-KAKULA MINING COMPLEX TO KOLWEZI.





# Economic and physical displacement, and livelihood restoration

Ivanhoe Mines is committed to upholding the best practice principles for resettlement and economic displacement as outlined in the IFCs Performance Standards. We are engaging in resettlement and livelihood restoration projects at both our Kamoa-Kakula Mining Complex and Platreef Project, which are at different phases of completion.

## Kamoa-Kakula Mining Complex

In 2017, the Kamoa-Kakula Mining Complex's requirement for operational surface areas triggered a multi-phased Resettlement Action Plan (RAP). The process commenced through surveys required to establish a baseline, and identify and register all project-affected persons (PAPs) and their assets. The RAP established the basis for the agreement with the affected parties, with the purpose of specifying all resettlement arrangements and measures for avoiding, minimizing or compensating losses or other negative social impacts resulting from resettlement. The host communities gave their consent for the resettlement and agreed on a compensation framework for economic displacement and household relocation, respectively. In addition, they agreed on communal compensation for loss of access to communal assets.

After conducting surveys for newly identified PAPs in 2020 and reaching agreement for resettlement, 2021 continued the implementation of construction of resettlement houses for the relocation program. In 2021, 129 homes were relocated, with five households awaiting their relocation. The remaining families are scheduled for relocation upon completion of the construction of their new homes. The previous straw-hut hamlet structures were replaced with better, more spacious houses of a much higher quality, constructed from pre-cast concrete, hollow cement blocks, roof sheeting and steel frames. The houses are raised above the ground for drainage and flood prevention.

Construction of communal infrastructures also progressed throughout the year, such as the Muvunda Clinic which is planned to officially open around April 2022. The community church at Kaponda Village was completed and the keys were officially handed over to the community in December 2021. The church, which was constructed by a local contractor, took 15 months to build and has capacity for 500 people. The Kaponda Church will not only be a place of worship, but also a gathering point to discuss important community matters.

The livelihood restoration program focused on the distribution of 758 chickens for all project-affected-people, as well as three goats each to all 45 beneficiaries. Additional livelihood restoration efforts included planting 3,600 orange seedlings to cover nine hectares, 1,000 grafted avocados for ten hectares and approximately 54 hectares of cassava.

PICTURED FROM LEFT TO RIGHT: GHISLAIN MPANGA KAZADI, COMMUNITY RELATIONS OFFICER, NADIA NKULU ILUNGA, RESETTLEMENT CONSULTANT, ALTERNATIVE PLUS, LEON KOJI TSHIKUTA, COMMUNITY RELATIONS SUPERINTENDANT, AND ELIE TSHISOLA TSHINABU, A LOCAL FARMER AND LAND OWNER, CONDUCTING SURVEYING FOR THE RESETTLEMENT REQUIRED FOR THE KAMOA 1 BOXCUT, NEAR KANSOKO.



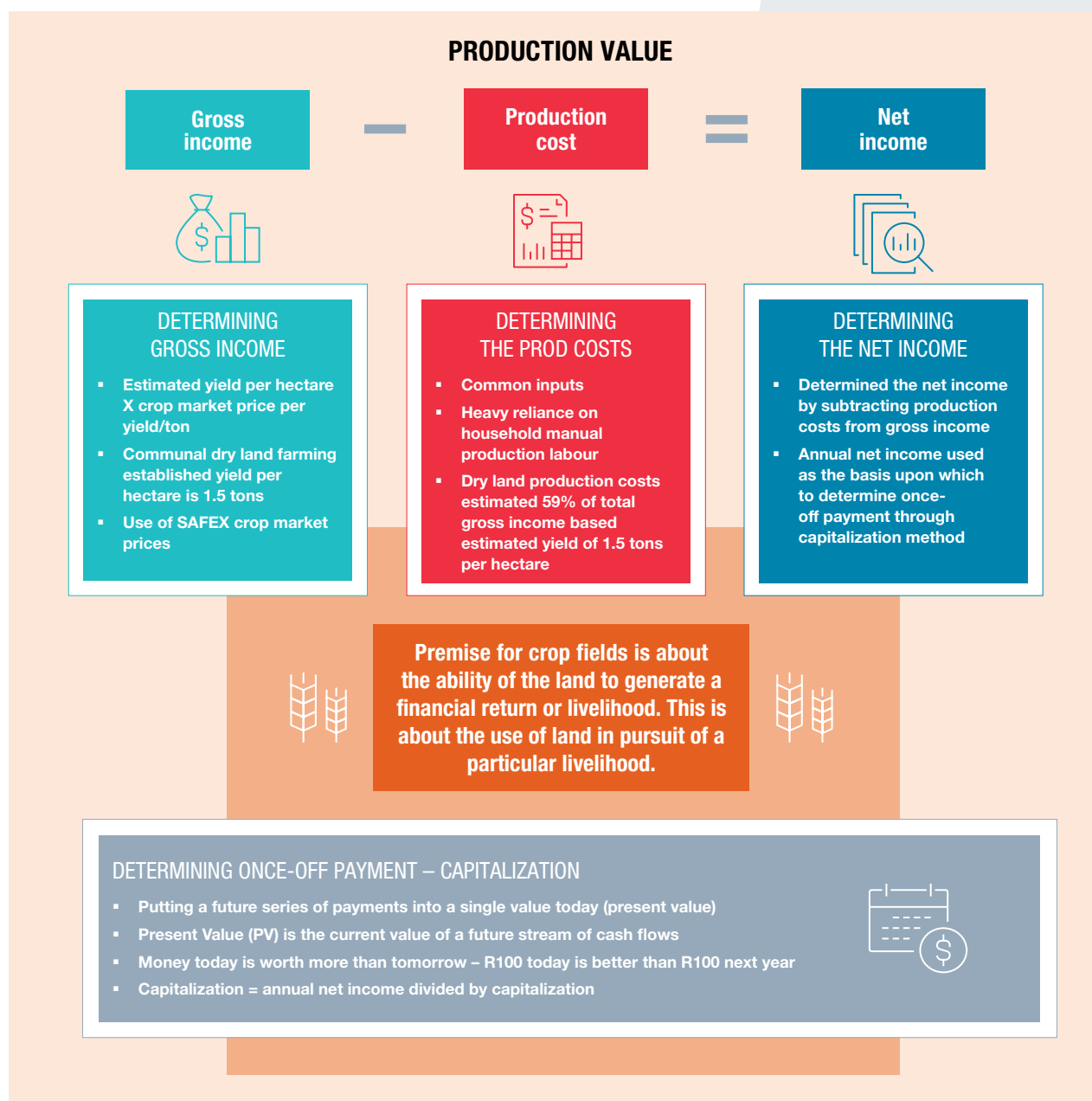
## Platreef Project

The Platreef Project spent 2021 engaging with the three communities of Ga-Kgobudi, Ga-Magongoa and Tshamahansi on the Livelihood Restoration Plan (LRP). The livelihoods that are impacted by the Platreef Project are: crop production; livestock farming and traditional medicine. The three communities formed compensation task teams to negotiate the compensation offer for their respective communities. The Platreef Project then used the "logic model" to negotiate the once-off compensation for the mielie fields. Agreements were reached with these communities and a total of eighty-nine (89) households agreed to a once-off compensation offer. Engagements with the Ga-Magongoa community are still on-going. Ivanhoe is also planning a number of community livelihood initiatives to augment the cash compensation provided.

### The logic model is underpinned by two approaches:

- A production value approach for loss of crop fields
- A valuation-based approach, based on market prices for loss of grazing land. Previous compensation received by the land rights users set a precedence, which established an expectation, even a type of "principle value". Thus, communities used this amount as a reference point. This made negotiations very challenging. Ivanhoe, therefore built robust logic models for the two approaches to determining compensation in order to ensure transparency, and a science-based approach. An independent valuation was also sought in order to ensure equity and provide affected project stakeholders with a sense of comfort.

## Compensation determination model





During 2021, the communities of Kgobudi; Magongoa and Tshamahansi were further engaged regarding the fencing of additional areas, as well as the long-term surface lease agreement. The surface area on which our Platreef Project is being developed is held by the South African national

Department of Agriculture, Land Reform and Rural Development, and used by traditional villages or communities. The traditional authorities of each community are responsible for distributing parcels of land for residential or agricultural purposes to local community members.



TRADITIONALLY, LIVESTOCK HAVE PLAYED A SIGNIFICANT ROLE IN AFRICAN SOCIETY, SYMBOLIZING STATUS, HONOUR AND PROSPERITY, AND FULFILLING SEVERAL SOCIO-ECONOMIC ROLES. THESE COMMUNITY-OWNED CATTLE AT THE PLATREEF PROJECT WILL BE RELOCATED AS PART OF THE COMPANY'S LRP.

The livestock owners, mostly from Ga-Kgobudi and GaMagongoa, have had controlled access to the fenced-off Platreef Project footprint area for the grazing of their livestock since 2015. The Project has now reached the stage where it would like to further develop the area for mining and cannot afford to allow livestock continued access to this area. Consequently, Platreef intends to request that livestock owners remove their livestock from the fenced-off project area. The Project's commitments to livelihood restoration, compensation and restoration will need to be considered.

Conditions for owning livestock have become increasingly challenging as the Mogalakwena area has grown and developed since mining operations started in the 1980s. Most livestock consist of cattle, donkeys, goats and sheep, and owners are generally older and considered to have some financial-means, compared to most Mogalakwena residents. As Mogalakwena grows and develops, and urbanization takes root, livestock ownership will continue to be under pressure, particularly for space and subject to stock-theft. Eventually livestock ownership should phase out altogether.

A number of options may be considered as alternatives and/or compensation for the impact of the mine on the livestock activities in the immediate and impacted area, each of which contain their own implications and risk considerations. These include:

- Provision of alternative mine-owned grazing land;
- To rent and provide temporary access to suitable land;
- Warehousing, as an interim arrangement, while the mine and livestock owners decide on more permanent options;
- Partnership arrangements such as "Crowdfarming"; and
- Self-determination, offering monetary compensation directly to livestock owners, possibly with assistance of livestock associations

# 6

# OUR PLANET



**“Sustainability is not a given, it doesn’t simply happen. We must work tirelessly to ensure that sustainability remains at the heart of our agenda, and at the forefront of everyone’s minds. The work of sustainability is essential to any organization’s future.”**

**Dr Guy Muswil**

Executive HSE and Sustainability,  
Kamoa-Kakula Mining Complex



## Emission-free BEVs

purchased for Platreef

## Climate change

scenario analysis conducted

## 100% metal and paper

recycled at Platreef and Kipushi

## 100% renewable electricity

purchased at Kamoia and Kipushi

Alignment with Ivanhoe's  
priority SDGs



# Our commitment and approach to environmental stewardship

Companies cannot create long term value and societies cannot succeed without a healthy planet to provide the clean air, fresh water, agriculture, forests and fisheries on which human life depends. Business continuity, within the context of planetary bounds, should be managed effectively through responsible consumption and production, which we strive for, seeking to leave behind a legacy that supports the needs of both present and future generations.

It goes without saying that our governance approach must be rooted in compliance with all applicable environmental laws and regulations in our host country jurisdictions and should inform, drive and enable policy developments aligned to best-practice solutions for the global challenges we face. **As a priority, we continuously review and implement international standards and best practices.** Ivanhoe Mines' policies, standards and systems are principally aimed at avoiding negative impacts and mitigating unavoidable impacts, whilst at the same time striving for delivery against the three pillars of sustainable development. Our environmental governance priorities are further driven by our objectives of contributing to the achievements of our priority SDGs – SDG 6 (clean water and sanitation), SDG 12 (responsible consumption and production) and SDG 15 (life on land), as well as to SDG 13 (climate action).

**We strive to improve our environmental performance** in advocating for the least impact on the natural environment across our operations, supply chains and end-user products and services. Our strategic approach towards environmental stewardship comprises both proactive and sustained environmental management, which are underpinned by continuous feedback and improvement. Our holistic and

integrated view of environmental stewardship and governance enables us to prepare and implement **emergency response plans**, which are pro-active and risk-aware in case of incidents and crisis events. **Ivanhoe Mines is committed to responsible environmental stewardship throughout our mining life cycle**, from exploration to mining to closure and post-closure, and across our value chain. **We strive to implement best-practice tailings management practices for safety** during all phases of the mining lifecycle and to minimize our project footprints and to rehabilitate mining-impacted areas in the most sustainable manner possible.

We value and respect ecosystems and our natural and heritage resources, and **strive to protect and conserve areas, species and ecosystems of special biodiversity concern, as well as areas and objects of heritage value** in our host nations. We acknowledge the importance of the development and implementation of sound, inclusive and transparent land use planning procedures and alternative livelihood practices.

**We aim to protect the planet and our host countries' natural resources from pollution and to take action in the fight against climate change**, by implementing adequate and effective adaptation and mitigation measures, continually seeking ways to reduce our carbon, waste and water footprints. **We strive to implement adequate waste management and circular economy practices and to promote and ensure the responsible use of water resources**, especially in the water-stressed regions in which we operate.

**We recognize capacity building as a fundamental means of achieving these imperatives**, and accordingly are focused on enhancing **environmental awareness** by conducting appropriate training and awareness campaigns in order to promote knowledge transfer and scientific research development in environmental and social studies, where possible.

Negative environmental impacts may affect societal well-being, and the responses, which we identify and apply to these impacts, can create invaluable opportunities or devastating risks.

Our approach to environmental governance and stewardship is therefore driven by both the expectations of our stakeholders, and our responsibility to create shared, long-term value across the full lifecycle and value chain of our projects.

We acknowledge that while corporate reporting for established environmental themes and data points has been largely formalized and is well-understood, the climate in which ESG and environmental stewardship is developing requires a holistic, contextualized view on a wider range of environmental issues which are equally pressing from scientific, societal and business perspectives. These include – in addition to climate, pollution and water consumption data – issues such as biodiversity, nature and land loss; waste management and circular economy thinking; freshwater availability; resource availability; and contamination of land- and water-based resources. These issues drive not only our corporate reporting from a sustainability perspective, but avail

opportunities for innovation; resource planning, management and conservation; business resilience and operational efficiency; building and maintaining social trust in our host communities; awareness creation; and strategically-driven and -mandated efforts to support projects, people and priorities which create sustainable solutions and long-term shared value.

**We acknowledge that robust stakeholder engagement is required** to appreciate the interconnectedness of the issues identified above and respecting the rights of employees, host communities and society to an environment that is not harmful to their health and well-being, as well as basic human rights such as access to clean water and sanitation. **Ivanhoe Mines seeks to ensure that all role players in our value chain respect the natural environment in our host communities and host countries.**

### PROACTIVE ENVIRONMENTAL MANAGEMENT

- Compliance with legal frameworks
- Baseline, risk and environmental impact assessments
- Engineering controls and best practices
- Environmental management systems
- Environmental Management Plans
- Technology and innovation to reduce footprint
- Climate risk and vulnerability assessments
- Climate change scenario analysis
- Environmental engagement and awareness

Continuous feedback and improvement



Biodiversity and ecosystem management



Water availability, consumption and discharge



Value chain



Heritage



Greenhouse gas emissions data



Climate change and energy efficiency



Air quality



Waste, tailings, gas emissions and circular economy



Noise



Management commitment and resource availability



Emergency response planning



Closure and rehabilitation

Continuous feedback and improvement

### RESPONSE-DRIVEN ENVIRONMENTAL MANAGEMENT

- Reporting to stakeholders
- Environmental monitoring and data updates
- Timeous and effective response to incidents
- Mitigate and manage impacts
- Climate change adaptation and mitigation plans
- Non-conformance and corrective actions



## MATERIAL TOPIC

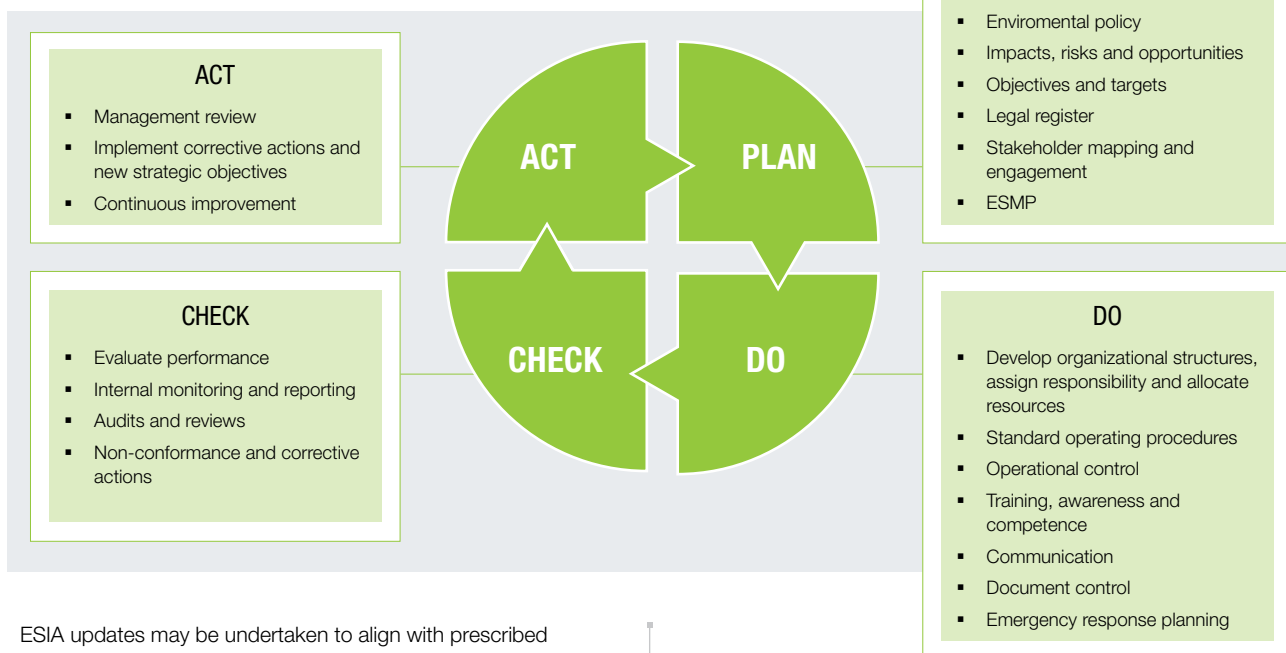
# Compliance and monitoring

Mining operations disturb the natural environment. Throughout the lifecycle of a mine and beyond, environmental and social impacts, risks and opportunities will arise.

Ivanhoe Mines seeks to identify, address and manage these impacts, risks and opportunities from the onset until closure. We ensure that all our operations regularly undertake and disclose an environmental and social impact assessment (ESIA). Through an integrated approach, the linkages between environmental and socio-economic impacts are considered and an appropriate environmental and social management plan (ESMP) developed. Compliance with these ESMPs, local regulations, licence conditions and best practice is managed as a crucial objective, and we have established and maintained a system of environmental management appropriate at each of our projects.

Our integrated web-based risk management solution, which is routinely updated to incorporate legislative or license amendments, is aligned to the ISO standards (ISO 9001, 14001, and 45001). The application gives control and visibility over the full continual improvement life cycle.

PHILLIP RAMPHISA, ENVIRONMENTAL MANAGER, TESTING LOCAL WATER SAMPLES AS PART OF PLATREEF'S COMPLIANCE MONITORING.



ESIA updates may be undertaken to align with prescribed regulatory periods, or sooner if there are any changes in the project which trigger a revised impact assessment. The ESIA reports at our projects are at various stages of being updated, depending on the study phase and development of the respective project.

At our Kamoa-Kakula Mining Complex, a revised ESIA, to deal with aspects related to the planned tailings storage facility (TSF), was submitted to DRC authorities for approval during 2020 and approved on 12 January, 2021. Kamoa-Kakula is currently compiling another amendment application for the ESIA, based on the latest technical information for the project, including the

proposed smelter. A number of specialist studies and public participation meetings were undertaken in 2021 to support the amendment of the Platreef Project's ESIA, to align with the latest technical developments outlined in the updated project feasibility study. Studies related to an update of the ESIA for our Kipushi Project have also been completed.

Dedicated environmental monitoring has been established at our projects, and reports are submitted to the respective regulators as per the requirements of the EMPs and associated licences.

The environmental monitoring practices at our projects include: air quality, noise, surface and ground water, biodiversity, vibration blasting, weather and climate, greenhouse gas emissions, waste (liquid and solid), and potable water for communities and employee living quarters.

The 2021 monitoring data indicates that currently there are no adverse material impacts as a result of our operations. During 2021, four non-material environmental incidents were recorded at Kamoakakula, and one at Platreef, all of which were mitigated and closed out according to the relevant standard operating procedures, and controls were implemented in the affected areas to prevent similar incidents.

Regulatory external environmental audits are undertaken every two years in the DRC and annually in South Africa. At our Kamoakakula Mining Complex, an audit was undertaken in 2020 and the next audit is scheduled for 2022. The projects also endeavour to undertake periodic internal audits, reporting results to all relevant departmental heads and making use of an “action tracker” whereby actions are assigned and tracked using the environmental and social management software, IsoMetrix.

As part of an equipment financing arrangement with a lender group – comprised of Standard Bank of South Africa (SBSA), the Swedish Export Credit Agency (EKN) and the Swedish Export Credit Corporation (SEK) – IBIS Environmental Social Consulting Governance South Africa Pty Ltd has been retained to provide the services of an independent environmental and social consultant in order to undertake environmental and social (E&S) monitoring for Kamoakakula, as well as compliance monitoring against an approved environmental and social action plan (ESAP) for a period of 24 months from the date of the transaction, and continuous E&S monitoring following the close out of the ESAP until maturity of the credit facility. The ESAP established for the project is based on a gap analysis and associated corrective actions necessary to align the project with IFC standards.

Ivanhoe continues to ensure that environmental training and awareness is achieved. Environmental inductions are conducted for both employees and suppliers. Standard operating procedures (SOPs) are developed for all the work likely to impact negatively on the environment and a training matrix is used to identify employees needing training on specific SOPs. Training is provided to employees on an annual basis and refreshed as required. Internal environmental awareness is also undertaken and includes monthly talk topics on environmental related issues and HSE meetings. External awareness includes celebration of environmental awareness with various community organizations, members and schools. Ivanhoe also conducts ongoing environmental staff capacity building throughout the year.

In 2021, the environmental teams at our projects were trained on:

#### Kamoakakula

- Environmental Management Systems
- Critical habitats and biodiversity management
- Air quality and noise monitoring protocols
- Radioactivity monitoring instruments

#### Platreef

- IFC Performance Standards: Managing Environmental and Social Performance
- Snake handling (as part of the BMP)

#### Kipushi

- Dangers of ionizing or radioactive radiation
- Radioactivity monitoring instruments

### MATERIAL TOPIC

## Water stewardship

Globally, the social, cultural, environmental, ecological and economic value of water has led to greater scrutiny of responsible water use and expectations from our stakeholders for improved resource stewardship.

The basis of our strategic approach to securing and efficiently using water as a resource is underpinned by this increased awareness of water security, the acknowledgement of the human right to water and sanitation, and recognition of environmental linkages, such as climate change, our commitment to responsible water use in support of the SDGs with regard to access to water and sanitation, and responsible consumption and production.

Water is an important interface between our operations, various regulatory agencies, our surrounding communities, environmental protection organizations, and the public in general. Through this interface, we are able to demonstrate how we make mining work by committing to responsible water consumption and protection of water quality. Water stewardship refers to monitoring freshwater availability, using water efficiently, maintaining water quality and engaging with communities to collaboratively manage shared water resources throughout the mining life cycle.

Ivanhoe Mines' water strategy is governed at the Board level through the Sustainability Committee. Our water use strategy and operational objectives are informed by robust engagement with a variety of stakeholders, including investors, policymakers, peer companies, non-governmental organizations and host communities.



## Freshwater availability and water security

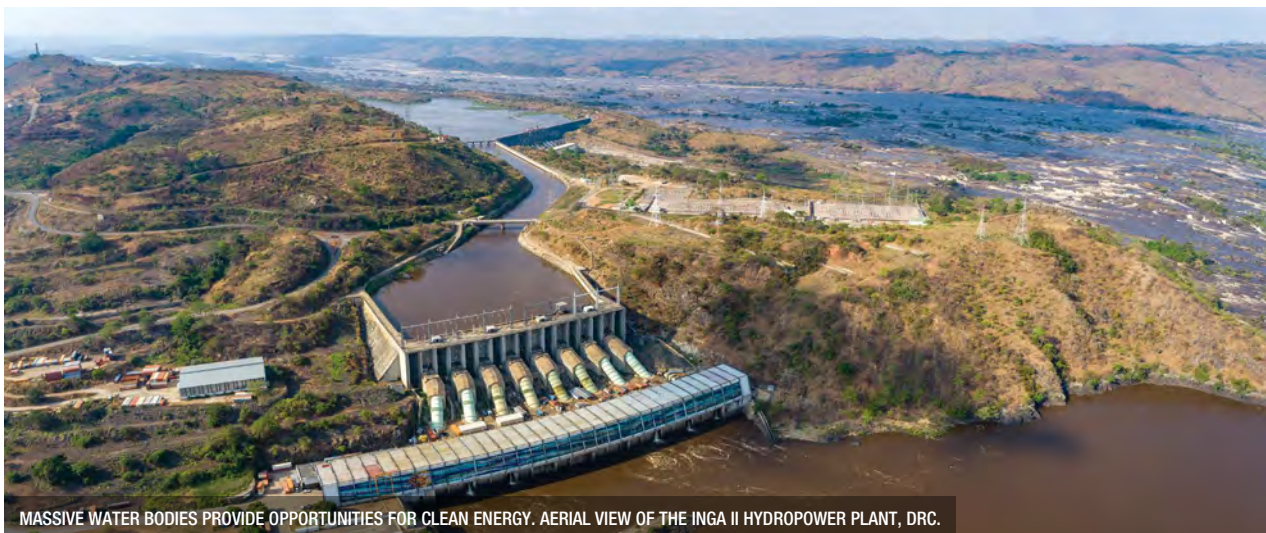
To address environmental concerns, as well as water security for current and future water users in the areas affected by our projects, Ivanhoe Mines has established systems to ensure that our projects design and implement water stewardship strategies and plans, based on a catchment-level approach.

Water is a critical underlying component of the SDGs and is crucial in achieving the targets of our priority SDG 6 (clean water and sanitation). Water is also one of the areas that is of specific relevance to the African context, as water is considered, in many areas, a scarce resource. This does not only relate to the availability of water, but also access to clean water. Ivanhoe is acutely aware of the water challenges faced in both South Africa and the DRC. In this regard, our water risk management systems integrate a number of contextual issues including basin/catchment level water availability and stakeholder conflicts, as well as water-related regulatory frameworks and the status of ecosystems and habitats.

The implementation of our strategic objectives for water use is underpinned by the following commitments: alignment with public policy initiatives; implementation of water-related commitments beyond regulatory compliance; voluntary public disclosures and reporting; innovative approach to water-related matters; continued stakeholder awareness and education; continued improvement in environmental performance practices in respect of water-related issues; a holistic approach to water-related risks; and the provision of accessible, safe water, sanitation and hygiene (WASH) programs for our workforce.

As significant quantities of water are required for mining development activities, such as shaft sinking, construction of surface infrastructure and dust suppression, and for mining activities and associated processes, the long-term viability of our principal projects and operations will rely on our ability to obtain the appropriate quantity and quality of water. It is therefore imperative for us to understand whether any of our operations are exposed to water risks. To establish this exposure we used the Water Risk Filter (WRF), which provides an interactive map with which the water-related risks can be assessed. Our projects are situated in regions of the world where water risks and impacts range from excess to water scarcity.

Our projects are situated in emerging markets in Africa and can be subjected to sudden regulatory changes. Water-related regulatory frameworks are thus relevant at both operational and executive levels, and are included in our water risk assessments. Our legal, corporate and government relations teams in both South Africa and the DRC closely monitor possible changes in water regulation to ensure that our projects can manage possible risks related to regulatory changes. In addition, the group sustainability team keeps a close eye on the impact of climate change on future water availability and alerts the project teams of probable future risks. This range of water-related challenges calls for innovative approaches to ensuring access to quality water sources for our projects and our host communities, and further informs our risk-and-opportunity management approaches. Current and emerging issues related to the sensitivity of key commodities/raw materials to water are also included in the water risk assessments. Disclosure of water-related risks is undertaken annually in the Company's Annual Information Form (AIF), Management Discussion and Analysis, Sustainability Report and CDP Water Disclosure.



MASSIVE WATER BODIES PROVIDE OPPORTUNITIES FOR CLEAN ENERGY. AERIAL VIEW OF THE INGA II HYDROPOWER PLANT, DRC.

## Kamoa-Kakula Mining Complex and Kipushi Project

Our Kamoa-Kakula Mining Complex and Kipushi Project in the DRC are located near large water aquifers and thus Ivanhoe is continually mitigating the risk of flooding as a result of the areas' net positive water balances. This is done using engineering designs and controls, pumping systems, diversion drains, dam walls and natural aquifers, such as wetlands. The DRC is currently not considered a water-stressed area. However, our 2020 climate change risk and vulnerability assessment

has indicated that the future drought frequency probability in some areas is at moderately high and high risk, and flooding poses a medium risk. Therefore, our operations in the DRC may potentially be at water risk in future.

For both Kamoa-Kakula and Kipushi operations, groundwater supply is abundant and readily available for operational use. At Kamoa-Kakula, surface and groundwater are used to supply the project's water requirements. The mine is designed to facilitate the reuse of water in its processes, however, excess water from mine dewatering which is not required for plant

operations, as well as recycled water from the TSF, will be sent to a mine water settling pond (and treated with flocculent if required) prior to the overflow being discharged to local watercourses. In Kipushi, which Ivanhoe Mines spent three years dewatering to make it safe for drilling and further works underground, groundwater is the main source of process water used.

A further priority risk area is Kamoa-Kakula's current use of hydropower-generated electricity. Extreme rainfall and flooding could negatively impact this efficiency, and fluctuating water volumes could potentially affect the functionality of hydropower stations and thus electricity generation. Without uninterrupted electricity supply, Kamoa will be unable to operate (or unable to operate efficiently), leading to reduction and disruption in our production capacity. In order to minimize these risks during times of floods from the hydropower plants, the Company is researching methods of incorporating alternatives such as solar power and vanadium flow batteries into Kamoa-Kakula energy mix. In addition, infrastructure investments can be made to ensure that the hydropower plants operate efficiently, even during extreme rainfall and flood events.

## The Platreef Project

The Platreef Project is located in the Olifants river basin in the Limpopo Province, in the north-eastern part of South Africa. The country is generally considered a water-scarce region and the Mogalakwena region currently has a medium-risk drought tendency. The water stress risk in the region in which the Platreef Mine operates is extremely-high risk. It is projected that this region is likely to become even more water stressed in future as a result of climate change. The consequences for direct operations are less water or inaccessibility to water, which could lead to reduced production values. A reduction in production capacity may reduce sales and – in turn – negatively impact revenues, as well as threaten the livelihoods of communities, where our workforce and the surrounding communities themselves require freshwater. Securing sufficient sources and quantities of water poses a challenge for the Platreef Mine. These risks are likely to be further impacted by climate change effects. The relative scarcity of water in the region led to innovative mine planning and a closed water system during construction and the consideration of environmentally sustainable bulk water supply for the production phase. In order to mitigate this risk, it is also imperative that the project secures an interest in, or accesses rights to, forthcoming water development projects. The means of such access include securing commercial entitlement to the water source, developing

the infrastructure to transport water to the project and obtaining necessary government and regulatory permits.

In December 2021, Ivanhoe concluded a new agreement that will provide local, treated water to supply the bulk water needed for Platreef's Phase 1 and 2 operations. The recently signed offtake agreement with the Mogalakwena Local Municipality to **re-use upgraded wastewater** is an important milestone in Platreef's development. Recycling locally treated water is a cost-effective and sustainable approach to securing water for Phase 1 and 2. Ivanhoe is therefore on track to develop Platreef into South Africa's next great platinum-group metals mine, while ensuring that we do it in a way that is environmentally responsible and resource efficient.

South Africa's natural water resources are owned by the government, and held in trust for its people. Undertaking regulated water uses is thus subject to licensing or authorization by national government. Our Platreef Project received its Integrated Water Use Licence in January 2020, which is valid for 30 years and enables the project to make use of water, among others, from boreholes adjacent to the project. Process water from the mine development is also recycled and reused.

## Water consumption

Ivanhoe's water use trends (see page 148) indicate that the group-wide water consumption has increased from 2020 to date.

**In 2021, the total fresh water withdrawn from all sources was 43,196 megalitres which is a 83% increase from 23,558 megalitres in 2020**

The increase can be attributed to the ramp-up of activities at Kamoa-Kakula. The largest quantity of groundwater used was at Kipushi Mine's potable water station, which provides approximately 2 000 million litres of potable water to the Kipushi town, annually.

## Water pollution

Water quality is an issue that may negatively impact Ivanhoe's operations and cause disruptions to production if not monitored and managed appropriately. It may also have devastating consequences for the host communities who rely on water for consumption, hygiene and sanitation, resulting in social unrest. Ongoing water quality monitoring is undertaken at all of our projects in order to ensure legal compliance and alignment with our environmental stewardship principles. Both current and emerging issues related to water quality at a basin/catchment level, as well as emanating from operational use cases, are included in our water risk assessments.

From a construction perspective, we acknowledge that the status of ecosystems and habitats is critical to Ivanhoe, both in maintaining our social license to operate and in adhering to environmental management standards and laws. At the Platreef Project, the environmental and social impact assessment informed several construction methods, such as curtain grouting the shaft, to prevent contamination of groundwater and avoid a negative impact on the ecosystems surrounding the mine. In



WERNER VAN DER BERG, PROJECT MANAGER: BULK INFRASTRUCTURE, PLATREEF PROJECT, RECEIVING THE NEW RECYCLED WATER OFFTAKE AGREEMENT FROM THE MOGALAKWENA LOCAL MUNICIPALITY DURING A SIGNING CEREMONY IN DECEMBER, 2021.



addition, water consumption at the Platreef Project is controlled through the implementation of a closed water system with minimal discharge. Part of environmental compliance consists of assessing water-related risks and the potential impacts on ecosystems and habitats.

From an operations perspective, the DRC projects are situated in generally water-abundant regions and our Kamoakakula Mining Complex and Kipushi Project remain at risk of flooding, with the additional incurrence of rainfall events likely to become more extreme as a result of climate change. The resulting increased risk and intensity of floods pose a threat to tailings and water storage facilities. This includes overflowing, with further consequences of contamination of potable water and groundwater, as well as soil degradation. Groundwater contamination and tailings dam overflows could result in major health and safety hazards not only for employees at the mine but also for its surrounding communities. The DRC is already earmarked as a region of poor water quality and possible further contamination of water associated with flooding could result in additional social, health and environmental harm, as well as untreatable water. Our projects have adopted limits for water quality, which are assessed through ongoing monitoring and measures, such as silt traps and flocculent, aimed at improving water discharge quality as required. In July 2021, Improchem was appointed to manage the settling pond discharges – mainly TSS levels – and ensure compliance with the limits adopted by Kamoakakula.

In response to the risk of flooding that could lead to social and environmental harm from our DRC projects, Ivanhoe

has put risk management strategies in place that support the installation of primary dewatering systems and backup systems in case of failure, as well as implementing flooding emergency response plans and strict adherence to regulated floodlines. In addition, Ivanhoe is focused on improving the maintenance of mine infrastructure, such as for the dam walls and stormwater management. Protection of the non-perennial streams and riparian zones through litter removal and prevention of over-grazing is a further strategic imperative, as these river systems allow for water purification and reduce flood risks to local communities, the workforce and infrastructure. Ivanhoe continuously evaluates and ensures that the necessary capex is available for these response strategies.

The importance of water quality for host community livelihoods is also crucial. The Kamoakakula Sustainable Livelihoods Program teaches local farmers to use environmentally friendly practices for farming, apiculture and aquaculture.

From an employee health perspective, water is considered an important vector for the potential spread of pollution, making it a critical compliance issue and a risk factor (to the environment and human health) if not responsibly managed. Each project accordingly ensures that the workforces obtain access to clean potable and wash water for sanitation services, through the provision of fully-functioning, safely managed and monitored WASH services for all employees. Ivanhoe places a special focus on providing safe, accessible facilities to female employees. In addition, our environmental teams on the project sites perform regular capacity building sessions to ensure appropriate water stewardship.



BEN MUDUNG, SENIOR ENVIRONMENTAL OFFICER, KAMOAKAKULA MINING COMPLEX, CONDUCTING DRINKING WATER QUALITY MEASUREMENTS AND SAMPLE COLLECTION FOR CHEMICAL PARAMETERS TREND ANALYSIS.

## Ivanhoe's response to water risk for our host communities and other stakeholders

Ivanhoe recognizes that local communities are an integral part of water management practices because water is a shared resource, without which neither Ivanhoe nor local communities can survive. Moreover, managing any potential stakeholder conflict concerning water resources is thus relevant to maintaining our social license to operate. Water availability and quality are raised as concerns by host communities. Formal stakeholder engagement and grievance and complaint mechanisms are accordingly in place at each project (see page 39). In addition, the 2020 Materiality Assessment identified water and sanitation as material issues to our stakeholders.

Our Water Security Position Statement reflects the interplay between the reliance on our ability to obtain the appropriate quantity and quality of water to progress and sustain our principal projects, and to use this resource as efficiently as possible, cognizant of the fact that our projects are located in regions of the world where water risks and impacts range from water scarcity to excess. The incumbent water-related challenges call for innovative approaches to ensuring access to quality water sources for our projects and our host communities.

SDG 6 targets which are relevant to Ivanhoe's operations and commitment to local communities include enabling access to safe drinking water, improving water quality by reducing pollution, and enabling access to adequate and equitable sanitation. Water-related community development projects are therefore strategically included in our sustainable development programs.

Ivanhoe has, in response to these challenges, developed and implemented various initiatives across our principal projects, including our "boreholes and water wells project", which seeks to make provision for clean potable water to the host communities in South Africa and the Democratic Republic of Congo, where our principal projects are situated. These projects seek to provide dignity and truly transform lives at the most basic level, their impact often far outweighing Ivanhoe's capital investment (see pages 101 and 104). Other projects include the provision of safe WASH facilities at local schools and central community areas, the value of which was significantly highlighted by the coronavirus pandemic.

Finally, Ivanhoe also recognizes that farmers and communities of nearby towns are other water users at a catchment level that need to be included in our water risk assessments. This is important because water is a shared resource – particularly in the water-scarce Limpopo region of South Africa. Neighbouring mines have also been established prior to the Platreef Project and have existing water-use rights. As these mines ramp-up, they may require additional water, thereby competing with Ivanhoe for water uptake. These stakeholders have a right to adequate water supplies and conflicts can impact our social licence to operate. Ivanhoe Mines accordingly engages in regional water planning bodies at the Platreef Project to leverage the need for water by other stakeholders in the same region. The management team of the Platreef Project is an active member of the Joint Water Forum which is part of the Olifants River Water Resources Development Project, in which companies in the Olifants river basin collaborate to find solutions to water-based challenges.



YOUNG GIRLS COLLECTING WATER AT THE MOSQUE WATER WELL INSTALLED BY THE KIPUSHI PROJECT.



# Climate change, energy and GHG emissions

## Climate change

The energy transition requires the sustainable and secure supply of critical metals for clean technologies, such as copper, PGMs, nickel and zinc. Ivanhoe continues to advance its projects to supply a spectrum of electric metals to global markets, including copper, platinum, palladium, nickel, rhodium, zinc and germanium. A proactive response to climate change is foundational to achieving our objective to develop our projects in a sustainable, and environmentally and socially responsible manner.

Acceding to the assessment of the progressive regime on climate change science, which findings include that temperatures are gradually rising globally due to human activities and that physical impacts are unavoidable, Ivanhoe Mines believes that humanity must actively pursue the objective of limiting global temperature increase in line with current international agreements, while actively pursuing access to innovative, reliable and affordable energy to support economic development and improved living standards. It is thus imperative to drive energy efficiencies, develop and deploy low-emissions technologies, and adapt to the impacts of climate change.

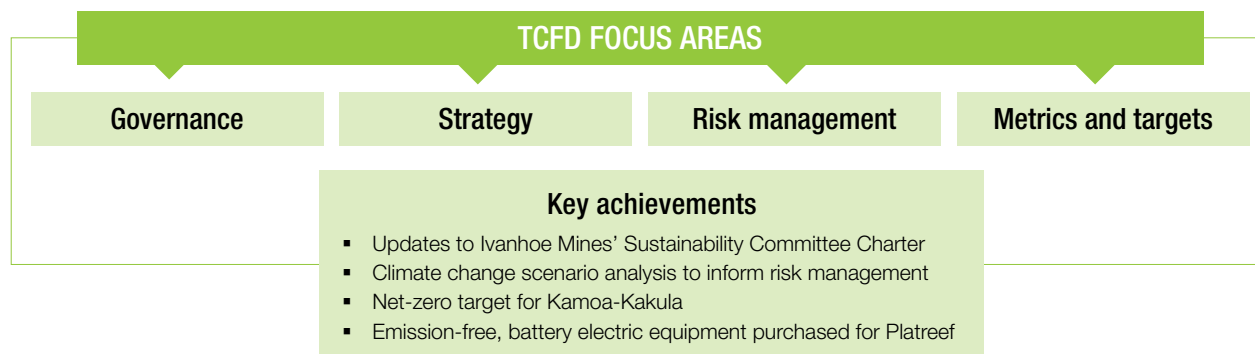
Consequently, responding to climate change is governed at Ivanhoe Mines' Board level through the Sustainability Committee. Executive management has primary responsibility for the design and implementation of an effective position on, and response to, climate change. Our climate change strategy and operational objectives are further informed by robust engagement with a variety of stakeholders – including investors, policymakers, peer companies, non-governmental organizations and host communities.



TURBINE MAINTENANCE AT THE INGA II HYDROPOWER PLANT, DRC.

## Climate change reporting

Ivanhoe continues to report according to the recommendations of the Task Force for Climate-related Financial Disclosures (TCFD) as well as global best practice and the Sustainable Development Goals Disclosures (SDGD). Ivanhoe is proud to present the following updates on its climate change Governance, Strategy, Risk Management and Metrics.



### Governance

Our Sustainability Committee has oversight on issues relating to climate change. The committee assists our Board in respect of the development, implementation and monitoring of the Company's environmental management and sustainable development strategies, policies and performance. This is achieved through the integration of best practice into our policies and procedures, including issues pertaining to climate change mitigation and adaptation, energy efficiency and water conservation.

For instance, the SDGs materially impacted by our operations were integrated into our practices through an internal workshop across multiple levels of management. Corporate adaptation goals and strategies, specifically for SDG 13: Climate Action, were developed as part of the implementation plans aligned with public adaptation efforts and community risks in our operating locations.

### Strategy

Ivanhoe Mines is acutely aware of the potential socio-economic and environmental impacts climate change can have on our projects. We also recognize the crucial role of the mining sector, particularly of our copper mines, in contributing towards the shift to a low-carbon economy. Thus, we aim to harness our social and environmental investments to catalyze development in creating self-sustaining communities beyond the life of our mines.

Such investments can have long-term benefits for both Ivanhoe and our local communities. It is important that these investments are made at the right place and time. To inform the decision-making process, climate change-related risks and opportunities were identified through a thorough analysis of climate change scenarios. Risks assessed include short-, medium-, and long-term risks.

Short term risks have to do with the impacts climate change will have on Ivanhoe's operations, value chain and broader network. For instance, increased temperature will impact the efficiency of our mining equipment and lead to increased heat-stress in our labour force. Operations at Kamoa-Kakula could be particularly

### CLIMATE CHANGE STRATEGY



**"We prioritize strengthening the resilience of people and groups** in our host communities through a variety of activities aimed at economic diversification, food security, water provision and digital inclusion."



**"We concentrate on powering our mines primarily with electricity generated from clean, renewable energy sources**, such as hydro, solar and wind power, where applicable, to help minimize the Company's environmental footprint."



**"We are committed to taking a proactive approach in publicly reporting on our climate change-related activities** while our principal projects still are in the development phase and as we continue to grow our company as an explorer and mine operator."



**"Ivanhoe Mines plans to be at the forefront of the mining industry's drive to produce some of the key metals** – copper, nickel, platinum, palladium and zinc – that are essential for the new generation of environmentally-friendly vehicles."

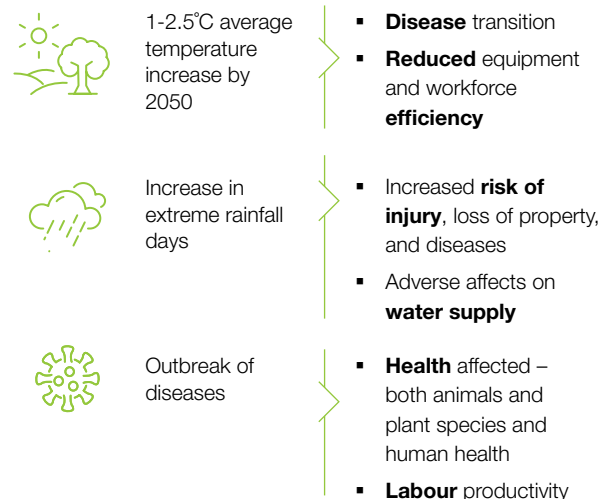
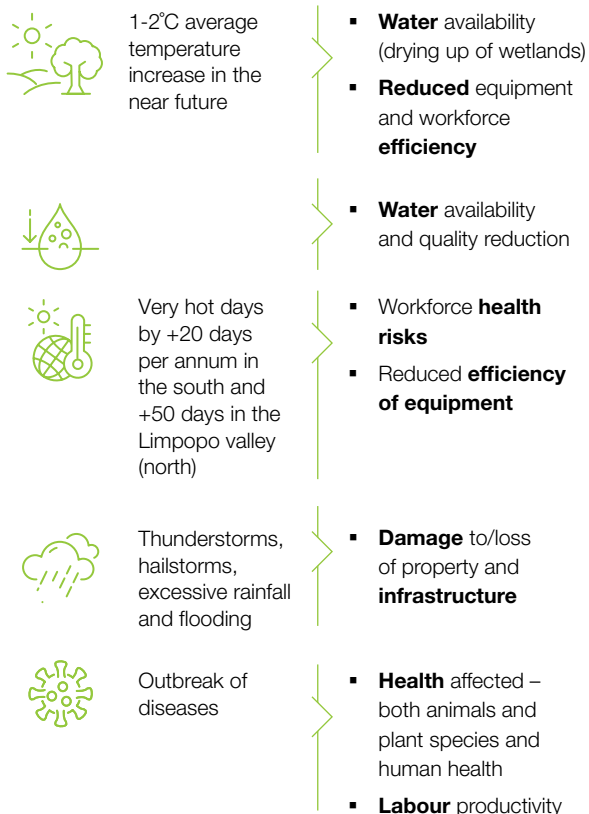


susceptible to this risk as the opencast operations will be directly exposed to the increased atmospheric temperatures.

Medium-term risks have to do with the impacts climate change will have on mine infrastructure and processes, such as the tailing storage facilities, rehabilitation and leaching. In the DRC, increased annual rainfall and more severe rainfall events are expected. An extreme rainfall event could increase the water level in tailings dams above intended capacity, which reduces their stability. Ivanhoe is taking steps to mitigate these risks before they impact the mines' operations, surrounding environment and community.

Long-term risks are associated with market behaviour such as the world's transition to electric vehicles. The demand for platinum is expected to drop as the world transitions from internal combustion engines to electric motors. However, the same transition is expected to increase the demand for copper, which is a principal metal used in low-carbon technologies. A World Bank report<sup>1</sup> estimates that there will be a significant increase in the demand for copper as the world transitions to a low-carbon economy, with demand increasing by 200% for some scenarios. Thus, Ivanhoe is well positioned for the transition to a low-carbon economy.

The direct physical climate change-related risks relevant to the operations in South Africa and in the DRC are summarized in the figures below:



1 Hund, K., La Porta, D., Fabregas, T.P., Laing, T. and Drexhage, J., 2020. Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition. World Bank Group. Washington, D.C: World Bank.

Our strategy to manage the risks consists of multiple parts. Some of these are:

- Incorporating environmental values in the engineering design calculations for Ivanhoe's operations and engineering designs.
- Communicating the principles of the Cynefin Framework to management, to ensure that the decision-making processes are informed by the risks and opportunities posed by climate change.
- Considering the Rapid Disruption Scenario in future investments in the PGM market. This scenario revolves around the idea of how old industry/market can collapse with the rise of a new industry/market.
- Working towards the development of a group-wide net-zero plan in line with the increasing demands by institutional investors. Kamoakakula has already embarked on its net-zero journey.

- Considering the impacts that the transition to electric vehicles will have, both on the copper market as well as how this technology can change the way we operate our own mining fleet.

Ivanhoe is also aware that our value chain plays an important role on our climate change resilience. We are considering the level of influence we have on our value chain to promote climate change awareness and sustainable practices along our value chain.



## SPECIAL REPORT

# Emission-free, battery electric equipment purchased for Platreef's underground mine development

Diesel vehicles, ore processing, and ventilation are some of the largest contributors to carbon emissions in mining. In order to reach a net zero society, the industry must take active steps to ensure that the process of extracting minerals and metals does not pollute our planet, as well as actively embrace opportunities to reduce emissions to become net zero.

The transition from diesel to hydrogen-powered vehicles or battery electric can enable the reduction of carbon emissions, as well as decrease the mine's ventilation requirements because there are fewer fumes from diesel exhaust emissions. These battery electric vehicles include dump trucks, passenger vehicles, and semi-trucks that haul the mined materials.

In 2021, Ivanhoe partnered with Epiroc for a significant order of battery-electric mining equipment for the Platreef Project, ordering several emissions-free Boomer M2 Battery face drill rigs and Scooptram ST14 Battery loaders. These electric drill rigs and loaders are built in Sweden, and are automation ready and equipped with Epiroc's telematics solution Certiq.



THE SCOOPTRAM ST 14 BATTERY LOADER, PART OF THE PLATREEF FLEET.

The equipment will be delivered to Ivanhoe early in 2022 and Epiroc also plans to provide on-site operator and maintenance training to the Platreef team.

According to Epiroc's President and CEO, Helena Hedblom, "Battery-electric equipment is increasingly embraced by mining companies as it provides a healthier work environment, lower total operating costs, and higher productivity. The technology is now well established, and Epiroc is driving this change toward emissions-free mining." Epiroc plans to offer its complete fleet of underground mining equipment as battery-electric versions by 2025, and its full fleet for surface operations as battery-powered versions by 2030.

"We want to be at the forefront of utilizing battery electric, zero-emission equipment at all of our mining operations. This partnership with Epiroc for emissions-free mining equipment at the Platreef Mine is an important first step towards achieving our net-zero carbon emissions goals while mining metals required for a cleaner environment."

**Marna Cloete**  
President



## Risk management

Risk management is embedded into our day-to-day operational business processes. A special focus was placed on climate change-related risks and opportunities this year. A thorough analysis of climate change scenarios assisted Ivanhoe in identifying significant climate change risks and opportunities to our business.

The scenario analysis also contributed to the site-specific risk registers that Ivanhoe maintains. These registers are updated annually to ensure risks identified at the various sites remain up to date.

Ivanhoe is aware that climate science is a complex field and new findings are made on a regular basis. That is why the climate change scenario analysis will be reviewed regularly, to ensure that Ivanhoe stays abreast of the most recent developments and science in the field. This will enable us to respond promptly and appropriately to any changes in existing climate-related risks or opportunities as well as inform us of any newly identified risks and opportunities.

## Metrics and targets

Ivanhoe has implemented a cloud-based monitoring system that streamlines monitoring and reporting practices across our operations. This system assists with operations- and climate-related metrics reporting, as well as in monitoring our sustainability targets. Data captured on this system includes metrics such as electricity consumption, fuel consumption and other climate-related data.

The system also will enable Ivanhoe to accurately monitor our progress on our targets. This includes commitments such as achieving net-zero for the Kamoa-Kakula Mine.

Targets will be set for Kipushi and Platreef once these mines have become fully operational. Our first step in the target setting journey is to establish a baseline from the initial production phase. Thereafter, a target will be set against the baselines set for Kipushi and Platreef.

## Energy

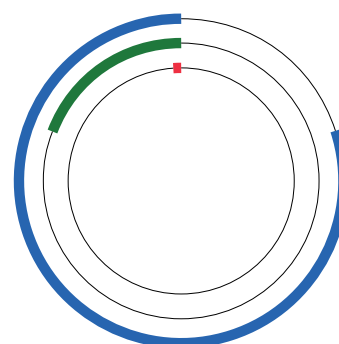
Ivanhoe continues to source the electricity for our Kamoa-Kakula Mining Complex and Kipushi Project from renewable sources. 100% of the electricity supplied to the projects from the grid was from renewable energy sources, specifically hydropower. This is in line with our key target to minimize our environmental footprint and align with the SDGs.

Ivanhoe has partnered with the DRC's state-owned power company to upgrade existing hydropower facilities to increase generation capacity, resulting in an additional 78MW from the Mwadingusha hydropower plant. In 2021, an agreement was signed to also upgrade Turbine 5 at the Inga II hydropower complex. This upgrade will increase the production capacity of the turbine by 162 MW. Overall, the production capacities of the facilities will increase by 240 MW, benefiting operations at Kamoa-Kakula as well as the national grid.

The energy demand across Ivanhoe's three mining operations was 711 GWh, with Platreef having the largest energy demand. Kamoa-Kakula has an energy demand almost equal to that of Platreef but sources most of its energy from renewable electricity, whilst Platreef currently relies predominantly on fossil fuels.

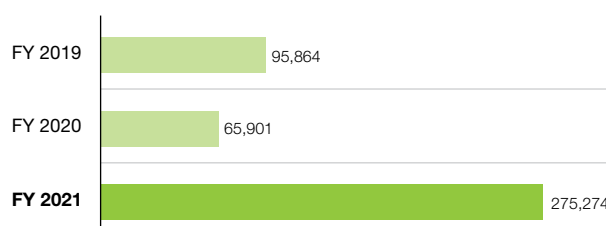
	Kamoa-Kakula	Platreef	Kipushi	Overall
Renewable electricity (MWh)	214,602	0	57,685	272,287
Non-renewable electricity (MWh)	0	2,987	0	2,987
<b>Total electricity (MWh)</b>	<b>214,602</b>	<b>2,987</b>	<b>57,685</b>	<b>275,274</b>
Total energy from fuels (MWh)	66,487	284,986	84,638	436,111
<b>Total Energy (MWh)</b>	<b>281,089</b>	<b>287,973</b>	<b>142,323</b>	<b>711,385</b>

Total electricity per site, 2021



	2021
Kamoa-Kakula	80%
Kipushi	19%
Platreef	1%

Electricity consumption trend (MWh)



## Greenhouse gas emission mitigation

Ivanhoe Mines, as a responsible corporate citizen, acknowledges the contribution of greenhouse gas (GHG) emissions to climate change and accepts that we too must endeavour to reduce the emissions from our operations.

In May, Ivanhoe pledged to achieve net-zero scope 1 and scope 2 emissions for our Kamoa-Kakula operation. This commitment is in support of the Paris Agreement on climate change and fits in with commitments made at the virtual global climate conference held in 2021 by the Chinese government and the government of the United States of America to sharply cut emissions. Ivanhoe Mines has committed to work with its joint-venture partners and leading underground mining equipment manufacturers to ensure that Kamoa-Kakula becomes the first net-zero operational carbon emitter among the world's top-tier copper producers.

**The group-wide Scope 1 emissions have risen from the previous year to over 100,806 tCO<sub>2</sub>e. The largest contributor to these** emissions is the Platreef Project, as Platreef's activities ramped-up significantly in 2021 and Platreef is also the largest consumer of fossil fuels.

**The group-wide Scope 2 (location-based) emissions are 2,927 tCO<sub>2</sub>e for 2021.** These are exclusively from the Platreef Mine as both operations in the DRC make use of 100% renewable electricity.

	Kamoa-Kakula	Platreef	Kipushi	Group Services	Overall
Scope 1 (tCO <sub>2</sub> e)	17,634	63,934	19,198	40	100,806
Scope 2 (tCO <sub>2</sub> e)	–	2,927	–	–	2,927
Scope 3 – land (tCO <sub>2</sub> e)	659	111	67	4	841
Scope 3 – air (tCO <sub>2</sub> e)	1,432	304	486	–	2,223

Ivanhoe currently calculates its **scope 3 emissions** from land and air related travel. The **land-based travel emissions for 2021 calculated to 814 tCO<sub>2</sub>e**. This covers the travel across the operations as well as from our head offices.

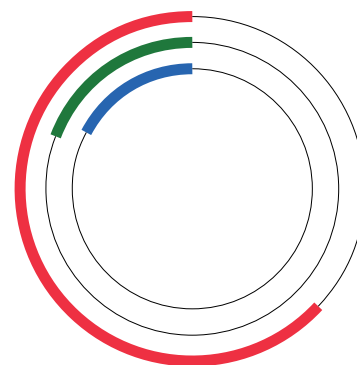
The major component to the business travel emissions are the flights between our three operations. A small portion of the air travel emissions are from our own aircraft, reported under the Scope 1 of Group Services. **The scope 3 emissions from air travel are 2,223 tCO<sub>2</sub>e**, with Kamoa-Kakula contributing the most to these emissions.

We strive to utilize technology to advance our GHG mitigation efforts. These technologies include interoperable cloud-based video meetings services, connecting our operations and reducing the need for travel. Through just one of these platforms, BlueJeans, we saved 2,130 metric tonnes of carbon emissions in 2021.

We are investigating methods of possibly incorporating solar power and vanadium flow batteries into the grid-supplied electricity to Kamoa-Kakula and Kipushi Mines. Considerations around electric vehicle uptake for our mining fleet are also being considered, as these units become available on the market.

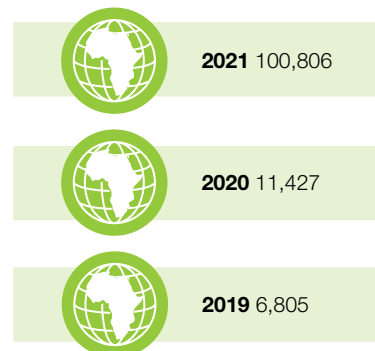
At the Platreef Project, which makes use of coal-based electricity from the South African national grid, energy-efficient design and planning have been applied to Platreef to minimize the operation's electricity demand. In 2021, Ivanhoe partnered with Epiroc for a significant order of battery-electric mining equipment for the Platreef Project. The implementation of a 5MW solar facility is underway, as well as an investigation into joining a third party, solar-powered 100 MW independent power provider (IPP).

Total direct emissions per site, 2021

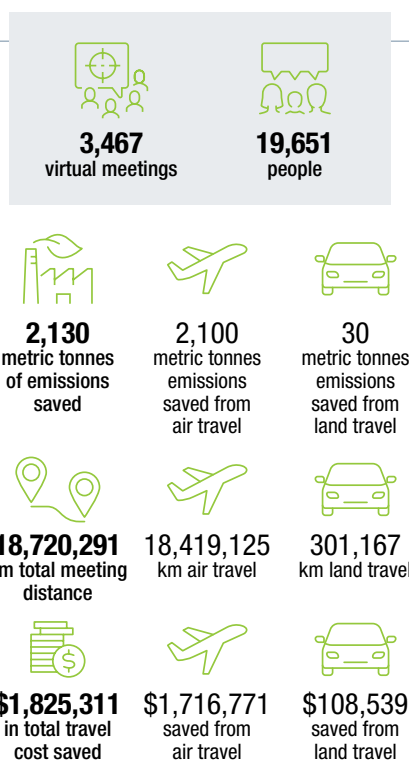


	2021
Platreef	63%
Kipushi	19%
Kamoa-Kakula	17%

Ivanhoe's emission trends



Emissions saved through BlueJeans virtual meetings, 2021





## SPECIAL REPORT



## Planting for our planet and a greener DRC

Our planet needs trees. People need trees. Trees create the kind of transformational change that the world needs now and their value and impact cannot be overstated.

When planted in the right place, trees can help slow climate change, filter our air and water, foster biodiversity, and strengthen our communities.

In 2020, the role of trees was underscored by the President of the DRC, His Excellency, Felix Tshisekedi, who launched an initiative to plant a billion trees by 2023.

The Kamoa-Kakula nursery will be home to thousands of young saplings of a variety of local tree species, seeking to build climate resilience, by cultivating the saplings for planting on national Arbor Day each year, aiming towards a goal of planting 5,000 annually for reforestation, particularly focusing on native species from the *Mlombo* woodlands. Kamoa celebrated the 2021 national Arbor Day by sourcing and planting 3,600 orange and mandarin saplings, as well as 200 grafted avocado trees, in the backyards of homes of project-affected communities.

The Kipushi Project's national Arbor Day efforts in 2021 focused on tree planting both on-site and off-site. 250 trees were planted

on-site and 500 trees in two communities. Partnering with the town's Environmental Inspector and local youth organization, the Kipushi team planted 450 lemon, mango and orange trees in a fruit orchard as well as Pine and Jacaranda trees in the woodlands area at the Kakoke village. Another 50 palm trees were donated to the local youth group in Kipushi to be planted at churches, schools, and public areas around the Kamarenge Centre. The initiative also entailed an educational awareness campaign at local schools, highlighting the importance of trees in the eco-system, with the local youth organization also contributing an additional 200 avocado trees from their own program to the community.

The aforementioned trees have numerous benefits for the community and also contribute towards the larger battle against global warming. Not only do they provide shade and nutrition-rich fruit, but they also alleviate the impact of climate change by storing carbon dioxide. Their roots absorb water run-off which helps to lessen the effect of stormwater. These trees thus improve air quality as well as bring ecosystem balance. They are able to grow above 5.5m high and can survive up to 50 years. One of the ways we can reverse climate change is by planting more and more trees. Today there is no doubt that our lives, and those of future generations, are intimately linked to that of the tree. As such, every tree planted can make a difference.

KONA MUMONGO GRACE, A LOCAL FARMER AT THE KAPONDA VILLAGE, RECEIVING MANDARIN SAPPLINGS FROM KAMOA.





PETRUS SETATI, ENVIRONMENTAL COORDINATOR, PLATREEF PROJECT, CONDUCTING AIR QUALITY MONITORING.

## Air pollution

There is a strong link between GHG emissions and localized air pollution when considering existing technologies. This is especially true in the mining sector, where several of the major GHG emitting activities, such as fuel combustion in mining vehicles or process emissions, can also lead to the emission of fine particulate matter and oxides of sulphur and nitrogen. Thus, the control of air pollutants and the control of GHG emissions are closely linked.

Localized air pollution, in the form of fine particulate matter and oxides of sulphur and nitrogen, is a leading cause of ill-health and premature death globally. These priority air pollutants are typically generated and emitted during mining processes and across the mining value chain. The generation of these air pollutants can also be closely linked with the emission of GHGs.

Ivanhoe follows rigorous air quality monitoring programs at all our projects to help manage the air pollutants generated. All sites have air quality monitoring procedures which are followed to proactively prevent or reduce these air pollution impacts.

## Adaptation

Ivanhoe acknowledges that our host communities are vulnerable to the potential impacts of global climate change. We prioritize strengthening the resilience of people and groups in our host communities through a variety of activities aimed at economic

diversification, food security, water provision and digital inclusion. These investments align with the group-wide strategy to build community resilience, specifically considering climate change and its associated uncertainties and community vulnerabilities. For example, the Kamoakakula Sustainable Livelihoods Project significantly contributes to the economic empowerment of people in local communities since 2012. This project focuses on communities in the vicinity of Ivanhoe's Kamoakakula Mining Complex. Programs within this project focus on sustainable food provision and resource efficient agriculture within the host communities. This includes a beekeeping program that benefits three communities and serves over 45 beneficiaries and the construction and maintenance of more than 100 local dams stocked to maintain the production of fish for food. Ivanhoe's efforts also seek to foster rehabilitation of previously degraded forests through tree-planting activities and sustainable harvesting.

Furthermore, the upgrades of the Mwadingusha hydropower plant and of Turbine 5 at the Inga II hydropower complex have unlocked renewable electricity for local enterprises near Kamoakakula, enabling the development and continuation of small enterprises within the local communities and fostering the growth of a stronger local economy. Having a stronger local economy improves the resilience of local communities to climate change impacts, as communities who have access to

more funds, are better able to absorb the costs associated with climate change related impacts.

## Engagement

Ivanhoe Mines' approach to climate-related issues is also informed by cross-cutting engagements with our stakeholder community, including investors, shareholders, communities, local tribal authorities, policymakers, government departments, municipalities, and local development or non-profit organizations. This is especially relevant when Ivanhoe is planning changes to its operations, such as expansions and upgrades. We strive to keep our stakeholders aware of our development and plans through annual reporting methods and CDP disclosure.

Ivanhoe is committed to providing meaningful and long-lasting benefits to all our stakeholders, especially for our local communities. That is why we continuously engage with our stakeholders on relevant topics and developments at our projects.

Ivanhoe engages with and supports our local communities across a wide range of issues. At Kipushi, it was noted that illiteracy can be a major stumbling block for many in our host communities. Functional literacy training is offered at the village of Kipushi and at the nearby village of Mimbulu. A similar program also is offered at our Kamoakakula Mining Complex. We have also conducted initiatives for high school students in communities surrounding our Platreef Project, to promote environmental awareness and education.





## SPECIAL REPORT

## Engaging with local youth to raise awareness for youth climate action day

In support of the global movement calling for young people around the world to participate in climate change awareness campaign, Ivanhoe partnered with the Mogalakwena Local Municipality and the Limpopo Department of Environmental Affairs to conduct an impactful awareness campaign for local youth in the Mokopane area.

Approximately 120 learners from the Masodi Secondary School participated in the engagement and awareness campaign, as well as contributed towards planting vegetables and fruit trees. The interactive session made it fun to learn about climate awareness. Stationary was donated to some of the learners for their subject-matter knowledge and keen participation.

We had a blast, it was a great day! It's so nice to speak to officials and build relationships with them as it creates continuous communication which helps the project with compliance. Learners and schools also don't forget days like these, which aid in the growth of sustainable development, as the planting of vegetable trees supports food security and climate action. It ticks so many boxes in terms of our climate goals and agenda. On the day you get really excited and become involved with the kids, working together for a bigger cause. It's really important to get our youth involved and to inspire them to engrain sustainability as a way of life."

**Phillip Ramphisa**

Environmental Manager, Platreef

## Biodiversity and ecosystem management

The environment is comprised of the surroundings within which everything exists, made up of the land, water and atmosphere of the earth, as well as microorganisms, plant and animal life, including humans.

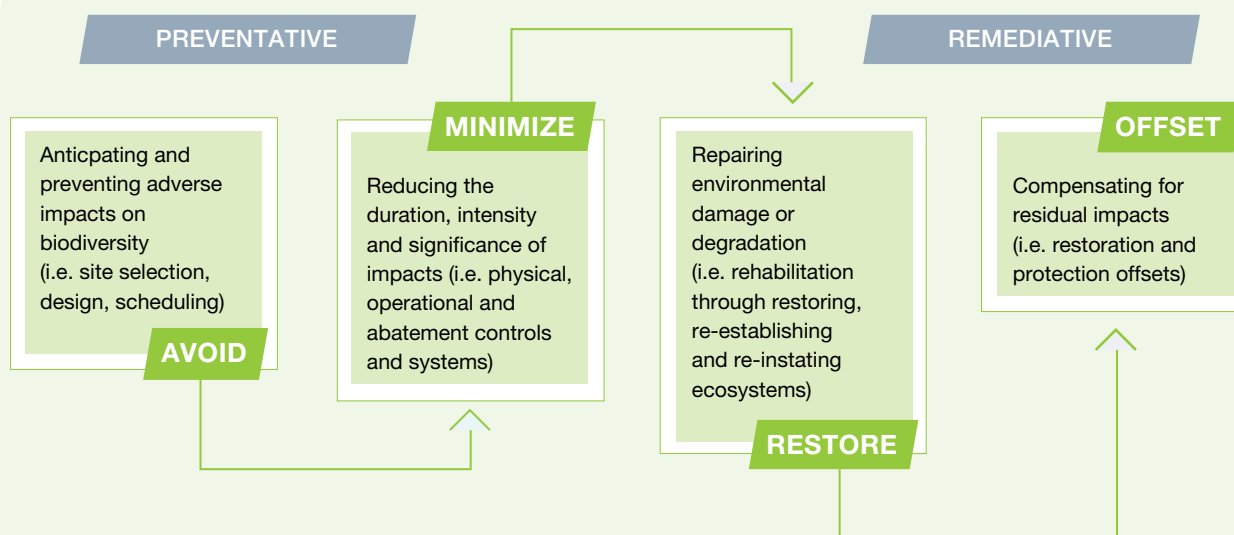
This biodiversity includes any part or combination of these elements and the interrelationships among and between these organisms encompassing the natural processes that sustain life. These elements also carry inherent physical, chemical, aesthetic and cultural properties, and conditions that influence human health and well-being. Biodiversity, in turn, is the variability among living organisms from all sources and ecosystems and the ecological complexes of which they are part, and also includes diversity within and between species and of ecosystems.

Biodiversity may be affected by the impacts of mining activities on water, land and ecosystems. In grasping the full extent of what the environment, land and biodiversity comprises, Ivanhoe Mines has a profound appreciation for the natural environment, ecosystems and communities inhabiting the vicinity of our projects. We are also conscious of the regulating, supporting, provisioning and cultural ecosystem services within our mining environment. This drives our commitment to responsible stewardship of the natural environment where our exploration, construction and mining activities are likely to both negatively and positively impact their surroundings. In proactively seeking to effectively limit the negative environmental impacts, or to enhance the positive impacts, we have put in place integrated, innovative systems and solutions based upon the mitigation hierarchy.





### THE MITIGATION HIERARCHY



Ivanhoe Mines is dedicated to supporting biodiversity and integrating conservation actions into our planning and operations. We recognize that our biodiversity footprint extends beyond the limits of our properties to areas of immediate influence. Careful land-use planning, done in close consultation with local communities, is another way for us to make mining work. Our local stakeholders are valuable sources of knowledge concerning biodiversity. Stakeholder concerns are incorporated into our environmental stewardship approach, allowing us to identify critical habitat and species and their relationships with the local communities, as well as to put forward initiatives to monitor, study, protect, conserve and support these ecosystems now and in the future.

We use our understanding of the relevant natural environments derived from our project ESIAs to develop these systems and solutions. This information translates into ESMPs whose principal objectives are to secure the protection of the environment, and to propose management, mitigation, protection or remedial measures that will be undertaken to address identified

environmental impacts. Especially acknowledging that Africa is immensely rich in biodiversity and that its living organisms comprise around a quarter of global biodiversity, safeguarding the biodiversity in the areas in which we operate is prioritized in our environmental management strategy.

Construction and drilling activities, and continued operations, thus have the potential to negatively impact on biodiversity by:

- Permanently removing or temporarily disturbing indigenous vegetation;
- Disturbing significant vegetation, communities and habitats; (terrestrial or aquatic) either directly or indirectly through off-site impacts, including cumulative impacts;
- Increasing activity levels and vehicle movements causing noise and dust, which may make habitats undesirable;
- Habitat disturbance, fragmentation or removal;
- Fauna capture in open excavations; and
- Introducing and spreading of exotic species and diseases.



Our biodiversity strategy, which seeks to include a concurrent reclamation approach, is linked to each stage of development of our projects. Biodiversity risks are actively mitigated through ongoing field mapping of fauna and flora and vegetation clearance disturbance assessments. In line with the mitigation hierarchy, Ivanhoe will seek to undertake reforestation or biodiversity offset initiatives to recompense for unavoidable residual impacts. Currently none of our projects are in or near protected areas.

As part of Kamo'a-Kakula's Biodiversity Management Plan (BMP), key actions are stipulated to either enhance or conserve biodiversity in the mining lease area and all directly and indirectly

affected areas. One such key action arising from the BMP is the identification of suitable offset areas so that Kamo'a can achieve net biodiversity gain in the watershed plains grassland habitat. Watershed plains grasslands are listed as **critical habitat** and are therefore prioritized in the hierarchy to mitigate the loss thereof. A watershed grassland baseline assessment was undertaken to identify and manage an offset area of this critical habitat. The assessment will be followed by a comprehensive multi-season monitoring program. Kamo'a's beekeeping program has been making progress during the course of the year to tackle offset challenges arising from local deforestation activities.

## SPECIAL REPORT



# Buzzing business at Kamo'a

Beekeeping, or apiculture, is the management of honeybee colonies in order to collect honey, beeswax and other bee products. Apiculture is practiced in most African countries, including DRC, where there is a long history in traditional beekeeping.

The relatively undisturbed Mlombo woodlands and *Cryptosepalum* forests that lie outside of Kamo'a's mining footprint are home to the major flowering tree species that attract bees and the honey season runs from October to December. At Kamo'a's nursery, native trees are being grown, which will in turn enhance beekeeping in the area.

In the past traditional beekeeping practices, known as "honey hunting," have in some cases led to the destruction of the natural forests, however more sustainable beekeeping practices that have been put in place at Kamo'a will have a positive impact on beekeeping for both the bee populations and the beekeepers. Sustainable beekeeping involves the use of moveable comb hives, which have a lifespan of over 10 years. There are a number of benefits to this type of beekeeping including easier access to control and manage diseases in bee colonies, accurate and reliable honey-yield prediction and higher quality honey yields. It is also safer for humans to collect honey from comb hives. The top-bar hives which are used are cost effective to make, and are sourced locally, which has a positive economic impact for local businesses.

In 2021, Kamo'a celebrated 10 years of sustainable honey-making through phase 1 of its beekeeping initiative. As part of Kamo'a's beekeeping project, a start-up advance of \$5000 is provided to 20 participants for communal subsistence honey making. The participants come from three local communities and enable the beekeepers to make an income from the honey they



DAVID MACOZA, BEEKEEPER, KAMISANGE COMMUNITY.

farm and sell. Through phase 1, 3838 kg of honey was collected and \$23,556 worth of honey was sold by over 45 beekeepers.

There are multiple environmental and social benefits afforded by this program, which also encourages women to participate in beekeeping. Initially established beekeepers and honey hunters are engaged. This helps encourage more sustainable beekeeping methods and helps reduce local tree cutting, which happens during traditional bee collecting processes. The project seeks to minimize agriculture chemical use and ensures water availability for bees. New farming systems are also created to increase pollen and nectar availability for bees, positively affecting local crop yield. Jobs are created and new sources of income result for the local community.

In 2022, Kamo'a will launch phase 2 of the beekeeping project in order to facilitate the shift to sustainable beekeeping practices.

The biodiversity assessments at the Platreef Project have ensured that no red data listed species are on site. Platreef's BMP safeguards that the protected tree species identified in the MLA, including Marula Trees (*Sclerocarya birrea*) and Leadwood (*Combretum imberbe*), are continuously monitored and conserved as development progresses on site.

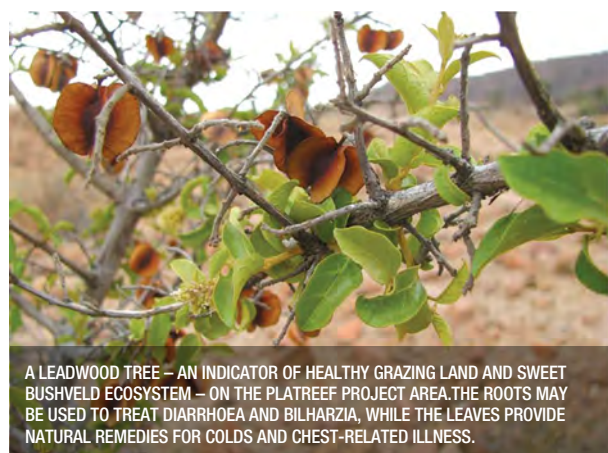
A land management action plan has been developed and is fully implemented to ensure the effective management of land related environmental risks including erosion and alien invader species. Progress is underway to relocate sensitive species of fauna from the mining area of Platreef to a nearby game farm that is owned by the project. This is done in strict compliance with local regulations and has required the appointment of a local fauna specialist.

Objectives, performance indicators, management strategies, monitoring protocols, and data recording and reporting requirements are consequently put in place to manage these issues and concerns. By way of example, typical annual activities at our projects in respect of biodiversity management include: Arbor Day tree planting, eradication of alien invasive plants, protection of wildlife (e.g. through relocation), preservation of protected plants, vegetation of soil stockpiles, seeding of soil stockpiles with local grasses, and bio monitoring of aquatic species in streams and rivers.

Invasive species management plans are separately established and implemented at our projects, to address the establishment or spreading of weeds and/or invasive species by:

- The use of earthmoving equipment, vehicles, and construction materials from elsewhere outside the mining license introducing weeds and/or invasive species;
- Vegetation clearing and soil disturbance creates suitable conditions for the establishment and spread of weed and/or invasive species. Once weed/invasive species become established they compete with native vegetation and can adversely affect native flora and fauna; and
- Landscaping activities around camps often involve contractors who have the potential to introduce weeds and/or invasive species into the camp during their work.

Ground disturbance, land clearing and land use management issues typically arise from mine exploration, development and operation activities. These challenges, which differ from project-to-project, have significant effects on the environment and in



A LEADWOOD TREE – AN INDICATOR OF HEALTHY GRAZING LAND AND SWEET BUSHVELD ECOSYSTEM – ON THE PLATREEF PROJECT AREA. THE ROOTS MAY BE USED TO TREAT DIARRHOEA AND BILHARZIA, WHILE THE LEAVES PROVIDE NATURAL REMEDIES FOR COLDS AND CHEST-RELATED ILLNESS.

defining optimum post-mining land use. All ground disturbance activities on our project sites requires ground disturbance and land clearing permission, as unauthorized and/or mismanaged ground disturbance and vegetation clearing can lead to the following:

- Increased erosion potential, which can lead to uncontrolled erosion and sedimentation of waterways;
- Degradation or loss of flora and fauna habitat;
- Damage or loss of protected flora species;
- Visual scarring of the landscape;
- Prosecution and fines;
- Loss of reputation; and
- Damage to cultural heritage sites.

Adapted management plans therefore cater to these issues, and include coverage of aspects such as erosion and sediment control – where erosion of soils can degrade flora and fauna habitat, scar the landscape and cause sedimentation of downstream waterways; and where excess sediment loads in waterways can further negatively impact freshwater ecosystems and downstream water users – and topsoil management – recognizing that plants produce seeds which accumulate in the soil and become a vital resource for rehabilitation activities. Ivanhoe Mines therefore recognizes that it is essential to collect and correctly manage the soil resources from the onset of land disturbance activities as it often means the difference between rehabilitative maturation success and failure.

Ecosystem services are defined as the direct and indirect contributions of ecosystems to human well-being, and have an impact on our survival and quality of life. As such, the loss of ecosystem services is not just an environmental issue, but also an economic and social issue as it affects not only the environment, but also the economy and individual well-being. Moreover, the holistic nature of ecosystem services and their interactive behaviour means that common anthropogenic pressures often affect more than one service. The most prolific threats to ecosystem services are habitat destruction, pollution and invasive species. The management plans for our projects are based on this understanding and acknowledgement that conservation of biodiversity is an essential component of these life-giving ecosystem services. An ecosystem services impact study has been undertaken at our Kamo-a-Kakula Mining Complex in 2021, with Platreef planned for 2022.



SPOT THE SPOTTY OWL CATCHING THE MORNING SUN OUTSIDE THE OUTBOUND LOGISTICS WAREHOUSE AT THE KAMO-A-KAKULA MINING COMPLEX. SUCH A TREAT FOR AVID NATURE LOVERS.





Legislative and regulatory developments, and ongoing engagement with different stakeholder groups, guide the land-use planning protocols at each of our projects, in addition to baseline information provided by the existing and ongoing studies. Ivanhoe Mines recognizes the value in partnerships, which facilitate biodiversity conservation for future generations and strategic land-use planning.

## MATERIAL TOPIC

### Cultural heritage

Cultural heritage encompasses properties and sites of archaeological, historical, cultural, artistic, and religious significance.

It also refers to unique environmental features and cultural knowledge, as well as intangible forms of culture embodying traditional lifestyles that should be preserved for current and future generations. The 2020 Materiality assessment has highlighted the significance our stakeholders place on this issue and Ivanhoe is committed to implementing best practice recommendations in the treatment of cultural heritage at our sites. We respect the culture and customs of the local community, whom we regard as indigenous peoples, having ancestral ties to the land.

The IFC Performance Standards (PS 8) requires companies to protect cultural heritage from adverse impacts of project activities and support its preservation. It also promotes the equitable sharing of benefits from the use of cultural heritage.

Ivanhoe's impacts (and consequently, our prevention and mitigation measures) on heritage resources are informed by the ESIA processes undertaken in support of each project. Specialist heritage studies and management plans inform the Company's management of cultural heritage resources

impacted by its activities, as further required by the in-country regulatory frameworks. We have also developed Chance Find Procedures for all our project sites, which provide clear guidelines regarding procedures to be followed upon discovering any unmarked and previously unidentified graves or heritage resources. All our employees and contractors working on site are sensitized in respect of this procedure, which provides for an immediate "stop work" order in the event of such discoveries.

At our Kamoakakula Mining Complex, a heritage impact assessment was undertaken in respect of an area previously suspected to be of high heritage value. As far as possible, we seek to preserve cultural heritage resources *in situ*, moving them only when there is no other alternative. The grave relocation process at Platreef presented an opportunity, however, as these ancestral graves, which were scattered across the project's proposed surface area, have now been moved to community and municipal cemeteries, which are much more accessible to the next-of-kin of the deceased. In 2021, 23 graves were relocated, completing the second phase of grave relocations. The team then set about the preparatory work for phase three. Extensive consultations were undertaken, as well as authorized test excavations at unmarked areas which had been pointed out by the next-of-kin and elders within the community. The third phase of grave relocations is anticipated to commence in 2022.

## Tailings and waste management

### Solid waste

A failure to adequately manage waste can result in significant negative impacts on the environment and human health, even beyond the area where waste is generated and discarded. Sustainable development demands circular economy-based business models, and mining presents an opportunity to integrate waste management solutions into business functioning, through recovering or recycling most waste and seeking opportunities to make effective use of the waste, such as waste-based fuel operations. Our waste management strategies are still in an early phase of development and implementation and will remain a key focus in 2022.

Ivanhoe Mines' waste management programs key highlights		
<b>Waste management strategies and policies</b>	Waste management policies, procedures and initiatives implemented across all sites.	
<b>Waste reduction strategy and plan</b>	<p><b>Kamoa:</b> Waste reduction strategy is under development and will include a reuse, recycling and recovery process with the aim of completion in 2022.</p> <p><b>Platreef:</b> Currently the project is ramping up with new activities and an increase in the number of people coming to site. Once the baseline is set a waste reduction strategy will be put in place with targets.</p>	
<b>Waste-related targets, programs and initiatives</b>	<p><b>Kamoa:</b> Set up a camp recyclable waste collection point together with colour coded recycling bins and initiate waste segregation, as well as upgrade the landfill facility to implement waste segregation. Plans are underway to implement a piggery project to enhance food security and reduce food waste. Waste management awareness is included in employee and contractor induction training.</p> <p><b>Kipushi:</b> A waste reduction strategy will be developed in line with project development.</p> <p><b>Platreef:</b> Waste volumes are measured regularly. There are procedures in place for the management of waste. The project is in a developmental stage, targets for waste volume reduction will be set once steady-state production is attained.</p> <p>A local contractor has been employed on-site with three sorters to separate various waste streams for recycling. Annual recyclable waste targets are set for achievement.</p> <p>The target for the 2022 annual period is 2,000 kgs. Campaigns are conducted to promote waste separation on-site and minimization of the use of non-renewable resources.</p>	
<b>Active waste management plan</b>	Waste management plans are implemented across all sites.	
<b>Waste inventory on site</b>	IsoMetrix system enables an electronic waste inventory with required disposal certificates.	
<b>Regular waste audits and inspections</b>	<p><b>Kamoa:</b> Routine inspections are conducted regularly, together with annual audits that are undertaken by the environmental department of Kamoa.</p> <p><b>Platreef:</b> Weekly inspections are conducted and quarterly waste management audits are undertaken as per the Environmental Management Plan.</p>	
<b>Vegetation of mining stockpiles</b>	Topsoil stockpiles are naturally revegetated and the slope managed to avoid erosion at all sites. Regular monitoring is undertaken by the environmental departments.	
<b>Recycling of waste materials, such as paper, organic materials and oil</b>	<p><b>Kamoa:</b> Kamoa currently recovers organic materials, particularly from the canteen waste, which is re-used as domestic animal feed (e.g. piggery and chicken coop).</p> <p><b>Platreef:</b> Oil is collected for recycling. Paper is also recycled. All recyclable waste materials are recycled, calculated volume amounts are recorded.</p> <p><b>Kipushi:</b> Oil, paper and scrap steel are recycled.</p>	
<b>Waste-related training programs with employees and contractors</b>	<p><b>Kamoa:</b> 4GreenDRC Company removes certain recyclable waste from site.</p> <p><b>Platreef:</b> Bhasisa Recycling Program recycles waste.</p> <p><b>Kipushi:</b> Classified scrap steel is recycled in Lubumbashi.</p>	
<b>Kg of waste generated in reporting year</b>	<p><b>Platreef</b></p> <ul style="list-style-type: none"> <li>1 374,5 kg paper</li> <li>363 628 kg scrap metal</li> <li>1 860 kg general waste</li> <li>9 600 kg hazardous waste</li> </ul>	<p><b>Kipushi</b></p> <ul style="list-style-type: none"> <li>1 078 kg paper</li> <li>238 626 kg scrap metal</li> <li>337 280 kg general waste</li> <li>12 000 kg hazardous waste</li> </ul>
<b>Kg waste recycled in reporting year</b>	<p><b>Platreef</b></p> <ul style="list-style-type: none"> <li>1 374,5 kg paper</li> <li>363 628 kg scrap metal</li> </ul>	<p><b>Kipushi</b></p> <ul style="list-style-type: none"> <li>1 078 kg paper</li> <li>238 626 kg scrap metal</li> </ul>



We strive to implement adequate waste management and circular economy practices to promote and ensure the responsible use of resources, and we are continually reviewing our waste management plans and programs to reduce our waste footprint, seek opportunities for recycling, and conform to international changes to best practices.

We have not yet evaluated the upstream and downstream waste management practices in our value chain, but we acknowledge

the need that commences with this assessment in the near future. In 2021, Kamoa-Kakula established a new waste facility, which includes an area for community recycling. They also undertook rehabilitation of a landfill site near the Kakula mine. In 2022, Kamoa-Kakula intends to undertake a complete overhaul of their waste management system, including implementing measures to accurately measure waste generated and recycled.



AERIAL VIEW OF THE KAMOA-KAKULA TAILINGS STORAGE FACILITY.

## Tailings and waste management

Mining operations of economic mineral deposits typically produce by-product materials, which are composed of finely ground rock, fine mineral particles and water separated from ore minerals during the milling process.

Tailings storage facilities (TSFs) are designed to allow for the safe storage and management of this by-product material through mine operations and closure. Ivanhoe Mines' position statement on tailings stewardship and the 2020 Global Industry Standard on Tailings Management (GISTM) are used to inform the management standard applicable to tailings at each of our projects, as well as the development of the respective executive reporting protocols.

Our mine design team continues to work closely with international experts and independent reviewers while designing TSFs for each of our projects in line with our safe, modern and innovative approach to mine design and development. The disposal of tailings, within a downstream structure, results in the creation of a landform that is inherently more stable in the long-term than a conventional upstream self-raised facility.

**Platreef tailings storage facility** – tailings facility still in the design phase based on the new Platreef 2022 Feasibility Study; being designed as a dry-stack facility.

**Kipushi tailings storage facility** – tailings facility design being finalized following finalization of the feasibility study. The facility will be situated on a gently sloping plain with all upstream storm water runoff being diverted away from the facility. A minimum freeboard of two meters is provided for on the TSF thus ensuring that under correct operation, the TSF cannot overtop. Potential seepage through the engineered wall will be conveyed safely out the wall via a curtain drain system.

**Kamoa-Kakula tailings storage facility** – active facility situated approximately 30 kilometers south west of Kolwezi in the Katanga district of the DRC situated in a valley with a large catchment upstream of the facility, on the upper reaches of the Mulumgwishi river which drains westwards from the east. The areas south of the Mulumgwishi river drains towards the Tchimbundji river while the northern areas drain northwest to the Lulula river. All storm water runoff is diverted around the facility in lined trenches to ensure minimal storm water enters the top of the facility. The facility has a penstock to decant water, thereby allowing water to be removed easily and quickly in the event of a storm event. Potential seepage through the engineered wall is safely conveyed out the wall via a curtain-drain system. There is no critical infrastructure or housing that is or will be situated within the zone of flow.

Moreover, it is not as susceptible to a static/transient load induced liquefaction flow slide event, such as the one experienced at Córrego do Feijão and at Bento Rodrigues (Minas Gerais, Brazil) in 2015. The design of both the Kamo-a-Kakula and Kipushi TSFs are that of downstream facilities with engineered earth-fill walls. induced liquefaction flow slide event, such as the one experienced at Córrego do Feijão and at Bento Rodrigues (Minas Gerais, Brazil) in 2015. The design of both the Kamo-a-Kakula and Kipushi TSFs are that of downstream facilities with engineered earth-fill walls.

At the Kipushi Project, there is also an inactive historical TSF (consisting of three dams) northeast of the current mining license area, which was used during the Gécamines production years. Although the historical tailings storage facility is a legacy issue for which Gécamines was responsible, Ivanhoe Mines recognizes the social and reputational risk posed by the proximity of the historical tailings facility to Ivanhoe's current operations. A recent independent review indicated that although the dams appear generally safe, an additional safety assessment of the structural integrity of the dam wall at Dam 3 needs to be undertaken (the final containment site). The project's feasibility study determined that since a new downstream tailings storage facility is planned for when production resumes, no further use of the historic tailings facilities is intended. A high-level management plan for this historical tailing's facility is underway — pending approval from Gécamines, Ivanhoe's joint-venture partner at Kipushi.

Ivanhoe Mines acknowledges the safety risks inherent to downstream conditions, whether they are environmental, reputational or health and safety risks. Therefore, in order to adequately address this risk and to comply with the dictates of good practice, a purchase order is being raised for an independent mine residue and environmental engineering consultant, Epoch Resources, to conduct both quarterly and annual inspections of the TSF, as well as to incorporate monitoring data which may be used to assess the stability of the TSF throughout the life of the facility, as well as during and after closure.

The GISTM established the first global standard on tailings management that can be applied to existing and future TSFs. Strengthening current practices in the mining industry by integrating social, environmental, governance, local economic and technical considerations, the GISTM covers the entire tailings facility lifecycle — from project conception, planning and design, through operation and ongoing construction, to closure and post-closure. The GISTM encourages greater involvement by communities and stakeholders, including the world's major investor bodies. Pursuant to our commitment to tailings management that meets global best practices for safety during all phases of the mine lifecycle, in 2021, Ivanhoe appointed Epoch Resources to conduct a gap analysis to determine and outline an action plan for the Kamo-a-Kakula TSF to adhere to the GISTM. The scope of work outlined in Kamo-a's GISTM action plan is planned for implementation throughout 2022.

Concurrent rehabilitation by backfilling enables Ivanhoe to minimize our surface footprint, reduce closure and rehabilitation liabilities, and help support the underground mine by filling voids. The backfilling process entails mixing tailings with cement and pumping it back underground to be stored in the mined-out workings. Pursuant to our commitment to reducing our environmental footprint, concurrent rehabilitation by backfilling is planned for the TSFs at all three our projects. Approximately half of the Kamo-a-Kakula's tailings will be sent back underground as backfill.

The development of training and capacity-building programs, to raise awareness and educate our workforce, contractors and communities on tailings risk and our tailings stewardship approach, is still in progress.

## Mine closure

Notwithstanding that Ivanhoe Mines is at the dawn of our operations at our projects, we recognize that orebodies are finite and exhausted over time, and therefore, one can never start planning for closure too early. We are committed to minimizing negative impacts — while maximizing benefits — and to the rehabilitation of land.

All our operations are underground mines, where tailings will be reduced through backfilling, thereby reducing our rehabilitation footprint area. Closure planning is a core element of our business strategy. In accordance with best practices, we integrate closure considerations early in operations planning and engineering processes.

Our projects are continually advancing, and the legislative frameworks governing mine closure are constantly evolving — we therefore strive to ensure that we are designing our operations within the sustainable development mindset, which includes concurrent rehabilitation and planning for the sustainable closure or end state of each mining operation. The environmental management plans, and closure plans, for each project are regularly reviewed in this context and updated. We have conducted independent closure cost assessments for all our projects and ensured that we have made provision for the funds necessary to cover these closure and rehabilitation costs.

We are also cognizant of the socio-economic challenges resulting from mine closures, and the dynamic shift changes brought about by the coronavirus pandemic, geopolitics and climate change. We therefore strive to empower communities to have sustainable livelihoods independent of the mine, as well as to develop proactive, comprehensive land reclamation strategies, in collaboration with host communities, in order to ensure that we leave behind a natural and socio-economic environment that is healthy, flourishing and fit for meaningful use by local communities.





AN UNDERGROUND TUNNEL AT IVANHOE'S KIPUSHI MINE.



## 7

## OUR KEY PERFORMANCE DATA

## Our Governance

Governing Body	2021	2020	2019
Nominated Directors	11	11	11
% Independent Directors	55%	55%	55%
% Female Board of Directors	18%	18%	9%
% Female Executive Officers	33%	33%	25%
% Female Senior Management (Employees)	11%	11%	18,9%

## Ethical Behaviour

Confirmed incident of corruption	–	–	*
Monetary losses from unethical behaviour	–	–	*

## Stakeholder Engagement

Meetings Held	<b>Total</b>	<b>633</b>	772	728
	<b>Kamoa-Kakula</b>	<b>479</b>	689	514
	<b>Platreef</b>	<b>132</b>	53	115
	<b>Kipushi</b>	<b>22</b>	30	99
Participants engaged	<b>Total</b>	<b>10,645</b>	10,861	10,052
	<b>Kamoa-Kakula</b>	<b>7,500</b>	9,784	7,544
	<b>Platreef</b>	<b>1,763</b>	437	872
	<b>Kipushi</b>	<b>1,382</b>	640	1,636

## Grievances

Grievances received	<b>Total</b>	<b>56</b>	69	81
	<b>Kamoa-Kakula</b>	<b>50</b>	66	71
	<b>Platreef</b>	<b>6</b>	3	4
	<b>Kipushi</b>	<b>–</b>	–	6
% grievances resolved by year-end	<b>Total</b>	<b>80%</b>	78%	98%
	<b>Kamoa-Kakula</b>	<b>78%</b>	79%	100%
	<b>Platreef</b>	<b>100%</b>	67%	50%
	<b>Kipushi</b>	<b>–</b>	–	100%

\* Data not available/not previously measured

## Our People

Our workforce		2021	2020	2019
Total workforce comprised of employees and contractors	Total	12,374	8,884	5,287
	Kamoa-Kakula	10,800	7,890	3,889
	Platreef	776	238	631
	Kipushi	631	590	630
	Exploration	30	20	20
	Corporate and Group Services	137	146	117

Total employees by location	<b>Total</b>	<b>2,806</b>	2,163	1,305
	<b>Kamoa-Kakula</b>	<b>1,952</b>	1,431	514
	<b>Platreef</b>	<b>246</b>	108	157
	<b>Kipushi</b>	<b>480</b>	484	522
	<b>Corporate and Group Services</b>	<b>128</b>	140	112
Total contractors by location	<b>Total</b>	<b>9,568</b>	6,721	3,964
	<b>Kamoa-Kakula</b>	<b>8,848</b>	6,459	3,357
	<b>Platreef</b>	<b>530</b>	130	474
	<b>Kipushi</b>	<b>151</b>	106	108
	<b>Exploration</b>	<b>30</b>	20	20
	<b>Corporate and Group Services</b>	<b>9</b>	6	5

## Labour relations

Labour relations by % of workforce unionized	<b>Total</b>	<b>16%</b>	34%	~39%
	<b>Kamoa-Kakula</b>	<b>12%</b>	33%	*
	<b>Platreef</b>	<b>80%</b>	32%	*
	<b>Kipushi</b>	<b>44%</b>	46%	*
	<b>Corporate and Group Services</b>	<b>0%</b>	3%	*
Number of strikes, lockouts or protests	<b>Total</b>	<b>–</b>	4	*
	<b>Kamoa-Kakula</b>	<b>–</b>	2	*
	<b>Platreef</b>	<b>–</b>	2	*
	<b>Kipushi</b>	<b>–</b>	–	*
	<b>Corporate and Group Services</b>	<b>–</b>	–	–

## Diversity, inclusion and local employment

% female employees	<b>Total</b>	<b>9%</b>	8%	13%
	<b>Kamoa-Kakula</b>	<b>5%</b>	3%	6%
	<b>Platreef</b>	<b>23%</b>	23%	32%
	<b>Kipushi</b>	<b>7%</b>	7%	6%
	<b>Corporate and Group Services</b>	<b>46%</b>	40%	49%
% local employment	<b>Total</b>	<b>97%</b>	91%	94%
	<b>Kamoa-Kakula</b>	<b>97%</b>	87%	89%
	<b>Platreef</b>	<b>100%</b>	100%	78%
	<b>Kipushi</b>	<b>97%</b>	97%	93%
	<b>Corporate and Group Services</b>	<b>96%</b>	92%	–
% local employees in management, where local employees are either Congolese nationals or historically disadvantaged South Africans in the DRC and RSA respectively	<b>Total</b>	<b>61%</b>	58%	*
	<b>Kamoa-Kakula</b>	<b>35%</b>	32%	36%
	<b>Platreef</b>	<b>50%</b>	42%	53%
	<b>Kipushi</b>	<b>89%</b>	90%	57%
	<b>Corporate and Group Services</b>	<b>64%</b>	42%	48%

Diversity, inclusion and local employment		2021	2020	2019
% employees living with disabilities	Total	0,18%	0,25%	*
	Kamoa-Kakula	0,10%	0,28%	*
	Platreef	0,81%	0,93%	*
	Kipushi	0,21%	–	*
	Corporate and Group Services	–	–	–



Performance monitoring, remuneration and retention				
% employees receiving regular performance and career development reviews	<b>Total</b>	<b>27%</b>	24%	*
	<b>Kamoa-Kakula</b>	<b>16%</b>	13%	*
	<b>Platreef</b>	<b>100%</b>	100%	*
	<b>Kipushi</b>	<b>16%</b>	25%	*
	<b>Corporate and Group Services</b>	<b>61%</b>	73%	–
Health, Safety and Well-being				
Number of patients accessing occupational health services on site	<b>Total</b>	<b>16,677</b>	16,667	10,396
	<b>Kamoa-Kakula</b>	<b>13,258</b>	13,851	9,222
	<b>Platreef</b>	<b>887</b>	111	1,060
	<b>Kipushi</b>	<b>2,532</b>	2,705	114
Number of patients tested for COVID-19	<b>Total</b>	<b>14,191</b>	1,487	
	<b>Kamoa-Kakula</b>	<b>6,359</b>	1,028	
	<b>Platreef</b>	<b>6,413</b>	115	
	<b>Kipushi</b>	<b>1,326</b>	318	
	<b>Corporate and Group Services</b>	<b>93</b>	26	
Number of patients tested positive and treated for COVID-19	<b>Total</b>	<b>869</b>	34	
	<b>Kamoa-Kakula</b>	<b>564</b>	21	
	<b>Platreef</b>	<b>223</b>	5	
	<b>Kipushi</b>	<b>68</b>	–	
	<b>Corporate and Group Services</b>	<b>14</b>	8	
Number of hours worked	<b>Total</b>	<b>20,310,877</b>	14,937,236	10,639,982
	<b>Kamoa-Kakula</b>	<b>18,470,385</b>	13,172,334	7,233,906
	<b>Platreef</b>	<b>775,867</b>	733,302	1,518,983
	<b>Kipushi</b>	<b>1,064,625</b>	1,031,600	1,887,093
Work-hours free of lost-time injury (LTI)	<b>Total</b>	<b>7,357,563</b>	5,618,429	4,688,507
	<b>Kamoa-Kakula</b>	<b>2,696,794</b>	2,618,438	2,629,889
	<b>Platreef</b>	<b>677,450</b>	81,298	171,525
	<b>Kipushi</b>	<b>3,983,319</b>	2,918,693	1,887,093
Lost-time injuries (employees)	<b>Total</b>	<b>10</b>	4	3
	<b>Kamoa-Kakula</b>	<b>9</b>	2	–
	<b>Platreef</b>	<b>1</b>	2	3
	<b>Kipushi</b>	<b>–</b>	–	–
Lost-time injuries (contractors)	<b>Total</b>	<b>6</b>	*	*
	<b>Kamoa-Kakula</b>	<b>6</b>	*	*
	<b>Platreef</b>	<b>–</b>	*	*
	<b>Kipushi</b>	<b>–</b>	*	*
Health, Safety and Well-being		2021	2020	2019
Lost-time injury frequency rate (LTIFR)	<b>Kamoa-Kakula</b>	<b>0.81</b>	0.15	–
	<b>Platreef</b>	<b>1.29</b>	2.73	1.98
	<b>Kipushi</b>	<b>–</b>	–	–
Total recordable injury frequency rate (TRIFR)	<b>Kamoa-Kakula</b>	<b>2.76</b>	3.04	4.7
	<b>Platreef</b>	<b>1.29</b>	6.82	10.53
	<b>Kipushi</b>	<b>2.8</b>	2	2.3

Fatalities	<b>Total</b>	<b>1</b>	5	1
	<b>Kamoa-Kakula</b>	<b>1</b>	2	1
	<b>Platreef</b>	<b>–</b>	3	–
	<b>Kipushi</b>	<b>–</b>	–	–
Number of employees (including contractor employees) participating in inductions and safety-related training interventions	<b>Total</b>	<b>11,302</b>	11,662	6,730
	<b>Kamoa-Kakula</b>	<b>10,434</b>	6,797	2,342
	<b>Platreef</b>	<b>809</b>	4,521	3,328
	<b>Kipushi</b>	<b>59</b>	344	1,060
Skills for the future				
Number of employees in programs for upgrading employee skills, including skills transfer related to succession planning	<b>Total</b>	<b>455</b>	190	209
	<b>Kamoa-Kakula</b>	<b>229</b>	96	81
	<b>Platreef</b>	<b>106</b>	46	88
	<b>Kipushi</b>	<b>111</b>	33	40
	<b>Corporate and Group Services</b>	<b>9</b>	15	*
Number of community beneficiaries in training interventions	<b>Total</b>	<b>1,884</b>	976	2,070
	<b>Kamoa-Kakula</b>	<b>776</b>	416	277
	<b>Platreef</b>	<b>685</b>	125	1,388
	<b>Kipushi</b>	<b>423</b>	435	405

\* Data not available / not previously measured

Our Prosperity				
Employment and wealth generation (\$) ('000)		2021	2020	2019
Total value created and distributed	<b>Total</b>	<b>1,141,199</b>	799,619	480,910
	<b>Kamoa-Kakula</b>	<b>1,007,718</b>	705,479	341,225
	<b>Platreef</b>	<b>43,518</b>	32,653	43,592
	<b>Kipushi</b>	<b>27,593</b>	30,801	62,483
	<b>Exploration</b>	<b>19,466</b>	5,784	10,688
	<b>Corporate and Group Services</b>	<b>42,904</b>	24,902	22,922
Value created in the local community	<b>Total</b>	<b>907,434</b>	547,253	*
	<b>Kamoa-Kakula</b>	<b>790,451</b>	466,535	*
	<b>Platreef</b>	<b>43,518</b>	32,653	*
	<b>Kipushi</b>	<b>24,806</b>	24,205	*
	<b>Exploration</b>	<b>15,614</b>	4,571	*
	<b>Corporate and Group Services</b>	<b>33,045</b>	19,289	*
Total employee remuneration	<b>Total</b>	<b>84,712</b>	36,267	34,695
	<b>Kamoa-Kakula</b>	<b>56,619</b>	18,236	13,126
	<b>Platreef</b>	<b>7,954</b>	4,214	5,817
	<b>Kipushi</b>	<b>7,458</b>	8,826	10,961
	<b>Exploration</b>	<b>957</b>	1,045	*
	<b>Corporate and Group Services</b>	<b>11,724</b>	3,946	4,791
Total socio-economic development spend	<b>Total</b>	<b>9,500</b>	10,943	19,224
	<b>Kamoa-Kakula</b>	<b>7,510</b>	9,486	15,661
	<b>Platreef</b>	<b>1,191</b>	715	2,305
	<b>Kipushi</b>	<b>568</b>	534	904
	<b>Exploration</b>	<b>–</b>	–	–
	<b>Corporate and Group Services</b>	<b>231</b>	208	354

Proportion of spending on local suppliers	<b>Total</b>	<b>594,063</b>	401,610	236,962
	<b>Kamoa-Kakula</b>	<b>527,277</b>	352,051	164,205
	<b>Platreef</b>	<b>36,037</b>	31,102	37,802
	<b>Kipushi</b>	<b>6,627</b>	7,428	19,779
	<b>Exploration</b>	<b>13,950</b>	3,195	6,898
Total royalties and tax paid	<b>Corporate and Group Services</b>	<b>10,172</b>	7,834	8,278
	<b>Total</b>	<b>169,668</b>	77,957	61,548
	<b>Kamoa-Kakula</b>	<b>154,084</b>	66,707	42,941
	<b>Platreef</b>	<b>(2,036)</b>	(2,809)	(2,923)
	<b>Kipushi</b>	<b>6,024</b>	6,475	10,873
Number of enterprises and suppliers in support and/or training interventions	<b>Exploration</b>	<b>704</b>	198	2,584
	<b>Corporate and Group Services</b>	<b>10,892</b>	7,386	8,073
	<b>Total</b>	<b>115</b>	73	293
	<b>Kamoa-Kakula</b>	<b>34</b>	21	51
	<b>Platreef</b>	<b>78</b>	52	220
Number of opportunities ring-fenced for local community suppliers	<b>Kipushi</b>	<b>3</b>	–	22
	<b>Total</b>	<b>22</b>	22	*
	<b>Kamoa-Kakula</b>	<b>7</b>	8	*
	<b>Platreef</b>	<b>10</b>	10	*
	<b>Kipushi</b>	<b>5</b>	4	*

\* Data not available / not previously measured

## Our Planet

Environmental Compliance		2021	2020	2019
Number of environmental spills	<b>Total</b>	<b>5</b>	2	*
	<b>Kamoa-Kakula</b>	<b>4</b>	2	*
	<b>Platreef</b>	<b>1</b>	–	*
	<b>Kipushi</b>	<b>–</b>	–	*
	<b>Corporate and Group Services</b>	<b>–</b>	–	*
Environmental fines and sanctions (Number and monetary value in \$'000)	<b>Total</b>	<b>–</b>	3	*
	<b>Kamoa-Kakula</b>	<b>–</b>	1,090	*
	<b>Platreef</b>	<b>–</b>	–	*
	<b>Kipushi</b>	<b>–</b>	3	*
	<b>Corporate and Group Services</b>	<b>–</b>	1,090	*
Water management (MI)				
Water withdrawal	<b>Total</b>	<b>43,196</b>	23,558	30,154
	<b>Kamoa-Kakula</b>	<b>32,554</b>	338	4,054
	<b>Platreef</b>	<b>207</b>	193	448
	<b>Kipushi</b>	<b>10,435</b>	23,027	25,652
	<b>Corporate and Group Services</b>	<b>–</b>	–	–
Water discharged	<b>Total</b>	<b>48,990</b>	36,293	27,844
	<b>Kamoa-Kakula</b>	<b>32,263</b>	18,622	2,001
	<b>Platreef</b>	<b>191</b>	–	194
	<b>Kipushi</b>	<b>16,536</b>	17,671	25,649
	<b>Corporate and Group Services</b>	<b>–</b>	–	–
Water consumption	<b>Total</b>	<b>(5,794)</b>	(12,734)	2,310
	<b>Kamoa-Kakula</b>	<b>291</b>	(18,284)	2,053
	<b>Platreef</b>	<b>16</b>	193	254
	<b>Kipushi</b>	<b>(6,101)</b>	5,357	3
	<b>Corporate and Group Services</b>	<b>–</b>	–	–

Energy (MWh)				
Total energy consumption from grid and non-renewable fuels	<b>Total</b>	<b>711,385</b>	104,748	117,811
	<b>Kamoa-Kakula</b>	<b>281,089</b>	33,694	20,337
	<b>Platreef</b>	<b>287,973</b>	6,568	7,121
	<b>Kipushi</b>	<b>142,323</b>	64,522	90,353
	<b>Corporate and Group Services</b>	<b>–</b>	–	–
Total energy grid consumption	<b>Total</b>	<b>270,024</b>	65,901	95,864
	<b>Kamoa-Kakula</b>	<b>214,602</b>	2,206	497
	<b>Platreef</b>	<b>2,987</b>	6,010	6,442
	<b>Kipushi</b>	<b>52,435</b>	57,685	88,925
	<b>Corporate and Group Services</b>	<b>–</b>	–	–
Energy from renewable grid	<b>Total</b>	<b>267,037</b>	59,891	89,422
	<b>Kamoa-Kakula</b>	<b>214,602</b>	2,206	497
	<b>Platreef</b>	<b>–</b>	–	–
	<b>Kipushi</b>	<b>52,435</b>	57,685	88,925
	<b>Corporate and Group Services</b>	<b>–</b>	–	–
Energy from non-renewable grid	<b>Total</b>	<b>2,987</b>	6,010	6,442
	<b>Kamoa-Kakula</b>	<b>–</b>	–	–
	<b>Platreef</b>	<b>2,987</b>	6,010	6,442
	<b>Kipushi</b>	<b>–</b>	–	–
	<b>Corporate and Group Services</b>	<b>–</b>	–	–
Energy from non-renewable fuels	<b>Total</b>	<b>436,111</b>	38,883	21,947
	<b>Kamoa-Kakula</b>	<b>66,487</b>	31,488	19,840
	<b>Platreef</b>	<b>284,986</b>	558	679
	<b>Kipushi</b>	<b>84,638</b>	6,837	1,428
	<b>Corporate and Group Services</b>	<b>–</b>	–	–
GHG Mitigation (tCO <sub>2</sub> e)		2021	2020	2019
Total GHG Emissions	<b>Total</b>	<b>106,796</b>	34,194	11,619
	<b>Kamoa-Kakula</b>	<b>19,725</b>	22,764	6,150
	<b>Platreef</b>	<b>67,276</b>	8,047	4,967
	<b>Kipushi</b>	<b>19,751</b>	3,383	502
	<b>Corporate and Group Services</b>	<b>44</b>	*	*
Direct GHG Emissions (Scope 1)	<b>Total</b>	<b>100,806</b>	11,427	6,805
	<b>Kamoa-Kakula</b>	<b>17,634</b>	9,368	6,090
	<b>Platreef</b>	<b>63,934</b>	164	213
	<b>Kipushi</b>	<b>19,198</b>	1,895	502
	<b>Corporate and Group Services</b>	<b>40</b>	*	*
Indirect GHG Emissions (Scope 2)	<b>Total</b>	<b>2,927</b>	5,971	4,814
	<b>Kamoa-Kakula</b>	<b>–</b>	9	60
	<b>Platreef</b>	<b>2,927</b>	5,731	4,754
	<b>Kipushi</b>	<b>–</b>	231	0.4
	<b>Corporate and Group Services</b>	<b>–</b>	–	–
Scope 3 (estimate)	<b>Total</b>	<b>3,063</b>	16,796	*
	<b>Kamoa-Kakula</b>	<b>2,091</b>	13,388	*
	<b>Platreef</b>	<b>415</b>	2,151	*
	<b>Kipushi</b>	<b>553</b>	1,257	*
	<b>Corporate and Group Services</b>	<b>4</b>	*	*

\* Data not available/not previously measured



## 8

REPORTING  
FRAMEWORKS

## Ivanhoe Mines' reporting frameworks

The Company reports, primarily, against the GRI Core Option Standards and disclosures, as well as the WEF Stakeholder Capitalism Metrics; Task Force on Climate-related Financial Disclosures (TCFD); UN SDG performance indicators; CDP (formerly, Climate Disclosure Project); and the Mining Local Procurement Reporting Mechanism (LPRM). In addition, the Company's methodology and approach to sustainability reporting is informed/influenced by the following frameworks and principles: The GRI Reporting Principles; International Council on Mining and Metals (ICMM) 10 Mining Principles; UN Guiding Principles; UN Global Compact 10 Principles; International Finance Corporation (IFC) Performance Standards; Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises; and Voluntary Principles on Security and Human Rights.

## GRI Content Index

GRI Standards Disclosure	Disclosure details/ weblink	WEF SCM Pillar, theme and metric	ICMM Principles	Priority UN SDGs and indicators		UNGP Principles	UNGC Principles	TCFD and CDP Disclosures	LPRM Disclosures	IFC Performance Standards	IVN Materiality
<b>102-1</b> – Name of the organization	Front cover Our approach to sustainability reporting, About this report, p3; Our business at a glance, p10; Local procurement, p94 – 95	Governance: Governing purpose; Setting purpose	1: Ethical Business (1.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A1.3; A2; B4; C1.1; C2.3; C3.2			LPRM 100, Context for local procurement systems		
<b>102-2</b> – Activities, brands, products, and services	Our approach to sustainability reporting, About this report, p3; Our Journey, p4; Our business at a glance, p10; Local procurement, p94 – 95	Governance: Governing purpose; Setting purpose	1: Ethical Business (1.1)	<b>SDG 12</b> (12.2.1; 12.6.1; 12.7.1; 12.8.1)		A1.3; A2; B4; C1.1; C2.3; C3.2			LPRM 100, Context for local procurement systems		
<b>102-3</b> – Location of headquarters	Information and contact details, p182; Local procurement, p94 – 95	Governance: Governing purpose; Setting purpose	1: Ethical Business (1.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A2; B4; C1.1; C2.3; C3.2			LPRM 100, Context for local procurement systems		
<b>102-4</b> – Location of operations	Our approach to sustainability reporting, About this report, p3; Our business at a glance, p10; Local procurement, p94 – 95	Governance: Governing purpose; Setting purpose	1: Ethical Business (1.1)	<b>SDG 12</b> (12.2.1; 12.6.1; 12.8.1)		A1.3; A2; B4; C1.1; C2.3; C3.2			LPRM 100, Context for local procurement systems		

## GRI Content Index

GRI Standards Disclosure	Disclosure details/ weblink	WEF SCM Pillar, theme and metric	ICMM Principles	Priority UN SDGs and indicators		UNGP Principles	UNGC Principles	TCFD and CDP Disclosures	LPRM Disclosures	IFC Performance Standards	IVN Materiality
<b>102-5</b> – Ownership and legal form	Our business at a glance, p10; Local procurement, p94 – 95	Governance: Governing purpose; Setting purpose	1: Ethical Business (1.1; 1.2; 1.4)	<b>SDG 12</b> (12.6.1; 12.8.1)		A2; B4; C1.1; C2.3; C3.2			LPRM 100, Context for local procurement systems		
<b>102-6</b> – Markets served	Our business at a glance, p10; Local procurement, p94 – 95	Governance: Governing purpose; Setting purpose	1: Ethical Business (1.1; 1.5)	<b>SDG 12</b> (12.6.1; 12.8.1)		A2; B4; C1.1; C2.3; C3.2			LPRM 100, Context for local procurement systems		
<b>102-7</b> – Scale of the organization	Our business at a glance, p10; Local procurement, p94 – 95	Governance: Governing purpose; Setting purpose	1: Ethical Business (1.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A2; B4; C1.1; C2.3; C3.2			LPRM 100, Context for local procurement systems		
<b>102-8</b> – Information on employees and other workers	Our approach to people, p47; Our workforce, p48; Local procurement, p94 – 95	Prosperity: Employment and wealth generation; Absolute number and rate of employment	1: Ethical Business (1.1; 1.2)	<b>SDG 12</b> (12.6.1; 12.7.1; 12.8.1)		A2; B4; C1.1; C2.3; C3.2	Principle 2 Principle 3 Principle 6		LPRM 100, Context for local procurement systems	PS2: Labour and Working Conditions	
<b>102-9</b> – Supply chain	Employment and wealth generation, Total value created and distributed, p92; Local procurement standards of practice, p94; Transformative innovation through enterprise and supplier development, p98; Local procurement, p94 – 95	Prosperity: Employment and wealth generation, Economic contribution; Innovation of better products and services; Social value generated; Community and social vitality, Additional tax remitted and Total tax paid by country for significant locations	9. Social performance (9.1 – 9.2)	<b>SDG 12</b> (12.6.1; 12.7.1; 12.8.1)		A1; A2; A2.3; A2.4; B4; C1.1; C2.3; C3.1; C3.2; C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 4 Principle 10		LPRM 200, Procurement systems; LPRM 300, Local procurement spending by category; LPRM 400, Local procurement due diligence; LPRM 500, Methods to incentivize local procurement	PS1: Risk Management PS2: Labour and Working Conditions	
<b>102-10</b> – Significant changes to the organization's size, structure, ownership or supply chain	Our business at a glance, Our Company and the metals to fuel the green revolution, p10; Our principal projects, p12; Local procurement, p94 – 95	Governance: Quality of governing body; Governance body composition Prosperity: Employment and wealth generation; Absolute number and rate of employment	1: Ethical Business (1.1; 1.2; 1.4)	<b>SDG 12</b> (12.2.1; 12.6.1; 12.7.1; 12.8.1)		A2; B4; C1.1; C2.3; C3.2	Principle 1 Principle 2 Principle 4 Principle 10		LPRM 100, Context for local procurement systems	PS2: Labour and Working Conditions	
<b>102-11</b> – Precautionary principle or approach	Our approach to sustainability reporting, p3; Our approach to governance, p29; Our risk management, p33; Climate change, p128; Local procurement, p94 – 95	Governance: Governing purpose, Purpose-led management; Risk and opportunity oversight; Integrating risk and opportunity into business process	2. Decision-making (2.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A1.3	Principle 7	TCFD Risk Management	LPRM 100, Context for local procurement systems	PS1: Risk Management PS3: Resource Efficiency and Pollution Prevention	



## GRI Content Index

GRI Standards Disclosure	Disclosure details/ weblink	WEF SCM Pillar, theme and metric	ICMM Principles	Priority UN SDGs and indicators	UNGP Principles	UNGC Principles	TCFD and CDP Disclosures	LPRM Disclosures	IFC Performance Standards	IVN Materiality
<b>102-12</b> – External initiatives	Our approach to sustainability reporting, About this report, p3; Local procurement, p94 – 95 Ivanhoe Mines' reporting frameworks, p152;	Governance: Quality of governing body, Progress against strategic milestones	4. Risk management (4.1 – 4.4)	<b>SDG 12</b> (12.6.1; 12.8.1)	A1.3; C1	Principle 1 Principle 7		LPRM 100, Context for local procurement systems	All	
<b>102-13</b> – Membership of associations	Our approach to sustainability reporting, About this report, p3; Local procurement, p94 – 95		1: Ethical Business (1.1; 1.4)	<b>SDG 12</b> (12.6.1; 12.8.1)	A1.3; A2; B4; C1.1; C2.3; C3.2	Principle 1 Principle 7		LPRM 100, Context for local procurement systems		
<b>102-14</b> – Statement from senior decision maker	Our approach to sustainability reporting, Message from the Chair of our Sustainability Committee, p6; Message from the President; Message from our Executive Vice-President, Sustainability and Special Projects, p16; Message from our Group Manager, Sustainability, p18; Local procurement, p94 – 95	Governance: Governing purpose; Purpose-led management	1: Ethical Business (1.1; 1.4)	<b>SDG 12</b> (12.6.1; 12.8.1)	A1.3; A2; B4; C1.1; C2.3; C3.2			LPRM 100, Context for local procurement systems		
<b>102-15</b> – Key impacts, risks and opportunities	Our governance, Our risk management, p33; Materiality assessment, p40; Climate change, energy and GHG emissions, Climate change reporting, p128 –130; Local procurement, p94 – 95	Governance: Stakeholder engagement; Material issues impacting stakeholders; Risk and opportunity oversight; Integrating risk and opportunity into business process	4: Risk management (4.1)	<b>SDG 12</b> (12.6.1; 12.8.1)	A1; C1	Principle 1 Principle 2 Principle 4 Principle 6	TCFD, Risk Management: (b) Risk management process; and Strategy (b) Impact of the organizations businesses, strategy and financial planning	LPRM 100, Context for local procurement systems	PS1: Risk Management PS2: Labour and Working Conditions PS3: Resource Efficiency and Pollution Prevention PS4: Community Health, Safety and Security PS7: Indigenous Peoples	✓
<b>102-16</b> – Values, principles, standards and norms of behaviour	Our approach to sustainability reporting, p3; Our governance, Our approach to governance, p29; Ethical behaviour, p32; The human rights lens, p42; Local procurement, p94 – 95	Governance: Governing purpose; Setting purpose and Purpose-led management	1: Ethical Business (1.1) 3: Human rights (3.1)	<b>SDG 12</b> (12.6.1; 12.8.1)	A1.1 – A1.3; A2.1 – A2.5; B1; B2; B4; C1.1; C2; C2.1 – C2.3; C3.1; C3.2; C4.1 – C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 4 Principle 6 Principle 10		LPRM 402, Anti-corruption policy	PS2: Labour and Working Conditions PS3: Resource Efficiency and Pollution Prevention	✓
<b>102-17</b> – Mechanisms for advice and concerns about ethics	Our governance, Ethical behaviour, p32; Our strategic stakeholder management, p34; Local procurement, p94 – 95	Governance: Ethical behaviour; Protected ethics advice and reporting mechanisms	1: Ethical Business (1.1)	<b>SDG 12</b> (12.6.1; 12.8.1)	A2; B4; C1.1; C2.3; C3.2	Principle 10		LPRM 402, Anti-corruption policy	PS1: Risk Management	✓

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GRI Standards Disclosure	Disclosure details/ weblink	WEF SCM Pillar, theme and metric	ICMM Principles	Priority UN SDGs and indicators		UNGP Principles	UNGC Principles	TCFD and CDP Disclosures	LPRM Disclosures	IFC Performance Standards	IVN Materiality
<b>102-18</b> – Governance structure	Our governance, Governing body, p29; Climate change reporting, p128	Governance: Governing purpose; Setting purpose	1: Ethical business (1.1 – 1.2)	<b>SDG 12</b> (12.6.1; 12.8.1)		A2; B4; C1.1; C2.3; C3.2		TCFD, Governance: (a) Board oversight.			
<b>102-19</b> – Delegating authority	Our governance, Governing body, p29; Climate change reporting, p128	Governance: Governing Purpose; Setting Purpose	1: Ethical business (1.4)	<b>SDG 12</b> (12.6.1; 12.8.1)		A2; B4; C1.1; C2.3; C3.2		TCFD, Governance: (a) Board oversight.			
<b>102-20</b> – Executive-level responsibility for economic, environmental and social topics	Our governance, Governing body, p29; Climate change reporting, p128; Local procurement, p94 – 95	Governance: Governing purpose, purpose-led management; Quality of governing body; Progress against strategic milestones; Risk and opportunity oversight; Economic, environmental and social topics in capital allocation framework	1: Ethical business (1.4)	<b>SDG 12</b> (12.6.1; 12.8.1)		A2; B4; C1.1; C2.3; C3.1; C3.2; C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 4 Principle 5 Principle 6 Principle 7 Principle 8	TCFD, Governance: (a) Board oversight TCFD, Governance: (b) Management's role.		PS1: Risk Management PS2: Labour and Working Conditions PS3: Resource Efficiency and Pollution Prevention PS4: Community Health, Safety and Security PS5: Land Acquisition and Involuntary Resettlement	
<b>102-21</b> – Consulting stakeholders on economic, environmental, and social topics	Our governance, Our strategic stakeholder management, p34	Governance: Stakeholder engagement; Material issues impacting stakeholders	10: Stakeholder engagement (10.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A1; C3.1; C3.2; C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 6 Principle 7			PS1: Risk Management PS2: Labour and Working Conditions PS5: Land Acquisition and Involuntary Resettlement	
<b>102-22</b> – Composition about the highest governance body and its committees	Our governance, Governing body, p29; Climate change reporting, p128 – 130	Governance: Quality of governing body; Governance body composition	2: Decision- making (2.1)	<b>SDG 12</b> (12.6.1; 12.8.1)				TCFD, Governance: (b) Management's role.			
<b>102-26</b> – Role of highest governance body in setting purpose, values, and strategy	Our governance, Governing body, p29; Climate change reporting, p128 – 130	Governance: Quality of governing body; Governance body composition; Governing purpose, setting purpose and purpose-led management	1: Ethical Business (1.1, 1.4) 2: Decision making (2.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A2; B4; C1.1; C2.3; C3.2		TCFD, Governance: (a) Board oversight.			
<b>102-29</b> – Identifying and managing economic, environmental, and social impacts	Our governance, Governing body, p29; Climate change reporting, p128 – 130	Governance: Governing purpose, purpose-led management; Quality of governing body; Governance body composition	2: Decision making (2.1) 4: Risk management (4.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		C1; C3.1; C3.2; C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 4 Principle 5 Principle 6 Principle 7 Principle 8 Principle 9	TCFD, Governance: (a) Board oversight; and Risk Management: (a) Risk identification and assessment process.		PS1: Risk Management PS2: Labour and Working Conditions PS3: Resource Efficiency and Pollution Prevention PS5: Land Acquisition and Involuntary Resettlement PS7: Indigenous Peoples	
<b>102-30</b> – Effectiveness of risk management processes	Our governance, Our risk management, p33; Our people, Health, safety and well-being, Crisis management planning and emergency preparedness, p77; Climate change reporting, p128 – 130	Governance: Quality of governing body; Governance body composition; Risk and opportunity oversight, Integrating risk and opportunity into business process	4: Risk Management (4.1 – 4.4)	<b>SDG 12</b> (12.6.1; 12.8.1)		C1; C2.3; C3.1; C4.3; C5.1		TCFD, Risk Management: (a) Risk identification and assessment process.		PS1: Risk Management PS2: Labour and Working Conditions	



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GRI Standards Disclosure	Disclosure details/ weblink	WEF SCM Pillar, theme and metric	ICMM Principles	Priority UN SDGs and indicators	UNGP Principles	UNGC Principles	TCFD and CDP Disclosures	LPRM Disclosures	IFC Performance Standards	IVN Materiality
<b>102-31</b> – Review of economic, environmental and social topics	Our governance, Governing body, p29; Climate change reporting, p128 – 130	Governance: Quality of governing body; Governance body composition; Risk and opportunity oversight; Economic, environmental and social topics in capital allocation framework	2. Decision- making (2.1)	<b>SDG 12</b> (12.6.1; 12.8.1)	C3.1; C3.2; C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 4 Principle 5 Principle 6 Principle 7 Principle 8 Principle 9	TCFD, Governance: (a) Board oversight and Risk Management: (a) Risk identification and assessment process.		PS1: Risk Management PS2: Labour and Working Conditions PS5: Land Acquisition and Involuntary Resettlement PS7: Indigenous Peoples	
<b>102-32</b> – Highest governance body's role in sustainability reporting	Our governance, Governing body, p29; Climate change reporting, p128 – 130	Governance: Governing purpose; Purpose-led management; Quality of governing body; Governance body composition	1: Ethical business (1.4) 2. Decision- making (2.1)	<b>SDG 12</b> (12.6.1; 12.8.1)	A1.3; A2; B4; C1.1; C2.3; C3.2		TCFD, Governance: (a) Board oversight.			
<b>102-40</b> – List of stakeholder groups	Our governance, Our strategic stakeholder management, p34	Governance: Stakeholder engagement; Material issues impacting stakeholders	10: Stakeholder engagement (10.1)	<b>SDG 12</b> (12.6.1; 12.8.1)	A1				PS1: Risk Management PS2: Labour and Working Conditions PS4: Community Health, Safety and Security	✓
<b>102-41</b> – Collective bargaining agreements	Our people, Labour relations, p49	People: Dignity and equality, Freedom of association and collective bargaining at risk	3: Human rights (3.1; 3.4; 3.8)	<b>SDG 12</b> (12.6.1; 12.8.1)  <b>SDG 4</b> (4.7.1)	A1; A1.2; A2.1 – A2.5; B1; B2; B4; C1.1; C2.1 – C2.3; C3.1; C3.2; C4.1 – C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 3			PS1: Risk Management PS2: Labour and Working Conditions	
<b>102-42</b> – Identifying and selecting stakeholders	Our governance, our strategic stakeholder management, stakeholder engagement, p34	Governance: Stakeholder engagement, Material issues impacting stakeholders	10: Stakeholder engagement (10.1)	<b>SDG 12</b> (12.6.1; 12.8.1)	A1				PS1: Risk Management	✓
<b>102-43</b> – Approach to stakeholder engagement	Our governance, Our strategic stakeholder management, p34	Governance: Stakeholder engagement, Material issues impacting stakeholders	10: Stakeholder engagement (10.1)	<b>SDG 12</b> (12.6.1; 12.8.1)	A1				PS1: Risk Management	✓
<b>102-44</b> – Key topics and concerns raised	Our governance, Our strategic stakeholder management, Tracking community feedback, issues and grievances, p39; Materiality assessment, p40	Governance: Stakeholder engagement, Material issues impacting stakeholders	9: Social performance (9.3) 10: Stakeholder engagement (10.1)	<b>SDG 12</b> (12.6.1; 12.8.1)	A1; C3.1; C3.2; C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 7			PS1: Risk Management PS2: Labour and Working Conditions PS4: Community Health, Safety and Security PS5: Land Acquisition and Involuntary Resettlement	✓
<b>102-45</b> – Entities included in the consolidated financial statements	Our approach to sustainability reporting, About this report, p3; Our business at a glance, p10 <b>MD&amp;A</b>		1: Ethical business (1.1; 1.5) 2: Human rights (2.2)	<b>SDG 12</b> (12.6.1; 12.8.1)	A1; A1.3; A2; B4; C1.1; C2.3; C3.2	Principle 1 Principle 2				

GRI Content Index											
GRI Standards Disclosure	Disclosure details/ weblink	WEF SCM Pillar, theme and metric	ICMM Principles	Priority UN SDGs and indicators		UNGP Principles	UNGC Principles	TCFD and CDP Disclosures	LPRM Disclosures	IFC Performance Standards	IVN Materiality
<b>102-46</b> – Defining report content and topic boundaries	Our approach to sustainability reporting, About this report, p3; Our governance, Materiality assessment, p40		1: Ethical business (1.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A1.3; A2; B4; C1.1; C2.3; C3.2	Principle 1 Principle 7				
<b>102-47</b> – List of material topics	Our governance, Materiality assessment, p42; Climate change reporting, p128 – 130	Governance: Stakeholder engagement, Material issues impacting stakeholders	4: Risk management (4.1)	<b>SDG 12</b> (12.6; 12.8)		C1	Principle 1 Principle 7	TCFD, Risk, Strategy & Governance		PS1: Risk Management	✓
<b>102-48</b> – Restatements of information	Our approach to sustainability reporting, About this report, p3		1: Ethical business (1.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A1.3; A2; B4; C1.1; C2.3; C3.2					
<b>102-49</b> – Changes in reporting	Our approach to sustainability reporting, About this report, p3; Our governance, Materiality assessment, p40		1: Ethical business (1.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A1.3; A2; B4; C1.1; C2.3; C3.2					
<b>102-50</b> – Reporting period	Our approach to sustainability reporting, About this report, p3		1: Ethical business (1.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A1.3; A2; B4; C1.1; C2.3; C3.2					
<b>102-51</b> – Date of most recent report	Our approach to sustainability reporting, About this report, p3		1: Ethical business (1.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A1.3; A2; B4; C1.1; C2.3; C3.2					
<b>102-52</b> – Reporting cycle	Our approach to sustainability reporting, About this report, p3		1: Ethical business (1.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A1.3; A2; B4; C1.1; C2.3; C3.2					
<b>102-53</b> – Contact point for questions regarding the report	Information and contact details, p182		1: Ethical business (1.1; 1.4)	<b>SDG 12</b> (12.6.1; 12.8.1)		A2; B4; C1.1; C2.3; C3.2					
<b>102-54</b> – Claims of reporting in accordance with the GRI Standards	Our approach to sustainability reporting, About this report, p3		1: Ethical business (1.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A1.3; A2; B4; C1.1; C2.3; C3.2					
<b>102-55</b> – GRI content index	Ivanhoe Mines' reporting frameworks, p152		1: Ethical business (1.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A2; B4; C1.1; C2.3; C3.2					
<b>102-56</b> – External assurance	Our approach to sustainability reporting, About this report, p3		1: Ethical business (1.1) 10: Stakeholder engagement (10.4)	<b>SDG 12</b> (12.6.1; 12.8.1)		A1; A1.3; A2; B4; C1.1; C2.3; C3.2					
<b>103-1</b> – Explanation of the material topic and its boundary	Our governance, Materiality assessment, p40; Ethical behaviour: Our governance, Our approach to governance, p29; Ethical behaviour, p32; Stakeholder engagement and grievance management: Our governance, Our strategic stakeholder management, p34	Governance: Stakeholder engagement, Material issues impacting stakeholders	1: Ethical business (1.1) 2: Decision making (2.1) 4: Risk management (4.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		C1; A2; B4; C1.1; C2.3; C3.2	Principle 7			PS1: Risk Management	✓




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GRI Standards Disclosure	Disclosure details/ weblink	WEF SCM Pillar, theme and metric	ICMM Principles	Priority UN SDGs and indicators		UNGP Principles	UNGC Principles	TCFD and CDP Disclosures	LPRM Disclosures	IFC Performance Standards	IVN Materiality
<b>103-2</b> – The management approach and its components	Compulsory and child labour: Our governance, The human rights lens, p42; Health and safety and physical and mental well-being: Our people, Health safety and well-being, p63; Key performance data, p144; Training and education opportunities: Our people, Our approach to people, p46; Skills for the future, p79; Prosperity, Community and social vitality, p100; Social compliance and investment: Prosperity, Our approach to prosperity, p90; Employment and wealth generation, p92; Climate change reporting, p128 – 130	Governance: Stakeholder engagement, Material issues impacting stakeholders	1: Ethical business (1.1) 2: Decision making (2.1) 4: Risk management (4.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A1; A2; B4; C1; C1.1; C2.3; C3.1; C3.2; C4.3; C5.1	Principle 1 Principle 2 Principle 4 Principle 5 Principle 6 Principle 7 Principle 8 Principle 9 Principle 10	TCFD, Governance: (a) Board oversight. TCFD, Governance: (b) Management's role; and Risk Management: (a) Risk identification and assessment process.		PS1: Risk Management	
<b>103-3</b> – Evaluation of the management approach	Environmental compliance: Our planet, Our approach to environmental stewardship, p118; Compliance and monitoring, p121; Key performance data, p149; Water and sanitation management: Our planet, Our approach to environmental stewardship, p122; Water stewardship, p122; Culture and heritage: Our planet, Biodiversity and land use, p139; Our business at a glance, Our 2020 sustainability objectives and targets, p24; Climate change reporting, p128 – 130	Governance: Stakeholder engagement, Material issues impacting stakeholders; Quality of governing body; Progress against strategic milestones	1: Ethical business (1.1) 2: Decision making (2.1) 4: Risk management (4.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A2; B4; C1.1; C2.3; C3.1; C3.2; C4.3; C5.1	Principle 2 Principle 4 Principle 6 Principle 7 Principle 8 Principle 9	TCFD, Strategy: a) Climate-related risks and opportunities; b) Impact of the organizations businesses, strategy and financial planning; c) Resilience of the organization's strategy; and Risk Management: a) Risk identification and assessment process; b) Risk management process; and c) Integration into overall risk management.		PS1: Risk Management PS2: Labour and Working Conditions PS3: Resource Efficiency PS4: Community Health, Safety and Security PS5: Land Acquisition and Involuntary Resettlement PS 6: Biodiversity Management PS7: Indigenous Peoples PS8: Cultural Heritage	

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<b>201-1</b> – Direct economic value generated and distributed	Prosperity, Employment and wealth generation, Total value created and distributed, p92; Climate change reporting, p128 – 130	Prosperity: Employment and wealth generation, Economic contribution; Community and social vitality, Total tax paid; Innovation of better products and service, Social value generated	1: Ethical business (1.5)	<b>SDG 1</b> (1.4.1)		A2; B4; C1.1; C2.3; C3.2		TCFD, Strategy: a) Climate-related risks and opportunities.		PS1: Risk Management PS7: Indigenous Peoples	✓
<b>201-2</b> – Financial implications and other risks and opportunities due to climate change	Our planet, Climate change, energy and GHG emissions, p127 – 130	Planet: Climate change, Greenhouse gas emissions and Paris-aligned GHG emissions targets	4: Risk management (4.1; 4.3)	<b>SDG 1</b> (1.5.3)		C1	Principle 7 Principle 8 Principle 9	TCFD, Risk Management: (b) Risk management process and Strategy: b) Impact of the organizations businesses, strategy and financial planning.		PS1: Risk Management PS2: Labour and Working Conditions PS3: Resource Efficiency and Pollution Prevention	
<b>202-2</b> – Proportion of senior management hired from the local community	Our people, Diversity, inclusion and local employment, p50; Key performance data, p149	Prosperity: Employment and wealth generation, Absolute number and rate of employment	3. Human rights (3.8)	<b>SDG 12</b> (12.6.1; 12.8.1)		A1.1 – A1.2; A2.1 – A2.5; B1; B2; B4; C1.1; C2; C2.1 – C2.3; C3.1; C3.2; C4.1 – C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2			PS2: Labour and Working Conditions	
<b>203-1</b> – Infrastructure investments and services supported	Prosperity, Infrastructure for sustainable cities and communities of the future, p113	Prosperity: Employment and wealth generation, Infrastructure investments and services supported	9. Social performance (9.1; 9.2)	<b>SDG 1</b> (1.4.1; 1.4.2)  <b>SDG 4</b> (4.2.1; 4.2.2; 4.4.1; 4.6.1; 4.7.1; 4.a.1; 4.b.1)  <b>SDG 6</b> (6.1.1; 6.2.1; 6.3.1; 6.4.1; 6.5.1; 6.b.1)		C3.1; C3.2; C4.3; C5.1; C6.1 – C6.5	Principle 8			PS2: Labour and Working Conditions	✓
<b>203-2</b> – Significant indirect economic impacts	Prosperity, borehole case study, p104; Infrastructure for sustainable cities and communities of the future, p113; Economic and physical displacement and livelihood restoration, p115	Prosperity: Employment and wealth generation, Significant indirect economic impacts	9. Social performance (9.1; 9.2)	<b>SDG 1</b> (1.5.3)  <b>SDG 4</b> (4.2.1; 4.2.2; 4.4.1; 4.6.1; 4.7.1; 4.a.1; 4.b.1)  <b>SDG 6</b> (6.1.1; 6.2.1; 6.3.2; 6.4.1; 6.4.2; 6.5.1; 6.b.1)		C3.1; C3.2; C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 4 Principle 5 Principle 6 Principle 8			PS4: Community Health, Safety and Security PS5: Land Acquisition and Involuntary Resettlement PS7: Indigenous Peoples	
<b>204-1</b> – Proportion of spending on local suppliers	Prosperity, Employment and wealth generation, p92; Local procurement, p94 – 95	Prosperity: Innovation of better products and services, Social value generated; Community and social vitality, Additional tax remitted and Total tax paid by country for significant locations	9. Social performance (9.2)	<b>SDG 1</b> (1.1.1)  <b>SDG 6</b> (6.b.1)		A1; A2.3; A2.4; C3.1; C3.2; C4.3; C5.1; C6.1 – C6.5			LPRM 300, Local procurement spending by category	PS1: Risk Management PS2: Labour and Working Conditions	✓
<b>205-2</b> – Communication and training about anti- corruption policies and procedures	Our governance; Ethical behaviour, p32	Governance: Ethical behaviour; Anti-corruption	1: Ethical business (1.2)	<b>SDG 12</b> (12.6.1; 12.8.1)  <b>SDG 4</b> (4.7.1)		A2; B4; C1.1; C2.3; C3.2	Principle 10				✓



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<b>205-3</b> – Confirmed incidents of corruption and actions taken	Key performance data, p149	Governance: Ethical behaviour; Anti-corruption	1: Ethical business (1.2)	<b>SDG 12</b> (12.6.1; 12.8.1)	A2; B4; C1.1; C2.3; C3.2	Principle 10				
<b>207-1</b> – Approach to tax	<b>AIF</b> <b>AFS</b>	Prosperity: Innovation of better products and services; Social value generated; Community and social vitality; Additional tax remitted and Total tax paid by country for significant locations	1: Ethical business (1.5)	<b>SDG 1</b> (1.1.1)	A2; B4; C1.1; C2.3; C3.2				PS1: Risk Management	
<b>207-2</b> – Tax governance, control, and risk management	<b>AIF</b> <b>AFS</b>	Prosperity: Innovation of better products and services; Social value generated; Community and social vitality; Additional tax remitted and Total tax paid by country for significant locations	1: Ethical business (1.5)	<b>SDG 1</b> (1.1.1)	A2; B4; C1; C1.1; C2.3; C3.2				PS1: Risk Management	
<b>207-4</b> – Country-by-country reporting	Prosperity; Employment and wealth generation, p92	Prosperity: Employment and wealth generation; Economic contribution; Innovation of better products and services; Social value generated; Community and social vitality; Additional tax remitted and Total tax paid by country for significant locations	1: Ethical business (1.5)	<b>SDG 1</b> (1.1.1; 1.4.1; 1.4.2; 1.5.3)  <b>SDG 4</b> (4.2.1; 4.2.2; 4.4.1; 4.6.1; 4.7.1; 4.a.1; 4.b.1)  <b>SDG 6</b> (6.1.1; 6.2.1; 6.3.1; 6.3.2; 6.4.1; 6.4.2; 6.5.1; 6.b.1)	A2; B4; C1.1; C2.3; C3.2					
<b>302-1</b> – Energy consumption within the organization	Our planet; Climate change, energy and GHG emissions, p127 – 130; Key performance data, p149	Planet: Climate change; Greenhouse gas emissions and Paris-aligned GHG emissions targets	6: Environmental performance (6.5)	<b>SDG 12</b> (12.2.2)  <b>SDG 13</b> (13.2.1)	C1	Principle 7 Principle 8 Principle 9	TCFD, Metrics and targets: (a) Climate- related metrics in line with strategy and risk- management process; and (c) Climate- related targets and performance against targets.		PS3: Resource Efficiency and Pollution Prevention	
<b>302-2</b> – Energy consumption outside of the organization	Our planet; Climate change, energy and GHG emissions, p127 – 130; Key performance data, p149	Planet: Climate change; Greenhouse gas emissions and Paris-aligned GHG emissions targets	6: Environmental performance (6.5)	<b>SDG 12</b> (12.2.2)  <b>SDG 13</b> (13.2.1)		Principle 7 Principle 8 Principle 9	TCFD, Metrics and targets: (a) Climate- related metrics in line with strategy and risk- management process; and (c) Climate- related targets and performance against targets.		PS3: Resource Efficiency and Pollution Prevention	

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<b>302-4</b> – Reduction of energy consumption	Our planet, Climate change, energy and GHG emissions, p127 – 130; Key performance data, p149; Our prosperity, Infrastructure for sustainable cities and communities of the future, p113	Planet: Climate change; Greenhouse gas emissions and Paris-aligned GHG emissions targets; Resource availability; Resource circularity	6: Environmental performance (6.5)	<b>SDG 12</b> (12.2.1; 12.2.2)  <b>SDG 13</b> (13.2.1)			Principle 7 Principle 8 Principle 9	TCFD, Metrics and targets: (a) Climate- related metrics in line with strategy and risk- management process; and (c) Climate- related targets and performance against targets.		PS3: Resource Efficiency and Pollution Prevention	
<b>303-1</b> – Interactions with water as a shared resource	Our planet, Water stewardship, p122; Key performance data, p149	Planet: Freshwater availability; Impact of freshwater consumption and withdrawal; Water pollution; Impact of water pollution	6: Environmental Performance (6.2)	<b>SDG 6</b> (6.1.1; 6.2.1; 6.3.2; 6.4.1; 6.4.2; 6.5.1; 6.b.1)		C1; C2.3; C3.1; C4.3; C5.1	Principle 1 Principle 2 Principle 7 Principle 8 Principle 9	TCFD, Risk: (b) Risk management process and Metrics and targets (c) Climate- related targets and performance against targets.		PS1: Risk Management PS2: Labour and Working Conditions PS3: Resource Efficiency and Pollution Prevention PS4: Community Health, Safety and Security	✓
<b>303-2</b> – Management of water discharge-related impacts	Our planet, Water stewardship, p122; Key performance data, p149	Planet: Freshwater availability; Impact of freshwater consumption and withdrawal; Water pollution; Impact of water pollution	6: Environmental Performance (6.2)	<b>SDG 6</b> (6.3.1; 6.3.2; 6.5.1; 6.b.1)		C1; C2.3; C3.1; C4.3; C5.1	Principle 1 Principle 2 Principle 7 Principle 8 Principle 9	TCFD, Metrics and targets: (c) Climate- related targets and performance against targets.		PS1: Risk Management PS3: Resource Efficiency and Pollution Prevention PS4: Community Health, Safety and Security	✓
<b>303-3</b> – Water withdrawal	Our planet, Water stewardship, p122; Key performance data, p128	Planet: Freshwater availability; Water consumption and withdrawal in water-stressed areas	6: Environmental Performance (6.2)	<b>SDG 6</b> (6.3.2; 6.4.1; 6.4.2; 6.5.1)		C1; C2.3; C3.1; C4.3; C5.1	Principle 7 Principle 8 Principle 9	TCFD, Metrics and targets: (c) Climate- related targets and performance against targets.		PS3: Resource Efficiency and Pollution Prevention	✓
<b>303-4</b> – Water discharge	Our planet, Water stewardship, p122; Key performance data, p149	Planet: Freshwater availability; Water consumption and withdrawal in water-stressed areas	6: Environmental Performance (6.2)	<b>SDG 6</b> (6.3.1; 6.3.2; 6.4.1; 6.4.2; 6.5.1)		C1; C2.3; C3.1; C4.3; C5.1	Principle 7 Principle 8 Principle 9	TCFD, Metrics and targets: (c) Climate- related targets and performance against targets.		PS3: Resource Efficiency and Pollution Prevention	✓
<b>303-5</b> – Water consumption	Our planet, Water stewardship, p122; Key performance data, p149	Planet: Freshwater availability; Water consumption and withdrawal in water-stressed areas	6: Environmental Performance (6.2)	<b>SDG 6</b> (6.3.2; 6.4.1; 6.4.2; 6.5.1)		C1; C2.3; C3.1; C4.3; C5; C5.1	Principle 7 Principle 8 Principle 9	TCFD, Metrics and targets: (c) Climate- related targets and performance against targets.		PS3: Resource Efficiency and Pollution Prevention	✓
<b>304-1</b> – Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Our planet, Biodiversity and land use, p135; Climate change reporting, p128 – 130	Planet: Nature loss; Land use and ecological sensitivity	7: Conservation of Biodiversity (7.1; 7.2)	<b>SDG 15</b> (15.3.1; 15.5.1; 15.8.1)			Principle 7 Principle 8 Principle 9	TCFD, Risk: (c) Integration into overall risk management.		PS 6: Biodiversity Management	
<b>304-2</b> – Significant impacts of activities, products, and services on biodiversity	Our planet, Biodiversity and land use, p135; Climate change reporting, p128 – 130	Planet: Nature loss; Impact on land use and conservation	7: Conservation of Biodiversity (7.1; 7.2)	<b>SDG 15</b> (15.3.1; 15.5.1; 15.8.1)			Principle 7 Principle 8 Principle 9	TCFD, Risk Management: (a) Risk identification and assessment process.		PS1: Risk Management PS5: Land Acquisition and Involuntary Resettlement PS 6: Biodiversity Management	





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<b>305-1</b> – Direct (Scope 1) GHG emissions	Our planet, Climate change, reporting strategy, p127 – 130; GHG emission mitigation, p132; Key performance data, p149 – 150	Planet: Climate change; Greenhouse gas emissions and Paris-aligned GHG emissions targets	6: Environmental Performance (6.5)	<b>SDG 12</b> (12.2.2) <b>SDG 13</b> (13.1.3; 13.2.1; 13.3.2)			Principle 7 Principle 8 Principle 9	TCFD, Metrics and Targets: (a) Climate-related metrics in line with strategy and risk-management process; (b) Scope 1,2, and 3 greenhouse gas (GHG) metrics and the related risks; and (c) Climate-related targets and performance against targets.		PS3: Resource Efficiency and Pollution Prevention	
<b>305-2</b> – Energy indirect (Scope 2) GHG emissions	Our planet, Climate change, reporting strategy, p127 – 130; GHG emission mitigation, p132; Key performance data, p149 – 150	Planet: Climate change; Greenhouse gas emissions and Paris-aligned GHG emissions targets	6: Environmental Performance (6.5)	<b>SDG 12</b> (12.2.2) <b>SDG 13</b> (13.1.3; 13.2.1; 13.3.2)			Principle 7 Principle 8 Principle 9	TCFD, Metrics and Targets (a) Climate-related metrics in line with strategy and risk-management process; and (b) Scope 1, 2, and 3 greenhouse gas (GHG) metrics and the related risks.		PS3: Resource Efficiency and Pollution Prevention	
<b>305-3</b> – Other indirect (Scope 3) GHG emissions	Our planet, Climate change, reporting strategy, p127 – 130; GHG emission mitigation, p132; Key performance data, p149 – 150	Planet: Climate change; Greenhouse gas emissions and Paris-aligned GHG emissions targets	6: Environmental Performance (6.5)	<b>SDG 12</b> (12.2.2) <b>SDG 13</b> (13.1.3; 13.2.1; 13.3.2)			Principle 7 Principle 8 Principle 9	TCFD, Metrics and targets: (b) Scope 1, 2, and 3 greenhouse gas (GHG) metrics and the related risks.		PS3: Resource Efficiency and Pollution Prevention	
<b>306-3</b> – Significant spills	Key performance data, p149 – 150	Planet: Water pollution; Impact of water pollution	6: Environmental Performance (6.4)	<b>SDG 6</b> (6.3.1; 6.3.2; 6.5.1) <b>SDG 12</b> (12.2.2; 12.5.1)		C1; C2.3; C3.1; C4.3; C5.1	Principle 7 Principle 8 Principle 9	TCFD, Metrics and Targets: (a) Climate-related metrics in line with strategy and risk-management process.		PS3: Resource Efficiency and Pollution Prevention	
<b>307-1</b> – Non-compliance with environmental laws and regulations	Our planet, Compliance and monitoring, p121	Planet: All themes	1: Ethical business (1.1)	<b>SDG 12</b> (12.6.1; 12.8.1)		A2; B4; C1.1; C2.3; C3.2	Principle 7 Principle 8 Principle 9	TCFD, Metrics and Targets: (a) Climate-related metrics in line with strategy and risk-management process.		PS1: Risk Management PS3: Resource Efficiency and Pollution Prevention	✓
<b>401-2</b> – Benefits provided to full time employees that are provided to temporary or part time employees	Our people, Performance monitoring, remuneration and retention, p60		3: Human rights (3.4; 3.5; 3.8)	<b>SDG 12</b> (12.6.1; 12.8.1) <b>SDG 4</b> (4.7.1)		A1.1; A1.2; A2.1 – A2.5; B1; B2; B4; C1.1; C2.1 – C2.3; C3.1; C3.2; C4.1 – C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 6			PS1: Risk Management PS2: Labour and Working Conditions	
<b>401-3</b> – Parental leave	Our people, Performance monitoring, remuneration and retention, p60		3: Human rights (3.4)	<b>SDG 12</b> (12.6.1; 12.8.1) <b>SDG 4</b> (4.7.1)		A1.1; A1.2; A2.1; – A2.5; B1; B2; B4; C1.1; C2.1 – C2.3; C3.1; C3.2; C4.1 – C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2			PS1: Risk Management PS2: Labour and Working Conditions	

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<b>403-2</b> – Hazard identification, risk assessment, and incident investigation	Our people; Health, safety and well-being, p63	People: Health and well- being; Health and safety, and Employee well-being	4: Risk Management (4.3)	<b>SDG 1</b> (1.5.3)  <b>SDG 6</b> (6.5.1)		C1; C2.3; C3.1; C4.3; C5.1	Principle 1 Principle 2 Principle 7			PS1: Risk Management PS2: Labour and Working Conditions PS4: Community Health, Safety and Security	
<b>403-3</b> – Occupational health services	Our people; Health, safety and well-being, p63	People: Health and well-being; Health and safety	5: Health and safety (5.1; 5.2)	<b>SDG 1</b> (1.5.3)  <b>SDG 6</b> (6.1.1; 6.2.1; 6.5.1)		C1; C2.3; C3.1; C4.3; C5.1				PS2: Labour and Working Conditions	✓
<b>403-4</b> – Worker participation, consultation, and communication on occupational health and safety	Our people; Health, safety and well-being, p63	People: Health and well-being; Health and safety	5: Health and safety (5.1; 5.2)	<b>SDG 1</b> (1.5.3)  <b>SDG 6</b> (6.1.1; 6.2.1; 6.5.1)		C1; C2.3; C3.1; C4.3; C5.1	Principle 1 Principle 2			PS1: Risk Management PS2: Labour and Working Conditions	✓
<b>403-5</b> – Worker training on occupational health and safety	Our people; Health, safety and well-being, p63; Key performance data, p149 – 150	People: Health and well-being; Health and safety	5: Health and safety (5.2)	<b>SDG 1</b> (1.5.3)		C1; C2.3; C3.1; C4.3; C5.1				PS2: Labour and Working Conditions	✓
<b>403-6</b> – Promotion of worker health	Our people; Health, safety and well-being, p63	People: Health and well-being; Health and safety	5: Health and safety (5.1; 5.2)	<b>SDG 1</b> (1.4.1; 1.5.3)  <b>SDG 6</b> (6.1.1; 6.2.1)		C1; C2.3; C3.1; C4.3; C5; C5.1	Principle 1 Principle 2 Principle 4			PS1: Risk Management PS2: Labour and Working Conditions	✓
<b>403-7</b> – Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Our people; Health, safety and well-being, p63; Local procurement, p94 – 95	People: Health and well-being; Health and safety	4: Risk management (4.3) 5: Health and safety (5.1; 5.2)	<b>SDG 1</b> (1.5.3)  <b>SDG 6</b> (6.1.1; 6.2.1; 6.5.1)		C1; C2.3; C3.1; C4.3; C5.1	Principle 4		LPRM 401, Due diligence process and 403, Training and guidance for suppliers	PS1: Risk Management PS 2: Labour and Working Conditions	✓
<b>403-8</b> – Workers covered by an occupational health and safety management system	Our people; Health, safety and well-being, p63; Local procurement, p94 – 95; Key performance data, p149 – 150	People: Health and well-being; Health and safety	3: Human rights (3.4) 5: Health and safety (5.1)	<b>SDG 1</b> (1.5.3)  <b>SDG 6</b> (6.5.1)		A1.1; A1.2; A2.1 – A2.5; B1; B2; B4; C1.1; C2.1 – C2.3; C3.1; C3.2; C4.1 – C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2		LPRM 401, Due diligence process and 403, Training and guidance for suppliers	PS 2: Labour and Working Conditions	✓
<b>403-9</b> – Work related injuries	Our people; Health, safety and well-being, p59; Key performance data, p149 – 150	People: Health and well-being; Health and safety	4: Risk management (4.3) 5: Health and safety (5.1)	<b>SDG 1</b> (1.5.3)		C1; C2.3; C3.1; C4.3; C5; C5.1	Principle 1 Principle 2			PS 2: Labour and Working Conditions	✓
<b>403-10</b> – Work-related ill health	Our people; Health, safety and well-being, p63	People: Health and well-being; Employee well-being	4: Risk management (4.3) 5: Health and safety (5.1)	<b>SDG 1</b> (1.5.3)		C1; C2.3; C3.1; C4.3; C5.1	Principle 1 Principle 2			PS 2: Labour and Working Conditions	✓



## GRI Content Index

GRI Standards Disclosure	Disclosure details/ weblink	WEF SCM Pillar, theme and metric	ICMM Principles	Priority UN SDGs and indicators	UNGP Principles	UNGC Principles	TCFD and CDP Disclosures	LPRM Disclosures	IFC Performance Standards	IVN Materiality
<b>404-2</b> – Programs for upgrading employee skills and transition assistance programs	Our people, skills for the future, p79; Key performance data, p147	People: Skills for the future; Training provided and Number of unfilled skilled positions	3: Human rights (3.4)	<b>SDG 1</b> (1.1.1)  <b>SDG 4</b> (4.4.1; 4.6.1; 4.b.1)	A1.1; A1.2; A2.1 – A2.5; B1; B2; B4; C1.1; C2; C2.1 – C2.3; C3.1 – C3.2; C4.1 – C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 6			PS 2: Labour and Working Conditions	
<b>404-3</b> – Percentage of employees receiving regular performance and career development reviews	Our people; Performance monitoring, remuneration and retention, p62; Key performance data, p146	People: Skills for the future, training provided	3: Human rights (3.4)	<b>SDG 1</b> (1.1.1)  <b>SDG 4</b> (4.7.1)	A1.1; A1.2; A2.1 – A2.5; B1; B2; B4; C1.1; C2.1 – C2.3; C3.1; C3.2; C4.1 – C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 6			PS 2: Labour and Working Conditions	
<b>405-1</b> – Diversity of governance bodies and employees	Our people, Diversity, inclusion and local employment, p50; Key performance data, p146	Principles of Governance: Quality of governing body, Governance body composition People: Dignity and equality, Diversity and inclusion, and pay equality	3: Human rights (3.8)	<b>SDG 4</b> (4.7.1)	A2.3; A2.4; C1	Principle 1 Principle 2 Principle 6			PS 2: Labour and Working Conditions	
<b>407-1</b> – Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Our people, Labour relations, p49; Key performance data, p145	People: Dignity and equality, Freedom of association and collective bargaining at risk	4: Risk management (4.2)	<b>SDG 4</b> (4.7.1)	A1.1; A1.2; A2.1 – A2.5; B1; B2; B4; C1.1; C2.1 – C2.3; C3.1; C3.2; C4.1 – C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 3			PS1: Risk Management PS 2: Labour and Working Conditions	
<b>408-1</b> – Operations and suppliers at significant risk for incidents of child labour	Our governance, The human rights lens, p42	People: Dignity and equality, Risks for incidents of child, forced or compulsory labour; and Human rights review, grievance impact and modern slavery	3: Human rights (3.1; 3.4)	<b>SDG 4</b> (4.7.1)	A1.1; 1.2; A2.1 – A2.5; B1; B2; B4; C1.1; C2.1 – C2.3; C3.1 – C3.2; C4.1 – C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 5			PS1: Risk Management PS 2: Labour and Working Conditions PS7: Indigenous Peoples	
<b>410-1</b> – Security personnel trained in human rights policies or price	Our governance, The human rights lens, p42	People: Dignity and equality, Human rights review, grievance impact and modern slavery	3: Human rights (3.1; 3.3)	<b>SDG 4</b> (4.7.1)	A1.1; 1.2; A2.1 – A2.5; B1; B2; B4; C1.1; C2.1 – C2.3; C3.1 – C3.2; C4.1 – C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2			PS1: Risk Management PS4: Community Health, Safety and Security PS7: Indigenous Peoples	
<b>412-1</b> – Operations that have been subject to human rights reviews or impact assessments	Our governance, The human rights lens, p42	People: Dignity and equality, Human rights review, grievance impact and modern slavery	3: Human rights (3.1 – 3.8)	<b>SDG 4</b> (4.7.1)	A1.1; 1.2; A2.1 – A2.5; B1; B2; B4; C1.1; C2.1 – C2.3; C3.1 – C3.2; C4.1 – C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 4 Principle 5 Principle 6			PS1: Risk Management PS 2: Labour and Working Conditions PS4: Community Health, Safety and Security PS7: Indigenous Peoples	
<b>412-2</b> – Employee training on human rights policies or procedures	Our governance, The human rights lens, p42	People: Dignity and equality, Human rights review, grievance impact and modern slavery	3: Human rights (3.1; 3.4)	<b>SDG 4</b> (4.7.1)	A1.1; A1.2; A2.1 – A2.5; B1; B2; B4; C1.1; C2.1 – C2.3; C3.1; C3.2; C4.1 – C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2 Principle 4 Principle 6			PS1: Risk Management PS 2: Labour and Working Conditions PS7: Indigenous Peoples	

## GRI Content Index

GRI Standards Disclosure	Disclosure details/ weblink	WEF SCM Pillar, theme and metric	ICMM Principles	Priority UN SDGs and indicators	UNGP Principles	UNGC Principles	TCFD and CDP Disclosures	LPRM Disclosures	IFC Performance Standards	IVN Materiality
<b>413-1</b> – Operations with local community engagement, impact assessments, and development programs	Our governance, Our strategic stakeholder management, p34; Our people, Skills for the future, p79; Our Prosperity, Employment and wealth generation, Transformative innovation through enterprise and supplier development, p98; Community and social vitality, p100; Local procurement, p94 – 95	Prosperity: Employment and wealth generation, Infrastructure investments and services supported; Innovation of better products and services, Social value generated	9: Social Performance (9.1 – 9.3)	<b>SDG 1</b> (1.4.1; 1.4.2; 1.5.3)  <b>SDG 4</b> (4.2.1; 4.2.2; 4.1.1; 4.7.1; 4.a.1; 4.b.1)  <b>SDG 6</b> (6.1.1; 6.2.1; 6.3.2; 6.4.2; 6.5.1; 6.b.1)  <b>SDG 12</b> (12.2.1; 12.2.2; 12.7.1; 12.8.1)  <b>SDG 15</b> (15.3.1)	A1; C3.1; C3.2; C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2		LPRM 500, Methods to incentivize local procurement	PS1: Risk Management PS4: Community Health, Safety and Security PS5: Land Acquisition and Involuntary Resettlement PS7: Indigenous Peoples	
<b>413-2</b> – Operations with significant actual and potential negative impacts on local communities	Our governance, Our strategic stakeholder management, p98; Our prosperity, Economic and physical displacement and livelihood restoration, p113	Prosperity: Employment and wealth generation, Significant indirect economic impacts	3: Human rights (3.1; 3.2; 3.6; 3.7)	<b>SDG 1</b> (1.4.1; 1.4.2; 1.5.3)  <b>SDG 6</b> (6.1.1; 6.2.1; 6.4.2; 6.5.1; 6.b.1)  <b>SDG 12</b> (12.2.1)  <b>SDG 15</b> (15.3.1)	A1.1; A1.2; A2.1 – A2.5; B1; B2; B4; C1.1; C2.1 – C2.3; C3.1; C3.2; C4.1 – C4.3; C4.2; C4.3; C5.1; C6.1 – C6.5	Principle 1 Principle 2			PS1: Risk Management PS4: Community Health, Safety and Security PS5: Land Acquisition and Involuntary Resettlement PS6: Biodiversity Management PS7: Indigenous Peoples PS8: Cultural Heritage	



# 9 APPENDICES

## DISCLOSURE OF TECHNICAL INFORMATION

Disclosures of a scientific or technical nature regarding the Kamoa-Kakula Mining Complex in this Sustainability Report have been reviewed and approved by Steve Amos, who is considered, by virtue of his education, experience and professional association, a Qualified Person under the terms of NI 43-101. Mr. Amos is not considered independent under NI 43-101 as he is the Head of the Kamoa Project. Mr. Amos has verified the technical data disclosed in this Sustainability Report.

Other disclosures of a scientific or technical nature in this Sustainability Report have been reviewed and approved by Stephen Torr, who is considered, by virtue of his education, experience and professional association, a Qualified Person under the terms of NI 43-101. Mr. Torr is not considered independent under NI 43-101 as he is the Vice President, Geosciences. Mr. Torr has verified the other technical data disclosed in this Sustainability Report.

Ivanhoe has prepared a current, independent, NI 43-101-compliant technical report for each of the Kipushi Project and the Kamoa-Kakula Mining Complex, which are available under the Company's SEDAR profile at [www.sedar.com](http://www.sedar.com):

- The Kamoa-Kakula Integrated Development Plan 2020 dated October 13, 2020, prepared by OreWin Pty Ltd., China Nerin Engineering Co., Ltd., DRA Global, Epoch Resources, Golder Associates Africa, KGHM Cuprum R&D Centre Ltd., Outotec Oyj, Paterson and Cooke, Stantec Consulting International LLC, SRK Consulting

Inc., and Wood plc., covering the Company's Kamoa-Kakula Mining Complex; and

- The Kipushi 2022 Feasibility Study dated February 14, 2022, prepared by OreWin Pty Ltd., MSA Group (Pty) Ltd., SRK Consulting (South Africa) (Pty) Ltd, and METC Engineering, covering the company's Kipushi Project.

Ivanhoe also has prepared and filed a technical report for the Platreef Project:

- The Platreef Integrated Development Plan 2020 dated December 6, 2020, prepared by OreWin Pty Ltd., Wood plc (formerly Amec Foster Wheeler), SRK Consulting Inc., Stantec Consulting International LLC, DRA Global, and Golder Associates Africa, covering the company's Platreef Project.

A new current technical report for the Platreef Project including disclosures regarding the Platreef 2022 FS will be filed on SEDAR at [www.sedar.com](http://www.sedar.com) within the time required under NI 43-101.

These technical reports include relevant information regarding all matters relevant to the scientific and technical disclosure contained in this Sustainability Report in respect of the Platreef Project, Kipushi Project and Kamoa-Kakula Mining Complex.

## FORWARD-LOOKING STATEMENTS

Certain statements in this Sustainability Report constitute "forward-looking statements" or "forward-looking information" within the meaning of applicable securities laws. Such statements and information involve known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the Company, its projects, or industry

results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or information. Such statements can be identified by the use of words such as "may", "would", "could", "will", "intend", "expect", "believe", "plan", "anticipate", "estimate", "scheduled", "forecast", "predict" and other similar terminology, or state that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved.

These statements reflect the Company's current expectations regarding future events, performance and results and speak only as of the date of this Sustainability Report. Such statements include without limitation, the timing and results of: (i) statements regarding the expected increase in processing capacity resulting from the planned de-bottlenecking program and the cost thereof; (ii) statements regarding copper production from Kamoa Copper's first two phases are projected to exceed 450,000 tonnes per year by Q2 2023; (iii) statements regarding production guidance of between 290,000 and 340,000 tonnes of contained copper in concentrate for 2022 from the Kamoa-Kakula Mining Complex; (iv) statements regarding the design and expected smelting capacity of Kamoa-Kakula's direct-to-blister flash smelter; (v) statements regarding relatively minor modifications to the Kamoa-Kakula Phase 1 concentrator that is expected to increase ore throughput from the current design of 475 tonnes per hour to 580 tonnes per hour; (vi) statements regarding Turbine 5 is expected to produce 162 MW of renewable hydropower, providing the Kamoa-Kakula Mining Complex and the planned, associated smelter with abundant, sustainable electricity

for future expansions; (vii) statements regarding Kamoa-Kakula's intention to work with its joint-venture partners and leading underground mining equipment manufacturers, aiming to become the first net-zero carbon emitter among the top-tier copper mines; (viii) statements regarding new independent feasibility study for the Platreef Project and statements confirming the viability of a new phased development pathway to fast-track Platreef into production by Q3 2024, based on a steady state production rate of 5.2 million tonnes per annum (Mtpa); (ix) statements regarding the changeover construction at Platreef Shaft 1 being on schedule for commencement of rock hoisting early in 2022; (x) statements regarding Platreef's shaft 2 headframe construction being well-advanced; (xi) statements regarding the supply of treated bulk water for Platreef's Phase 1 and Phase 2 operations; (xii) statements regarding equipping the official launch of Platreef's permanent training academy being planned for 2022, once fully equipped; (xiii) statements regarding the new agreement signed between Kipushi Holding and Gécamines to return the ultra-high-grade Kipushi Mine back to commercial production; (xiv) statements regarding the planned resumption of commercial production at Kipushi based on a two year construction timeline; (xv) statements regarding 50 boreholes of potable water are planned to be drilled around the Kipushi district over five years, to reach areas not served by the current distribution reticulation; and (xvi) statements regarding aspirational groupwide targets for gender inclusion across all levels of the organization.

Furthermore, with respect to this specific forward-looking information concerning the operation and development of the Kamoa-

Kakula, Platreef and Kipushi projects, the Company has based its assumptions and analysis on certain factors that are inherently uncertain. Uncertainties include: (i) the adequacy of infrastructure; (ii) geological characteristics; (iii) metallurgical characteristics of the mineralization; (iv) the ability to develop adequate processing capacity; (v) the price of copper, nickel, zinc, platinum, palladium, rhodium and gold; (vi) the availability of equipment and facilities necessary to complete development; (vii) the cost of consumables and mining and processing equipment; (viii) unforeseen technological and engineering problems; (ix) accidents or acts of sabotage or terrorism; (x) currency fluctuations; (xi) changes in regulations; (xii) the compliance by joint venture partners with terms of agreements; (xiii) the availability and productivity of skilled labour; (xiv) the regulation of the mining industry by various governmental agencies; (xv) the ability to raise sufficient capital to develop such projects; (xvi) changes in project scope or design; (xvii) recoveries, mining rates and grade; (xviii) political factors; (xviii) water inflow into the mine and its potential effect on mining operations, and (xix) the consistency and availability of electric power.

Forward-looking statements and information involve significant risks and uncertainties, should not be read as guarantees of future performance or results and will not necessarily be accurate indicators of whether or not such results will be achieved. A number of factors could cause actual results to differ materially from the results discussed in the forward-looking statements or information, including, but not limited to, the factors in the Company's Annual

Information Form and MD&A available at [www.sedar.com](http://www.sedar.com), as well as unexpected changes in laws, rules or regulations, or their enforcement by applicable authorities; the failure of parties to contracts with the Company to perform as agreed; social or labour unrest; changes in commodity prices; and the failure of exploration programs or studies to deliver anticipated results or results that would justify and support continued exploration, studies, development or operations.

Although the forward-looking statements contained in this Sustainability Report are based upon what management of the Company believes are reasonable assumptions, the Company cannot assure investors that actual results will be consistent with these forward-looking statements. These forward-looking statements are made as of the date of this Sustainability Report and are expressly qualified in their entirety by this cautionary statement. Subject to applicable securities laws, the Company does not assume any obligation to update or revise the forward-looking statements contained herein to reflect events or circumstances occurring after the date of this Sustainability Report.

The Company's actual results could differ materially from those anticipated in these forward-looking statements as a result of the factors set forth in the Company's Annual Information Form and MD&A available at [www.sedar.com](http://www.sedar.com).

# Abbreviations

AIF	Annual Information Forum
B-BBEE	Broad-Based Black Economic Empowerment
B-BBEE SPV	Broad-Based Black Economic Empowerment Special Purpose Vehicle
CDP	Carbon Disclosure Project
CFO	Chief Financial Officer
Covid-19	Novel Coronavirus-19
CPD	Continuous Professional Development
CSI	Corporate Social Investment
DRC	Democratic Republic of Congo
DMRE	Department of Mineral Resources and Energy
EMP	Environmental Management Plan
ESD	Enterprise and Supplier Development
ESG	Environmental, Social and Governance
ESIA	Environmental and Social Impact Assessment
GHG	Greenhouse Gas
GRI	Global Reporting Initiative
HIV	Human Immunodeficiency Virus
IAP2	International Association for Public Participation
ICMM	International Council of Mining and Metals
ICT	Information and Communications Technology
ICU	Intensive Care Unit
IDP	Individual Development Plans
IFC	International Finance Corporation Council
IPP	Independent Power Producer
KCS	Kamoa Consumer Substation
kl	Kilolitres
KPIs	Key Performance Indicators
LED	Local Economic Development
LPRM	Local Procurement Reporting Mechanism
LTJ	Lost-Time Injury
LTIFR	Lost-Time Injury Frequency Rate
MD&A	Management Discussion and Analysis
MVA	Megavolt-Ampere
MW	Megawatt
MWh	Megawatt Hour
NEOs	Named Executive Officers
NGO	Non-Governmental Organization
OECD	Organization for Economic Co-Operation and Development
PAP	Project-Affected Person
PBO	Public Benefit Organization
PGMs	Platinum Group Metals
Q	Quarter
RAP	Resettlement Action Plan

RSA	Republic of South Africa
SDGD	Sustainable Development Goals Disclosure
SEDAR	System for Electronic Document Analysis and Retrieval
SDG	Sustainable Development Goal
SHE	Safety, Health and Environment
SLAs	Service Level Agreements
SLO	Social Licence to Operate
SLP	Social and Labour Plan
SMME	Small, Medium and Micro Enterprise
SNEL	Societe Nationale d'Electricite
STEM	Science, Technology, Engineering and Mathematics
TCFD	Task Force for Climate-Related Financial Disclosure
TRIFR	Total Recordable Injury Frequency Rate
TSF	Tailing Storage Facility
UN	United Nations
UNDHR	United Nations Declaration of Human Rights
UNGC	United Nations Global Compact
UNGP	United Nations Guiding Principles on Business and Human Rights
WASH	Water, Sanitation and Hygiene
WEF	World Economic Forum
WEF SCM	World Economic Forum Stakeholder Capitalism Metrics

## Glossary

2030 Agenda	2030 Agenda for Sustainable Development
Board	Board of Directors
Code	Ivanhoe Mines Ltd. Our Code of Business Conduct and Ethics
Company	Ivanhoe Mines Ltd.
Crystal River	Crystal River Global Limited
Gecamines	Gécamines SA (Democratic Republic of Congo) state-owned mining company
Ivanhoe	Ivanhoe Mines Ltd.
Ivanhoe Mines	Ivanhoe Mines Ltd.
The Trust	Bonega Communities Trust
Zijin	Zijin Mining Group Co. Ltd.
Zijin Mining	Zijin Mining Group Co. Ltd.



# Stakeholder feedback form

We encourage all stakeholders to share their views on Ivanhoe Mines' performance related to delivering on its strategic commitment to create shared value for the Company and its stakeholders and to minimize the impact the Company's activities have on the environment.

Your opinion matters. Please share your views with us.

Which stakeholder group do you belong to? (You may tick more than one)							
Employee	<input type="checkbox"/>	Shareholder	<input type="checkbox"/>	Investor	<input type="checkbox"/>	Customer	<input type="checkbox"/>
Analyst	<input type="checkbox"/>	Supplier	<input type="checkbox"/>	Community	<input type="checkbox"/>	NGO	<input type="checkbox"/>
Other	<input type="checkbox"/>						
Does the report address issues of greatest interest to you?							
Comprehensively	<input type="checkbox"/>	Partially	<input type="checkbox"/>	Not at all	<input type="checkbox"/>		
Please identify any additional matters that you think should be reported on:							
What was your overall impression of the report in terms of:							
	Excellent	Good	Fair	Poor			
Content and scope							
Special reports							
Design and layout							
Do you have any additional comments on the report or on Ivanhoe Mines' performance in general?							
Your name, e-mail address and other contact details:							

## Contact details

### Jasmine Abrahams

Group Manager; Sustainability

Physical Address: 82 on Maude, 82 Maude Street, Sandton, South Africa

Telephone: +27 83 306 5239

E-mail: jasminea@ivanplats.com

# Information and contact details

## Ivanhoe Mines Ltd.

Incorporation number: C0949887  
 Toronto Stock Exchange (TSX):  
 IVN OTCQX Best Market: IVPF  
 Website: [www.ivanhoemines.com](http://www.ivanhoemines.com)

## Registered and Corporate Office

### Canada

654-999 Canada Place  
 Vancouver, BC  
 Canada V6C3E1  
 Phone: +1 604 688 6630

### South Africa

82 on Maude, Second Floor  
 82 Maude Street Sandton  
 South Africa, 2146  
 Phone: +27 11 088 4300

## Sustainable Development

Name: Jasmine Abrahams  
 Title: Group Manager: Sustainability  
 Telephone: +27 83 306 5239  
 E-mail: [jasminea@ivanplats.com](mailto:jasminea@ivanplats.com)

## Investor Relations

Name: Bill Trenaman  
 Title: Vice President,  
 Investor Relations  
 Telephone: +1 604 688 6630  
 E-mail: [billtr@ivancorp.net](mailto:billtr@ivancorp.net)

## Governance and Compliance

Name: Mary Vincelli  
 Title: Vice President, Compliance  
 and Corporate Secretary  
 Telephone: +1 604 688 6630  
 E-mail: [mary@ivancorp.net](mailto:mary@ivancorp.net)

## Independent Auditor

PricewaterhouseCoopers Inc.

## Directors

Robert Friedland  
 Yufeng "Miles" Sun  
 Tadeu Carneiro  
 Jinghe Chen  
 William Hayden  
 Martie Janse van Rensburg  
 Manfu Ma  
 Peter Meredith  
 Kgalema Motlanthe  
 Nunu Ntshingila  
 Guy de Selliers

## Transfer Agent

AST Trust Company (Canada)  
 1600-1066 West Hastings Street  
 Vancouver, British Columbia  
 V6E 3X1  
 Toll-free in Canada and the U.S.  
 1 800 387 0825  
 Outside Canada and the U.S.  
 +1 416 643 5500

We encourage all stakeholders to share their views on Ivanhoe Mines' performance related to delivering on its strategic commitment to create shared value for the Company and its stakeholders and to minimize the impact the Company's activities has on the environment.

**Your opinion matters.**  
**Please share your views with us.**



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[illegible]





