

# IVANHOE MINES

1	OUR APPROACH TO SUSTAINABILITY REPORTING	_ 1
	About this report	4
	Message from the Chair of our Sustainability Committee, Guy de Selliers	6
	Message from the President and CFO, Marna Cloete	8
	Message from the Executive Vice President, Sustainability, Patricia Makhesha	10
	Message from the Group Manager, Sustainability, Jasmine Abrahams	12
2	OUR BUSINESS AT A GLANCE	14
	Our company and the metals to fuel the green revolution	14
	Our principal projects	16
2	OUR STRATEGY, GOVERNANCE AND	20
J	PRIORITIES	
	Sustainability strategy and key objectives	20
	Governance and accountability	24
	Business ethics	26
	Materiality assessment	26
	The human rights lens	30
	Ivanhoe Mines and the United Nations' Sustainable Development Goals	34
4	OUR STRATEGIC STAKEHOLDER Management	36
4		<b>36</b>
4	MANAGEMENT	
4	MANAGEMENT Stakeholder mapping	36
5	MANAGEMENT Stakeholder mapping Engagement	36 38
<b>5</b>	MANAGEMENT Stakeholder mapping Engagement Complaints and grievance mechanisms	36 38 43
5	MANAGEMENT Stakeholder mapping Engagement Complaints and grievance mechanisms OUR PERFORMANCE	36 38 43 44
5	MANAGEMENT Stakeholder mapping Engagement Complaints and grievance mechanisms OUR PERFORMANCE Our 2019 performance at a glance	36 38 43 44 44
5	MANAGEMENT Stakeholder mapping Engagement Complaints and grievance mechanisms OUR PERFORMANCE Our 2019 performance at a glance Economic capital Total value created and distributed	36 38 43 <b>44</b> 44
5	MANAGEMENT Stakeholder mapping Engagement Complaints and grievance mechanisms OUR PERFORMANCE Our 2019 performance at a glance Economic capital Total value created and distributed local procurement	36 38 43 44 44 46 46
5	MANAGEMENT Stakeholder mapping Engagement Complaints and grievance mechanisms OUR PERFORMANCE Our 2019 performance at a glance Economic capital Total value created and distributed local procurement Local Procurement Mining Local Procurement Reporting	36 38 43 44 44 46 46
5	MANAGEMENT Stakeholder mapping Engagement Complaints and grievance mechanisms OUR PERFORMANCE Our 2019 performance at a glance Economic capital Total value created and distributed local procurement Local Procurement Mining Local Procurement Reporting Mechanism (LPRM)	36 38 43 44 44 46 46 47
5	MANAGEMENT Stakeholder mapping Engagement Complaints and grievance mechanisms OUR PERFORMANCE Our 2019 performance at a glance Economic capital Total value created and distributed local procurement Local Procurement Mining Local Procurement Reporting Mechanism (LPRM) Enterprise and supplier development Broad-based black economic	36 38 43 44 46 46 47 49
5	MANAGEMENT Stakeholder mapping Engagement Complaints and grievance mechanisms OUR PERFORMANCE Our 2019 performance at a glance Economic capital Total value created and distributed local procurement Local Procurement Mining Local Procurement Reporting Mechanism (LPRM) Enterprise and supplier development Broad-based black economic empowerment at our Platreef Project	36 38 43 44 46 46 47 49 52 54
5	MANAGEMENT Stakeholder mapping Engagement Complaints and grievance mechanisms  OUR PERFORMANCE Our 2019 performance at a glance Economic capital Total value created and distributed local procurement Local Procurement Mining Local Procurement Reporting Mechanism (LPRM) Enterprise and supplier development Broad-based black economic empowerment at our Platreef Project Human capital	36 38 43 44 46 46 47 49 52 54
5	MANAGEMENT Stakeholder mapping Engagement Complaints and grievance mechanisms  OUR PERFORMANCE Our 2019 performance at a glance Economic capital Total value created and distributed local procurement Local Procurement Mining Local Procurement Reporting Mechanism (LPRM) Enterprise and supplier development Broad-based black economic empowerment at our Platreef Project Human capital Our workforce	36 38 43 44 46 46 47 49 52 54 56
5	MANAGEMENT Stakeholder mapping Engagement Complaints and grievance mechanisms OUR PERFORMANCE Our 2019 performance at a glance Economic capital Total value created and distributed local procurement Local Procurement Mining Local Procurement Reporting Mechanism (LPRM) Enterprise and supplier development Broad-based black economic empowerment at our Platreef Project Human capital Our workforce Diversity, inclusion and local employment	36 38 43 44 46 46 47 49 52 54 56 57 58
5	MANAGEMENT Stakeholder mapping Engagement Complaints and grievance mechanisms  OUR PERFORMANCE Our 2019 performance at a glance Economic capital Total value created and distributed local procurement Local Procurement Mining Local Procurement Reporting Mechanism (LPRM) Enterprise and supplier development Broad-based black economic empowerment at our Platreef Project Human capital Our workforce Diversity, inclusion and local employment Recruitment	36 38 43 44 46 46 47 49 52 54 56 57 58 59
5	MANAGEMENT  Stakeholder mapping  Engagement  Complaints and grievance mechanisms  OUR PERFORMANCE  Our 2019 performance at a glance  Economic capital  Total value created and distributed local procurement  Local Procurement  Mining Local Procurement Reporting Mechanism (LPRM)  Enterprise and supplier development  Broad-based black economic empowerment at our Platreef Project  Human capital  Our workforce  Diversity, inclusion and local employment  Recruitment  Health and safety performance	36 38 43 44 46 46 47 49 52 54 56 57 58 59 60

Educational infrastructure and support	72
Community infrastructure and support	76
Economic and physical displacement, and	78
livelihood restoration	
Natural capital	82
Our strategic approach	82
Compliance and monitoring	82
Environmental targets and initiatives	85
Water stewardship	86
Climate change and energy	87
Energy	92
Water	93
Biodiversity and land use	98
Tailings and waste management	101
Intellectual capital	102
Resource development	102
Mine development	103
Information management systems	103
Infrastructure capital	104
Bulk power	104
Dain powor	
Access infrastructure	106
•	106 <b>107</b>
Access infrastructure	
Access infrastructure  MINE CLOSURE	107
Access infrastructure MINE CLOSURE CONCLUSION	107 108
Access infrastructure MINE CLOSURE CONCLUSION APPENDICES	107 108 110
Access infrastructure  MINE CLOSURE  CONCLUSION  APPENDICES  Qualified Person's statement  Cautionary statement on forward-looking	107 108 110
Access infrastructure  MINE CLOSURE  CONCLUSION  APPENDICES  Qualified Person's statement  Cautionary statement on forward-looking information  Global Reporting Initiative Standards Index for the Ivanhoe Mines Sustainability	107 108 110 110
Access infrastructure  MINE CLOSURE  CONCLUSION  APPENDICES  Qualified Person's statement  Cautionary statement on forward-looking information  Global Reporting Initiative Standards Index for the Ivanhoe Mines Sustainability Report 2019  Alignment with Mining Local Procurement	107 108 110 110 111 113
Access infrastructure  MINE CLOSURE  CONCLUSION  APPENDICES  Qualified Person's statement  Cautionary statement on forward-looking information  Global Reporting Initiative Standards Index for the Ivanhoe Mines Sustainability Report 2019  Alignment with Mining Local Procurement Reporting Mechanism  Alignment of International Council of Mining and Metals (ICMM) and Global	107 108 110 110 111 113
Access infrastructure  MINE CLOSURE  CONCLUSION  APPENDICES  Qualified Person's statement  Cautionary statement on forward-looking information  Global Reporting Initiative Standards Index for the Ivanhoe Mines Sustainability Report 2019  Alignment with Mining Local Procurement Reporting Mechanism  Alignment of International Council of Mining and Metals (ICMM) and Global Compact Principles	107 108 110 110 111 113 128
Access infrastructure  MINE CLOSURE  CONCLUSION  APPENDICES  Qualified Person's statement  Cautionary statement on forward-looking information  Global Reporting Initiative Standards Index for the Ivanhoe Mines Sustainability Report 2019  Alignment with Mining Local Procurement Reporting Mechanism  Alignment of International Council of Mining and Metals (ICMM) and Global Compact Principles  The United Nations Global Impact	107 108 110 1110 1111 113 128 129
Access infrastructure  MINE CLOSURE  CONCLUSION  APPENDICES  Qualified Person's statement  Cautionary statement on forward-looking information  Global Reporting Initiative Standards Index for the Ivanhoe Mines Sustainability Report 2019  Alignment with Mining Local Procurement Reporting Mechanism  Alignment of International Council of Mining and Metals (ICMM) and Global Compact Principles  The United Nations Global Impact  Special report – MiniChess  Broad-based Black Economic Empowerment (B-BBEE) Scorecard 2019:	107 108 110 1110 1111 113 128 129 131 132
Access infrastructure  MINE CLOSURE  CONCLUSION  APPENDICES  Qualified Person's statement  Cautionary statement on forward-looking information  Global Reporting Initiative Standards Index for the Ivanhoe Mines Sustainability Report 2019  Alignment with Mining Local Procurement Reporting Mechanism  Alignment of International Council of Mining and Metals (ICMM) and Global Compact Principles  The United Nations Global Impact  Special report – MiniChess  Broad-based Black Economic  Empowerment (B-BBEE) Scorecard 2019: Platreef Project	107 108 110 1110 1111 113 128 129 131 132 139

7

FRONT COVER: ALINE LUKUBE FROM KIPISHI COLLECTS POTABLE WATER FROM A NEWLY INSTALLED SOLAR WATER WELL BY IVANHOE AT THE KAMARENGE CHILDREN'S HOME

# IVANHOE MINES IS COMMITTED TO ACCELERATING PROGRESS TOWARDS THE UNITED NATIONS' SUSTAINABLE DEVELOPMENT GOALS

The Sustainable Development Goals (SDGs) were adopted by all United Nations (UN) Member States in 2015 as a universal call for action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030; termed the 2030 Agenda for Sustainable Development (the 2030 Agenda).

According to the White Paper on Mapping Mining to the SDGs: An Atlas (2016), the mining industry has an unprecedented opportunity to mobilize significant human, physical, technological and financial resources to advance the SDGs. It is noteworthy that the mining industry can impact positively and negatively across the SDGs. Mining can foster economic development by providing opportunities for employment, business development, increased fiscal revenues and infrastructure linkages. Many of the minerals produced by mining are also essential building blocks to technologies, infrastructure, energy and agriculture. Historically, however, mining has contributed to many of the challenges that the SDGs are trying to address, such as environmental degradation, displacement of populations, worsening economic and social inequality, armed conflicts, gender-based violence, tax evasion and corruption, increased risk for many health problems, and the violation of human rights. In recent decades, the industry has made significant advances in mitigating and managing such impacts and risks, by improving how companies manage their environmental and social impacts, protect the health of their workers, achieve energy efficiencies, report on financial flows, and respect and support human rights.

By mapping the linkages between mining and the SDGs, it is hoped that mining companies would be encouraged to incorporate relevant SDGs into their business and operations; validate their current efforts; and generate new and innovative ideas, all through the lens of sustainable development and by harnessing the transformative power of collaboration and partnership between the mining industry and other stakeholders.

The 17 SDGs and 169 associated impact targets demonstrate the scale and ambition of the 2030 Agenda. They are integrated and indivisible, and balance the three dimensions of sustainable development: economic, social and environmental.

Ivanhoe Mines Ltd.'s (also Ivanhoe Mines, Ivanhoe or the Company) contribution towards the delivery of the UN's SDGs at each of our principal projects, are indicated throughout this Sustainability Report, based on a mapping analysis which assessed our current SDG compliance with regard to our current initiatives and practices.

We at Ivanhoe Mines now seek to embed relevant SDGs and specific associated targets into our long-term sustainable development approach by way of a strategic roadmap, which will be developed based on our materiality assessment, business priorities and community needs.

This strategic roadmap will be workshopped together with stakeholders, including special input from executive leadership, with the aim of ensuring that our initiatives and practices achieve the maximum return on investment and benefit over time.

#### UNITED NATIONS' SUSTAINABLE DEVELOPMENT GOALS



































# **COVID-19 RESPONSE EFFORTS**

## WE ARE TAKING ACTION TO SUPPORT OUR EMPLOYEES AND COMMUNITIES AS THE COVID-19 SITUATION EVOLVES

As the novel coronavirus disease (COVID-19) continues to spread around the world, we understand that the consequent and unprecedented series of events is impacting on everyone's work and personal lives. We are closely monitoring the impact of COVID-19 and have implemented extraordinary measures to safeguard our people and communities, and mitigate the impact of COVID-19 on our mine development operations. The Company has appointed a team with overall responsibility for COVID-19 response efforts, which includes senior Ivanhoe Mines representatives with expertise in health and safety, operations, law, human resources and communication. Ivanhoe's COVID-19 response team is led by Dr. Nicolette Du Plessis, a specialist in Paediatric Infectious Diseases and a Professor at the University of Pretoria, and includes specialist doctors, paramedics, nurses, as well as counsel from several external, world-leading epidemiologists. Dr. Du Plessis is president of the Southern African Society of Paediatric Infectious Diseases and president-elect of the Federation of Infectious Diseases Societies of Southern Africa.

**IVANHOE** MINES SUSTAINABILITY REPORT 2019

As part of our COVID-19 response efforts, the Company is focusing particularly on the health and safety of all of our employees and contractors, as well as our host communities. The Company already has procured abundant critical protective supplies for our minesite medical professionals, including surgical gloves and N95 face masks. In addition, Ivanhoe's largest shareholder, CITIC Metal Co. Ltd., has assisted with the procurement of a very substantial number of COVID-19 diagnostic test kits.

Co-ordinated treatment efforts have further seen the Company working closely with our host governments, who have acted swiftly and decisively in legislating measures to curb the spread of the disease. Together with the DRC and South African Ministries of Health, we are sourcing a number of early-stage treatments that could potentially prevent a country-wide outbreak of COVID-19.

In addition to health readiness, we are taking measures to ensure business continuity and have identified several cost-reduction initiatives to generate cash savings of up to US\$75 million through to 2021. The savings will be fully directed towards progressing the Company's flagship Kakula Copper Mine to commercial production, on schedule and on budget. Moreover, the Company is conducting a continual review of purchase orders and its supply chain to minimize disruption to its projects.

The nature of our mine development projects is such that certain work cannot be done remotely, so our focus is on reducing the risk of COVID-19 spreading to our projects. Operational continuity is critical for jobs, the communities around our operations, and the local economies. We will continue to adapt our response as this situation evolves.

Our primary focus remains the health and safety of our people.



#### **MONITORING**

> Our aim is to keep operations running and we are monitoring the situation closely

#### **TESTING AND SCREENING**

> Daily screening at all the site entrances

#### **EMERGENCY RESPONSE**

> Emergency response plans and emergency protocols prepared

#### **SAFETY AND SECURITY**

- > Security measures implemented to ensure safety and security of all employees and contractors.
- > No security incidents have been experienced

#### **MEDICAL SUPPLIES** AND FACILITIES

- > Procured surgical gloves and N95 face masks
- > Procurement of coronavirus diagnostic test kits
- > Temporary hospital established at Kamoa-Kakula
- > Quarantine facilities established/secured

#### **CO-ORDINATED TREATMENT**

- > Working closely with host governments to curb the spread of the disease
- > Ivanhoe Mines sourcing a number of early-stage treatments

#### STAKEHOLDER COMMUNICATIONS

- > Ivanhoe Mines updated employees and stakeholders well before COVID-19 was declared a pandemic.
- > Ongoing community awareness and sensitization around the host communities
- > Weekly updates to Ivanhoe Board of Directors

#### SUPPLY CHAIN ASSESSMENT

- > Strategies for fast-tracking supplies of goods and mining equipment which will impact on Project schedules
- > Case-by-case assessments of potential supply chain reactions

#### **PRODUCTIVITY**

- > Ivanhoe Mines is in the process of applying to the UIF Employer/ Employee Temporary Relief scheme (TERS) for the South African employees who have not been able to work from home during the lockdown
- > Regular reporting on productivity statistics of employees

#### **BUSINESS PRESENCE**

- > Cost-reduction initiatives
- > Reduced exploration activities

#### PROTOCOLS AND ACTION PLANS

- > Location specific protocols
- > Establishment of site task teams
- > Stipulation of travel restrictions, lockdown and precautionary isolation requirements



















# **UUK APPKUACH** Sustainability reporting



## **About this report**

This 2019 Sustainability Report is our third 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. It 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. This annual report consists largely of information about the Company's sustainability policies, practices and performance for the reporting period from January 1, 2019 to December 31, 2019, and 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.

## Reporting guidelines

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);
- > International Council of Mining and Metals' (ICMM) 10 Principles: A Best Practice Framework for Sustainable Development;
- > International Integrated Reporting Council's (IIRC) Integrated Reporting Framework;
- > Local Procurement Reporting Mechanism (LPRM);
- > Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises;
- > United Nations Guiding Principles on Business and Human Rights;
- > United Nations Declaration of Human Rights (UNDHR);
- > United Nations Global Compact (UNGC);
- > United Nations Sustainable Development Goal (SGDs); and
- > Voluntary principles on security and human rights to which we subscribe.

The information in this Sustainability Report has been prepared and presented in accordance with the GRI's Standards Core Option. Country-specific reporting compliance is provided in the appendices to this report.

## Independent assurance

In 2018 we began a journey towards independent assurance readiness, as we believe that assurance of key non-financial information forms part of good corporate governance and has the ability to enhance strategic decision making. This journey includes undertaking assurance readiness reviews for key performance indicators (KPIs) in different areas of our business, followed by the implementation of recommendations for improvement resulting from the readiness reviews completed.

This process will inform our future reporting, with a view towards obtaining independent assurance in the next few years.

The Platreef Project has engaged Ernst & Young (EY) Incorporated, in accordance with the International Standard on Related Services (specifically, ISRS 4400 Engagements to Perform Agreed-Upon Procedures), to perform specific procedures related to the accuracy of the following reporting elements: (i) Local economic development (LED); (ii) Enterprise and supplier development (ESD); (iii) Human capital development plan; (iv) Collaborative partnership with the University of Limpopo; (v) Employment equity and local employment; and (vi) Preferential procurement.

Consequently, and through the above process, the information relating to these performance areas of the Platreef Project has been independently tested as part of Platreef's regulatory reporting processes.

This year, in consideration of the extensive investment we make in the various educational projects included in our Social and Labour Plan, we researched the positive impact of one of our flagship SLP education projects – the Mini Chess Programme – on learner participants, as well as

downstream impacts for the surrounding community. We used a specialist impact assessment service provider to shape our understanding of that impact, including estimation of the real and perceived positive impact associated with the project – both qualitative and quantitative.

#### Report scope

This Sustainability Report discloses information primarily on our material projects over which Ivanhoe has direct or joint management control. The following are our three principal projects in Southern Africa, namely (1) the Kamoa-Kakula Project in Lualaba Province, Democratic Republic of Congo (DRC); (2) the Platreef Project in Limpopo Province, South Africa; and (3) the Kipushi Project in Haut-Katanga Province, DRC. The scope of our 2019 report has been expanded to include sustainability data from our exploration projects and corporate offices. Historical data in this regard has been provided where it is available.

For occupational health and safety statistics purposes, 'total workforce' in this Sustainability Report means the average of 5 297 employees and contractors who are eligible for induction and/or medical surveillance and contributing to the safety statistics, as at December 31, 2019.



## MESSAGE FROM THE CHAIR OF THE **SUSTAINABILITY** COMMITTEE, **GUY DE SELLIERS**

## To our valued stakeholders

The dynamic international dialogue on climate change and our environment continues to place ever greater focus on corporations in terms of accountability, disclosure and transparency. We have recently seen a noteworthy manifestation of this conversation among large-scale financial institutions and global stakeholders in the prioritization of environmental, social and governance (ESG) standards and reporting practices. We at Ivanhoe Mines have always placed sustainable development at the forefront of our corporate policies, and welcome the opportunity to embrace ESG practices as an integral part of our culture, core purpose and strategy. We are committed to being a leader in sustainable development.

Our third Sustainability Report proudly evidences the policy imperatives and considerations underpinning the various sustainability initiatives implemented at our key projects, and details our safety, health, environmental (SHE) and social responsibility performance in 2019. Ivanhoe Mines acknowledges the ICMM imperative to implement good practices and innovation to improve social, environmental and economic performance, while also enhancing shareholder value.



As has always been our commitment, Ivanhoe Mines makes valuable investments in the host communities where we operate. We ensure that the social and economic benefits from our discoveries are shared as widely as possible through our community enhancement initiatives, as well as our stakeholder agreements with our host communities, local entrepreneurs and employees. In 2019, the total value created and distributed at our projects was US\$481 million.

Local recruitment and procurement efforts are further driven by international best practice. Ivanhoe Mines has established a world-class mining training centre at our Kamoa-Kakula Project, which boasts state-of-the-art simulators and a strategic cadet training program for local community recruits targeted at career progression through a clear development plan.

It is imperative to create a safe working environment. The right to work for fair wages in safe and healthy conditions is a fundamental human right recognized and actively pursued at our Project sites. We strive to ensure that worksites are designed to protect the health and safety of all workers.

At the end of 2019, the Kamoa-Kakula Project reached 2,629,889 work hours free of a lost-time injury (LTI), and up to the third guarter of 2019, the Kamoa-Kakula Project had an exemplary safety record. However, it is with regret that we report two fatalities as a result of workplace

injuries - the first in September 2019 and the second in February 2020. These two incidents occurred after the project had gone more than 7.5 years without an LTI. Our sincerest condolences go out to the families and loved ones of the deceased colleagues. Our stakeholders can be certain that the Kamoa-Kakula Project, and all of Ivanhoe's projects, continue to strive toward the workplace objective of an environment that causes zero harm to all employees and contractors.

Ivanhoe Mines values its role as a global corporate citizen. The finite nature of the environment's natural resources is becoming more and more pressing, and Ivanhoe Mines strives to ensure that better long-term, sustainable benefit is derived from the African nations' natural resources through the creation of a social compact between government, labour, business and communities. The foundations of this compact have been laid during this reporting year.



# MESSAGE FROM THE PRESIDENT AND CFO, MARNA CLOETE

# To Ivanhoe Mines stakeholders

The <u>Novel Coronavirus (COVID-19) pandemic</u> has ravaged countries and continents infecting millions of people across the globe, and wreaking havoc on world markets. There is no doubt that the devastating economic and human impacts of this pandemic will be felt for some time to come. We have acted swiftly and taken extraordinary measures to safeguard our people and mitigate the impact of COVID-19 on our operations.

While we will continue to monitor the devastating global and local effects of the COVID-19 pandemic on nations and economies worldwide, it is essential that we keep calm and carry on. These challenges and lessons will forever change the way we socialize, communicate and work, however a crisis is a double-sided coin. Every crisis presents an opportunity. We have the opportunity to take a step back, reassess our lives and take stock of what matters most. Thankfully, through increasingly sophisticated technology advances, we are able to connect from our home networks to our work environments and to ubiquitously connect to our colleagues, business partners, consultants, service providers, and stakeholders across countries and continents. Our dedicated teams have been working efficiently from home.

Creating an empowering environment for sustainable development is of utmost importance. At Ivanhoe, we continue to ensure that the right people, tools and equipment, procedures and systems, individuals and teams, and leadership are employed. We are proud of the growing diversity of our workforce, and strongly believe that diversity is the key to nurturing talent and driving innovation at our operations

Ivanhoe Mines' sustainable development strategy remains the creation of a better future for its stakeholders through long-term, effectively planned and successfully implemented social programs, and a focused approach to environmental stewardship.

The 17 SDGs embrace a universal, holistic approach to the sustainable development agenda. The goals clearly call on business to use creativity and innovation to contribute towards development challenges, and recognize the need for governments to encourage sustainability reporting. Ivanhoe Mines is set on the path to contribute towards the advancement of the 2030 Agenda at each of our key projects through supportive initiatives in our host communities, and is laying the groundwork to include corporate reporting on the SDGs into our existing processes. Ivanhoe Mines' policies and standards in respect of sustainability and transformation continue to act as guiding principles to progress our operations and sustainability initiatives.

Ivanhoe Mines is firmly committed to ensuring the effective design, implementation and reporting of the sustainability initiatives at our three principal projects in Southern Africa. We have undertaken a review across our Projects and have invested in new software systems that will equip our teams with enhanced monitoring and reporting tools, and ensure that all our operations are aligned from a reporting perspective. We continue to make strides towards our readiness for independent assurance, and are continually monitoring emerging trends in internationally recognized, best practice sustainability frameworks to guide our reporting.

While the COVID-19 pandemic has turned the world upside down and resulted in unprecedented times for which there is no guidebook, we believe that the answer lies in tackling problems head-on, taking each day at a time, while believing that we will soon see a return to a new normalcy.

Pursuant to our commitment to our host African nations over the past quarter of a decade, and as we evolve from one of the world's finest explorers to a leading responsible producer of important green metals, we will continue seeking to build and operate our mines as true showcases for responsible environmental stewardship, transformative social performance and ethical, transparent governance.

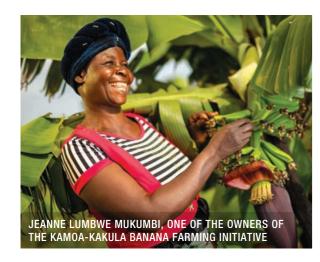




## **MESSAGE FROM** THE EXECUTIVE VICE PRESIDENT, SUSTAINABILITY, **PATRICIA MAKHESHA**

## To Ivanhoe Mines stakeholders

Pursuing continual improvement in social performance, and contributing to the social, economic and institutional development of host countries and communities, are among the most crucial building blocks of a sustainable mining operation.



"I am an African. I owe my being to the hills and the valleys, the mountains and the glades, the rivers, the deserts and the trees, the flowers, the seas and ever-changing seasons that define the face of our native land."

Thabo Mbeki

These profound words uttered by former South African President Thabo Mbeki resonate deeply with me as Ivanhoe Mines tirelessly seeks to build relationships across the African continent with a view to securing transformative public-private partnerships that will shape a better Africa and a better world.

The African mining landscape involves intricate and considered engagement with host community stakeholders, as well as a careful consideration of respect for human rights and the environment, in all jurisdictions where we operate. The pursuit of the underlying business objective of building value must therefore be driven by the foundations of corporate citizenship - a concept that is of utmost importance to our Statement of Values and Responsibilities. It is our belief that the link between sustainability performance and respect for human rights is inherent in these foundations of corporate citizenship.

Embracing an intrinsic sense of respect for, and subscription to, fundamental human rights, which are undoubtedly impacted by our operations, is therefore elevated to an obligation imposed not only on our employees, but also on our service providers, clients and workplace visitors.

This Sustainability Report thus introduces a unique focus on the societal elements informing our corporate strategies, our operational targets and our sustainability initiatives.

It is crucial that pursuant to any mine development, opportunities are created for host communities to partake in an enduring and sustainable local economy arising from the activities of the mine. Operationally, sustainable development requires, among other things, that we adopt a culture of technologically innovative and sustainable capabilities. At Ivanhoe Mines we have made significant in-roads in building adequate foundations to support this agenda, through our Maru a Mokopane initiative, an innovative step in establishing digital inclusivity. The initiative reflects our belief that South Africa's youth will determine the country's future, and one of the most important means to assist them in achieving success is access to information and technology.



In successfully conducting community asset mapping on such a large scale, despite significant challenges, and in achieving the secondary benefits of solidifying community relationships and equipping community members with skills that can be used beyond the process, Aurecon's Asset Mapping Project has been internationally recognized and awarded; a great success for our community agenda.

grassroots empowerment as communities focus on

what they have as opposed to what they lack.

In addition, Ivanhoe Mines has placed continual and strengthened emphasis on capacity building, both within our workforce and host communities, as well as ongoing strategic focus on our human capital performance areas. Owing to a partnership which we initiated and supported between Ivanhoe, the University of Limpopo in South Africa and the Goodman School of Mines at the Laurentian University in Canada, South African students, with undergraduate degrees in geology, are now pursuing Masters and Doctor of Philosophy (PhD) degrees at Laurentian University. This Sustainability Report highlights these efforts, and contains a number of other success stories, in the form of 'special reports', of which we are immensely proud.





# MESSAGE FROM THE GROUP MANAGER, SUSTAINABILITY, JASMINE ABRAHAMS

# To Ivanhoe Mines stakeholders

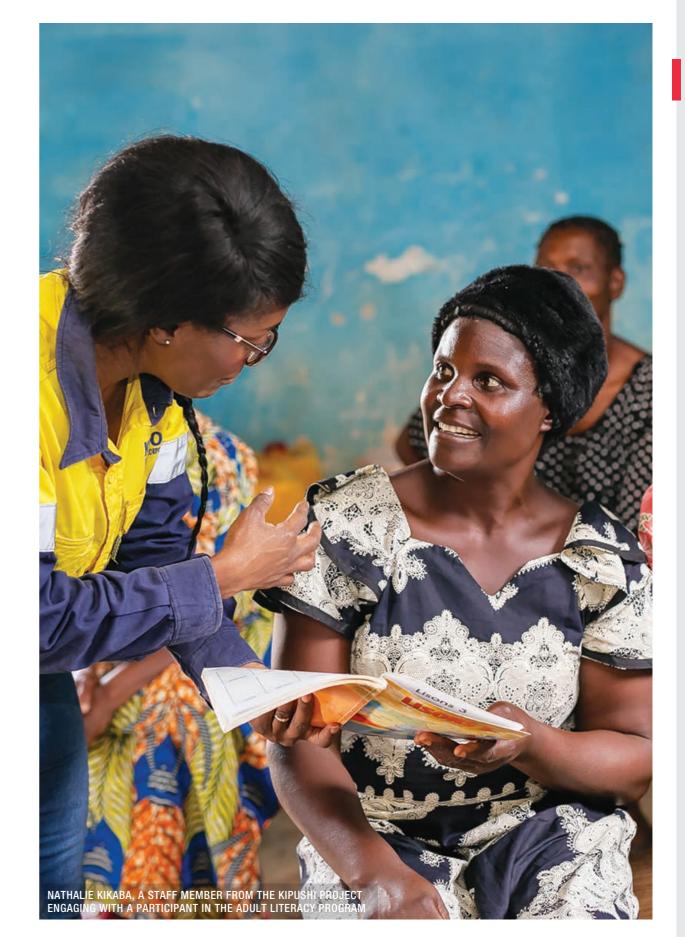
The plight of the earth is ever-changing and increasing with the impacts of growing populations, expanding urbanization, and the industrial and mining operations that fuel these growing economies. The role of business continues to grow into high-value areas that may not have been considered through a corporate lens historically, including the environment, culture, community development, employee empowerment, and the broader global agenda. The 2030 Agenda for Sustainable Development has brought with it a renewed sense of hope and focus, and has armed business with the tools to internalize and deliver measurable, sustainable development goals and targets.

These new agendas, frameworks, policy drivers and targets have pushed corporate strategy into new directions; enhancing ESG imperatives and corporate performance reporting. At the same time, Ivanhoe Mines acknowledges that achieving sustainable development is as much the imperative of operational business, and its teams on the ground, as it is a matter of strategy.

Ivanhoe Mines has embarked on significant strategy revisions, workshops and assessments to align its focus on all aspects of sustainability performance; in each case ensuring that the nuances of the environments in which our three principal projects are located are at the core of these outcomes.

In 2019, we undertook particularly important work with Promethium Carbon, a multi-disciplinary team of independent and passionate carbon and climate change advisors, in assessing the potential impacts of climate change on our projects, and aligning our reporting to ensure greater integration of climate-related issues. The increasing, value-driven need for reporting on climate change and sustainability issues has resulted in Ivanhoe Mines making the strategic decision to align our annual reporting with global best practice climate and sustainable development reporting methods and in accordance with the Task Force for Climate-related Financial Disclosure (TCFD) framework. Climate change risk and vulnerability impact assessments were conducted for each project and are being considered in our overall business strategy. These assessments considered the climate-related risks and opportunities for the core operations, value chain, social and natural environments of each project.

Climate change and sustainability imperatives impact responsible exploration and mining, environmental responsibility and conservation, innovation, and energy use management. These issues influence our corporate strategy through physical parameters on site, regulatory pressures, intergovernmental policy drivers and community vulnerability. Ivanhoe Mines is committed to aligning its sustainability strategies with the operational contexts and conditions of each of our projects, and strives to ensure accurate and valuable reporting against these imperatives in partnership with our young, vibrant, diverse workforce.





# THE ME THE GRI Ivanhoe Mines is a miner a vision to build a leading company. We are realizin three principal mining pro

OUR COMPANY AND THE METALS TO FUEL THE GREEN REVOLUTION

Ivanhoe Mines is a mineral exploration and development company with a vision to build a leading, commodity-diversified mining and exploration company. We are realizing this vision through responsibly advancing our three principal mining projects in Southern Africa that will produce many of the metals that the world urgently needs for cleaner air and water: (1) the development of major new underground mines at the Kamoa-Kakula copper discoveries in the DRC; (2) the Platreef palladium-platinum-nickel-copper-rhodium-gold discovery in South Africa; and (3) the extensive redevelopment and upgrading of the historic Kipushi zinc-copper-germanium-silver mine, also in the DRC. The Kakula Mine, the first of multiple planned mining areas within the Kamoa-Kakula joint-venture Project in the DRC, is expected to begin production in Q3 2021. We are also exploring for new copper discoveries on our wholly-owned Western Foreland exploration licences, adjacent to the Kamoa-Kakula mining licence.



## Copper

We plan to become a leading global copper producer in the near future, with our Kakula jointventure mine in the DRC expected to begin production in Q3 2021. We also have an extensive copper exploration program ongoing in the DRC on our wholly-owned Western Foreland exploration licences, adjacent to the Kamoa-Kakula Project.

Copper is the king of "green metals". With special conductive and sustainability properties, 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 also known to kill viruses and superbugs, as it is now used in hospitals to coat bed rails, call buttons, intravenous drip poles, taps and door handles.



## Platinum-group metals

We expect to progressively become one of the world's largest producers of platinum-group metals (PGMs) – namely platinum, palladium and rhodium – when our Platreef underground mine in South Africa begins production.

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.

#### KIPUSHI

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

68% owned

Gécamines 32%

#### KAMOA-KAKULA

Copper discoveries and mine development DRC's Central African Copperbelt

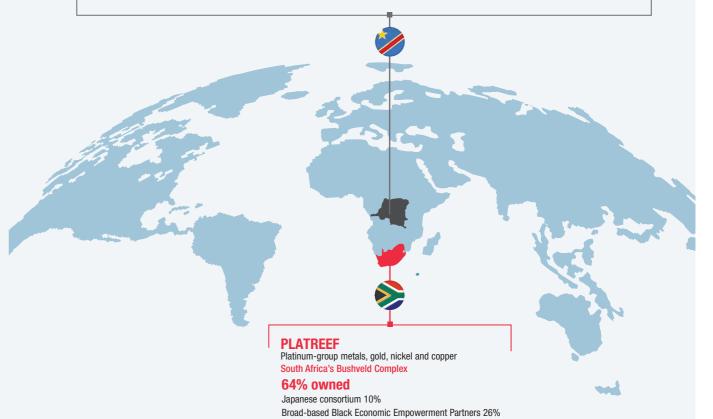
**39.6% owned** 

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

### WESTERN FORELAND

Copper exploration DRC's Central African Copperbelt

100% owner





#### 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 sulfate.

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.



#### Zinc

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

Zinc is 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 KAMOA-KAKULA PROJECT

The Kamoa-Kakula Project is a joint venture between Ivanhoe Mines Ltd., the Zijin Mining Group Co., Ltd. (Zijin or Zijin Mining), Crystal River Global Limited (Crystal River) and the DRC government within the Central African Copperbelt in the southern Lualaba Province of the DRC. A 5%, non-dilutable interest in the Kamoa-Kakula Project was transferred to the DRC government on September 11, 2012 for no consideration, pursuant to the 2002 DRC Mining Code. Following the signing of an agreement with the DRC government in November 2016 to transfer an additional 15% interest in the Kamoa-Kakula Project to the government, Ivanhoe Mines and Zijin Mining each hold an indirect 39.6% interest in the Kamoa-Kakula Project. Crystal River holds an indirect 0.8% interest and the DRC government holds a direct 20% interest. The project is approximately 25 kilometres west of the town of Kolwezi and about 270 kilometres west of Lubumbashi.

International mining consultant Wood Mackenzie has independently ranked the Kamoa-Kakula Project as the world's fourth largest copper deposit. The combined Kamoa-Kakula Project Indicated Mineral Resource currently totals 1.4 billion tonnes grading 2.7% copper at a 1% cut-off.

Construction of Kamoa-Kakula's phase 1 Kakula Mine and 3.8-million-tonne-per-annum copper-processing plant is rapidly advancing and is on track for initial production in Q3 2021. Based on the results of the February 2019 Kakula pre-feasibility study (PFS), Kakula's average feed grade over the first five years of operations is projected to be 6.8% copper and 5.5% copper on average over a 25-year mine life.

An independent preliminary economic assessment (PEA) issued in February 2019 indicates that Kamoa-Kakula has a potential production rate of at least 18 Mtpa. Once this expanded rate is achieved, Kamoa-Kakula is projected to become the world's second largest copper mine, with peak annual production of more than 700,000 tonnes of copper.

Work is progressing on the independent Kakula definitive feasibility study (DFS) and an updated Integrated Development Plan for the entire Kamoa-Kakula mining complex. The Kakula DFS will provide an increased level of accuracy for the project economics for the initial phase of mine development at Kakula. The Integrated Development Plan will include details on the planned expansion phases for the greater Kamoa-Kakula mining complex, incorporating updates on mineral resources, production rates and economic analysis.





#### THE PLATREEF PROJECT

Development of the planned Platreef Mine is now underway on the Company's discovery of platinum, palladium, nickel, copper, gold and rhodium on the Northern Limb of South Africa's Bushveld Complex. Ivanhoe Mines Ltd. holds a 64% interest in Platreef, the South African beneficiaries of a broad-based, black economic empowerment structure have a combined 26% stake and the remaining 10% is owned by a Japanese consortium of ITOCHU Corporation, Japan Oil, Gas and Metals National Corporation, and Japan Gas Corporation. The project is situated approximately 280 kilometres northeast of Johannesburg and eight kilometres from the town of Mokopane.

The Platreef Project, which contains the Flatreef Deposit, is a Tier One discovery by Ivanhoe Mines' geologists on the Northern Limb of South Africa's Bushveld Igneous Complex, the world's premier platinum producing region.

The Flatreef Deposit, with a strike length of six kilometres, predominantly lies within a flat to gently dipping portion of the Platreef mineralized belt at relatively shallow depths of approximately 700 to 1,100 metres below surface.



Platreef's flat-lying mineralized zones are up to 90 metres thick, at a 1 g/t 3PE+Au cut-off, with platinum-group-metals grades that are as high, or higher, than many of the narrow reef PGM mines on the Eastern and Western Limbs of the Bushveld Igneous Complex. Platreef also has large quantities of nickel, copper and gold, which are expected to establish Platreef as one of the lowest-cost PGM producers in Africa.

The Project's first shaft (Shaft 1) is nearing completion to a final depth of approximately 1,000 metres planned for mid-2020

Based on independent analysis prepared in the 2017 DFS, Platreef is projected to have a cash cost of US\$351 per ounce of 3PE+Au, net of nickel and copper by-products, and including sustaining capital costs. The DFS estimated that Platreef's initial, average annual production rate will be approximately 219,000 ounces of palladium, 214,000 ounces of platinum, 30,000 ounces of gold and 14,000 ounces of rhodium (combined 477,000 ounces of 3PE+Au), plus 21 million pounds of nickel and 13 million pounds of copper.

Prices of palladium and rhodium – two key metals in the Platreef orebody – surged to record highs in early 2020, as stricter air-quality rules boost demand for the metal used in vehicle pollution-control devices. Ivanhoe is investigating a phased development production plan for the Platreef Project, targeting significantly lower initial capital, to accelerate first production by using Shaft 1 as the mine's initial production shaft, followed by expansions to the production rate as outlined in the DFS. Ivanhoe also is evaluating various project-related financing options to fast-track Platreef's development schedule and accelerate initial production.

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**OUR PRINCIPAL PROJECTS / CONTINUED** 



#### THE KIPUSHI PROJECT

Extensive infrastructure upgrading is progressing at the existing Kipushi Mine which is located on the Central African Copperbelt in the DRC's southern Haut-Katanga Province, one of Africa's major mining hubs, approximately 250 kilometres southeast of the Kamoa-Kakula Project and less than one kilometre from the Zambian border. The mine is adjacent to the town of Kipushi and approximately 30 kilometres southwest of the provincial capital, Lubumbashi. Ivanhoe Mines holds a 68% interest in Kipushi; and the state-owned mining company, La Générale des Carrières et des Mines (Gécamines), holds the remaining 32% interest.

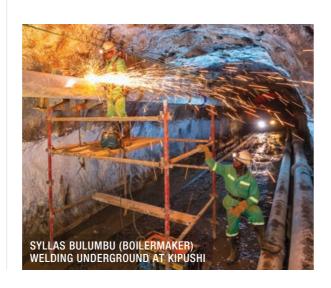
The Kipushi Project is based on the high-grade, underground zinc-copper mine in the Central African Copperbelt, which mined approximately 60 million tonnes grading 11% zinc and 7% copper between 1924 and 1993. In addition to producing copper and zinc, the mine produced 12,673 tonnes of lead and approximately 278 tonnes of germanium between 1956 and 1978. The mine had been managed on a care and maintenance basis since 1993.

Ivanhoe has made excellent progress in upgrading the mine's underground infrastructure to allow for mining to begin rapidly at the ultra-high-grade Big Zinc orebody. Resumption of production at Kipushi now requires the construction of a surface processing plant and other related surface production facilities. Discussions are continuing with Ivanhoe's joint-venture partner

Gécamines in order to help advance a new era of production at Kipushi.

The findings of an independent, PFS published by Ivanhoe in December 2017 for the planned redevelopment of the Company's historic, high-grade, Kipushi zinc-copper-silver-germanium mine anticipates annual production of an average of 381,000 tonnes of zinc concentrate over an 11-year initial mine life at a total cash cost of approximately US\$0,48 per pound of zinc.

Independent research by Wood Mackenzie concludes that the Kipushi Project could rank among the world's largest zinc mines when in full production.





#### THE WESTERN FORELAND EXPLORATION PROJECT

During 2019, Ivanhoe significantly expanded the size of its 100%-owned exploration licences in the Western Foreland area in close proximity to the Kamoa-Kakula Project in the DRC. Ivanhoe now holds permits to explore on more than 2,500 square kilometres of highly-prospective land holdings in the vicinity of the 400-square kilometre Kamoa-Kakula mining licence.

Ivanhoe's Western Foreland Project is a massive exploration land package with outstanding geological potential. Ivanhoe's DRC exploration team is targeting Kamoa-Kakula-style copper mineralization through high-resolution airborne magnetic surveys and regional drilling programs.





# **SUSTAINABILITY** STRATEGY AND KEY **OBJECTIVES**

At Ivanhoe Mines, we are guided by our sustainability strategy that includes our vision to explore, develop and mine responsibly while creating shared value for all our stakeholders informed by the goals and principles outlined in the UN SDGs.

We are committed to responsible mineral development by aligning our operations with the principles of and developing approaches to sustainable development across all spheres of our organization, in order to excel in our industry, as well as to foster a socioeconomic environment in which our local stakeholders can flourish.

In addition to human rights, these include (1) seeking to ensure a safe and healthy working environment in our business operations; (2) identifying, eliminating or controlling potential workplace hazards for the protection of all employees and contractors; (3) promoting local recruitment and local procurement practices; (4) promoting sound community development and engagement practices to facilitate socio-economic development in our host communities; (5) promoting sound land-use and alternative livelihood practices; and (6) promoting sound sustainable development and environmental practices to continually improve the efficient use of resources, processes and materials.

Our approach to sustainability is adapted from the International Integrated Reporting Council and is underpinned by the six capitals model of sustainable development, which states that sustainable development is attained if all six capitals are given appropriate attention during development and operation.



#### ECONOMIC CAPITAL

Company's contribution to local and national economic growth



#### **HUMAN CAPITAL**

People's safety, health, knowledge, skills, wellbeing and motivation



#### SOCIAL AND RELATIONAL CAPITAL

Company's social licence to operate from its host communities and other stakeholders

**NATURAL CAPITAL** 

Management and protection of the natural

environment in which

the Company operates



#### **INTELLECTUAL CAPITAL**

Intangible assets in the Company that can produce wealth



#### INFRASTRUCTURE CAPITAL

Supporting infrastructure needed by the Company to develop each of its principal projects, such as bulk electricity provision, bulk water provision and transport infrastructure

Our sustainability strategy can be attained by the consistent application of approaches and practices, underpinned by our key priorities, which treat people and the environment with respect, while pursuing our underlying business objective of responsibly producing the green metals required for the planet's future.



The value of human

Respecting and promoting diversity

Environmental responsibility and innovation

The right to work, safety, health and skills development

Respect for human rights with the UNDHR as guidance

Corporate integrity, transparency and accountability

Responsible exploration, development and production operations

Our sustainability strategy and the external factors that affect our performance is continually evaluated over time. Our strategy sets short-term goals for 2020, medium-term goals for 2025 and long-term goals for 2030. These goals are underpinned by our vision and key priorities. Our short-term goals are focused on addressing the most significant sustainability risks as determined

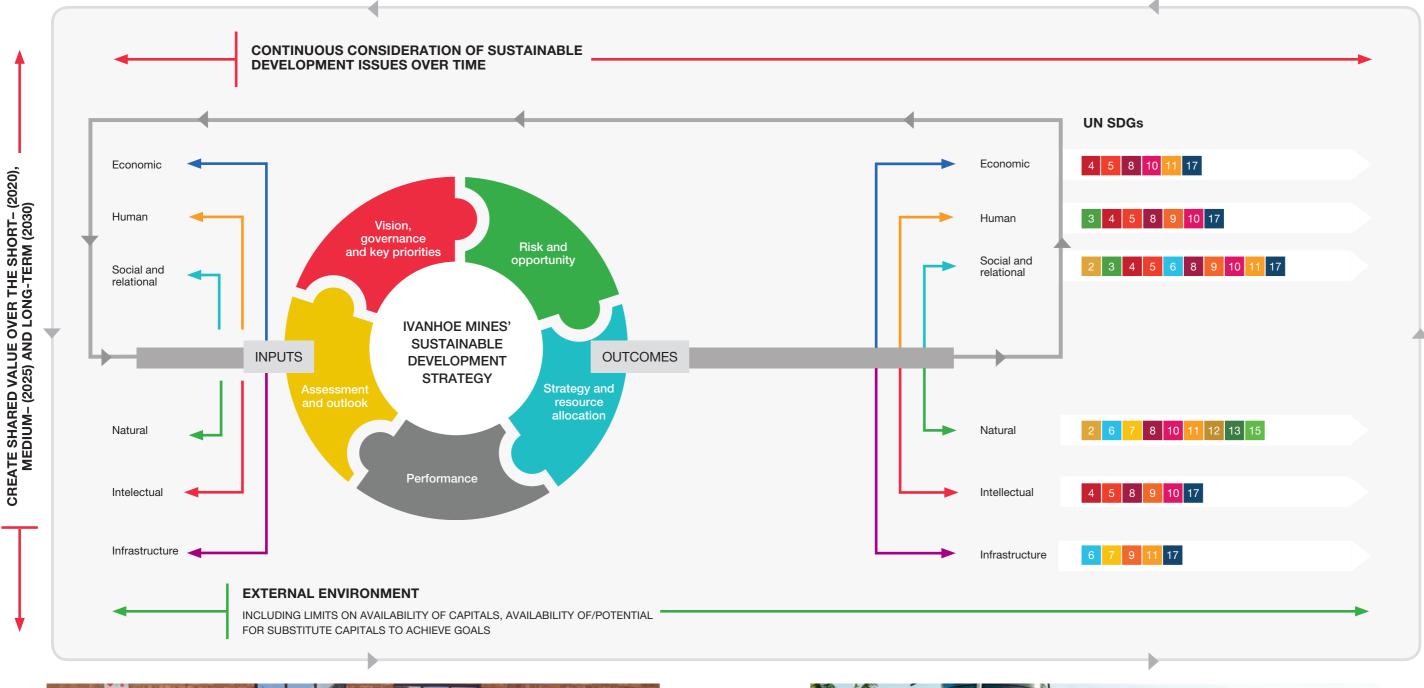
by our materiality assessment. Our medium- and long-term goals seek to address a wider range of sustainability risks facing Ivanhoe, together with the opportunities associated therewith. Our sustainability strategy is integrated in our decision making and processes, and is reviewed periodically throughout the year to measure performance in relation to the established goals.







Sustainable community partnerships







## **GOVERNANCE AND ACCOUNTABILITY**

The stewardship and governance of Ivanhoe Mines is the responsibility of our Board of Directors (the Board). The Board fulfils its mandate of protecting shareholder interests and good corporate citizenship either directly or through delegation to its committees, as indicated below. As of December 31, 2019, our Board is comprised of 11 members. The Board fulfils its mandate directly and through its committees at regularly scheduled meetings or as required. The Board has four standing committees and one advisory committee. Complete details of the composition of the Board committees may be found on Ivanhoe Mines Ltd.'s website .

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 <u>management proxy circular</u>.

The Audit Committee is responsible for acting as a liaison between the Board and the Company's independent auditors, and for assisting the Board in fulfilling its oversight responsibilities with respect to financial statements and dissemination of other financial information; compliance with legal and regulatory requirements; the qualification, independence and performance of the independent auditors; and the internal financial/accounting controls and management information systems. Ivanhoe has a rigorous system of internal controls and an internal audit department which reports directly to the Audit Committee. The nature of Ivanhoe's business necessitates a degree of risk-taking to meet our strategic objectives and the responsibility for this risk management is also overseen by the Audit Committee.

The Compensation and Human Resources Committee is charged with assisting the Board in discharging its responsibilities relating to the Company's securities-based compensation plans; and to determining compensation and benefits for its executive officers and directors, in a manner that is fair and transparent, and competitive in order to recruit, motivate and retain accomplished executives who share Ivanhoe's long-term strategic vision.

The responsibility for identifying and appointing individuals qualified to serve as members of the Board and its committees, and developing and implementing Ivanhoe's overall governance approach, is the function of the Nominating and Corporate Governance Committee, which is comprised entirely of independent directors. This Committee is also empowered to establish any permanent or ad hoc committees that it deems necessary for corporate governance purposes.

The Board is further assisted in discharging its responsibilities through the Technical Committee, which acts in an advisory capacity and assists the Board in overseeing matters affecting our mineral reserves and resources, project development, asset operations and other operational activities relating to exploration, construction and development of our mineral properties and projects.

The Sustainability Committee is responsible for the incorporation of internationally recognized standards of sustainable development, and environmental and social governance (ESG) in our internal policies by addressing issues such as labour, health, safety, operational security, the environment, human rights, climate change, water security, heritage and land access, and community engagement and development. This Committee ensures the development, implementation and monitoring of lvanhoe's sustainable development policies (including the necessary disclosures), and fosters and sustains a positive culture amongst the Company's employees and contractors.



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. During 2019, the Sustainability Committee dealt primarily with the following matters:

AREA	ACTIVITIES		
Policies and standards	Oversaw the review and release of the Ivanhoe Mines Sustainability Report (2018) and considered an assurance readiness assessment in respect of certain Key Performance Indicators therein.		
	Worked with management to formulate position statements in respect of water, climate change and human rights.		
Health and safety	Commissioned an independent tailings review panel of planned tailings storage facilities (TSFs) at all three projects.		
	Received immediate updates on serious workplace accidents and quarterly updates on general health and safety across the organization.		
	Considered a report regarding Ivanhoe's DRC emergency response plans.		
Committee operations	Reviewed the 2019 sustainable development strategy.		
	Received bi-annual updates on sustainable development.		
	Considered a risk report in respect of changes to the DRC Mining Code.		
	Considered a report in respect of amendments to the South African Mining Charter.		

Although the responsibility for managing the day-to-day affairs of the Company has been delegated to senior management personnel, the Board retains a supervisory role in respect of, and ultimate responsibility for, all matters relating to the Company and its business. In discharging this responsibility, the Board 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.

Our sustainability strategy is also integrated into our decision-making by embedding it into corporate and operational annual key performance areas (KPAs), as well as into the annual KPAs of senior management personnel and various other personnel as may be required.

**IVANHOE MINES' SUSTAINABILITY MANAGEMENT STRUCTURE** 

#### **IVANHOE MINES BOARD OF DIRECTORS** STRATEGY AND DIRECTION SUSTAINABILITY COMMITTEE **EXECUTIVE MANAGEMENT HEADS OF DEPARTMENTS FINANCIAL** HUMAN SOCIAL AND NATURAL INTELLECTUAL INFRASTRUCTURE **CAPITAL** CAPITAL **RELATIONAL** CAPITAL CAPITAL **CAPITAL** GROUP OPERATIONAL IMPLEMENTATION MANAGEMENT **CAPITAL** Departments: Departments: Departments: Departments: Departments: Departments: Geology; Finance: Human Community Environment Engineering; Relations: Procurement; Resources; Information Project **ESD** Health and Local Economic Development Technology; Safety Development Legal **Group KPAs per department** Implementation of project-specific KPAs

## **BUSINESS ETHICS**

Good corporate governance, underpinned by our values and bolstered by strong, accountable leadership is the cornerstone of Ivanhoe's Code of Business Conduct and Ethics (the Code), and is central to our approach to business. We require the highest standards of professional and ethical conduct from our all employees, officers, directors, consultants, advisors and contractors. The Code outlines the basic principles and policies with which everyone is required to comply, and reflects our commitment to a culture of honesty, integrity, accountability and respect for the communities in which we operate. 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, and we ensure that the Code is included as part of contractual agreements with our consultants, advisors and contractors. Non-adherence to the Code for employees may lead to disciplinary action up to and including termination of employment, and for contractors, 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.

Our Companion Booklet to the Code of Business Conduct and Ethics serves as a resource and standard to all employees and stakeholders by providing general information on anti-bribery laws in Canada, the United States, the United Kingdom, South Africa and the DRC. A more detailed discussion of the Company's governance policies can be found in the Company's most recently filed management proxy circular.

Our reputation for honesty and integrity is important for the success of our business. We aim for our business practices to be compatible with, and sensitive to, the economic and social priorities of each location in which we operate. Although customs vary from country to country and standards of ethics may vary in different business environments, the highest degree of ethics, honesty and integrity must always be inherent in our business activities. We have established internal grievance mechanisms at all our places of business, as well as external grievance mechanisms at all three projects. We have also established a whistleblower hotline, in partnership with EthicsPoint, an independent service provider. This hotline, which is directly overseen by the Audit Committee, enables employees and third parties to confidentially and anonymously report either by telephone or electronically, any concerns or misconduct, such as those related to financial irregularities and/or failed corporate governance.

Our management policies guide our management personnel, employees and operations, and inform the development of site-level procedures and plans. Our internal policy committee, comprising members of senior management, is responsible for the formulation of our corporate policies.

## **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."

Ivanhoe Mines has reported on its management approach in respect of each of the identified material topics throughout this report (Ivanhoe's performance against the GRI indicators for each material impact area are presented in the GRI Standards Index Appendix).

As a baseline, however, Ivanhoe Mines undertakes an annual process of identifying the material sustainability topics, based on prioritized and perceived business impacts (i.e. impacts of the organization on the economy, environment and/or society) and/ or stakeholder influences (i.e. impacts substantively influencing stakeholder assessments and decisions), in line with the GRI definition of materiality.

During 2019, we adopted a more rigorous approach by increasing the number of participants in our materiality engagements, as well as by increasing the number of impacts that were assessed. The materiality assessment included a preliminary desktop review, followed by input obtained through stakeholder focus groups and interviews conducted with a diverse pool of representatives from Ivanhoe corporate office and the Platreef Project in South Africa, and from the Kamoa-Kakula and Kipushi Projects in the DRC. For each of the mining projects, the stakeholder groups included employees, communities, suppliers and local government. A number of engagements were held and, in the end, a total number of 93 respondents across these stakeholder groups participated in our survey.

At the outset, we recognize that geographic and contextual differences result in people experiencing or perceiving our mining activities differently, and our materiality results reflect this.



Our methodology consisted of six steps as depicted below:

#### MATERIALITY ASSESSMENT METHODOLOGY



METHODOLOGY Design (Desktop research, textual and thematic analysis)

The Company conducted a desktop review of peer sustainability reports and external standards and best practice, and considered our previous materiality assessments with a view to improving on our existing methodology.



RESEARCH, Identify and List Material Indicators

Review of the results of the previous materiality assessment, the weekly social reports and grievance registers, press clippings, and other related internal and external documents from all three Projects and complied a long-list of 31 material indicators.



ASSESS and Prioritize

Similar indicators were grouped together and a significance rating scale was applied, enabling us to narrow the indicators down to 22 categories. A new questionnaire was designed based on these topics.



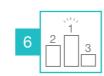
STAKEHOLDER Engagement and Validation

Interviews and focus group sessions were conducted with internal and external stakeholders across the corporate office and all three Project sites and obtained electronic inputs from selected participants at the corporate office.



**REVIEW** and Consolidate Results

All interview results were reviewed, scored and consolidated. Our Internal Audit Department reviewed the data



PRIORITIZATION and Final Categorization

The consolidated, scored results were analyzed, categorized and prioritized. The "most material impacts" were regarded as those that were raised by more than one stakeholder at more than one location/site. The final results were verified by our Internal Audit Department.

Pursuant to the prioritization and final categorization step, the material topics and impacts found to be rated by more than one stakeholder at more than one location/site have been prioritized as the "most material impacts" to the Company. The remaining "material impacts" are reported on as having lower priority, but are nevertheless material to the Company.

The prioritized "most material impacts" were found to be: land management climate change; local procurement opportunities; and access to technology. The remaining "material impacts" are: water access and stewardship; business ethics; and economic performance.

The following Materiality Matrix provides a discussion of these impacts, including their boundaries and the stakeholder groups impacted, as well as the planned management actions to be taken in risk mitigation. We have also mapped the applicable SDGs and ICMM principles to each impact.

MATERIALITY ASSESSMENT / CONTINUED

Stakeholders Affected	Boundary*	Performance Area Involved	Risk Mitigation Measures	SDG ICMM Principle		
Land Managen	nent: Communities	s' experiences	of relocation and livelihood restoration			
Communities	Resettlement and economic displacement pursuant to Project activities (Kamoa-Kakula and Platreef)	Social and relational capital	Successfully implement and robustly monitor livelihood restoration plans.      Strategic plans, investments and partnerships to ensure the sustainability of livelihood restoration programs.      Meaningful engagement to assess all potential impacts or consequences, whether intended or otherwise.      Increased engagement and grievance management.	2 :::::::::::::::::::::::::::::::::::::		
Climate Chang	e Management					
Communities and employees	Climate change adaptation measures at each project	Natural capital	<ul> <li>Effective communication strategies to educate and manage the impacts of climate change on agricultural livelihood projects.</li> <li>Communicate the company's climate change impact mitigation plans broadly.</li> <li>Investing in renewable energy sources such as hydropower.</li> <li>Apply climate change impacts to design and modeling.</li> <li>Seek to reduce greenhouse gas emissions.</li> <li>Implement initiatives to offset adverse biodiversity and environmental impacts.</li> </ul>	7 ####################################		
Local Procurer	<u>ment</u>					
Communities and local governments	Local recruitment and procurement efforts and opportunities at the projects	Economic capital	<ul> <li>Implement enterprise and supplier development programs at all mining projects and measure targets for local spend.</li> <li>Communicate opportunities, requirements and create transparency.</li> <li>Provide additional support and assistance to local SMMEs.</li> <li>Seek procurement opportunities that may be ringfenced for local suppliers, as well as unbundling of larger contracts.</li> </ul>	1 POLITY OF SHEET   5 SHEE		
Information Ma	anagement & Acce	ess to Technolo	ogy			
Communities and employees	Employee support structures; information management systems and innovation; and ESD/educational support	Social economic and intellectual capital	Computer centers and digital hubs in communities and/ or schools – seek to expand the existing program.      Increase employees' access to information through digital programs and online tools.	4 000000 5 000000 9 NORMAN 10 000000 0 0 0 0 0 0 0 0 0 0 0 0 0 0		

*	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 has caused or contributed to the impacts, or is directly linked to the impacts through its business
	relationships.

Stakeholders Affected	Boundary*	Performance Area Involved	Risk Mitigation Measures	SDG ICMM Principle
Water (Access	and Health)			
Communities	Response to water risks for host communities	Natural capital	<ul> <li>Ensure that effective monitoring is taking place at all uptake and discharge points.</li> <li>Increase the footprint of the 'boreholes and wells project' in both South Africa and DRC.</li> <li>Communicate all Environmental Impact Assessments (ElAs) and water related studies widely in host communities.</li> <li>Educate communities regarding water use and waste.</li> <li>Seek strategic partnerships geared towards the long-term sustainable supply and security of water for the mine and host communities.</li> </ul>	1 North 1 10 Williams (a) 10 W
Water Steward	<u>Iship</u>			1
Communities and employees	Water uses and challenges faced by each project	Natural capital	Effective and robust monitoring and reporting.     Effective communication techniques and media to communicate the Company's strategy related to water management.	12 contents 12 contents 13 contents 6 all and
Business Ethic	<u> </u>   <u> </u>			
Communities, employees, officers, directors, consultants, advisors and contractors, suppliers, investors	Corporate governance and standards of professional and ethical conduct required from and in all business relationships	Governance and Accountability	<ul> <li>Raise awareness and education about the Company's policies on ethics, codes of conduct, business integrity, through relevant communication techniques.</li> <li>Conduct regular ethics training for personnel and service providers.</li> <li>Contractually bind consultants and service providers to Ivanhoe Mines Ltd.'s Code of Business Conduct and Ethics.</li> </ul>	5 CONTROL TO TOWNS TO TOWN TOWN
Economic Per	formance			
Suppliers and employees	Imperative to implement good practice and innovate to improve social, environmental and economic performance while also enhancing shareholder value	Economic capital	<ul> <li>Increase knowledge about the Company's mining cycle once production starts, and the market presence it will have in the country and at the local level.</li> <li>Seek opportunities to create both direct and indirect economic benefits for local suppliers.</li> </ul>	9 WHITEHER TO THE PROPERTY OF

<sup>\*</sup> 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 has caused or contributed to the impacts, or is directly linked to the impacts through its business relationships.

Our materiality assessment methodology has been crafted to inform both our strategy imperatives and reporting in respect of material matters. In determining which economic, environmental and social impacts are most relevant to our business and our stakeholders, we strive to ensure that all voices from our stakeholders are represented in our assessment. The outcomes of this materiality assessment are considered by our executive and senior management for appropriate mitigation, and are used in the determination of our forward-looking sustainability priorities and the formulation of our strategic SDG roadmap.



# THE HUMAN RIGHTS LENS

# Our approach to respecting human rights

As a responsible Canadian mining company operating globally, Ivanhoe Mines is committed to respecting and observing all human rights, in alignment with the principles of the Universal Declaration of Human Rights and the United Nations Global Compact.

Respect for human rights is the foundation of our corporate culture. We believe that the realization of a broad, common good can be achieved by an enterprise that demonstrates, through its corporate citizenship practices, its support for human rights. Corporate citizenship throughout Ivanhoe Mines involves the consistent application of strategies and practices that treat people with respect while pursuing the underlying business objective of building value. The link between sustainability performance and respect for human rights is inherent in these foundations of Corporate Citizenship.

Respect for human rights and recognition of the equality and dignity of the people with whom we interact every day are embedded in our Human Rights Position Statement and Statement of Values and Responsibilities. Respect for our people, local community members and local governments is part of our core values guiding us in all we do.

The guideline framework for human rights set out in the OECD Guidelines for Multinational Enterprises further guides Ivanhoe's duties in this respect. The OECD Guidelines provide recommendations concerning enterprises' respect for human rights, in line with the United Nations Framework for Business and Human Rights 'Protect, Respect and Remedy', which recommendations have framed our policy commitment to respect human rights, generally and specifically in the areas of employment and industrial relations.

It is our belief that a conscientious, judicious enterprise can help to deliver more benefits to more people, and in the process, facilitate the desirable advancement of individual rights; create opportunities for fulfilment and sustainable economic progress; and build understanding of, and respect for, individual freedoms and democratic principles.

## **Our Human Rights Commitments at Work**



#### Leadership through action

We support international advocacy for human rights and seek to align the principles and foundations of frameworks such as the United Nations' Universal Declaration of Human Rights in Ivanhoe's Statement of Values and Responsibilities which is made available to all employees, contractors and suppliers.

We have appropriate procedures in place to evaluate and select suppliers, consultants and contractors consistent with our core values, human rights commitment, and Supplier Code of Conduct, which is further grounded in international human rights guidelines and best practice.

We progressively implement the United Nations Guiding Principles on Business and Human Rights (UNGPs): during the 2019 reporting period, we provided training to 52 employees on the UNGPs, and to 381 employees, including security personnel, on the United Nations

Voluntary Principles on Security and Human Rights (VPSHR), in both South Africa and the DRC.

We have internal structures to address remedial and compensation requirements that may result from potential adverse human rights impacts and grievance mechanisms at each of our mining projects that allow stakeholders to raise concerns, which may include human rights issues. The grievance mechanism forms part of a broader framework, which includes the stakeholder engagement plan and human rights commitment, and is compatible with international standards such as the International Finance Corporation's (IFCs) standard and the UNGPs.

The digital engagement portal, titled "Maru a Mokopane" (Sepedi for "the Clouds of Mokopane") launched in 2017, further provides us with real-time, up-to-date information regarding grievances from our communities in South Africa. We are working on extending this project to the DRC.



#### Responsible exploration and mining

Our initiatives are designed and implemented within a framework of consultation and continuous monitoring and evaluation.

Our commitments extend to our shareholders and our employees, and to all those who have responsible interests in the conduct of our business.

We place a priority on establishing and maintaining responsible exploration, development and production operations underpinned by respect for cultures and customs, open and transparent communication and

co-operation through trust-based relationships between the Company and all of its stakeholders.

We especially take cognizance of human rights that may be at risk during the development, construction and operation of our mining projects and how issues such as in-migration may exacerbate the local challenges.

We are committed to remain gender-sensitive and to focus on the negative impacts the Company's operations might have on women and children in our mining communities, who may be especially vulnerable.



#### People are our true wealth

We ensure that employment standards are consistent with international best practice.

Our human rights commitment as reflected in <u>Our Corporate Citizenship</u>, <u>Statement of Values and Responsibilities</u>, and <u>Human Rights Policy Statement</u>, applies at every level of the organization to all employees, independent service providers, clients and visitors – every employee has a responsibility to maintain a working environment that reflects respect for human rights, and that is free from all discrimination and harassment.

We are committed to the assessment of potential human rights risks associated with security arrangements that may be required from time to time, in order to maintain public and employee safety. Our security protocols and practices are aligned with industry best practice to ensure safe operations for our workforce, for visitors and for the host communities where we operate.

We subscribe to the values and principles of equal opportunity. Mutual respect is required among all stakeholders, regardless of an individual's gender, ancestry, religious beliefs, education or sexual orientation.



#### Right to work

We respect the right to work for fair wages in safe and healthy conditions as a fundamental human right, as well as the right of workers employed by the multinational enterprise to establish or join trade unions and representative organizations of their own choosing.

We strive to ensure that worksites are designed to protect the safety and health of all workers. Routine inspections are conducted to identify and remove, or minimize, potential hazards; safety training and protective equipment is provided for employees in hazardous work areas; and basic safety-awareness briefings and information materials are provided for all employees. Employees are encouraged to immediately report unsafe equipment, practices or conditions on site.

We are committed to the principle that the overwhelming majority of jobs on our projects are made available to nationals of our host countries, and to providing training which further contributes to skills pools that are enduring assets in the development of sustainable livelihoods, communities and economies.

We respect the diversity of multicultural states and local communities.

We create opportunities, without discrimination, for individual improvement and advancement, and for the acquisition of knowledge, skills and experience that contribute to sustainable livelihoods.



#### **Environmental responsibility and innovation**

We believe that people have a right to clean air and water. Ivanhoe Mines is committed to monitoring, assessing and integrating, where possible, best-practice environmental management practices and international frameworks guiding environmental, health and safety matters.



#### **Respect for communities**

We have the privilege of operating in a diverse range of international communities and are committed to the support of, and appreciation for, the customs and traditions of these communities: all stakeholders are expected to show respect for the culture and people of the communities in which they work, and to observe project-specific best practices when visiting our work sites.

We are committed to supporting and strengthening existing communities where we live and work. We encourage supportive, co-operative partnerships to enhance social and economic resources, and involve the public and community leaders in the planning, implementation and operation of our projects.

## **Looking forward**

Cognizant of the fact that through our projects and business relationships, including our numerous suppliers and contractors, we may expose ourselves to adverse human rights impacts, Ivanhoe Mines intends to undertake a human rights due diligence in 2020/21. The purpose is to identify, prevent and mitigate adverse human rights impacts in line with the UNGPs and the VPSHRs. The due diligence will focus on risk and impact assessment in the business areas of procurement, health and safety, environment, land management and resettlement, livelihood restoration, human resources, and security arrangements.

In order to ensure accurate, transparent reporting of our sustainability performance insofar as human rights impacts are concerned, we will be subscribing to industry reporting frameworks once the due diligence process has been completed.

We are also considering steps to become a signatory member of, and implement the recommended protocols under, the VPSHR.

A robust training program will also feature in order to ensure up-to-date human rights training and capacity-building courses to an increased scope of stakeholders.

We are committed to supporting and strengthening existing communities where we live and work. IVANHOE MINES AND THE UNITED NATIONS' SUSTAINABLE DEVELOPMENT GOALS

Although Ivanhoe Mines had not stated specific company-level goals for the SDGs prior to 2019, we have contributed to the SDGs through our compliance with several country-level frameworks, such as the Social and Labour Plans and Mining Charter regulated by South African law and Congolese law. Our Company vision and objectives, together with the findings and outcomes of our formal Environmental and Social Impact Assessments (ESIAs), community-level grievance mechanisms and Stakeholder Engagement plans, as well as the above-mentioned country-level regulations, have provided the strategic direction for our socio-economic programs.

During 2019, we completed a formal mapping exercise against the SDGs to both understand our current contribution and impact, and to inform our new sustainability strategy. We have established clear linkages between our work on the SDGs, our country-level regulatory compliance obligations and socioeconomic project delivery at grassroots level. These linkages are demonstrated throughout this report.

We are committed to continuing our contribution towards progressing the 2030 Agenda, and in 2020, will conduct engagement sessions with various teams and senior management to formulate our strategic SDG roadmap. This roadmap will define the stages of our journey to embedding the SDGs in our sustainability strategy and improve our impact measurements, using tools such as a monitoring and evaluation framework with specific KPIs for all SDGs and theory of change methodology.

Our new sustainability strategy and community investment vision, as informed by our <u>materiality assessment</u>, corporate strategy and SDG roadmap, will explicitly state our commitment and objectives to contribute to those SDGs that are critical to our host communities and countries, from a social inclusion, environmental sustainability and sustainable economic development perspective. All of our mining projects are developing new sustainable development strategies for the short-, medium- and long-term in line with the ramp-up from development to production at each mining project, and will have an explicit focus on the SDGs alongside country-level goals.







# OUR STRATEGIC LDER MANAGEMENT



We recognize that obtaining and maintaining community acceptance, often referred to as a social licence to operate (SLO), is challenging for all mining companies, and is dependent on deep, continued trust from stakeholder groups. At Ivanhoe Mines, we view stakeholders as any group or individual that has a material interest in, or is affected by, our projects. We are committed to an opendoor policy and our continuous engagement with our stakeholders guides the Company's long-term strategy.

We have designed site-based Stakeholder Engagement Plans at each of our projects 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). Our Stakeholder Engagement Plans are also aligned to our grievance mechanisms and allow us to include active engagements as part of our process of grievance resolution.

We heed the legitimate concerns of our stakeholders and endeavour to engage in a transparent and accessible manner.

## STAKEHOLDER MAPPING

Our projects each have unique geological characteristics, geographical settings and key stakeholder groups. Each project has a team dedicated to stakeholder relations, focusing on building relationships that foster trust and maintain our SLO. In addition to local stakeholders, each project has a unique set of employees, contractors, investors, government bodies (national, provincial/regional and local), suppliers and non-governmental organizations (NGO) interested in, and affected by, the respective projects. We respect and value all our stakeholders and therefore update and improve our stakeholder mapping processes at the sites annually, to ensure all critical groups, including the vulnerable, are included in engagement platforms.

# 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. Major stakeholder groups in the Platreef Project are:

South African government (National, provincial and local)	Investors and shareholders: Ivanhoe Mines (64%) Itochu (2%) B-BBEE (26%)* ITC (8%)	Twenty semi-urban host communities	Employees, contractors and consultants
Employee representatives and unions. National Union of Mineworkers (NUM)	Non-governmental organizations (NGO's)	Local suppliers and businesses	South African Mineral Council and industry peers

\* Broad-Based Black Economic Empowerment participants

# The Kipushi Project

The Kipushi Project is situated in the Haut-Katanga Province of the DRC, in the town of Kipushi. Kipushi is home to approximately 180,000 individual residents and surrounded by widespread rural communities. Major stakeholder groups in the Kipushi Project are:

Unions*	Suppliers and local businesses	DRC Government (National, provincial and local)	Investors and shareholders: Ivanhoe Mines (68%) Gécamines (32%)			
Non-governmental organizations (NGOs)	Urban and rural host communities	Employees, contractors and consultants	Industry Peers			

- \* Kipushi employees are represented by a democratically elected group of union representatives that belong to the following union groupings:
- > Alliance des Travailleurs Avertis et Consciencieux (ATAC), Garantie Sociale des Travailleurs (GST), Alternative Syndicale pour L'industrie au Congo (ASLIC), Force Ouvrière pour la Renaissance de la Connaissance et de l'Ethique Syndicale (FORCES), Centrale Générale des Travailleurs du Congo (CGTC)

## The Kamoa-Kakula Project

The Kamoa-Kakula Project is situated in the Southern Lualaba Province of the DRC, approximately 25 kilometres west of the mining hub of Kolwezi. The area adjacent to the Kamoa-Kakula Project footprint is home to approximately 20,000 people in 41 villages governed by two traditional authorities. Major stakeholder groups in the Kamoa-Kakula Project are:

Unions*	Suppliers and local businesses	DRC Government (National, provincial and local)	Investors and shareholders: Ivanhoe Mines (39.6%) Zijin (39.6%) DRC Government (20%) Crystal River (0.8%)			
Non-governmental organizations (NGOs)	Employees, contractors and consultants	Forty host communities	Industry Peers			

- \* Kamoa-Kakula employees are represented by a democratically elected group of union representatives that belong to the following union groupings:
  - > Travailleurs Unis des Mines, Métallurgies, Energie, Chimie et Industries Connexes (TUMEC), Confédération Syndicale du Congo (CSC), Conscience des Travailleurs et Paysans (CTP), ATAC

**ENGAGEMENT** 

At Ivanhoe Mines, we make use of an integrated range of stakeholder engagement approaches that promote trust and contribute to maintaining broad community support for our Projects.

#### IVANHOE MINES' GUIDING PRINCIPLES FOR ENGAGEMENT









RELIABILITY

5 Collaboration and Partnership

We strive toward attaining the overarching goal of free, prior and informed consent, and adopt the engagement techniques provided by the International Association for Public Participation (IAP2), 2004.

We use a web-based electronic system to manage our social engagements and sustainability. The system is used for data collection, record keeping and the generation of reports. All engagements, stakeholder groups, stakeholder platforms, engagement techniques, frequency of engagements and discussion content are uploaded onto the system.

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. Across all three projects, the key issues raised by our stakeholders include access to employment, procurement and development opportunities, concerns in respect of land use and water use, and compensation owing to economic displacement or land use. The statistics on the following pages list all stakeholder meetings per project, and indicate that the Kamoa-Kakula Project conducted significantly more engagements than the Platreef and Kipushi projects. This can be attributed to the fact that the project development at the Kamoa-Kakula Project resulted in a large number of matters and processes requiring engagement, such as economic displacement and household relocation.

## **The Kamoa-Kakula Project**

The Kamoa-Kakula Project has a community relations staff complement of five members dedicated to maintaining the SLO through continual engagement with local stakeholder groups, including traditional authorities, local government, community groups and individual local residents. The most discussed topics include employment, economic displacement, household relocation, project development, and opportunities from the Project's supply chain and social development initiatives.

#### NUMBER OF STAKEHOLDER MEETINGS

Number of meetings Number of participants

019 OJECT	JANUARY       2019     2018       600     44     38       305     904	FEBRUARY  2019 2018  35 75  327 1 441	MARCH 2019 2018 666 44 56 6 182 817	APRIL  2019 2018 665 39 6475 730		
JAN-DEC 2018/2019 KAMOA-KAKULA PROJECT	MAY       2019     2018       47     47       1 512     632	JUNE       2019     2018       ຣິດີຕີ     53     51       ຄື     970     459	JULY       2019     2018       ຊື່ຕິກີ     29     56       ຄື     135     715	AUGUST  2019 2018  42 48  704 370	TOTAL	2019 514 7 544
JAN- KAMOA	SEPTEMBER           2019         2018           จัดที่ที่         35         56           ดี         634         851	OCTOBER       2019     2018       47     38       421     464	NOVEMBER  2019 2018  44 72  944 598	DECEMBER 2019 2018 29 26 39 1 255		<b>2018</b> 602 9 236

## **The Platreef Project**

The Platreef Project has a community relations team of ten 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 and individual local residents. The team engages with the community on various topics including: employment, local procurement, B-BBEE community trust processes and projects, surface lease process, project progress, heritage (grave relocations), water queries, livelihood restoration, safety, and opportunities from the Project's social development initiatives.

The community relations department has bi-weekly internal assessment meetings where staff members provide feedback on events and sentiments within the community that may have an impact on the Company. These meetings are attended by security, human resources and community relations managers. Based on the communication received from the various channels available, the community relations department, in close alignment with human resources and security management, formulates the actions necessary to address the prevalent issues. These processes have proven to work well, resulting in the Platreef Project team being able to maintain and strengthen the Project's SLO and maintain trusting and positive relationships with critical stakeholder groups.

#### NUMBER OF STAKEHOLDER MEETINGS

JANUARY  2019 2018  3 5  23 33	FEBRUARY  2019 2018  3 8 70 185	MARCH 2019 2018 3019 2018 15 12 126 185	APRIL 2019 2018 9 3 80 58	
MAY 2019 2018 19 3 347 55	JUNE 2019 2018  1 7 28 191	JULY 2019 2018 2019 2018 17 5 231 129	AUGUST  2019 2018  5 12 74 153	TOTAL         2019           ຊິຕິຕິ         115           ຄື         1 636
SEPTEMBER  2019 2018  4 1 40 7	OCTOBER  2019 2018  666 10 6  105 125	NOVEMBER  2019 2018  16 9 336 114	DECEMBER  2019 2018  7 3  176 89	2018 74 1 322

Number of meetings Number of participants



41

SPECIAL REPORT

**IVANHOE** MINES SUSTAINABILITY REPORT 2019

## Sustainable livelihoods through asset mapping: A success story for the Bonega Communities Trust, Ivanplats and Aurecon

The South African mining landscape involves intricate and considered engagement with host community stakeholders. It is crucial that pursuant to any mine development, host communities benefit from an enduring and sustainable local economy. Ivanplats has made significant in-roads in building an adequate foundation to support this agenda for its 20 host communities once the Platreef Mine is operational, and Aurecon has now partnered with Ivanplats and the Bonega Communities Trust (the Trust) to make this a reality.

Ivanplats' local socio-economic development imperative is fundamentally driven by the maintenance of a culture of responsible and accountable corporate citizenship. This imperative is implemented and governed under the auspices of the Trust, a trust established by Ivanplats as part of its B-BBEE transaction for the benefit and prosperity of the local host communities, and mandated to assist with the development and upliftment of the local host communities by way of engaging in charitable, educational and training activities. The Trust has been funded by Ivanplats on an annual basis to perform this mandate.

In May 2018, Aurecon was appointed to conduct an Asset Mapping Process in the 20 host communities to identify initiatives that had the potential to benefit a number of people in each village. The Aurecon Communication and Stakeholder Engagement team, together with members of the Trust Advisory Council, a body comprised of village representatives from all 20 communities, engaged community members in over 60 focus group meetings and conducted 7,849 surveys in order to ascertain which projects would result in community-owned initiatives and could lead to sustainable development at the same time. Success hinged upon collaboration with various groups, some of which were experiencing tension due to competition and the high unemployment rate in the area. Aurecon

succeeded in obtaining buy-in from the tribal authorities, community members, the Trust's trustees and the Trust Advisory Council members, thus bringing together all interested parties to foster a climate of unified growth.

The Asset Mapping Process adopted by Aurecon was based on the Asset Based Community Development (ABCD) approach. This ground-breaking method of development promotes sustainability by using assets and skills already within communities to start and maintain projects to improve their own livelihoods, and leads to grassroots empowerment as communities focus on what they have as opposed to what they lack. A vast array of community-run projects was identified, creating renewed hopes of empowerment and capability.

In successfully conducting community asset mapping on such a large scale despite significant challenges, and in achieving the secondary benefits of solidifying community relationships and equipping community members with skills that can be used beyond the process, Aurecon's Asset Mapping Project has been internationally recognized and awarded. At Aurecon's 2019 Awards Gala, the project won the Africa Regional Award as well as the Sustainability Award, and was the only project finalist from Africa. The project was also recently recognized at the International Association for Public Participation (IAP2) Australasia Conference, where it won the International Members-At-Large Award for Project of the Year.

"We are so proud of the mindset shift that community members were able to make as a result of our engagement process. Communities are now open to initiatives and positively empowered to take their development into their own hands," says Amelia Visagie, Aurecon Manager, Communication and Stakeholder Engagement.







## The Kipushi Project

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 include employment, local procurement, project development, safety and opportunities from the Project's social development initiatives.

#### NUMBER OF STAKEHOLDER MEETINGS

SHI PROJECT	JANUARY       2019     2018       0     15       0     295	FEBRUARY       2019     2018       17     50       160     574	MARCH       2019     2018       14     28       108     364	APRIL 2019 2018 6 21 98 210		
18/2019 KIPUSHI	MAY 2019 2018  ΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩΩ	JUNE       2019     2018       មិន     9     11       ក្នុង     71     165	JULY       2019     2018       15     33       132     429	AUGUST 2018 2018 4 30 46 390	TOTAL	<b>2019</b> 99 872
JAN-DEC 2018/2019	SEPTEMBER           2019         2018           คืคือ         10         26           คื         73         468	OCTOBER           2019         2018           ดีดีดีดี         28           43         420	NOVEMBER           2019         2018           รัติที่ที่         5         57           รัติ         56         741	DECEMBER       2019     2018       0     17       0     221		<b>2018</b> 340 4 477



#### Kipushi leads the way in stakeholder engagement

In January 2017, Kipushi established the Kipushi Future Forum (KFF) as a platform for communication between Kipushi and the community. In 2019, the structure was formalised when KFF was registered as a non-profit organization.

Having started with 17 participants, from which five were elected as members of the KFF executive committee. the KFF now boasts an association of 25 affiliates who are representative of all walks of society. The KFF affiliation is comprised of the Kipushi Union President, honourable deputies, enterprise managers, church representatives, artisanal miners, media representatives, traditional authority members, local authority members, health representatives, economic operators, the youth, and people living with disabilities. This vastly diverse association of representatives has contributed to an incredibly effective platform for engaging and addressing stakeholder issues.

The primary objectives of the KFF are to:

- > ensure that the voices of all stakeholders are adequately heard and represented;
- > provide networking and engagement opportunities to the Kipushi community;
- > assist in the resolution of issues between Kipushi and the community;
- > ensure transparent sharing of information between Kipushi and the community regarding the Kipushi Project's progress and development, and associated opportunities; and
- > learn and apply best practice in engagement and communication.

Since its establishment, the KFF has achieved invaluable successes. The KFF has actively secured timely access to up-to-date and reliable information from Kipushi in order to better understand, adapt and respond to new challenges and changing conditions in the community. Notably, as a result of the effective interaction between the KFF, Kipushi and the community, no public protests from the community were observed in 2019.

The KFF has also facilitated a recruitment process for unskilled workers to secure short-term contracts and a sport groups' support scheme to help youth in the community develop coordination, motor and interpersonal skills.

Beyond the KFF's on-the-ground contributions, it has also been instrumental in setting up the strategic Kipushi five-year development plan, in articulating community demands, finding suitable channels to share experiences and participating in the policy-making process with regards to the Kipushi Project. The KFF has also participated in Kipushi's public events and accomplishment ceremonies, such as the inauguration of community water wells.

Ivanhoe applauds the commitment and drive of the KFF and is immensely proud of its achievements in not only representing the voices of the Kipushi community, but also the professionalism and effectiveness with which it has undertaken its engagement mandate. We look forward to the KFF's enduring success.





## **COMPLAINTS AND GRIEVANCE MECHANISMS**

Functional, accessible multi-lingual and widely-published external grievance mechanisms are in place at all three projects. Grievances are managed by the community relations teams at the respective projects, and managed through the web-based system.

We define a 'grievance' as a concern or complaint raised by an individual or group affected by our projects' activities. 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. Although we strive to handle all grievances internally, we do accept the right of the complainant to access judicial remedies.

We observe the following key principles, recommended by the IFC and based on the UN Guiding Principles on Business and Human Rights: legitimacy; accessibility; predictability; equitability; transparency; rights-compatibility; and engagement and dialogue.

The following table indicates the number of grievances recorded and resolved per project site during 2019, and provides examples of the types of grievances received:

#### KAMOA-KAKULA

## total grievances pending

## 28 in 2018

- > Land compensation claims
- > Damage to property and crops > Compensation:

## contractor employee dispute

#### **PLATREEF**

4 total grievances

### 2 pending 3 in 2018

## > Blasting complaint

- > Noise and dust complaint
- > Loss of livestock

#### > Stormwater complaint

#### **KIPUSHI**

6 total grievances

### O pending

## 3 in 2018

- > Procurement complaint
- > Land compensation: damage to crops > Water overflow issue

#### 81 GROUP TOTAL

The higher number of grievances recorded at Kamoa-Kakula compared to our other sites may be attributed to the significant pace of development of the project. We have analyzed the trends of the issues raised through the grievances received at Kamoa-Kakula, the vast majority of which were related to compensation claims for land or crops impacted by our construction activities, and have implemented additional mitigation measures to prevent the ongoing reoccurrence thereof.



# **OUR 2019 PERFORMANCE** AT A GLANCE





#### **Economic Capital**

Seeking to deliver financial returns to shareholders together with sustainable benefits for host countries and communities













**US\$480,910,248** total value created and distributed at our projects

**78% increase in value creation** from our key projects since 2018

293 total beneficiary businesses of local ESD training initiatives at our projects and 15 new enterprises advanced into our supply chain

**US\$19,224,774** total budget spent on socio-economic development projects

US\$323,959,632 total local procurement spend in Africa

42,843 estimated number of beneficiaries of the Bonega Communities Trust projects



#### **Human Capital**

Seeking to attract and retain a diverse, talented, aptly skilled workforce and ensure a safe and healthy environment













ANTONIO KANDURI (TRAINING COORDINATOR), KAMOA-KAKULA

TRAINING CENTRE

64% increase in our workforce since 2018

**5,297** employees (including contractors)

81% average local employment

1,887,093 LTIF hours worked and zero LTIs at our Kipushi Project

10,396 patients attended to at Ivanhoe's occupational health clinics



#### Social and **Relational Capital**

Seeking to maintain our social licence to operate



initiatives



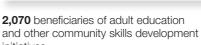












4,806 beneficiaries of educational infrastructure and support initiatives

**US\$342,835** earned by communities through Kamoa-Kakula's livelihood program

499kg Tilapia fish harvested from 33 ponds



#### **Natural Capital**

Seeking to ensure responsible environmental stewardship through embracing and conserving ecosystems and energy resources









2,000 megalitres of potable water supplied to the Kipushi town

**2,498 metric tonnes** of carbon emissions saved through innovative technology

**239 indigenous trees** planted in the Limpopo region, South Africa



#### **Intellectual Capital**

Seeking to realize urbanization's resource opportunities with minerals to help build a better world through quality education and industry innovation









#### Seeking to establish green, reliable infrastructure for sustainable cities and

communities of the future



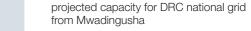






**Infrastructure Capital** 



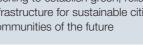


72 megawatts clean hydropower

US\$1,417,138 CSI spend through Ivanhoe-SNEL hydropower partnership in 2019

80 km of road from Likasi to Mwadingusha repaired and maintained

27 km road linking Kamoa-Kakula with the Kolwezi airport constructed



















#### Sustainable benefits for host countries and communities

Sustainable value creation for the countries and communities in which we operate is a core business objective and a corporate imperative. We create positive economic impacts through the value we create and distribute, including tax revenues and salaries, and capital and operational expenditure made 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 sustainable cities and communities. We seek to continue to increase these impacts and also further multiply their benefit through collaboration with government and partnerships with like-minded private sector peers and philanthropic organizations.

## **ECONOMIC CAPITAL**

Our financial performance is primarily affected by ongoing exploration and development activities being conducted at our three principal projects. Ivanhoe Mines has no producing operations or operating revenues, and expects to fund all of its exploration and development activities through debt and equity financing until operating revenues are generated.

For more information regarding our financial results for the year ending December 31, 2019, please refer to Ivanhoe Mines Ltd.'s Management Discussion and Analysis (MD&A) and annual financial statements at www.ivanhoemines.com and www.sedar.com.

This section details Ivanhoe's contribution to local and national economic growth in the countries in which it operates.

### Total value created and distributed

Ivanhoe Mines' principal projects are being developed in emerging economies. Through our economic contributions we seek to create enduring social and economic benefits, and leave a lasting legacy in the countries and communities where we are active. 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. The tables that follow show the total value created and distributed by Ivanhoe Mines during 2019, as well as 2018.

## Local procurement

LOCAL PROCUREMENT STATISTICS 2019/2018

Area	Percentage procurement spend					
	DRC	South Africa	Other African	Other		
KAMOA-KAKUI	_A					
2019	57.63%	24.65%	0.21%	17.51%		
2018	75.18%	16.30%	0.69%	7.82%		
IVANPLATS						
2019	0.00%	97.06%	0.00%	2.94%		
2018	0.00%	96.78%	0.00%	3.22%		
KIPUSHI						
2019	57.94%	35.51%	4.14%	2.41%		
2018	49.01%	41.11%	5.17%	4.71%		
EXPLORATION						
2019	61.43%	10.75%	0.00%	27.82%		
2018	83.12%	10.24%	0.00%	6.64%		
GROUP SERVICE	ES					
2019	4.16%	24.26%	0.01%	71.57%		
2018	4.58%	28.83%	0.01%	66.57%		
TOTAL						
2019	47.67%	32.14%	0.50%	19.69%		
2018	50.66%	34.81%	1.19%	13.34%		

For purposes of this Sustainability Report, we define 'local procurement' to be in-country procurement for our specific areas of operation, the DRC and South Africa. At Kamoa-Kakula and Kipushi, our local procurement strategy is guided by the applicable DRC regulatory framework, and at our Platreef Project, by the South African Mining Charter and the Department of Trade and Industry's (DTI) B-BBEE Codes of Good Practice. We set internal targets to ensure that the development of our projects brings direct benefit to local businesses through our supply chain.

As all of our projects are being developed close to neighboring communities, we are further committed to supporting community local procurement within each site's social area of influence. We have instituted enterprise development programs, through which we invest time and capital to help people establish, expand or improve businesses that may be directly or indirectly supported through our economic activities, as well as supplier development programs, whereby we work with certain suppliers on a one-to-one basis to improve their performance and equip them to take advantage of opportunities within our supply chain. As such, through these enterprise and supplier capacity-building programs, and together with ring-fencing of certain opportunities and unbundling of contracts, we seek to preferentially engage and support these local suppliers, and to create opportunities for community suppliers to partner with established suppliers for skills transfer. Through our ESD strategy, we are able to help people earn a living or find a way out of poverty, and begin the journey to long-term economic growth for themselves, their families and their communities.

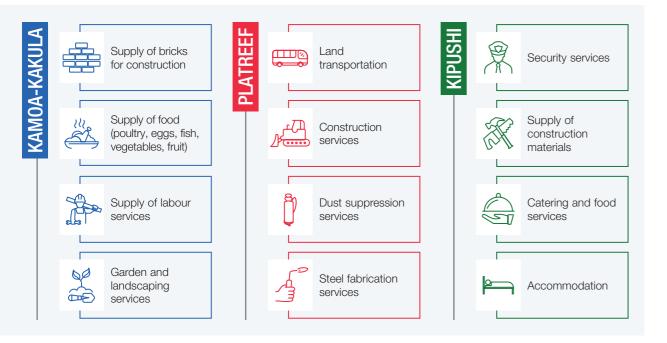
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Project		Gover	nment			Socio-		Procurement					
	Payroll tax	VAT paid/ (net refund)	Other tax	Parastatal Companies	Employees	Economic Develop- ment		South Africa	Other African	National Value Distribution	South Africa	Democratic Republic of Congo	Other African
Kamoa-Kakula*	13,664,664	25,285,849	3,990,143	34,463,292	13,125,780	15,661,146	164,205,482	70,241,346	587,555	341,225,257	70,241,347	270,396,355	587,555
Ivanplats	2,808,970	(5,731,550)	-	589,759	5,817,469	2,305,030	_	37,802,188	-	43,591,866	43,591,866	-	-
Kipushi	6,516,312	3,592,124	764,406	6,429,410	10,961,266	904,279	19,778,676	12,122,602	1,414,154	62,483,229	16,124,114	44,576,772	1,782,343
Exploration	-	_	2,583,706	_	_	_	6,897,504	1,207,174	_	10,688,384	1,207,174	9,481,210	_
Group Services	6,481,313	769,380	822,448	-	4,791,101	354,319	1,420,916	8,277,926	4,109	22,921,512	18,184,745	4,732,658	4,109
TOTAL	29,471,259	23,915,803	8,160,703	41,482,461	34,695,616	19,224,774	192,302,578	129,651,236	2,005,818	480,910,248	149,349,246	329,186,995	2,374,007
TOTAL VALUE CREATED AND DISTRIBUTE	D 2018												
Kamoa-Kakula*	7,405,038	9,231,570	3,479,905	27,971,970	8,898,722	1,924,145	63,176,378	11,018,942	630,745	133,737,416	14,349,748	118,756,922	630,745
Ivanplats	2,740,000	10,980	_	499,094	5,384,279	1,444,417	_	39,956,092	_	50,034,863	50,034,863	-	_
Kipushi	5,873,020	3,984,539	1,239,051	6,118,527	9,300,842	1,553,152	12,125,131	16,479,438	2,074,707	58,748,407	20,411,790	36,261,910	2,074,707
Exploration	-	2,339	293,849	3,170	-	_	8,410,702	1,036,334	_	9,746,395	1,036,334	8,710,061	-
Group Services	3,305,978	744,534	893,956	-	5,120,773	_	1,358,183	6,876,307	_	18,299,732	13,636,009	4,663,723	-
TOTAL	19,324,036	13,973,963	5,906,762	34,592,762	28,704,616	4,921,714	85,070,394	75,367,114	2,705,452	270,566,813	99,468,745	168,392,616	2,705,452

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

procurement supply chain:

The following are services typically procured from our local community suppliers at our projects, some of these being from suppliers which were established as enterprises through our programs, and subsequently graduated to suppliers in our



Recent amendments to the procurement-related provisions of the DRC Mining Code and its interplay with the laws governing subcontracting in the private sector required our consideration and interpretation.

During 2019, we held a number of workshops with team members from the legal, finance, procurement and ESD departments at our Kamoa-Kakula and Kipushi projects respectively, in order to further assess the requirements of these new norms and implement measures to ensure compliance.

Ivanhoe also implemented a training policy and related measures within the Company, and in co-operation with our direct contractors aimed at enabling Congolese to acquire the necessary technical expertise and qualifications to perform certain activities, and develop training structures specialised in the activities for which local expertise is lacking or unavailable.

Ivanhoe continues to carefully monitor all developments in this respect and to engage with DRC authorities, when appropriate.

In Q4 2019, Kamoa-Kakula established an ESD Department, which immediately set about developing an ESD management plan and strategy. The team also worked towards advancing the establishment of a local supplier digital portal that will enable local suppliers to register on a supplier database, and apply electronically for procurement opportunities. A number of opportunities have been ring-fenced for local enterprises, the first of which commenced in November 2019.



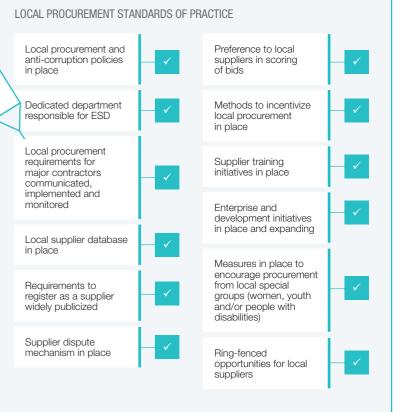
At our Platreef Project, we have established a partnership with Phakamani Impact Capital who specialise in providing finance and hands-on business support to local enterprises within our supply chains and local communities. The introduction of Phakamani Impact Capital's business accelerator and small, medium and micro enterprise (SMME) financing platform was a holistic response to the perennial access-to-finance challenge typically faced by local entrepreneurs. Through this integrated business training and loan-financing solution, Platreef was able to realize significant impact in the number of preferential loans granted to local SMMEs, jobs created and the reach extended to vulnerable groups of entrepreneurs, such as women and the youth. A total of 20 loans were granted during the reporting period, directly leading to the creation of 78 jobs. Particular focus was placed on women entrepreneurs, with eight woman-owned businesses having been supported, and on the youth, with eight youth-owned businesses being supported. Through Phakamani's unique Business Accelerator Program, a total of 76 SMMEs were trained, including 40 woman-owned and 36 youth-owned businesses.

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 as outlined in SDG 8, and the formalization and growth of micro-, small – and medium-sized enterprises, including through access to financial services. In 2019, Ivanplats also conducted a training program for local suppliers who are persons living with disabilities, further contributing to SDG 8 through fostering possibilities for decent work for all women and men, including for young people and persons living with disabilities.

During 2019, Kipushi worked towards further boosting our local procurement and reviewed our adjudication standards with a view to including criteria that favoured local suppliers, and our Kipushi procurement team similarly focused on the unbundling of large contracts in order to benefit a greater number of local suppliers.

## Mining Local Procurement Reporting Mechanism (LPRM)

The Mining 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. As previously reported in our 2018 Sustainability Report, Ivanhoe Mines adopted the standards of practice as published in the LPRM with a view to standardizing our procurement practices across all three of our projects, identifying any potential gaps at specific project locations and streamlining our group procurement reporting (see Appendix: Alignment with Mining Local Procurement Reporting Mechanism). We are working closely with the Mining Shared Value team to enhance our application and use of this reporting tool.



During 2019, we focused our efforts on the formulation of a Supplier Code of Conduct that aims to bolster compliance at all sites, and align practices and reporting for all site contractors.



#### **Strengthening local security enterprises**

The Platreef Project appointed Bidvest Protea Coin (Bidvest), a leading provider of integrated security solutions, as its preferred bidder for a three-year security services contract beginning in February 2018. A key component of the contract is the requirement that Bidvest invest in the economic upliftment of a selected local security company by means of a joint venture that provides for the progressive transfer of skills, resources and the handover of security operations, to ultimately establish a fully-empowered locally-owned security company. The opportunity was ear-marked for a local service provider. However as none of the tender responses received from the local service providers met all the adjudication criteria, we selected a suitable service provider from a pool of well-established security providers, provided that they, in turn, appointed a local security company to conduct a portion of the work in a joint-venture arrangement, and undertake to act as a "big brother" or mentor to the local service provider. As such. Bidvest initiated a formal process for the selection of a local security company. An intensely competitive process resulted in Mahwelereng-based Global Strake Security Services (Global Strake) emerging as the successful bidder for this supplier development opportunity. Global Strake's founding story is one that would resonate with most South Africans as they grapple with the scourge of crime in their day-to-day lives. More than 17 years ago, in 2002, the young and enterprising Mmushi Tsebe became concerned about





the increasing rate of wanton crime in his township of Mahwelereng. He mobilized a few of his friends, bicycles and patrol torches, and founded the Global Strake neighbourhood watch initiative. The community response was immensely encouraging and gathered large numbers of support, such that it culminated in today's security company. His company has acquired a market-leading position in the household security sector of Mokopane.

Over the years, and from its township base, Global Strake has evolved to offer an increasingly sophisticated array of security solutions to a wider and increasingly diverse client base comprising both private and public sector clients. These services include the provision of physical guards; the installation, maintenance and repairs of surveillance and alarm systems; and their monitoring. In addition, and as a consequence of being awarded the security component of the annual Ivanplats mealie-fields compensation contract, Global Strake has been able to extend its offering to the highly complex operation of cash-in-transit solutions. The Company is subsequently also in the process of erecting a cash storage facility that will facilitate the easy remittance of bulk payments.

From its small founding-member base, the Global Strake team has grown to include more than 267 staff members, which are representative of a diverse mix of race, gender and age. Mmushi Tsebe believes that diversity is a strength that enables his organization to be responsive to the needs of the community, and it is the main reason why Global



Strake continues to be embraced by all sectors of society. Given the people-centred focus of the security business, Global Strake is particularly grateful for the transfer of 18 highly-skilled security personnel from Bidvest, arising out of the Ivanplats security services contract, to complement its existing team and technical expertise.

Beyond benefitting from the specialist mining security training emanating from the Ivanplats–Bidvest contractual arrangement, Global Strake has also made a significant investment in the training of its staff on different aspects of sound security practice, including training on the Voluntary Principles on Security and Human Rights (VPSHRs).

It is this community-minded ethos that led to Global Strake establishing a ground-breaking PSIRA-accredited training academy (Jodigyn Training Academy) in 2018 – a first in Mokopane – to promote high standards of professionalism in the safety and security sector. The first group of 12 trainees commenced their 12-month training in May 2018 and graduated in 2019, attaining a National Certificate in General Security Practices (National Qualifications Framework (NQF) Level 3: ID (58577)) qualification, as well as qualifications in related skills programs in the private security sector. It is envisaged that at least 50 members of the community will be trained through the Jodigyn Training Academy in 2020, engaging in various aspects of security management with a view to improving the levels of safety in the community.

As a result of being awarded this opportunity by Ivanplats, Global Strake is now confident that it will be able to leverage the experience gained during the three-year contract period to develop and solidify its expertise in the mining security segment, and expand into other mining operations within Limpopo Province and beyond. Already, and due largely to its association with Ivanplats, Global Strake has begun securing security mandates in the coal basin of Lephalale and other mine sites in the area. Its expanded scope resulting from the Ivanplats' mealie-fields compensation project has further enabled Global Strake to venture confidently into the risky, but relatively highmargin, cash-management solutions segment.

Similarly, during 2019, at Kipushi Project we evaluated our security arrangements, and determined that the provision of security services provided an ideal opportunity for ring-fencing an opportunity for the benefit of a local service provider. Kipushi subsequently appointed Eagle One Security, a 100% locally-owned and managed security service provider to render security services effective from October 1, 2019.

Eagle One Security is a young company, with impressive leadership and professional execution of daily duties that ensure the safety and security of the Kipushi workforce and physical assets. Eagle One Security provides employment to locals and has made a great effort to ensure the recruitment of a staff complement that is 100% local.

This contract supports community local procurement, and increases the Kipushi Project's local spend and local recruitment targets. It also tackles unemployment, thereby addressing key pressure points from local government, youth movements and the community, and increases skills levels of locals while improving the security at the project. Eagle One Security is thus provided with further learning and experiences, including training in the Voluntary Principles on Securities and Human Rights, international management protocols and other technical skills in security. This enables them to bolster their experience and reputation with a view to expanding their business. This journey is off to a good start and we look forward to a solid working relationship with Eagle One Security.



**Enterprise and supplier development** 

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 following is a summary of our ESD initiatives per project:

ENTERPRISE DEVELOPMENT									
Project	Number of enterprises in support and/or training interventions	Number of new enterprises in development program	Number of enterprises graduated to supply chain	Type of training					
Kamoa-Kakula	12	7	4	Business management equipment training.					
Platreef	84	11	6	Introduction to procurement business accelerator program, digitally focused project training management.					
Kipushi	2	10	5	Legal business.					
Group total	98	28	15						

SUPPLIER DEVELOPMENT							
Project	Number of suppliers in support and/or training interventions	Type of training					
Kamoa-Kakula	39	Bids and pricing, importation process, delivery of goods, payment process.					
Platreef	136	Tender for business, project management, contractors' packs, end-user computing, business incubation support and advice.					
Kipushi	20	Tender process, supplier open day.					
Group total	195						





## Investment in a Skills and Entrepreneurial Development Program for People Living with Disabilities

Our Enterprise and Supplier Development (ESD)
Department at the Platreef Project identified a need
to help open up commercial opportunities for people
living with disabilities (PWD) in our host communities.
Our project team partnered with the leading skills
and enterprise development specialists (e.g., DRA
Global Engineering, Gordon Institute of Business
Science (GIBS)); a local civic organization; and local
skills development specialists (e.g., People Living with
Disabilities in Business (LIPDIB)). This partnership
sought to furnish PWD in business in our Platreef
Project's area of influence with the necessary skills to
access employment and economic opportunities within
the local mining value chain and beyond.

The training program aimed to equip candidates with the skills to efficiently and effectively access market opportunities within both the private and public sectors; reinforce essential business concepts and applications to enable entrepreneurial PWD to operate effectively as business leaders in their community; and provide cutting-edge digital and technological skills necessary to improve the operational efficiencies of their businesses, as the participants were also equipped with laptops and tablets to help them access online opportunities and tender platforms.

Accredited courses offered included Information and Communications Technology (ICT), Project Management, and Tendering Practices. These skills served not only to propel their businesses to greater heights, but also allowed us at the Platreef Project to demonstrate our commitment to key transformation imperatives.

The skills component of the program was benchmarked against specific learning unit standards of the National Qualifications Framework (NQF), in terms of which

learners were awarded a number of learning credits in the areas of New Venture Creation, ICT, Project Management, Tendering Practices and Supply Chain Management, and Business Plan Development. One of the selection criteria for the participants was that they should already be involved in business. This proved to be a key success factor in the program as the participants reported that they were able to apply the knowledge gained from the training interventions to real-life situations in their own businesses. One of the participants,

Jack Masenya from Ga-Magongoa community in Mokopane, is a successful businessperson who owns a restaurant and farm in the area. He was employed as a mining load and haul operator at another mine in 2014 when he had a serious car accident which left him with brain and spinal cord injuries and memory loss. Once he had been discharged from hospital and started adjusting to life in a wheelchair, he decided to start a small restaurant in a semi-urban community in Mokopane to help him regain his memory and strengthen his cognitive recovery.

Jack Masenya made such a success of his endeavours that he was able to employ six permanent workers and several casual workers within three years. He also bought a farm, started a hatchery with lay hens and established a cattle herd, which he is now focused on developing into a feedlot.

Already a successful businessperson in spite of personal challenges, he found the entrepreneurial development training facilitated by our Platreef team immensely beneficial. He says that throughout his life, he had to learn how to adapt from point A to point B very quickly, and views the business training he received as tools equipping him to adapt and grow more efficiently. He especially found the training about financial and staff management systems helpful in improving controls in his businesses.

His goals are to become a significant supplier of red meat in the area and to keep on expanding his business endeavours. One day, he would like to return to the mining industry as a skills development contractor, training young people to become load and haul operators and so make a positive impact on the lives of others.



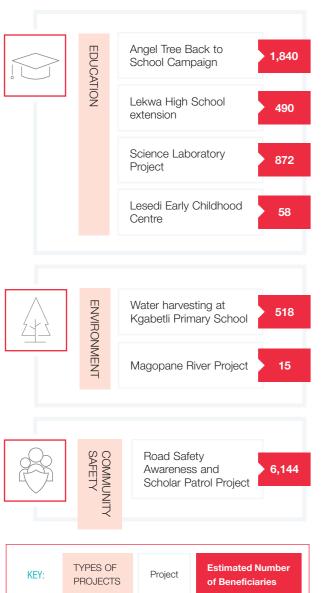
**Broad-based black** economic empowerment at our Platreef Project

In previous Sustainability Reports we reported on the ownership structure at the Platreef Project, which included a 26% interest transferred to a broad-based black economic empowerment special purpose vehicle (B-BBEE SPV). This was in conformance with South Africa's mining laws and in fulfilment 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 may only fund philanthropic, non-profit-making initiatives. The Trust is governed by a Board of Trustees comprising eight members (three of whom are independent). The 20 host communities and Trust beneficiaries elect three representatives each to serve for a three-year period on the Trust Advisory Council (60 members), and of this number, three representatives are put forward to serve on the Board of Trustees.

Ivanplats has been contributing ZAR 11 million per year to the Trust since its establishment. See the table below for an update on the number and type of socio-economic projects delivered during 2019, as well as the number of beneficiaries.

#### BONEGA COMMUNITIES TRUST PROJECTS 2019





Education remains the key to unlocking opportunities and changing lives, and being part of the core purpose of the Trust, educational projects have received significant support from the Trust. Lekwa Secondary School in Ga-Kgobudi, a community adjacent to the Platreef Project, sought and received assistance from the Trust for four additional classrooms to be built to cater for the volume of students at their school, and the erection of a fence, which could keep the children and school premises safe. The Lesedi Early Childhood Development Centre, also situated in Ga-Kgobudi, received a donation from the Trust, which was applied towards enhancing the centre with equipment, thereby making provision for more children, and procuring sports kits and stationery for the learners.

The Trust focuses on science in recognition of the opportunities that the subject unlocks for employment and studying towards a vast variety of professions. The Trust sponsored Ramogabudi High School with a pre-fabricated, fullyequipped science laboratory to assist learners in the school and encourage a love of the subject. Since then, the results of the learners in this school have improved tremendously and there is hope for future learners of the school to continue using the science labs to improve their academic performance.

Many children in the communities around our Platreef Project do not have school shoes and are forced to go to school barefoot or to wear old, torn shoes. The Trust therefore sponsored new shoes for Grade R learners in 22 schools in the 20 beneficiary communities during January 2019.



## teams up with Platreef and Aveng Mining for educational success at Lekwa Secondary School

Our Platreef Project, the Trust, and Aveng Moolmans, our contractor appointed for sinking Shaft 1 at the Project, joined forces to improve the quality of education at Lekwa Secondary School in Ga-Kgobudi, a community directly adjacent to the project. Ivanplats' investment spans a number of years and over a period of five years, Ivanplats has delivered sanitation facilities, science and computer laboratories and educational support, additional infrastructure such as a new classroom block, a security fence and paving in 2019.

The Lekwa Secondary School improved the quality of its matric pass rate between 2017 and 2018. Because it had achieved a 100% pass rate in 2018, it saw an influx of new learners enrolling. The resultant overcrowding in classrooms had the Trust investing in the construction of four classrooms, with Ivanplats offering project management on a voluntary basis in 2019. The Trust further invested in the installation of a security fence around the school grounds to improve safety and security. Aveng Mining contributed a significant amount of funding towards paving the critical pathways on the grounds to support the new infrastructure.

The school had previously benefitted from Ivanplats' Social and Labour Plan (SLP) as the recipient of computer and science laboratories which had been built. The computer laboratory is mainly used as a resource centre for research and completing formal tasks such as projects, training and assignments. It also assists educators in preparing their lessons and completing ongoing professional learning tasks. During 2019, the centre was utilized by 482 learners requiring additional educational assistance.

The science laboratory helps leaners and educators to follow the curriculum-required experiments when it comes to demonstrations. The availability of the new science laboratory, equipment and consumables has benefited the school as it replaced older and non-functioning infrastructure.

The school continues to strive for excellence and has, yet again, improved its performance in the 2019 national matriculation examinations. The school management has graciously expressed their appreciation to the Platreef Project and partners for contributing to the school's success.



NEWLY CONSTRUCTED CLASSROOMS AT LEKWA SECONDARY SCHOOL **NEAR THE PLATREEF PROJECT** 























#### A diverse, talented workforce for the mines of the future

At Ivanhoe, we are proud of the diverse, highly-talented workforce that we attract, recruit, develop and retain through our fair recruitment and remuneration practices and career development opportunities. As an equal opportunity employer, 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 vital to our innovation and success. We are committed to a goal of zero harm, and seek to improve our health and safety performance continually, thereby ensuring a safe and healthy working environment for our workforce and neighbouring communities. We focus on ensuring equal opportunities for nationals within our countries of operation, and for local people from our host communities. As far as possible, we also prioritize women and the vulnerable in our communities, such as people living with disabilities, including by affording these marginalized groups opportunities for training and development. We also seek and build strategic partnerships for the development and benefit of our people, and aim to build a strong pipeline of talent for future local employment.

## **HUMAN CAPITAL**

## At Ivanhoe Mines, our success relies greatly on our people

Our recruitment and remuneration practices are geared towards the attraction and retention of talent, and are guided by our corporate values, policies, standards and statement of corporate citizenship, and by applicable country-specific targets and regulatory requirements in the jurisdictions within which we operate. Ivanhoe Mines is an equal opportunity employer and we take pride in our diverse, talented workforce. We place a premium on the health and safety of our workforce, and are continually improving our training and education practices. We empower our people and foster an environment where ideas and innovation thrive, as our people reach their potential and perform at their peak.

As of December 31, 2019, our workforce, comprising employees and contractors, totalled 5,297, compared to 3,231 in 2018, an increase of 64%. This significant increase is attributable to the development and ramp-up of the Kamoa-Kakula Project towards production.







#### Our workforce

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, skills development and recruitment policies and procedures. Our main contractors are held accountable for complying with our employment standards, as set out in the contractor requirement frameworks of our three principal projects.

TOTAL WORKFORCE BY EMPLOYMENT TYPE AND LOCATION AS AT DECEMBER 31, 2019									
	Kamoa- Kakula	Platreef	Kipushi	Exploration	Group Services	Total Workforce			
Employees*	514	157	522	0	112	1,315			
Contractors	3,375	474	108	20	5	3,982			
Total	3,889	631	630	20	127	5,297			

<sup>\*</sup> Approximately 39% of the Company's work force (employees) is unionized.

The performance of our executive management is measured by way of a corporate scorecard based on Ivanhoe Mines' annual corporate strategy. Key Performance Indicators (KPIs) within this scorecard inform the scorecards for each site which, in turn, inform the objectives and scorecards for our employees. 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. Employees are thus provided with the opportunity to grow and develop through Individual Development Plans (IDPs), which are discussed together with the performance assessments, and through which our employees are identified for training, study or other development programs. Our human resources development is discussed further on in this report.

Ivanhoe Mines proudly claims a low staff turnover, as we not only attract and recruit top talent, but also retain our workforce through fair and competitive remuneration, and other benefits for full-time employees, including 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. As seen in the following table, which indicates the turnover of Ivanhoe Mines' full-time employees during 2019, the Company's turnover, is on average, less than 3%.

EMPLOYEE TURNOVER (2019)								
	Kamoa- Kakula	Platreef	Kipushi	Group Services	Total Workforce			
Number of employees	9	2	90	3	104			
% of workforce (full-time employees)	1.75%	1.27	17.24%*	2.68%	7.91%			

<sup>\*</sup> A significant number of Kipushi employees reached retirement age and were obligated by DRC law to retire.

At Ivanhoe Mines, we value and respect the rights of our employees, including the right to freedom of association and collective bargaining. We endeavour to preserve constructive relationships with our employees and their trade unions. 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. During the reporting period, no strikes took place at any of our projects. However, at our Platreef Project, a dispute regarding the number of representatives allowable per level in terms of the trade union recognition agreement was referred to the labour authority for conciliation.

## Diversity, inclusion and local employment

At Ivanhoe, we understand the business case and value of a diversified workforce, and strive to ensure that all persons have equal opportunities for recruitment or promotion, regardless of their race, skin color, national origin, gender, disability, religion, sexual orientation or age. The number of women across all levels in the mining sector is low, and the current international focus on diversity and inclusion is a critical one. We are committed to playing a prominent role in addressing this.

We are improving our internal systems, structures and approaches to ensure inclusion and diversity in our workforce and our Human Resource Development programs. This includes a Women in Mining initiative at our Platreef Project, where we set targets and measure the number of women in our workforce, and seek to ensure that women are adequately represented in technical positions, as well as the Her4Us Project, where women ambassadors work to improve internal engagements with employees and identify critical issues. In order to improve opportunities for women and young girls in our communities, we implement our development projects with an emphasis on opportunities for women and young

girls, that is, by offering bursaries and scholarship projects, science, technology, engineering and medicine (STEM) projects and ICT.

In November 2019, we conceptualized the Her4Us sustainability campaign for implementation during 2020. This initiative seeks to build morale, foster camaraderie and champion motivation within Ivanhoe Mines, as well as profile women for leadership positions. A number of female "champions" or "ambassadors" (Hers) have been appointed in order to facilitate a culture of diversity, inclusivity, engagement, innovation and the sharing of knowledge or information with all employees and stakeholders (Us). The Her4Us campaign also seeks to ensure that employees and stakeholders believe, acknowledge and feel that they are part of the historic journey of each project's development, using methods of positive re-enforcement both internal and external to the projects. The activities and outcomes of this initiative will be used to inform the next reporting period.

We track a number of diversity indicators, both for our internal employees and those of our contractors. The tables below indicate our employee and contractor gender ratios, our female employees in management, as well as our employee age categories. Note that the exploration team is comprised solely of contractors, as this work is seasonal in nature.

#### TOTAL WORKFORCE (EMPLOYEES) BY GENDER AND LOCATION AS AT DECEMBER 31, 2019

	Kamoa- Kakula	Platreef	Kipushi	Group Services	Total Workforce
Male	485	107	488	62	1,142
Female	29	50	34	60	173
Total	514	157	522	122	1,315

#### TOTAL WORKFORCE (CONTRACTORS) BY GENDER AND LOCATION AS AT DECEMBER 31, 2019

	Kamoa- Kakula	Platreef	Kipushi	Exploration	Group Services	Total Workforce
Male	3,297	400	91	20	1	3,809
Female	78	74	17	_	4	173
Total	3,375	474	108	20	5	3,982

#### TOTAL WORKFORCE (EMPLOYEES) BY AGE GROUP AND LOCATION AS AT DECEMBER 31, 2019

	Kamoa- Kakula	Platreef	Kipushi	Group Services
<30 years	64	6	76	14
30 to 40 years	217	45	152	44
40 to 50 years	152	65	126	43
50 to 60 years	66	28	113	16
60 years and older	15	13	55	5

## Recruitment

Ivanhoe Mines' recruitment policy prioritizes recruiting local people from our projects' host communities. 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. 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 being filled by local employees.

## IVANHOE MINES' LOCAL EMPLOYMENT STATISTICS

	Kamoa- Kakula	Platreef	Kipushi	Total Workforce
Local employees	460	122	486	1,068
Non-local employees	54	35	36	125

Note: For Kamoa-Kakula and Kipushi, 'non-local employees' refers to employees who are not Congolese nationals and for Platreef 'non-local employees' refers to employees not from or resident in the Mokopane communities.

## LOCAL EMPLOYEES IN MANAGEMENT\* STATISTICS

	AS AT DECEMBER 31, 2019						
		Number of employees	% of workforce				
Kamoa-Kakula	Total management employees	67	13,04				
	Congolese nationals	24	4,67				
	Expatriates	43	8,37				
Platreef	Total management employees	34	21,66				
	South African HDSAs	18	11,46				
	Local non-HDSAs	16	10,19				
Kipushi	Total management employees	21	4,02				
	Congolese nationals	12	2,30				
	Expatriates	9	1,72				
Group Services	Total management employees	58	47,54				
	HDSAs/indigenous persons	55	45,08				
	Expatriates	3	2,46				

<sup>\*</sup> Management includes all employees from Paterson band D and above

Owing to the increased demand for highly skilled and senior managerial employees at the Kamoa-Kakula Project, during the final ramp-up to production, we anticipate that the proportion of non-local employees will increase in the short to medium term. However, at our Kamoa-Kakula and Kipushi projects, we have a skills transfer program between expatriates and Congolese nationals in place to progressively increase the number of Congolese nationals in the Company's 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 Kamoa-Kakula in the long-term.



Onsite food and accommodation

Our care for the personal health and physical wellbeing of our employees is one of Ivanhoe Mines' top priorities. It is for this reason that the secure accommodation that we provide on our project sites is clean, well equipped and comfortable. The nutritious and organically-grown food that we serve in the respective dining facilities is partly sourced from the food programs in the local communities (e.g., vegetables, eggs, fish, chicken and honey) and caters for the varied tastes of our multinational workforce. Gym and other recreational facilities are available at our Kamoa-Kakula project to ensure workers' physical fitness and to offer respite from the work environment.





## Health and safety performance

## Our approach to safety management

The health and safety of our employees, contractors, suppliers, visitors and neighbours is one of our key priorities, and of paramount importance to us. We have established policies, systems and standard operating procedures to ensure that our employees, contractors and suppliers have the knowledge and ability to perform their duties safely, so that we are able to comply with our motto of "Home without harm, everyone, every day".

As an OECD member state, we acknowledge and remain committed to the framework of laws, regulations and administrative practices in the countries in which they operate, and in consideration of relevant international agreements, principles, objectives, and standards, to take due account of the need to protect public and employee health and safety in accordance with the OECD Guidelines.

We have embedded safety as a way of life, and through this safety strategy we aim to ensure that we foster a culture of 'zero harm' in SHE, seeking to eliminate unsafe acts and conditions in the working environment. The strategy manifests itself in an approach to change the thinking and therefore behaviour of employees and contractors ensuring that they have the means and intent to manage if not eliminate risk at the work face. Driven from the very top of the organization, the culture of zero harm carries the highest priority within the company.

#### IVANHOE MINE'S HEALTH AND SAFETY STRATEGY



Provide leadership and resources to manage health and safety



Manage workplace risk



Educate, train, communicate, share information



Commitment to health and safety, and a culture of 'zero harm'

#### 'Home without harm, everyone, every day'

# Our safety statistics and initiatives

At the end of 2019, the Kamoa-Kakula Project reached 2,629,889 work hours free of an LTI. Tragically, a fatality occurred in September 2019. The accident involved an employee of a civil contractor at a surface cement batching plant. This incident occurred after the project

had functioned for more than 7.5 years without an LTI. Following this accident, Kamoa-Kakula bolstered its contractor safety compliance through additional safety specifications requiring a declaration from all contractors regarding their commitment and enduring compliance. The Kamoa-Kakula Project continues to strive toward its workplace objective of an environment that causes zero harm to all employees and contractors.

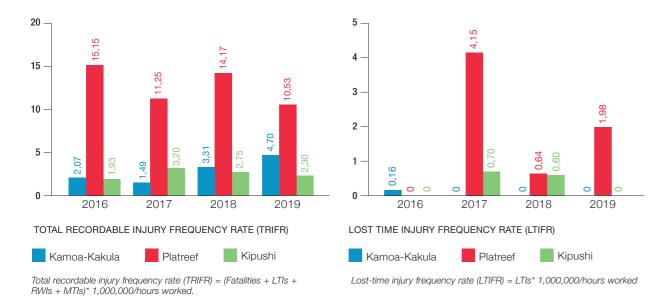


At the end of 2019, our Platreef Project reached a total of 171,525 LTI-free hours worked in accordance with South Africa's Mine Health and Safety Act and Occupational Health and Safety Act. Unfortunately, three LTIs occurred during the year, which resulted in the increase of the lost-time injury frequency rate (LTIFR) from 0.64 in 2018 to 1.98 for 2019. In all cases, the root cause of the accident was investigated and changes were made to applicable standard operating procedures and risk assessments. During the year, we conducted a number of safety-related training interventions at our Platreef Project, covering first-aid, safety inductions, and health and safety training for safety representatives. Standard operating procedures, and mandatory codes of practice, and a number of safety campaigns, initiatives and incentives were introduced to ensure that the Platreef Project continues to strive toward our workplace objective of an environment that causes zero harm to employees, contractors, sub-contractors and consultants. While disappointed that the LTIF rate increased compared to 2018 results, shaft sinking operations are nearing completion given the development of the final station at a depth of 950 metres below surface in the shaft planned to be 1,000 metres deep. Efforts to manage and control ground conditions and the support of mining excavations has delivered results in that since inception injury caused through 'falls of ground', the primary cause of most injuries in the South African mining industry, has been zero.

At the end of 2019, our Kipushi Project reached a total of 1,887,093 work hours free of an LTI. During the year, Kipushi conducted a number of safety-related training interventions, covering a number of topics, including first-aid, defensive driving, pump attendant training, safety representative training, Company Rules, human rights, supervisor training and refresher training.







<sup>\*</sup> Platreef is currently still in a shaft-sinking phase

SAFETY STATISTICS AND INITIATIVES IMPLEMENTED AT THE RESPECTIVE SITES DURING 2019						
	Kamoa- Kakula	Platreef	Kipushi			
Number of hours worked	7,233,906	1,518,983	1,887,093			
Total number of employees and contractors	3,879	631	628			
Number of lost-time injury – (LTI) free days during 2019	267	47	365			
Number of lost-time injury – (LTI) free hours during 2019	2,629,889	171,525	1,887,093			
Lost-time injury frequency rate (LTIFR)	0	1,98	0			
Total recordable injury frequency rate (TRIFR)	4,7	10,53	2,3			
Fatalities	1	0	0			
Lost-time injuries (LTI)	0	3	0			
Near miss incidents	25	39	12			
First-aid cases (FACs)	14	2	4			
Medical treatment cases (MTCs)	16	11	0			
Number of visitor inductions conducted	323	88	652			
Number of full inductions concluded	1,979	905	368			
Number of safety-related training interventions conducted	10	6	12			
Number of attendees for safety-related training interventions	363	2,423	692			
Digital HSE management system fully operational	In progress	In progress	In progress			

#### Our health statistics and initiatives

At Ivanhoe Mines, we place a priority on our employees' health and wellness. Each project has a fully-equipped medical team, as well as a medical emergency response team, and conducts regular occupational wellness campaigns that support employees' capacity to look after their own health and wellbeing. We conduct occupational hygiene monitoring and programs that provide project teams with timely information to institute preventative measures to mitigate health and safety risks.

	OCCUPATIONA	L HYGIENE MONI	TORING PROGRA	MS AND ASSOCIA	ATED OCCUPATIO	NAL DISEASES	
	Noise	Surface blast	Potable water quality	Underground ventilation	Noxious or flammable gasses	Airborne pollutants	
CAUSING							
	_	_	_	_	_	_	
	Noise-induced hearing loss	Vibrational disorders	Poisoning	Respiratory illnesses/conditions			

In compliance with the relevant labour and mine health and safety regulations applicable to our projects, medical insurance, or access to basic medical care is provided to our employees and, where applicable, to their dependants. As such, our contribution to SDG 3 goes beyond a focus on the health and well-being of our employees to include the family of our employees and our host communities. The Kamoa-Kakula and Kipushi projects 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 to. The following table provides an overview of the 2019 health statistics from our principal projects:

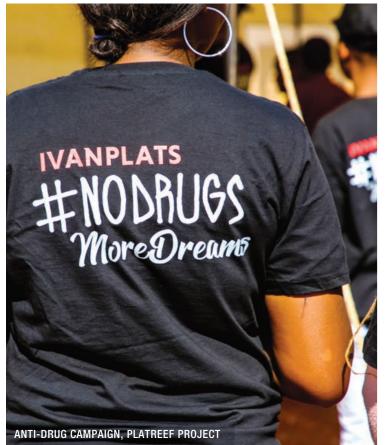
HEALTH CARE STATISTICS					
		Kamoa- Kakula	Platreef	Kipushi	Total
Number of annual employee medicals performed	Employees	174	905	484	1,563
Number of patients tested for malaria	Employees	2,323	0	825	3,148
Number of patients tested positive and treated for malaria	Employees	991	0	748	1,739
Total patients seen at site occupational health clinic	Employees	9,222	1,060	114	10,396
Total of chronic patients seen and treated on a monthly basis	Employees	253	1,027	0	1,280
Total of chronic patients seen and treated on a monthly basis	Employee dependants <sup>1</sup>	20	0	0	20
Total patients seen at designated hospitals	Employees	228	0	562	790
Total patients seen at designated hospitals	Employee dependants	1,482	2	1,743	3,227
Number of health induction attendees	Employees	3,521	905	361	4,787
Number of HIV tests performed	Employees	0	624	0	624
Number of HIV tests positive	Employees	0	61	0	61
Number of patients voluntarily on Highly Active Antiretroviral Therapy (HAART)	Employees	156	61	0	217
Number of new cases of Tuberculosis (TB)	Employees	0	1	2	3
Number of noise-induced hearing loss cases	Employees	0	4	0	4
Number of chronic obstructive airway disease cases	Employees	0	0	0	0
Employee wellness topics covered	Employees	7	23	12	42

DRC labour regulations require that the Company provide medical care for the dependants of the employees through state-owned or private medical facilities









# Community-based health initiatives

The community relations and development teams at all three projects prioritize engagement and support initiatives focused on community health and safety. A number of community health initiatives are also conducted throughout the year.

At Kamoa-Kakula we scaled our impact in the local communities with regards to human immunodeficiency virus (HIV) awareness by training peer educators in nine localities and impacting a total of 6,675 people. World AIDS Day awareness campaigns were also held in four villages and reached a total of 12,204 people.

Kamoa-Kakula also supported the 2019 Malaria World Day theme of "Zero Malaria Starts with Me", through sensitization campaigns held in nine villages and positively impacting a total of 1,947 people. As part of a health and immunization drive, five locations received donations of medicine and health equipment, and 27,129 people were immunized against cholera, polio and measles.

A number of health and employee wellness programs, focused on specific topics, take place throughout the year at our Platreef Project. Platreef also conducts several community health initiatives and during 2019, these were focused on peer education awareness campaigns regarding life skills, substance abuse and HIV/AIDS at five secondary schools and one primary school situated in Platreef's host communities, benefiting 1,277 learners.

Employee health training initiatives take place throughout the year at the Kipushi Project. We also conduct several community health initiatives at Kipushi and during 2019, these initiatives were largely focused on malaria prevention. In this regard, we donated 2,500 mosquito nets in the Kikonge Village and surrounds.

At Kipushi we also support health and information initiatives being conducted by local and provincial government, such as the polio and measles campaign conducted by the Health Zone. Kipushi provided fuel for the entire campaign and the "Hand Wash Day" and "World Toilet Day" respectively.

## **Human resource development**

Ivanhoe Mines is committed to developing our most precious resource – the people who work passionately and tirelessly to realize the vision of building a leading, diversified mining company in southern Africa. We focus especially on building the capacity of local employees through continual skills development, such as on-the-job coaching and mentoring, augmented by study assistance in line with IDPs and associated career progression plans. We recognize star performers as part of a talent pool and fast-track their development. Skills transfer programs are in progress at our three projects. 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.

			KAMOA-KAKULA	PLATREEF	KIPUSHI
		Number of employees enrolled for certificate courses	38	10	0
	PLOYEE	Number of employees enrolled for diploma courses	2	4	0
		Number of employees enrolled for graduate degrees	4	1	0
CE DEVELOPMENT HUMAN RESOURCE DEVELOPMENT: EM DEVELOPMENT	Number of employees enrolled for postgraduate degrees	5	4	0	
	Number of employees on any other type of study assistance	10	26	0	
	Number of employees in adult training and education (literacy training)	0	2	0	
	Number of employees in portable skills training related to retirement	0	0	0	
Д С					

Number of key positions identified for succession planning for local employees

Number of employees enrolled in mentoring program

Number of employees enrolled in skills transfer program (related to succession planning)

Number of high-potential candidates on a career development program

Number of active interns for the reporting year

Number of active interns for the reporting year

At our Kamoa-Kakula Project, our Human Resources Development (HRD) program takes into account the relatively remote setting of the project, the multi-cultural workforce, our commitment to local employment, the expansion of the mineral resources, and the need for a future, skilled, local workforce. To reach these objectives, our Kamoa-Kakula HRD Department focuses on identifying and assisting high-potential Congolese nationals through training, mentoring, skills transfer programs, study assistance and active succession planning.



OUR STRATEG

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GROUP OF ARTISANAL MINERS TRAINED AT THE INPP WITH MEMBERS OF THE KIPUSHI TEAM, PIERRE JOUBERT (VICE-PRESIDENT AND GENERAL MANAGER). SHIKO KEBONTE (HEAD STAKEHOLDERS MANAGÉMENT). AND NATHALIE KIKABA (SOCIO-ECONOMIC DEVELOPMENT MANAGER)

Our Platreef Project is guided by operational requirements and those mandated by the Project's 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 2019 reporting year was the fifth year of implementation of the Project's first SLP.

At our Kipushi Project, the HRD program is based on the progressive need for a variety of skills as the mine readies for production. The HRD department started a complete restructure in August 2018, focusing on instituting best-practice policies and procedures. A formal skills transfer program is underway, through which expatriate workers and highly-skilled nationals build the skills of local employees. Pending the completion of IDPs, the Kipushi Project will provide its workers with appropriate study assistance to reach their career growth objectives.

Our team at Kipushi have taken a giant leap towards inclusivity at the project. There are a number of people conducting artisanal mining activities in the footprint area of the Kipushi mining area. We are appreciative of the impact that these activities have on the livelihoods of many who are impoverished. However, such activities pose potential risks to the health and safety of the artisanal miners themselves, as well as to Kipushi employees and contractors, and

potential environmental risks for the Kipushi Project. The Kipushi team sought to devise a strategic intervention which would address the plight of these artisanal miners and has been working in close collaboration with these artisanal miners close to our mining right area. Some of the artisanal miners were further intent on increasing their employability and requested training opportunities from Kipushi in skills areas outside of mining.

A group of 25 artisanal miners, including seven women, participated in a six-month skills training program incorporating plumbing, welding, painting and brick-laying at the National Institute for Preparation of Businesses (INPP) in Lubumbashi.

The larger group of 750 artisanal miners have organized themselves in five different groups, each with a leader. The leaders will meet regularly with the Kipushi Corporate Social Responsibility team. This has instilled increased levels of trust and improved the communication flow between the project and the artisanal miners.

We have further offered permanent employment to 40 artisanal miners at Kipushi in various departments that are suited to their skills and interests. Kipushi also includes the artisanal miners as a preferred supplier of gravel and construction sand whenever these products are required at the project.



#### Kamoa's world-class training centre paves the way for local employment

Kamoa-Kakula has invested in a world-class training centre with state-of-the-art mining simulators and developed a strategic "Cadetship Career Development Program" for young locals from the communities around the Kamoa Mine of Kolwezi, DRC. This program forms part of a skills training strategy concentrated on building a world-class workforce to drive success at a worldclass mechanized mining operation of the future.

The cadet program aims to increase the skills level of a number of local recruits with a long career path and who will be proud ambassadors of the Company. The program incorporates a combination of theoretical classroom-based learning and practical experiential learning through simulation exercises, all in safe and controlled settings.

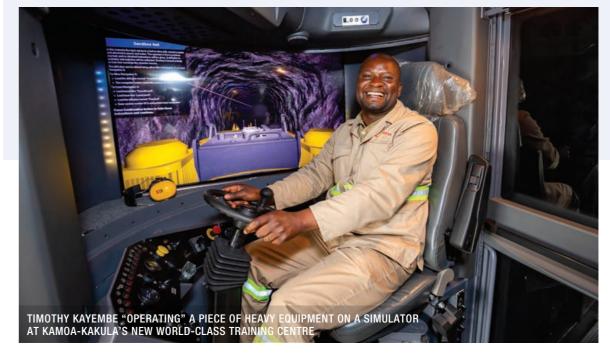
Unnecessary dangers and accidents are prevented through the use of mining simulators, which enable training in a safe and controlled environment. Kamoa-Kakula's simulators are used to assist in upskilling local community cadets in training rooms that mirror the production area and ensure that cadets become operationally ready, resulting in competent, productive machine operators. By repetitively focusing on specific tasks under continuous supervision, cadets receive accelerated training that improves their productivity and eliminates bad habits at the outset. A cadet's career path may move from a light duty vehicle (LDV) driver, Bobcat operator, tractor-loader-backhoe (TLB) operator, bump truck operator, compact operator, loader operator to grader excavator. The career path

allows cadets to move through the ranks and become an operator of a specific machine, as well as move from one type of operator to another, all dependent on performance.

Our training site at Kansoko boasts a world-class training centre with state-of-the-art simulators and training rooms covering a variety of training courses. These courses include: basic computer training, electrical and auto electrical, mechanical and fitting, boiler making and welding, mining construction, and operating large underground machines.

Once trainees have completed their practical and experiential learning, they are moved to an underground mining environment at the Kamoa-Kansoko mine. Once training underground by way of mining has been successfully completed, cadets are transferred to the Kamoa-Kakula mine for permanent placement according to their training and capabilities.







The University of Limpopo was formed as a result of the merger between the former Medical University of Southern Africa (MEDUNSA) and the University of the North. The university is located in Mankweng, mid-way between Polokwane and Magoebaskloof, in Limpopo Province. It comprises four faculties, the Faculty of Health Sciences, Humanities, Science and Agriculture, and Management and Law. The Geology and Mining Department is now located within the School of Physical and Mineral Sciences in the Faculty of Science and Agriculture.

Laurentian University was founded in 1960 in Sudbury, Ontario. The City of Greater Sudbury is a vibrant northern city that has become an important centre for global and domestic businesses, mining and mining services, film and television production, health sciences and post-secondary education. Laurentian with its federated partners and campuses in Sudbury and Barrie, offers a wide array of choices for undergraduate, Master's and doctoral programs in fields such as Management, Health Sciences, Mining Engineering and the Environment. Laurentian's location brings unique opportunities in the fields of Natural Resource Engineering, Mineral Exploration, Mining, Environment, Health and Cultural, Social and Economic Sciences. The university's research centres include the Vale Living with Lakes Environmental Research Facility, Centre for Excellence in Mining Innovation, Mining Innovation Rehabilitation and Applied Research Corporation, Mineral Exploration Research Centre, Centre for Research in Occupational Safety and Health, and the world-famous underground Sudbury Neutrino Observatory. The Goodman School of Mines was established in 2013 to support students in meeting the challenges of 21st century mining activity and is one of the few mining schools that promotes a holistic approach to mining education.

#### Partnering for sustainable development in higher education for the extractive industry

Exploration success has driven value-creation at Ivanhoe Mines. In testing new concepts and generating exploration models, exceptional geological talent is supported by management that encourages risk taking and passion. In a world rapidly transforming through technological innovation, future success will rely on talent, more than capital.

In recognition of this five years ago, we at Ivanhoe Mines partnered with the University of Limpopo in South Africa and Laurentian University in Canada, specifically the Goodman School of Mines. The partnership was a result of a suggested collaboration initiated by the Executive Co-Chairman of Ivanhoe Mines, Robert Friedland, a member of the Goodman School of Mines Advisory Board, This collaboration sought to improve the University of Limpopo's academic standards through sending postgraduate Geology students and lecturers to Laurentian University, and to send students and lecturers to visit the Platreef Project and the University of Limpopo for internships, to conduct research work or to share knowledge. The support for the University of Limpopo also included the provision of equipment to the School of Physical and Mineral Sciences, with the ultimate goal of establishing Geology as a university department that can serve as a centre of excellence in Geoscience in the Limpopo Province. This goal was achieved when the University of Limpopo launched the Department of Geology and Mining at the University of Limpopo in September 2018.





The students participating in this collaboration are recruited from the local pool of current and previous students at the University of Limpopo, and was expanded to include employees of Ivanhoe Mines. Jan Mapeka (Geologist) was selected as a candidate PhD student, and George Gilchrist (Vice President, Resources) and David Edwards (Geology Manager) enrolled for part-time MSc degrees.

Most recently, one of the beneficiaries of the program. Sharlotte Mkhonto, was congratulated by the Staff, Faculty and Students of Harquail School of Earth Sciences for successfully defending her MSc thesis (https://hes.laurentian.ca/news-standard/ sharlotte-mkhonto-successful-msc-thesis-defence). Sharlotte's MSc project was titled "The use of sulfide mineral chemistry to understand PGE-mineralization processes in the Northern Limb of the Bushveld Igneous Complex, South Africa", under the academic supervision of Dr Pedro Jugo, Dr Danie Grobler and Matthew Leybourne.

Sixteen students have participated in the program to date, with ten students scheduled to complete their studies by August this year. All of the University of Limpopo students are performing well academically and have adjusted well to their surroundings, participating in the numerous sports and recreational opportunities that are a hallmark of the Sudbury area. Two students have truly excelled and their academic performance requires a special mention, Michael Langa and Fransica Maepa. As a result of Michael and Fransica's very strong academic achievements, both students have been recommended and upgraded from their two-year MSc programs to four-year PhDs, a reward that is granted to only the very best students.

Canadian students have also benefited from financial and in-kind support from our scholarship, industrial and educational partners. A number of our undergraduates have taken up internships at Ivanhoe's Ivanplats Project site, University of Limpopo's Geology Department, where they have taught several undergraduate-level courses and the university's Life Science Centre where they helped to build exhibits and have engaged in community outreach activities.

The tripartite collaboration is funded by Ivanhoe Mines, the International Development Research Centre (IDRC) Scholarship, and the Queen Elizabeth Scholarship from the Goodman School of Mines. The total program spend to date amounts to US\$2.25 million. Ivanhoe believes that The Sustainable Development Agenda can be achieved through such partnerships (SDG 17) and will continue to seek and build such partnerships.



























#### Providing the building blocks for sustained socio-economic development and quality education

The local economic growth and prosperity of our host communities are critical to our success, and we proudly contribute to SDG 8: Decent Work and Economic Growth through our Supplier and Enterprise Development projects (SDG 8: Targets 8.3 and 8.5).

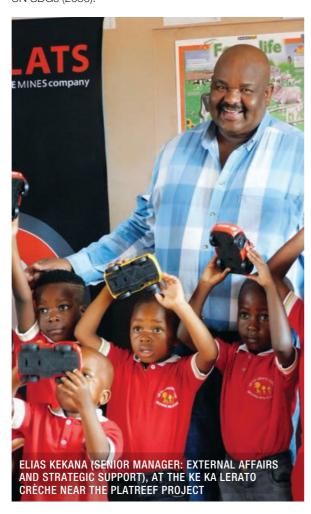
In particular, we strive to address the targets focused on the "creation of decent jobs, entrepreneurship, creativity and innovation, as well as the formalization and growth of micro-, small – and medium-sized enterprises, including through access to financial services" and "decent work for all women and men, including for young people and persons living with disabilities".

In addition, 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 affect our ability to hire future labour from the local context, but also influence 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.

The sustainability of our projects is critical, and we work towards the hand-over 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.

# **SOCIAL AND** RELATIONAL CAPITAL

Ivanhoe Mines places great value on the level of acceptance and trust, that is, our SLO, that which we have obtained from local host communities. We have strengthened our internal policies, procedures and practices to maintain high standards in stakeholder engagement, handling of grievances, and socio-economic development project design and delivery. We strongly believe in partnering with our communities and key external stakeholders to find solutions to pertinent socioeconomic challenges. Our Group Sustainability Strategy includes our goals and targets for social development, and seeks to align our social projects with country regulatory frameworks and international frameworks such as those targets outlined in 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 the UN SDGs (2030).



We have concentrated our efforts on the following:

INFRASTRUCTURE IN **EDUCATION AND WATER** AND SANITATION

POVERTY ALLEVIATION IN ITS MULTI-DIMENSIONAL NATURE

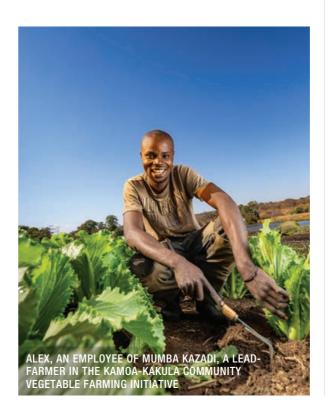
JOB CREATION

ICT ACCESS **EMPLOYABILITY** 

DEVELOPMENT

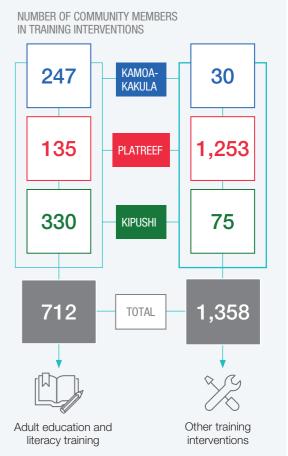
At our Platreef Project, we have ensured compliance with the regulatory requirements of the SLP and the B-BBEE codes of best practice. We focus our spend on the following areas: local economic development (LED); employee and community skills development; ESD; and local procurement.

At the Kamoa-Kakula Project, we have focused on the critical needs of food security and access to potable water, educational infrastructure, job creation and road infrastructure.



At the Kipushi Project, we continue to invest in the town's water infrastructure through boreholes and 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.

The long-term, sustainable, social development strategies for Kipushi and Kamoa-Kakula are under review to align them with the new requirements in the DRC Mining Code and Regulations, the regional development plans, and the technical studies that are being conducted.





# Community skills development

Ivanhoe's principal projects are situated in emerging economies where discrepancies exist between the skill and educational levels of a significant portion of individuals in our host communities, and the skills required for employment at the mine or for establishing and growing a successful local business. We invest in adult literacy and education, and other training interventions to enable community members to improve their socio-economic status through employment or entrepreneurial activities.

The Kamoa-Kakula and Kipushi projects partnered with the INPP, a DRC public establishment supervised by the Ministry responsible for Employment, Labour and Social Welfare, and Alpha Congo, a Congolese NGO to provide skills training to assist individuals to either apply for employment or launch their own small businesses.

At the Platreef Project, community skills development is focused on partnering with the Adult Education and Training (AET) program, presented in partnership with the Department of Basic Education. This program is focused on helping those who want to complete their formal

secondary schooling. Other community training initiatives include making use of local service providers to train community members in computer skills and partnering with main contractors to provide local workers with basic health and safety training.

Kipushi also established the Kushona Sewing Centre, which provides training in sewing using both hand machines and industrial sewing machines. The long-term vision of the centre is to supply the Kipushi Project with all uniforms and soft furnishings for guesthouses and offices. There are currently 25 beneficiaries progressing through the sewing course work and the centre is planning an intake of an additional 25 beneficiaries.

# Educational infrastructure and support

We at Ivanhoe Mines value the power of education and recognize the opportunity to invest in a growing pipeline of future employees and entrepreneurs in our host communities, and we strive to raise the quality of education across all stages, from Early Childhood Development (ECD) through to schooling and tertiary education levels. We invested in a number of educational infrastructure and support initiatives at all three projects during 2019, and will continue such programs as they align with our

sustainable development vision and the 2030 Agenda. 'Educational infrastructure' refers to structural or material assistance provided to schools, including through science and technology platforms, whereas 'educational support' indicates programs where learning was enhanced through direct training interventions with teachers or students

The education and schooling levels of children and adults in the footprint of the Kamoa-Kakula Project have been identified as a critical need and an imperative for Ivanhoe's strategic sustainable development plan for the region. At Kamoa-Kakula, we have completed the construction of a primary school at Kamisange, provided water, sanitation and solar-generated electricity to the school, facilitating access to education for 302 scholars.



SERGE KASONGO & THERESE KASONGO, GRADE 8 LEARNERS AT THE KAMPEMBA SECONDARY SCHOOL, NEAR THE KAMOA-KAKULA PROJECT



At Kamoa-Kakula, we also provided support to a secondary school, benefitting 74 scholars. Additional support provided by Kamoa-Kakula during the reporting year included science and mathematics equipment and support, benefitting 1,788 pupils from eight local schools. To encourage pupils to perform academically, Kamoa-Kakula has paid the school fees, by way of bursaries, for primary and secondary school pupils who achieved excellent academic performance during the year. This initiative benefitted 269 individual pupils from five different schools.

Recognizing the beneficial effect of early childhood education, stimulation and development, on children's intellectual, social, emotional, and dispositional performances, we at Kamoa have prioritized the establishment of ECD facilities as a dire need for our host communities and during 2019 we conceptualized and planned the roll-out of at least two ECD facilities in the 2020 academic year.

At our Platreef Project, throughout the 2019 academic year, the Entrust Foundation, a non-profit organization, together with Simon Mokhanda, a local youth entrepreneur from the Masehlaneng Village, presented the MiniChess Development Program for Foundational Development of 302 learners from Grade R to Grade 3 at Motshitshi Primary School. Arithmetic skills, spatial cognition, problem solving and life skills improved vastly in the school, and attendance rates are almost 100% on the days when MiniChess is offered.

E-learning remedial and enrichment lessons for approximately 1,250 scholars was provided in five secondary schools situated in communities adjacent to the project. The E-learning program also contributed towards the continuous professional development (CPD) of the educators at the schools.



During 2019, the Thobela Disability Centre in the Village of Ga-Madiba, which caters for 30 young people of various ages, requested assistance from the Platreef Project for the installation of a rain water capture and storage system to assist with irrigation activities in support of the food garden which we had previously established. Our Platreef Project also partnered with one of our engineering contractors, DRA Global, towards the development of a playground, and procurement of specialized educational play equipment to accommodate learners' special needs.

The Lesedi early childhood development centre was assisted with new infrastructure upgrades which caused an influx of children to the facility. To meet the increased need for nutritious meals, Platreef assisted Lesedi in establishing vegetable garden nets. Approximately 58 children were assisted by the Lesedi ECD centre during 2019. With a view to self-sufficiency and financial sustainability at Lesedi, a moringa tree (Moringa oleifera) nursery was established on the open fields available at their premises.

# IVANHOE MINES SUSTAINABILITY REPORT 2019





LESEDI COMMUNITY CARE CENTER KIDS PLAYING ON THEIR SOCCER FIELD





#### Lesedi's pathway to self-sustainability

The Lesedi Early Childhood Development Centre in Ga-Kgobudi, Mokopane, Limpopo Province, was started in 2011 by a group of women volunteers who recognized the need for young children in their community to participate in ECD activities, receive a nutritious meal and find a safe haven from often hostile home environments. The traditional authority council of Ga-Kgobudi granted the volunteers the right to use a communally-owned stand and building in the centre of the community for their centre.

Ivanplats joined this community-led program during our exploration phase. The care and dedication of the volunteers in the face of poorly equipped infrastructure compelled the Platreef Project Social Development team to include Lesedi in the Project's first Social and Labour Plan (SLP).

The investment included infrastructure, such as tartan soccer and netball pitches, an outdoor playground, additional temporary buildings, main infrastructure upgrades, a borehole pump, kitchen renovations and a small stipend for all volunteers. The new upgrades increased the number of children attending the centre to benefit from the organized activities, such as gymnastics, music lessons and support with homework. To meet the increased need for nutritious meals, the Platreef Project team helped Lesedi ECD to establish vegetable garden tunnels.

Self-sustainability plans commenced in 2017, in order to enable the Lesedi ECD to exit at the end of the SLP cycle in 2020. These plans included a tree nursery of indigenous tree saplings, including Moringa trees and selected fruit trees. Uptake contracts for trees are currently in the negotiation stage and the Lesedi nursery team are continually increasing their business knowledge. Several other initiatives to support self-sustainability have been completed since Lesedi's inclusion in the SLP in 2014, including training programs, small business viability testing and support for applications to other social development funds and grants.

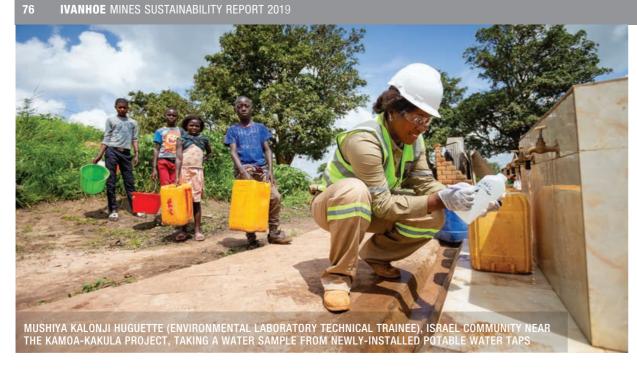
The founding members of Lesedi, Eunice Kekana and Betty Tema, are extremely proud of what the team has achieved with the Platreef Project's support. "Every person brings their contribution to the table, and work together to make something a success," said Eunice Kekana.



At our Kipushi Project, the Mungoti School was refurbished. The school, originally built by Gécamines, was in dire need of a complete renovation, and Kipushi elected to transform the school in various phases as part of a multi-year refurbishment plan. The school identified the wall-fence as a key issue and of vital importance to the safety and security of the learners. The project therefore commenced in 2019 with the school wall-fence, which was constructed by a local service provider, Chekina Group, under favourable commercial terms. Through the Mungoti School upgrade, and assistance with the provision of power and water to two other secondary schools, the Kipushi Project benefitted approximately 1,000 scholars during 2019.

IVANHOE MINES' EDUCATIONAL PROGRAMS (2019)	KAMOA-KAKULA*  NUMBER OF BENEFICIARIES	PLATREEF NUMBER OF BENEFICIARIES	KIPUSHI NUMBER OF BENEFICIARIES
Scholarships (educational support for qualifying school children)	269	125	52
Bursaries (educational support for qualifying tertiary students from host communities)	-	15	52
Educational enrichment programs in early childhood centres in host communities	-	12	60
Educational enrichment programs in primary schools in host communities	-	47	-
Educational enrichment programs in secondary schools in host communities	-	78	200
Educational enrichment programs aimed at maths, science and IT	-	1,250	-
Educational enrichment programs aimed at health and/or safety topics in schools in host communities	-	1,277	-
Educational consumables support	-	125	500
TOTAL NUMBER OF ESTIMATED BENEFICIARIES	269	2,929	864

<sup>\*</sup> Kamoa-Kakula identified the need for educational infrastructure as the greatest priority with the result that the educational development strategy prioritized the provision of school infrastructure. Now that this has been achieved, Kamoa-Kakula is considering educational support programs.



# **Community infrastructure and support**

As previously communicated, we at Ivanhoe Mines consider community infrastructure as critical to the creation of functional and prosperous local economies, and have therefore contributed significantly to educational, and water and sanitation infrastructure in our host communities. We also ensure that this infrastructure is maintained and kept in good repair, and that potable water is routinely tested.

The following table indicates the estimated number of beneficiaries for the various community infrastructure and support projects implemented by our project teams in 2019.

IVANHOE MINES' COMMUNITY INFRASTRUCTURE PROJECTS (2019)	KAMOA-KAKULA ESTIMATED NUMBER OF BENEFICIARIES	PLATREEF ESTIMATED NUMBER OF BENEFICIARIES	KIPUSHI ESTIMATED NUMBER OF BENEFICIARIES
Provision of potable water infrastructure	5,907	50	55,000
Provision of free wiFi	-	20,000	-
Provision of electricity	302	30	10,000
Infrastructure support for roads	-	-	5,000
Infrastructure support for community building	14	-	1,000
Infrastructure support for community sanitation	-	-	500
TOTAL NUMBER OF ESTIMATED BENEFICIARIES	6,223	20,080	71,500
GROUP TOTAL		97,803	





# Fish ponds provide livelihood opportunities

Our Kamoa-Kakula Sustainable Livelihoods Program is committed to development in the communities within our mining footprint. The main objectives of the Livelihoods Program are to build sustainable communities, increase food security and improve the living standards of the people who are living within the mining footprint. Kamoa started the fish farming project in 2018 with the purposes of instilling aquaculture skills in local communities, and enhancing nutrition and income at household levels.

The fish farming project, one component of the Livelihoods Program, is based on an integrated approach incorporating ecological, economic and social aspects of development. The project aims to be profitable by yielding sufficient food with minimal costs; while the farming methodology and practices aim to prevent significant disruptions to the ecosystem, loss of biodiversity or substantial pollution.

The Tilapia fish market has contributed significantly to the livelihood needs and sustenance of communities in terms of employment and wealth creation. The benefits of aquaculture in local development relate

to entrepreneurship, employment, income, reduction of vulnerability and farm sustainability. The fish farming project has created jobs for 25 people from the surrounding communities. These jobs are created along the Tilapia value chain, including construction of ponds, tanks or cages; production of feed; production of seed (wild collection or hatchery production); nursing and outgrowing; processing and value addition; and marketing and sales. Kamoa has assisted in building 33 ponds in five surrounding communities, of which 31 ponds have been stocked with Tilapia fish. The fish from the harvest are sold to the Kamoa-Kakula accommodation camp, contractors' camps, and to surrounding communities.

The 2019 harvest produced an impressive 499 kilograms of Tilapia fish, with the average weight of the fish harvested at 400 grams. In just 100 grams, 26 grams of protein can be consumed.

Aquaculture allows for an important contribution to livelihoods, economic development and food security in Africa. Sustainable aquaculture, in turn, addresses the needs of the community in a socially responsible manner by encouraging skills development and ensuring ecological conservation.



Economic and physical displacement, and livelihood restoration

Ivanhoe Mines is committed to upholding the 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 and Platreef projects, which are at different phases.

#### Kamoa-Kakula Project

To efficiently and safely develop the mining infrastructure at Kamoa-Kakula, the project team needs surface areas that can be safely fenced off for construction. In 2017, Kamoa-Kakula initiated a multi-phased Resettlement Action Plan (RAP) which sought to establish the basis for the agreement with individuals and communities affected by the development of the mine. Between 2018 and 2019 mine development necessitated economic displacement of 635 small-scale farmers and household relocation of 84 families. The RAP provides specifications for all resettlement activities and measures for avoiding, minimizing or compensating losses or other negative social impacts resulting from resettlement.

#### RESETTLEMENT, ECONOMIC DISPLACEMENT AND LIVELIHOOD RESTORATION

Identify affected areas, farmers and household owners.

Create a relocation working group in collaboration with affected people, local traditional authorities, the territorial administrator and local office of the Department of Agriculture.

Conduct a baseline survey to determine the sizes of farming land, types of crops, and types and sizes of structures.

Agree on a compensation framework for economic displacement and household relocation, respectively. In addition, agree on communal compensation for loss of access to communal assets.

Compensate affected farmers for economic displacement according to the value of their crops and support them to find, clear and plant crops on alternative fields.

Assist affected people with opening bank accounts to deposit compensation safely.

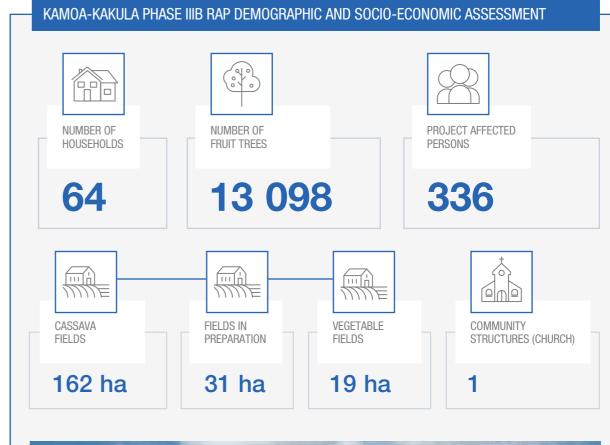
For household relocation, negotiate land for new houses with local authorities and build new houses within agreed specifications.

Implement communal compensation projects such as school buildings, potable water wells and solar power.

During 2019, surveys were undertaken by Alternative Plus ONG, a civil society organization that works for justice and equity in relationships between individuals and communities in favour of respecting the economic, social and political rights of people and communities affected by poverty, discrimination, exploitation and violence, together with two provincial government services, Le Ministre de l'Agriculture, Pêche et Elevage (the Minister of Agriculture, Fisheries and Livestock) and Deru. 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.

Houses are now in construction at two new site villages, Kaponda 1 and Samukoko, according to the agreement reached with the PAP. As at the end of 2019, 45 families had been successfully relocated. The previous straw-hut hamlet structures were replaced with better, more spacious houses of a much higher quality, constructed from precast concrete, hollow cement blocks, roof sheeting and steel frames. The houses are raised above the ground for drainage and flood prevention. Social infrastructure for a school and water wells were built and construction of a clinic is underway. The RAP activities, including asset assessments, stakeholder engagements, compensation agreements and impact assessments, were completed under the guidance of the DRC government and partner consultancy companies to ensure compliance with incountry regulations and best practice.

The next phase of the RAP, Phase IIIB, is planned for 2020. During 2019, the preliminary survey to identify the project-affected persons (PAPs) and their property in the target area was completed with the results as indicated below.





#### **Promoting sustainable local food** economies at Kamoa-Kakula

Kamoa-Kakula's Livelihood Program was initiated as a response to hunger and poverty in the region surrounding the project. The Livelihood Program seeks to create diversified farming communities who ultimately build sustainable local food economies and eradicate hunger and poverty across the region.

Local community farmers are equipped with training and a start-up kit, and then supported by Kamoa's agronomists until they are able to farm independently. These farmers also receive business training and support from Kamoa's ESD team.

All produce from the various faming initiatives is procured by Kamoa-Kakula for the camp, as well as by surrounding contractor camps. These projects,

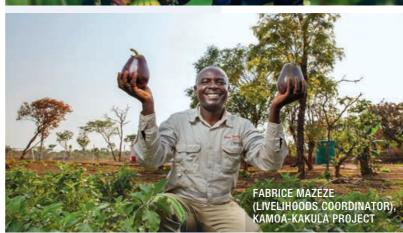
which commenced initially only with maize, now include an array of vegetables, fruit, poultry, honey and fish. The vision is to continue to expand these projects, and to diversify into other business opportunities such as agro-processing.

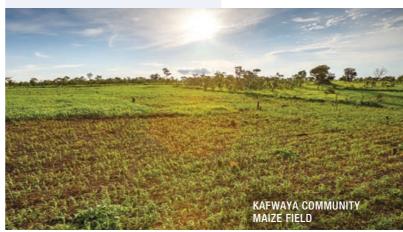
During 2019, a new big-scale banana project was also launched, involving 28 women from seven communities.

The Livelihood Program also forms an essential part of our Livelihood Restoration Program undertaken at Kamoa-Kakula as part of the resettlement and economic displacement activities resulting from loss of access to fields due to mine infrastructure development.









# **Platreef Project**

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.

Our Platreef Project has impacted on access to maize and grazing fields of individual subsistence farmers of three communities, Ga-Magongoa, Ga-Kgobudi and Tshamahansi. To date, affected landowners have been compensated in terms of temporary surface lease agreements concluded with the affected communities. These temporary agreements are to be replaced with long-term surface lease agreements and a livelihood restoration plan.

Extensive consultation is underway with the communities who are the lawful occupiers of the area required for mine surface infrastructure, and the project is currently in the process of negotiating with the affected communities and landowners towards the conclusion of a long-term surface lease agreement which will make provision for compensation to be paid to the affected communities for land used by the project for mining purposes.

The Livelihood Restoration Process is also underway in the affected communities. This process seeks to find a solution to provide either alternative land, or the creation of an alternative income, for landowners whose subsistence agricultural activities may have been affected by the mining activities. The Platreef Project, assisted by an expert independent consultant, completed a baseline agriculture study in 2018, which, together with the results of ongoing stakeholder engagement and input, informed an entitlement framework matrix that was completed during 2019. Work is currently underway to develop a potential compensation matrix that will be discussed with all stakeholders.

2019 HIGHLIGHTS

12 COMMUNITIES

380,000 kg PRODUCED

US\$190,000 EARNED IN 2019 138 BENEFICIARIES



11 COMMUNITIES

112,272 kg PRODUCED 13 BENEFICIARIES US\$143,082 EARNED IN 2019



2 COMMUNITIES 9 BENEFICIARIES 19,590 eggs PRODUCED US\$2,546 EARNED IN 2019



5 COMMUNITIES 25 BENEFICIARIES 499 kg PRODUCED US\$1,497 EARNED IN 2019



2 COMMUNITIES 30 BENEFICIARIES 571 kg PRODUCED US\$5,710 EARNED IN 2019



























# Embracing and conserving ecosystems and energy resources

In seeking to contribute to the global efforts to eliminate poverty and hunger (SDG 1) and support efficient life on land (SDG 15), we focus on embracing and integrating ecosystem and biodiversity values in our planning and participate in poverty reduction strategies in the countries where we operate. We recognize that poverty is multi-dimensional in nature, and our strategy therefore incorporates interventions in education, infrastructure, food security and sanitation. We minimize our footprint on the environment, identify negative impacts, and contribute to conservation.

In addition, remaining cognizant of and continually assessing climate-related risks to the projects and communities remains an important component of corporate governance, decision-making and investment protocols. We have also embarked on a process to develop appropriate adaptation actions at each of our projects, in light of climaterelated risks. Climate change adaptation measures contribute to the retention of livelihoods, local employment opportunities and reforestation, thus delivering against SDG 2, SDG 13 and SDG 15. Furthermore, in recognising our contribution to global greenhouse gas emissions, we monitor and manage our emissions in order to mitigate our contribution to global emissions; procure energy from renewable energy sources; and continually monitor our energy use to drive efficiencies, thereby contributing to

# **NATURAL CAPITAL**

Ivanhoe Mines is respectful of the natural environment in our host communities and host countries, and thus implements international standards and best practices in integrated ecosystem management, water stewardship and climate change. Our policies, standards and systems are 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 strategic approach

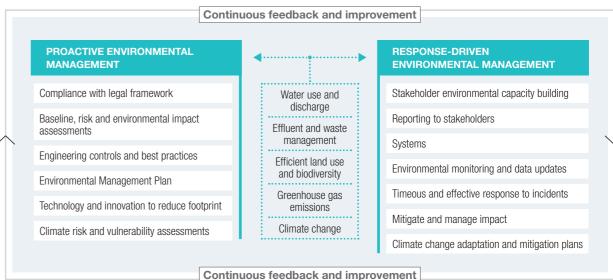
Ivanhoe Mines is committed to responsible environmental stewardship throughout our mining life cycle, from exploration to mining to closure and post-closure. We value and respect ecosystems and our natural resources, and continually seek ways to improve our environmental performance and reduce our carbon, waste and water footprints. Through our strategies, we wish to reduce the effects of climate change. Our design and management approach for our waste facilities are based on best practice and sound governance. Our strategic approach towards environmental stewardship is set out hereunder.

# Compliance and monitoring

Compliance with local regulations, licence conditions and best practice, to the extent possible, regarding our potential impact on the surrounding environment is managed as a crucial objective that we strive to comply with. Legal and project developments are continually being monitored in line with dedicated monitoring programs. ESIAs at our principal projects are at various stages of being updated, depending on the study phase of the respective project.

At our Kamoa-Kakula Project, a revised ESIA, based on the latest technical information for the project, was submitted to DRC authorities for approval during December 2019. Further amendments to the ESIA may be considered and submitted for approval based on changing project requirements and/or the results of the Kamoa-Kakula DFS, which is currently underway. During 2019, a number of assessments were conducted by independent specialists for purposes of determining various aspects related to the project's environmental compliance, the results of which have been implemented.

#### IVANHOE MINES' ENVIRONMENTAL STEWARDSHIP STRATEGIC APPROACH



The amended ESIA for our Platreef Project was approved and the appeal against the license set aside. Further amendments to the ESIA may be considered pending the outcome of the Platreef PDP study, which is currently underway. A complete licence review was undertaken by external legal advisors, for purposes of updating the existing permit register, based on legislative and regulatory amendments, and proactively determining future permitting obligations which would be required as the project progresses.

Studies related to an update for the ESIA of our Kipushi Project have been finalized. They may be further updated based on ongoing mine planning.

Based on the approved Environmental Management Plans (EMP) at our Kamoa-Kakula and Platreef projects, and the updated standards of practice at our Kipushi Project, environmental monitoring as depicted below takes place on a continual basis at the respective projects.







# ENVIRONMENTAL MONITORING PRACTICES AT IVANHOE'S PROJECTS Air quality Noise Surface water Vibration blasting Weather Greenhouse gas emission data Waste Waste

Monitoring reports are submitted to the respective regulators as per the requirements of the EMPs and associated licences. The monitoring data indicate that currently there are no adverse material impacts as a result of development and construction activities. During 2019, the environmental incidents recorded in the following table occurred at the projects, 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.

Compliance with environmental regulations, licences and EMPs is managed from a central cloud-based compliance tracking tool at our Platreef Project, with system implementation underway at Kamoa-Kakula and Kipushi.

# ENVIRONMENTAL INCIDENTS BY TYPE OF INCIDENT PER LOCATION (2019)

Kamoa- Kakula	Platreef	Kipushi
2	8	3
_	1	6
_	1	-
_	1	-
_	_	1
2	11	10
	Kakula           2           -           -           -	Kakula         Platreef           2         8           -         1           -         1           -         1           -         -

# **Environmental targets** and initiatives

Ivanhoe continues to ensure that environmental training and awareness is heightened. Each of our projects conducts monthly talk topics covering an array of subjects ranging from water, the efficient use and conservation thereof, and stormwater management, to deforestation and World Habitat Day, among many others. The topics follow the Global Environmental Calendar and are adapted to be more site-specific. The projects also conduct environmental staff capacity building, such as the Kipushi Project's facilitation of training related to the use of underground sanitation chemicals and the use of monitoring equipment during 2019.

The Kamoa-Kakula Project implemented a community education and clean-up campaign, through which local communities were trained on the sorting of waste, and coloured bins were placed in various communities. Incentives were awarded to community members who showed the most initiative and drive, including things such as paint or tools for home improvement.

Our Platreef Project continually manages biodiversity to protect fauna and flora. In recognition of the global climate change crisis, to raise awareness within host communities and to offset a small number of trees that were removed to make way for the Project's infrastructure, the Platreef environmental team collaborated with local authorities in an Air Quality Awareness Campaign where 200 trees were planted in schools situated in nearby communities. The trees used for the campaign were procured from the nursery established at Lesed. This initiative embraced local biodiversity, through making use of the deciduous marula trees (Sclerocarya birrea; the South Africa tree of the year for 2019), which are indigenous to the Limpopo region and held in high regard by the local people owing to their multitude of uses both in diet and culture. The Platreef Project celebrated Arbor Day through two tree-planting initiatives. At our project site, a short talk was held on the importance and role of trees in environmental conservation. followed by the planting of nine white stinkwood (Celtis africana) trees around the project area. Thirty indigenous trees of various species such as wild plum (Prunus americana), mahogany (Trichilia dregeana) and wild olive (Olea europaea) were also donated to local schools in the area, and so too garden tools and wheeled garbage bins, and the schools were assisted in the tree planting.

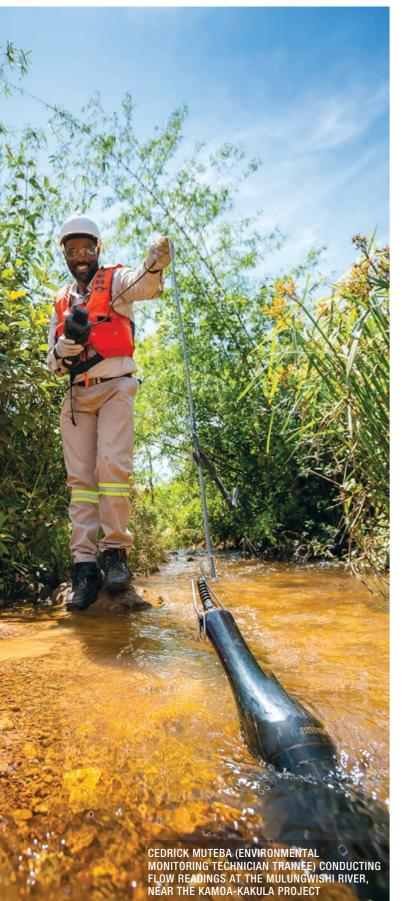
The annual Environmental Science Competition, an initiative of the environmental department at our Platreef Project was, once again, a success in 2019. The aim of this competition is to encourage students from 19 local schools to explore and develop creative ideas that could help to address environmental issues such as air and water quality, renewable energy, and solid-waste recycling. The schools were given an opportunity to put together a group of not more than five learners from Grade 8 to Grade 12 to represent them in the competition. The learners were required to present to a panel of judges, which included officials from the Department of Mineral Resources and

Energy, the Department of Environment, Forestry and Fisheries, the Department of Agriculture, Land Reform and Rural Development and the Department of Human Settlements, Water and Sanitation. Eight schools were shortlisted to bring their proposed invention to life by developing and demonstrating a prototype. The winning school was awarded prizes, including educational tablets for the learners and a cash contribution for the school. Some extremely interesting concepts have been generated from this competition, which include ideas for mine process water purification, and household water conservation and water reuse. The winning idea proposed a strategy for the establishment and implementation of a waste buy-back centre. The development of a waste buy-back centre, together with a live online system for reporting recyclable waste to improve waste management within the MLM, is currently under discussion with community members and the Trust. Through this initiative, Platreef has excelled beyond mere compliance metrics, and has demonstrated that it is a good corporate citizen in caring for the environment and empowering the youth.

Looking ahead, in addition to the monthly topics and ongoing environmental training, Ivanhoe has planned a climate change workshop for executive management, as well as a number of other climate-related training interventions for the greater workforce.







# Water stewardship

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. Our Ivanhoe Mines Projects face a diverse set of water challenges. Our Kamoa-Kakula and Kipushi projects in the DRC have net positive water balances and are continually mitigating the risk of flooding to safeguard the development operations, while the Platreef Project faces water scarcity as a key risk. These risks may be further impacted by climate change effects.

To mitigate the risk of underground flooding at our Kamoa-Kakula and Kipushi projects, risk management strategies include primary dewatering systems, backup systems in case of failure, as well as flooding emergency response plans.

Securing sufficient sources and quantities of water poses a challenge for our Platreef Project. In order to mitigate this risk, it is 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.

On May 7, 2018, Ivanhoe announced the signing of a new agreement to receive local, treated water to supply most of the bulk water needed for the first phase of production at Platreef. The Mogalakwena Local Municipality (MLM) has agreed to supply a minimum of 5 million litres of treated water a day for 32 years, beginning in 2022, from the town of Mokopane's new Masodi Waste Water Treatment Works. Initial supply will be used in Platreef's ongoing underground mine development and surface infrastructure construction.

Under terms of the agreement, which is subject to certain suspensive conditions, Ivanplats will provide financial assistance to the MLM for certified costs of up to a maximum of ZAR 248 million (approximately US\$19.6 million) to complete the Masodi treatment plant. Our Platreef Project will purchase the treated wastewater at a reduced rate of ZAR 5.00 per thousand litres for the first 10 megalitres per day to offset a portion of the initial capital contributed.

During the reporting year, the MLM continued with the process of seeking the regulatory approvals required for the project to commence.

Our Platreef Project received its Integrated Water Use Licence in January 2019, which is valid for 30 years and enables the project to make use of water as planned in the DFS. An integrated water strategy report has been conceptualized for commencement in 2020.

# Climate change and energy

GOVERNANCE

EMISSIONS ASSESSMENTS

TARGETS AND INITIATIVES

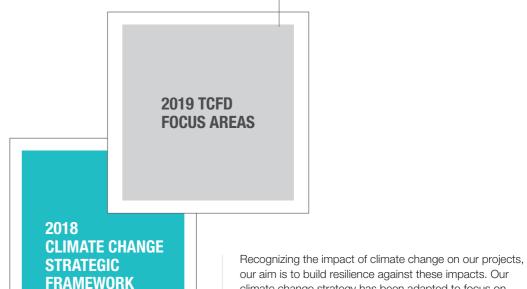
COMMUNICATION

OPPORTUNITIES AND THREATS

## Aligning our reporting to ensure greater integration of climate related issues in our annual reporting

Ivanhoe recognizes the valuable role that reporting plays in communicating to shareholders and varied stakeholders. We further recognize the increasing need for reporting on climate change and sustainability issues. These aspects not only impact on our business, but are also critical points on the global development agenda. As a result, the strategic decision has been made to align our annual reporting with global best-practice climate and sustainable development reporting methods. We are thus embarking on structuring our annual reports in accordance with the Task Force for Climate-related Financial Disclosure (TCFD) framework.





our aim is to build resilience against these impacts. Our climate change strategy has been adapted to focus on the four TCFD-defined key areas. These key areas relate closely to our previously defined climate change strategic framework, and we are therefore integrating our previous framework with the TCFD approach. Noting the clear links between these two frameworks, the TCFD framework encourages greater focus on the financial implications of climate change impacts on our projects. We acknowledge this focus and are progressively integrating these considerations into our business strategy. The TCFD focus areas also align with the recently released Sustainable Development Goals Disclosure (SDGD) Recommendations, which call on organizations to consider sustainable development risks and opportunities relevant to their strategy to create long-term value and communicate their

impacts on achievement of the SDGs.

**TCFD FOCUS AREA: GOVERNANCE** 

Ivanhoe is committed to responsible stewardship of mineral, social and natural resources. We have an embedded recognition of climate change, and have committed to the introduction of mitigation and adaptation methods into our business strategy and decision-making frameworks.

We make use of the eight climate governance principles endorsed by the TCFD to indicate our current status on climate change awareness, adaptation and mitigation measures.

		GOVERNANCE PRINCIPLES ENDORSED BY THE TCFD TO INDICATE STATUS ON E CHANGE AWARENESS, ADAPTATION AND MITIGATION MEASURES
		How this principle is relevant to Ivanhoe Mines
1	Climate accountability	The Sustainability Committee of the Board is charged with the responsibility of building Company sustainability and resilience with respect to potential shifts, due to climate change impacts, which include assessing climate change risks, the oversight of climate action, and the integration and building climate resilience in host communities.
2	Command of the (climate) subject	Climate change is acknowledged as a new area of expertise, and we recognize that our Board and personnel need to be educated in this respect. In 2019, we embarked on a process to articulate the impacts of climate change on our business. The material produced in this process will be used as the basis for educating our Board and workforce. This activity kicked off with climate change risk and vulnerability assessments of all of our operations. We recognize that this principle also aligns with the SDGD Recommendations in building competencies in the Board related to sustainable development issues. Training focused on climate change and global warming impacts is also planned for the executive team.
3	Board structure	The Sustainability Committee is charged with assisting the Board in discharging its responsibilities relating to a climate change response.
4	Material risk and opportunity assessment	The Sustainability Committee manages and assesses short-, medium- and long-term risks and opportunities of climate change impacts, continually. Assessments of risks and opportunities have been conducted through our voluntary participation in the Carbon Disclosure Project (CDP), as well as specific climate change risk and vulnerability assessments conducted at each of our projects.
5	Strategic integration	The Board considers sustainability as a cornerstone of our business. Climate-related risks on the operations and communities of each of our projects have been unpacked, to assist us in making effective decisions and beneficial investments. We have also embarked on a process to develop appropriate adaptation actions at each of our projects, in light of climate-related risks. Climate change adaptation measures contribute to the retention of livelihoods, local employment opportunities and reforestation. These adaptation actions speak to a number of the SDGs, specifically SDG 2 Zero Hunger, SDG 13 Climate Action and SDG 15 Life on Land. In addition, we recognize our contribution to global greenhouse gas emissions. Therefore, we monitor and manage our greenhouse gas emissions in order to mitigate our contribution to global emissions. We also procure energy from renewable energy sources and continually monitor our energy use to drive efficiencies, which contribute to SDG 7 Affordable and Clean Energy.
6	Incentivization	Incentives associated with the integration of climate change across the various business streams in Ivanhoe are being considered.
7	Reporting and disclosure	Ivanhoe Mines reports in accordance with the GRI Core Option Guidelines. Our annual reporting scheme contains information regarding our policies, practices and performance from each operation. We have been collecting data and disclosing information voluntarily, including participation in the CDP. During the reporting year, we implemented a new data collection system which will support the refinement of our reporting techniques. We have aligned our reporting with the SDGs, International Integrated Reporting Council's Integrated Reporting Framework, and the ICMM's 10 Principles Best-Practice Framework For Sustainable Development. The recent release of the SDGD Recommendations provides a practical framework for reporting on Ivanhoe's progress and initiatives related to the SDGs. The alignment of these recommendations to the TCFD affords us an opportunity to streamline our reporting. We will take the SDGD Recommendations under review in the next financial year to determine its applicability within our existing reporting context.
8	Exchange	With each operation, relevant stakeholders are identified and consulted, including investors, employees, government and non-government role-players, labour unions, local suppliers, and urban and rural surrounding communities. We have installed a new software system to ensure increased availability of climate-related data, specifically for our Kamoa-Kakula and Kipushi operations, and more continuous data modelling available for strategic planning and climate change managements.

Through the climate change risk and vulnerability impact assessments conducted for each project, climate-related risks and opportunities were considered for the core operations, value chain, social and natural environments and climatic parameters based on are being integrated into our business strategy through the consideration of the climate change scenarios. These assessments made use of available climate-related data for these sites. We intend to conduct a more detailed climate-related scenario analysis, on each project, within the next two years, in line with the TCFD recommendations.

#### TCFD FOCUS AREA: STRATEGY

We are acutely aware of the potential social, environmental, infrastructure and financial impacts that the effects of climate change have on our projects, and we recognize the crucial role of the mining sector in the shift towards a low-carbon economy. We also recognize the role of the mining sector in contributing to the SDGs, either through product development, employment practices or creating shared value for communities and local stakeholders. Our business strategy thus contributes to our aim of encapsulating a good corporate citizen, as follows:

#### CATEGORY

#### **OUR CONSIDERATIONS**

GLOBAL CORPORATE CITIZENSHIP Human rights awareness and social justice: The climate change impact assessments conducted include consideration for the impacts of climate change on vulnerable communities surrounding our operations. Our strategy includes measures to reduce the risks faced by vulnerable individuals in these communities.

Sound environmental management: Continual monitoring and feedback processes ensure environmental compliance and minimal disturbance to the natural surroundings. This is of key importance, specifically in light of the anticipated changes with climate change impacts.

RESPONSIBLE EXPLORATION AND MINING Our exploration and mining strategy takes cognizance of climate change in a number of areas, including:

- Setting exploration targets: Metals (including copper) are in demand to build renewable energy infrastructure for the global transition to a low carbon economy. We acknowledge the role of our operations in the transition towards a more climate-resilient environment.
- > Limiting impact of mining on resources such as energy and water. Through the development and implementation of our energy and water efficiency strategies, we ensure that we make use of natural resources responsibly.

ENVIRONMENTAL RESPONSIBILITY AND INNOVATION Follow best-practice environmental management methods: Reporting according to the TCFD requirements is an internationally recognized baseline of best-practice in terms of climate change reporting and risk management. We strive to exceed the TCFD expectations in our climate-related strategic developments. We recognize the importance of the SDGs in defining a global development agenda. In this regard, we are continually enhancing our internal data collection systems and processes to unpack our impact on the environment effectively. Collecting data also enables us to determine the best way forward in terms of mitigating environmental risks.

Energy use management: Both our Kamoa-Kakula and Kipushi projects make use of clean, renewable hydro-powered electricity. Energy-efficient design was also used in our Platreef Project's independent power provider, DFS. Renewable energy provision and energy efficient technologies will ensure energy availability to surrounding communities, as well as enable greater resilience against anticipated climate change impacts.

Water resource conservation: A water efficiency strategy was developed to encourage best-use practices and efficiency within our operations. Thereafter, climate change risk and vulnerability assessments conducted for each operation identified water scarcity and contamination, specifically at our Platreef Project, as a key vulnerability. Going forward, we aim to implement mitigation measures to combat the water vulnerabilities anticipated to be exacerbated by climate change.

Remediation and restoration: Extensive livelihood restoration programs are conducted for all operations. Active reforestation of indigenous trees at Kamoa-Kakula and rehabilitation and biodiversity offset programs are being explored extensively.

PENDICES

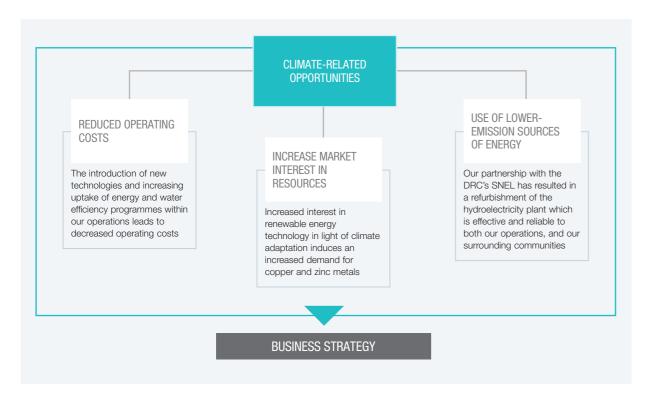
On a more measurable scale, our climate change strategy considers the impacts of climate change in line with the ICMM best-practice guidelines.

Our strategic approach to responsible environmental stewardship, includes managing impacts and conserving natural resources for climate-related risk management. This continuous feedback model defines our strategic approach to climate change impacts.

Climate change influences our overall business strategy through:

> Physical climate-related parameters, including water scarcity, risk of flash-flooding, increased drought occurrences and increasing temperatures.

- > Regulatory pressures aligned to meet the 2°C target highlights the role of the mining sector in lowering emissions.
- > Recognising that the Paris Agreement, as well as the latest Intergovernmental Panel on Climate Change report, call for greater ambition in order to achieve a 1.5°C target.
- > Community vulnerability informed a number of our decisions around land rehabilitation for building community resilience.



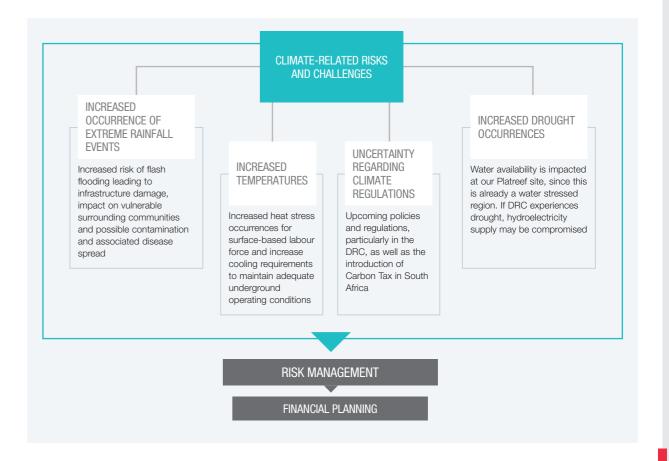
Ivanhoe Mines stresses the importance of compliance and continuous improvement. Accordingly, all Scope 1, 2 and 3 emissions are reported annually, with no exclusions. To accurately and adequately monitor our greenhouse gas emissions and other climate-related data, during 2019, we commenced with the scoping and implementation of software systems, which record all climate-related data, collating the collected data on a real-time basis. This data is intended to assist us in identifying and mitigating potential risks, as well as to identify potential improvement areas within our operating processes.

# TCFD FOCUS AREA: RISK MANAGEMENT

Risk management, including that of climate changerelated risks, is embedded in our day-to-day operational business processes. Risks and opportunities are constantly identified and managed to ensure minimal disruption to our operations.

Business risks associated with climate change impacts (including regulatory risks, physical climate parameter changes and others) are significant to our projects. Through identifying these risks and associated opportunities, we are able to develop informed and well-rounded Life of Mine strategies, business plans and insurance programs for each project.

Extensive climate change risk and vulnerability studies, and strategic environmental impact assessments were conducted on all operations. Through these assessments and our CDP participation, we have identified the risks and opportunities that our projects face. Mitigation and adaptation techniques for each project will be implemented, to minimize our risks and benefit maximally from the presented opportunities. The key risks and challenges posed by climate change impacts have been summarised in the following diagram:



These identified risks can now feed into our existing risk management plan, to ensure that our projects remain robust to the impacts of climate change. Through the use of this risk management plan, and the identified risks and challenges, we prioritized our financial planning needs.

Since our Kamoa-Kakula and Kipushi projects are in close proximity to each other, these operations are anticipated to experience similar climate-related impacts. Increased temperatures and rainfall variability are anticipated to pose a risk to the stability of the hydro-generated power supply. Similarly, rainfall variability will cause increased infrastructure, road and rail damage, which could possibly result in production delays. The impact of climate change on the vulnerable communities surrounding the mines in the DRC is of key concern.

In contrast, our Platreef Project, is located in a waterstressed region which is anticipated to experience increased temperatures, increased drought occurrences, fewer rainy days and increased torrential rainfall due to climate change impacts. Platreef operations are thus at risk of increased flood occurrences with associated infrastructure damages, accessibility limitations and safety hazards. Employees may also experience increase heat stress and plant equipment may operate at lower efficiencies. The recent developments around the National Climate Change Adaptation Strategy pose regulatory risks to the Platreef Project, which are being monitored closely.

We recognize that through adequate management of the above-mentioned climate change-related risks, various opportunities could arise and afford Ivanhoe Mines a great advantage against industry competitors.

# TCFD FOCUS AREA: METRICS AND TARGETS

Ivanhoe Mines is streamlining monitoring and evaluation techniques associated with energy and water use, and greenhouse gas emissions, as well as enhancing our adaptation implementation and engagement methods. At present, no targets have been set since all projects are still in the development stage. As each project enters into the production stage, we expect to set site-specific science-based targets (SBTs) on these mines.



## **Energy**

Powering our projects with primarily renewable energy sources, such as hydro – and solar power, is a key target to minimize our environmental footprint. Our Kamoa-Kakula and Kipushi projects currently mainly make use of hydro-power-generated electricity. The instability of the national grid is supported by onsite diesel generators. Kamoa-Kakula and Kipushi aim to minimize their reliance on diesel. We have thus partnered with the DRC's Société Nationale d'Électricité (SNEL) to upgrade and re-commission three hydro-electricity plants (with total capacity of 200 MW). This will ensure adequate and more stable grid-based electricity supply to both projects. The refurbishment of the first large hydro-power plant is well under way at Mwadingusha with the first of six generating units completed in 2019 and the entire 72 MW plant scheduled for completion in early 2021.

We are researching methods of incorporating solar power and vanadium flow batteries into the grid-supplied electricity to Kamoa-Kakula and Kipushi. Considerations around electric vehicle uptake for our mining fleet are also being explored.

At Platreef, however, the primary source of electricity is the South African National Grid, which primarily runs on coal-based electricity. Energy-efficient design and planning were applied to Platreef to minimize the operation's electricity demand. In addition, an investigation into joining a third party, solar-powered 100 MVA independent power provider (IPP) is underway.

IVANHOE'S ENERGY CONSUMPTION, 2018 AND 2019									
Source MWh from renewable MWh from non-renewable Total MWh									
Financial year	2019	2018	2019	2018	2019	2018			
Consumption of fuel	0	0	22 754	828 802	22 754	828 803			
Consumption of purchased or acquired electricity	14 943	0	4 672	99 735	19 615	99 735			
Total energy	14 943	0	27 426	928 537	42 369	928 538			

SDG 7 calls for "access to affordable, reliable, sustainable and modern energy for all". Ivanhoe recognizes the critical role that energy and energy provision play in the 2030 Agenda and the Paris Agreement on Climate Change. According to the SDGs Knowledge Platform: Energy for Sustainable Development, "Ensuring access to affordable, reliable, sustainable and modern energy for all will open a new world of opportunities for billions of people through new economic opportunities and jobs, empowered women, children and youth, better education and health, more sustainable, equitable and inclusive communities, and greater protections from, and resilience to, climate change". SDG 7 targets include energy efficiency and the increased uptake of renewable energy.

We recognize the vital role that technology plays in the stimulation of operational efficiency, specifically in terms of managing climate change risks, such as verifying energy emissions and ensuring energy efficiency. Ivanhoe has implemented new software systems towards the end of 2019. This system aims to collect data related to, among other things, energy and energy use. This improved data monitoring system will allow us to effectively manage our energy usage, develop appropriate efficiency measures and drive energy use reductions.

#### Water

At Kamoa-Kakula, surface and groundwater is used to supply the Project's water requirements. In Kipushi, groundwater is the main source of water used. For both Kamoa-Kakula and Kipushi operations, groundwater supply is abundant and readily available, however, the water is not of a drinkable standard. Kipushi hosts a water treatment station which makes use of the groundwater, purifies it and supplies the potable water to the entire town of Kipushi.

Our Platreef Project sources groundwater from boreholes adjacent to the project. Process water from the mine development is also recycled and reused.

IVANHOE'S WATER USE TRENDS, 2018 AND 2019								
Facility Kamoa-Kakula Platreef Kipushi Group Total							Total	
Financial year	2019	2018	2019	2018	2019	2018	2019	2018
Water withdrawals (kl)	4,054	957	448	9	25,652	23,391	30,154	24,357
Water discharge (kl)	2,001	905	194	0	25,649	16,732	27,844	17,637
Water consumption (kl)	2,053	52	254	9	3	6,659	2,310	6,720

The group-wide water consumption has decreased from 2018 to date. The largest quantity of groundwater used was at Kipushi Project's potable water station (which provides approximately 2,000 megalitres of potable water to the Kipushi town, annually).

Our legal, corporate and government relations teams in both South Africa and the DRC closely monitor possible changes in water regulation to ensure that all of the projects are prepared to face the 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.

Water is a critical underlying component of the SDGs. It 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, but not limited to:

- > Water availability at a basin/catchment level;
- Stakeholder conflicts concerning water resources at a basin/catchment level;
- > Water-related regulatory frameworks;
- > Status of ecosystems and habitats; and
- > Access to fully-functioning, safely managed water, sanitation and hygiene (WASH) services for all employees.

SDG 6 targets 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. Evidence of these commitments is illustrated in the following table:

	VANHOE'S RESPONSE TO WATER RISK FOR OUR HOST COMMUNITIES, 2019
Kamoa-Kakula	Water boreholes and wells for communities: Four water boreholes and extension of water collection points underway at Kamisangi and Muvunda; water stand structures to be installed.
	Sanitation projects: Provision of toilets at schools.
Platreef	Thobela Rainwater Harvesting Project.
	SLP2 (2020–2025): Partnership with the Mogalakwena Local Municipality for the completion and commissioning of the Masodi Waste Water Treatment Works, as well as a number of access boreholes and wells.
	Toilet facilities: Ongoing maintenance of the sanitation facilities installed at community public spaces and schools to improve sanitation and access.
Kipushi	Water infrastructure upgrades: Inspection of drilling location for water wells on main road to Kipushi from Lubumbashi.
	Water wells project: Maintenance and security for installed solar panels at Betty City.
	Water access: 30 cm trench being dug at the military camp by Marechal in preparation for the installation of pipes for potable water by the KICO engineering team.

Acknowledging that access to water is a basic human right, we will positively impact thousands of people by increasing access to water.



# Our Kipushi team makes every drop count

Water is a vital ingredient for healthy human life. We are committed to increasing access to clean quality water to residents in our host communities. To this end, our Kipushi Project has a strategic five-year plan of constructing multiple potable water wells that are solar panel driven.

During 2019, we constructed five water wells, with further expansion of the initiative planned for delivery in 2020. Each potable water well is comprised of two 5,000-litre water tanks, solar panels and a well drilled a depth of 80 metres. Local communities take great pride in their water well structures and have established local committees responsible for the maintenance and security of the infrastructure. These committees also ensure that water waste or loss is diminished through ensuring that taps are not left open and that any leaks are timeously repaired. This initiative improves the lives and dignity of thousands of people who live in nearby communities and collect water from the wells.

Our Kipushi Project has also constructed a water pump station which supplies 1 million litres of potable water per hour to Kipushi town residents, at a cost of approximately US\$600,000 per year. Acknowledging that access to water is a basic human right, we positively impact thousands of people by increasing access to water.



#### Greenhouse gas emission mitigation

In the transition to a low-carbon economy, we have increased our focus on seeking opportunities for greenhouse gas emission reductions. We further recognize the significant role that technology plays in greenhouse gas emission mitigation. In 2019, Ivanhoe Mines made a significant investment towards the development and implementation of software geared towards timely and accurate monitoring of environmental data which, in turn, informs strategies and interventions for mitigation and reduction. The new software system has been introduced at all Project sites, and provides more accurate values through real-time monitoring and in-build trend analysis techniques. The Scope 1 and 2 emissions from each Project are summarised in the table below.

IVANHOE'S GREENHOUSE GAS EMISSIONS, 2019 AND 2018						
Facility Kamoa-Kakula Platreef					Kip	ushi
Financial year	2019	2018	2019	2018	2019	2018
Scope 1 emissions (tCO <sub>2</sub> e)	6,090	3,270	213	237	502	429
Scope 2 emissions (tCO <sub>2</sub> e)	60	218	4,754	6,953	0.4	153
Scope 1 and 2 emissions (tCO <sub>2</sub> e)	6,150	3,488	4,967	7,190	502	582

The group-wide Scope 1 emissions for financial year 2019 were calculated to be  $6,805 \text{ tCO}_2\text{e}$  while the group-wide Scope 2 emissions were  $4,814 \text{ tCO}_2\text{e}$ .

The emissions intensities calculated in previous years for Ivanhoe Mines make use of two intensity denominators: (1) revenue intensity and (2) full-time employment intensity. The emissions intensity per unit revenue has remained unchanged as zero, since our operations currently do not generate revenue. However, our full-time employee intensity has decreased by 22% from 2018 to 2019. The number of full-time employees has increased by around 300 people, while our Scope 1 and 2 emissions have remained relatively unchanged from 2018 to 2019. This demonstrates a reduction in the per capita emissions across the Group, and illustrates the growth of our operations and active efforts to minimize Ivanhoe's greenhouse gas emissions.

Ivanhoe Mines has also invested in an interoperable cloud-based video meetings service, Bluejeans, that connects our Company and external users across different devices, platforms and conference programs. During the reporting year, 2,462 meetings were conducted across 166 cities in 46 countries, from a number of participant endpoints, the majority being through desktop (99%), followed by the room system installed at our various offices and project sites (13%), then mobile (8%) and finally public switched telephone network (PSTN) (5%). Through the use of this innovative technology, Ivanhoe has saved 2,498 metric tonnes of carbon emissions.



#### **ROI CALCULATOR**



#### ROI CALCULATOR



#### ROI CALCULATOR



Ivanhoe Mines, as a responsible corporate citizen, acknowledges the contribution of greenhouse gas emissions to climate change. We also recognize that climate change is one of the most critical challenges facing society today. In this regard, we have embarked on the process of implementing the TCFD framework for integrating climate change effectively across our levels of governance. We believe the TCFD will also allow us to communicate our efforts in managing climate related risks to all our stakeholders.

Our SDG mapping has indicated that SDG 13 includes targets that are relevant to Ivanhoe's climate action which commenced during 2019. These targets include strengthening resilience to climate-related hazards through detailed climate change risk and vulnerability studies undertaken at our various operations; improving education and capacity on climate change mitigation, adaptation and impact reduction; and integrating climate change measures into policies. Ivanhoe has integrated climate change aspects into corporate key performance indicators.

## Adaptation

Ivanhoe Mines has invested in extensive climate change risk and vulnerability impact analyzes at all of our projects, to best recognize the risks faced by our operations, the surrounding communities and natural environments. This investment aligns with the Group-wide strategy to build community resilience, specifically in light of climate change and its associated uncertainties and increasing vulnerabilities.

We intend to make use of these impact analyzes, and the suggestions in them, to implement adequate adaptation actions and resilience measures for both operational efficiency and community benefit.

During 2019, we conceptualized a land restoration process for indigenous reforestation and/or a biodiversity offset program around the Kamoa-Kakula Project, as well as an arbour initiative for implementation near our Kipushi Project. We intend to develop a carbon sink through our programs in the DRC. In this regard, we recognize the positive contribution of our adaptation projects to the SDGs, specifically in respect of SDG 15.

# Engagement

Cross-cutting stakeholder engagements are held as and when they are required. Communities, policymakers, government, local traditional authorities, civic organizations and non-governmental organizations are earmarked as the key base-level stakeholders. These are complemented by investors, shareholders and other related stakeholders which make up our stakeholder community. We keep our extended stakeholders aware of our developments and plans through annual reporting methods and voluntary disclosures.

In addition, we have developed an extensive supplier engagement questionnaire. Through this, we are able to engage with our value chain partners on their greenhouse gas emissions, water-related issues and climate change awareness. We hope to gain insight into our Scope 3 emissions and reducing our associated climate-related risks. We also aim to encourage our suppliers to become aware of the climate-related issues facing our operations, as well as their own

During 2019, a new intervention imposed under the South African legal framework was the promulgation of the Carbon Tax Act. In terms of this new legislation, the greenhouse gas emissions reported by our Platreef Project will, from June 2020, translate into a carbon tax on emissions payable by the mine to the South African Revenue Service. Still in its infancy, this new legal regime has received significant pushback from targeted sectors and industries. It remains law, however, and Ivanhoe is committed not only to complying with any levy payments to be made, but also to engaging the allowance and offset frameworks contemplated therein by ensuring that clean technologies are used during operations.









## Biodiversity and land use

Biodiversity may be affected by the impacts of mining activities on water, land and ecosystems. Our local stakeholders are valuable sources of knowledge concerning biodiversity, and we work closely with our local communities to identify sensitive areas and monitor any potential impacts. We incorporate all stakeholder concerns into our environmental stewardship approach.

The environmental targets for our respective projects are stipulated in the environmental management plan (EMP) of each project and include the following categories: incident prevention and management; continuous environmental risk assessment; environmental induction for all site staff and contractors; and staff and community capacity building on environmental topics.

The development of mining operations has a direct impact on the physical environment, and such activities can impact the natural environment in their vicinities. Ensuring that we understand the biodiversity in the environments in which we operate is an important aspect of the EIA processes that we undertake at each of our projects. Furthermore, ensuring that each EMP provides for safeguarding of the biodiversity in the areas in which we operate is prioritized in our environmental management strategy.

Our biodiversity strategy is linked to the stage of development of our projects. At our Kamoa-Kakula Project, biodiversity risks are actively mitigated through ongoing field mapping of fauna and flora, as well as vegetation clearance disturbance assessments and reforestation or biodiversity offset initiatives. The development of the Biodiversity Management Plan is in progress, and a beekeeping program has been implemented to offset deforestation activities. A Biodiversity Management Plan is in place at our Platreef Project and all activities are monitored in accordance therewith. Protected flora may only be removed once the required permits have been obtained. The Platreef Project undertakes the following activities in respect of biodiversity management: Arbor Day tree planting, eradication of alien invasive plants, protection of wild life, preservation of protected plants, vegetation of soil stockpiles, seeding of soil stockpiles with local grasses, and biomonitoring of streams and rivers.

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 studies currently in place. Ivanhoe Mines recognizes the value in partnerships, which facilitate biodiversity conservation for future generations and strategic land-use planning.



#### Harnessing the socio-ecological value of beekeeping

The Livelihood Program at Kamoa-Kakula continues to grow year-on-year, with hundreds of beneficiaries growing maize and vegetables and selling poultry and honey. Since 2014, beekeeping has been an integral component of the livelihood restoration program undertaken by the local farmers of the project who lost access to their fields due to mine surface infrastructure development.

However, a renewed focus on beekeeping in 2019 stemmed from its role in biodiversity conservation alongside the promotion of high-quality honey production to the local market, showing how conservation and community development can be integrally connected. In the reporting year, the eight beekeepers from the Kamisange community sold 571 kg at a value of US\$5,710. This harvest produced high-quality honey due to a good flowering season that resulted in enhanced nectar. The honey produced from this project is harvested from well-managed and well-zoned forests, with no contamination of agriculture pesticides, no fumes from vehicles, and is created from natural constructed materials within a safe distance from mining activities.

According to the World Bee Project, if global population and food consumption trends continue as projected, by 2050 the world will need 60% more food than is available today. The concept of ecological intensification of agriculture can contribute to meeting this demand. Ecologically-intensified farming produces more from the same land surface by working in harmony with nature and using biodiversity (such as with beekeeping). It is the long-term promising solution to pollination decline, food and nutrition insecurity and farmer poverty. In essence, beekeeping initiatives can promote sustainable agriculture, which helps to diversify the agricultural landscape and makes use of ecological processes as part of food production.



It is a known fact that bee populations are on the decline. The conservation of bees as a species is critical to the survival of local plant life; a crucial element of sustainable environmental conservation and biodiversity enrichment. Beekeeping provides additional opportunity for pollination, both to wild-growing and agricultural crops. Most plants would become extinct without their pollinators and pollinators would become extinct without plants. Bees, through pollination, thus promote the cultivation of crops, the fertilization of plants and soils, and support for local fauna subsistence. All of this influences environment stabilization.

The skills beekeepers have acquired include beekeeping management, types of hives, apiary selection, apiary management, beekeeping tools and equipment use, hive inspection, harvesting, processing of honey, storage, and processing and storage of wax. The keeping of beehives helps to maintain riparian zones, natural springs and remnant forest and bush areas, as these are the optimal habitat for bees. The presence of the hives also prevents timber and firewood harvesting in those areas, and discourages large animals from trampling the nearby farmland and destroying the crops. Undoubtedly, the knockon effects of beekeeping in this arena could result in reductions of greenhouse gas emissions from tree felling and harvesting.

Bees therefore play an integral role to the survival of their ecosystems, and the wellbeing and prosperity of earth's ecological balance, as well as human society, directly depends on the extent and status of biological

By engaging in the beekeeping initiatives, our Project's beneficiaries not only proactively assist in biodiversity conservation, but consequently also create conservation awareness; all in addition to providing a means of subsistence livelihood.







# Tailings and waste management

Sustainable development demands circular economy-based business models, and mining presents an opportunity to integrate waste management strategies into business functioning, through recycling most waste and seeking opportunities to make effective use of the waste, such as waste-based fuel operations. We are continually revisiting our waste management plans and programs with a view to reducing our waste footprint and conform to legislative changes and relevant recommendations made by tailings storage facility ('TSF') experts and institutions, globally.

IVANHOE MINES' WASTE MANAGEMENT PROGRAMS AS AT DECEMBER 31, 2019							
	Kamoa-Kakula	Platreef	Kipushi				
Waste reduction strategy and plan	Yes	Yes	Yes				
Active waste management plan	In progress	Yes	Yes				
Waste inventory on site	In progress	Yes	Yes				
Regular waste audits and inspections	No	Yes	Yes				
Vegetation of mining stockpiles	In progress	Yes	No				
Recycling of waste materials, such as paper, organic materials and oil	In progress	Yes	Yes				
Waste-related training programs with employees and contractors	In progress	Yes: 430 beneficiaries	Yes: 1 beneficiary				

At our Kamoa-Kakula and Platreef projects, waste rock dumps are managed according to specified dimensions and are vegetated to prevent dust and erosion.

South African municipalities have, in this reporting year, reported that many of their landfills have reached capacity and are unable to accept more waste. The Polokwane Declaration, which sets strict targets for mines, seeks to attain zero-waste-to-landfill by 2022, and ensure that 70% of mining waste is diverted from South Africa's landfills. Our Platreef Project has therefore embarked on an assessment of alternatives to waste disposal at the project (where the waste management hierarchy, at a policy level, requires that waste be disposed of as a last resort).

A (TSF) failure represents a catastrophic risk for any mine. TSF incidents and failures continue to result in devastating consequences worldwide. The devastating impact of the Brumadinho dam failure in Brazil shocked the world and has led to increased scrutiny of the design, operation and maintenance of TSFs, as well as the mining sector's investors and communities calling on mining companies for greater disclosure in respect of TSFs. During the reporting period, Ivanhoe participated in the Investor-led Mining and Tailings Safety Initiative through the disclosure of information to the Church of England Pensions Board, Chair of the Steering Committee for the initiative. We have also made this information publicly available on our website.

During 2019, Ivanhoe commissioned an independent tailings review panel of planned TSFs at all three our projects, the objectives of which was to assess whether the proposed TSFs could be operated safely and effectively, have minimal risk to local communities and the environment, and meet applicable local government and international standards. Recommendations for optimization, risk mitigation and/or governance improvements have been incorporated into the design and planning for all TSFs. Our mine design team continues to work closely with international experts and independent reviewers while designing tailings storage facilities for each of our three principal projects in line with our safe, modern and innovative approach to mine design and development.

Ivanhoe Mines is committed to tailings stewardship that meets or exceeds global best practices for safety and the preservation of the environment during all phases of the mine lifecycle. We have also recently compiled our position statement on tailings stewardship, which shall be used to inform the management standard applicable to tailings at our projects, as well as the development of an executive reporting protocol.

As we progress from development to mining, we plan to formulate rigorous training and capacity-building programs, to raise awareness and educate our workforce, contractors and communities on tailings risk and our tailings stewardship approach.



















#### **Quality education and** industry innovation

Innovation and education are critical business imperatives that we implement throughout the business, from mining exploration, technology and information systems, to people management and research and development.

We contribute to SDG 4 by investing in quality education in our workforce and host communities, thereby further reducing inequalities, as well as advancing SDG 9 through investment in technology, research and innovation.

# **INTELLECTUAL CAPITAL**

Through our intellectual capital, we seek to contribute towards people and prosperity, and to a cleaner planet fuelled by the green metals that we will produce. Ivanhoe Mines defines 'intellectual capital' as knowledge that can be used to produce wealth. This knowledge is encapsulated in the human capital of the Company and carefully considered in our recruitment and retention strategies. The structures supporting employees in their work, such as information management systems, are also considered as an important part of intellectual capital.

Intellectual capital within Ivanhoe Mines is built up through the participation of our employees in training and mentoring initiatives and the collective learning that takes place when projects are implemented successfully, through sharing best practices and developing innovative solutions across our projects.

## Resource development

Ivanhoe Mines prides itself on the discovery and development of three highly unique mineral deposits. Our geological experts come from varied backgrounds with experience in a wide range of environments and deposit styles. This broad base of experience provides a distinct competitive advantage that is used to support mineral resource development within the Company.

This experience base is 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 skills transfer programs and on-the-job training.

Significant volumes of data are collected using a variety of techniques to provide insights into the geological controls. 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, Kamoa North and the Western Foreland are testimony to the success of our proprietary exploration model.



Our executive management's 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, through the investment in resource development.





## Mine development

International contractor teams from Australia and China, used in the initial development of the Kansoko and Kakula mines, have been specifically tasked to recruit and train local development crews and build intellectual capital. The same commitment is evident in the training of local employees during shaft sinking operations at Platreef. Our desire to develop and transfer skills is evident in the establishment of the Kansoko Training Centre under the guidance of our mining experts who bring diverse development and operational experience. State of the art equipment and a dedicated underground mining section ensures that Ivanhoe Mines continues to build the intellectual capital required to realize the wealth of its many discoveries.

## Information management systems

Ivanhoe Mines places a premium on the integrity and security of the information that comprises its intellectual capital. To this end, the Company has procured comprehensive specialist data management systems to enable employees to apply advanced techniques and analytics on a variety of subject areas, such as resource modelling; mine planning; health, safety and environmental management; and stakeholder management. These systems provide employees with the tools to gain insight into different areas of operation at the Company's principal projects and enable a culture of innovative thinking.





















#### 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 SDG 9 and SDG 11 targets focuses on developing quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure.

We deliver this through 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.



# **INFRASTRUCTURE CAPITAL**

## **Bulk** power

Ongoing upgrading work at the Mwadingusha hydro-power plant in the DRC has significantly progressed, with major equipment being delivered to site. The power station was recently shut down in order 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, is underway and is expected to be completed in Q1 2021. The refurbished plant is projected to deliver an output increased by 10% to a capacity of approximately 72 megawatt (MW) of clean hydropower to the national grid.

The work at Mwadingusha, part of a program eventually to overhaul and boost output from three hydro-power plants, is being conducted by engineering firm Stucky of Lausanne, Switzerland, under the direction of Ivanhoe Mines and Zijin Mining, in conjunction with the DRC's stateowned power company, SNEL. Once fully reconditioned, the three plants will have a combined installed capacity of approximately 200 MW of electricity for the national grid, which is expected to be more than sufficient for the Kamoa-Kakula Project.

Our Kansoko Project, Kakula Project and Kamoa camp have been connected to the national hydroelectric power grid since the completion of a 20 kilometre, 120 kilovolt, single-circuit power line from the national grid to Kansoko in October 2016, and a 12 kilometre, 120 kilovolt, dual-circuit power line between Kansoko and Kakula in December 2017. For the production phase, a 220 kilovolt substation named 'NRO' and a 35 km 220 kilovolt overhead power line from NRO to Kakula have commenced. The contract for the 220 kilovolt overhead power line, as well as the contract for the new electrical substation, has been awarded. Bush clearing for the overhead line has started and earthworks for the electrical substation is underway. The power line will feed to the 220 kilovolt Kamoa Consumer Substation (KCS).





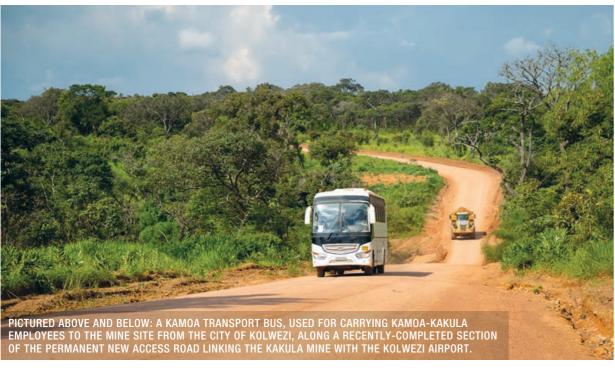
Kamoa-Kakula and Kipushi continue to use hydropower-generated electricity, and the incorporation of solar power at all our projects remains subject to investigation. At Kipushi, a 120 kilovolt dual supply line has been installed to remove the risk of power failure.

A number of corporate social investment (CSI) initiatives at the Mwadingusha and Nzilo power stations sites have been facilitated through this collaborative partnership. The initiatives are aimed at improving the living and working conditions of the SNEL employees working with our Ivanhoe Mines teams to refurbish the power stations and for the communities surrounding the power stations. The following CSI initiatives, amounting to a total value of US\$5,600,000 have either been completed or are ongoing as part of the Ivanhoe-SNEL hydropower partnership.

Initiative	Total value of the initiative	Total spent in 2019
Emergency repair of SNEL employee accommodation at Nzilo after severe storm damage (completed 2014)	148,000	_
Donation of a 60-seater bus for SNEL employees living in Mwadingusha town (2017)	108,000	_
Repair of 80 kilometres of road from Likasi to Mwadingusha (completed 2018), ongoing maintenance scheduled each dry season	3,400,000	769,898
Construction of five new houses and refurbishment of 10 old houses in Mwadingusha town for SNEL employees (2019)	1,000,000	143,223
Installation of Mwadingusha town mini-substation (500 kilovolt Ampere; 6.6/0.4 kilovolt) for electricity provision to residents (2018)	44,000	_
Installation of a potable water station for Mwadingusha town, ongoing	553,000	314,627
Refurbishment of the Mwadingusha hospital and donation of hospital equipment, ongoing	343,000	189,389

The Platreef-ESKOM partnership, supported by local government and communities, which was negotiated to bring a five megavolt-ampere (MVA) powerline to the mine development site to provide electricity during the construction of the mine continues to be the base for bulk power supply to the Platreef Project. The additional 70 MVA

permanent electricity supply secured through negotiating a self-build option, through which the Company will build the required powerline infrastructure, remains within the Project's achievable milestones. As energy regulation and mindsets shift in South Africa, renewable energy projects are also being investigated.







# **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.

A new provincial road linking Kamoa-Kakula with the Kolwezi airport has been constructed and is operational. Ivanhoe contributed to this project in accordance with an agreement entered into with the Province of Lualaba. This road, which is 27 kilometres long, enables more convenient and quicker travel between Kolwezi and Kamoa-Kakula, benefiting both the Kamoa-Kakula Project and employees who regularly transit to Kolwezi.



Notwithstanding the fact that none of our projects have commenced operations, Ivanhoe has acknowledged that one can never start planning for closure too early. The legislative frameworks governing mine closure are constantly evolving, and we therefore strive to ensure that we are designing our operations within the sustainable development mindset, which includes planning for the sustainable closure or end state of each mining operation. The EMPs and closure plans for each project are constantly viewed and reviewed in this context.

We are also cognizant of the socio-economic challenges resulting from mine closure, and therefore seek to develop proactive, comprehensive land reclamation strategies 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.



We would like to thank all of our valued stakeholders for their interest and commitment to Ivanhoe Mines and for taking the time to read this Sustainability Report. Moreover, we are passionate about everything that we do and keenly welcome your views and inputs, and therefore would like to encourage any interested stakeholders to contact us to share your thoughts or concerns

Last, but certainly not least, we would like to thank all of our corporate and site-based team members who work tirelessly to advance our projects in unison with our sustainable development agenda, as well as those specifically charged with sustainability responsibilities. A significant amount of collaboration and team-work was required for the compilation of this Sustainability Report and we would like to thank each and every individual for his and her contribution, including our external stakeholders who so willingly participated in our Materiality Assessment, and our internal stakeholders, comprised of our Board of Directors, senior management, corporate staff, various site teams and consultants.







# **QUALIFIED PERSON'S STATEMENT**

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, Project Geology and Evaluation at Ivanhoe Mines. Mr. Torr has verified the technical data disclosed in this Sustainability Report.

Ivanhoe has prepared a current, independent, NI 43-101-compliant technical report for each of its projects, namely Platreef Project, the Kipushi Project and the Kamoa-Kakula Project, which are available under the Company's SEDAR profile at www.sedar.com:

- > The Kamoa-Kakula Integrated Development Plan 2019 dated March 18, 2019, prepared by OreWin (Pty) Ltd., Amec Foster Wheeler E&C Services Inc. (a division of Wood PLC), SRK Consulting Inc., KGHM Cuprum R&D Centre Ltd., Stantec Consulting International LLC, DRA Global, Golder Associates, and Epoch Resources (Pty) Ltd., covering Ivanhoe Mines Ltd.'s Kamoa-Kakula Project;
- > The Platreef 2017 Feasibility Study Technical Report dated September 4, 2017, prepared by DRA Global, OreWin (Pty) Ltd., Amec Foster Wheeler, Stantec Consulting, Murray & Roberts Cementation, SRK Consulting, Golder Associates and Digby Wells Environmental, covering Ivanhoe Mines Ltd.'s Platreef Project; and
- > The Kipushi 2019 Resource Update dated March 28, 2019, prepared by OreWin (Pty) Ltd., MSA Group (Pty) Ltd., SRK Consulting (South Africa) (Pty) Ltd., and MDM (Technical) Africa (Pty) Ltd. covering the Ivanhoe Mines Ltd.'s Kipushi Project.

These technical reports include relevant information regarding the effective dates and the assumptions, parameters and methods of the mineral resource estimates on the Platreef Project, the Kipushi Project and the Kamoa-Kakula Project cited respectively in this Sustainability Report, as well as information regarding data verification, exploration procedures and other matters relevant to the scientific and technical disclosure contained in this Sustainability Report in respect of the Platreef Project, Kipushi Project and Kamoa-Kakula Project.

# **CAUTIONARY STATEMENT** ON FORWARD-**LOOKING** INFORMATION

Certain statements in this Sustainability Report constitute "forward-looking statements" or "forward-looking information" within the meaning of applicable securities laws. Such statements involve known and unknown risks. uncertainties and other factors, which may cause the actual results, performance or achievements of Ivanhoe Mines Ltd. ("Ivanhoe" or the "Company"), or any of its mineral projects, or industry results, to be materially different from any future results, expectations, performance or achievements expressed or implied by such forwardlooking statements or forward-looking 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.

Specific statements in this Sustainability Report that constitute forward-looking statements or forwardlooking information include, but are not limited to: (i) the Company's commitment to accelerating progress towards the United Nations' Sustainable Development Goals; (ii) the Company is committed to delivering a complete independent third-party assured sustainability report in the future; (iii) Kamoa-Kakula's phase 1 Kakula Mine and 3.8-million-tonne-per-annum copper-processing plant is on track for initial production in Q3 2021; (iv) Kakula's average feed grade over the first five years of operations is projected to be 6.8% copper and 5.5% copper on average over a 25-year mine life; (v) Kamoa-Kakula is projected to become the world's second largest copper mine, with peak annual production of more than 700,000 tonnes of copper and a potential production rate of at least 18 Mtpa; (vi) statements regarding the independent Kakula definitive feasibility study and an updated Integrated Development Plan for the entire Kamoa-Kakula mining complex are expected to be issued in mid-2020; (vii) Platreef's Shaft 1 is expected to be completed to a final depth of approximately 1,000 metres in mid-2020; (viii) statements regarding Platreef is projected to have a cash cost of US\$351 per ounce of 3PE+Au, net of nickel

214,000 ounces of platinum, 30,000 ounces of gold and 14,000 ounces of rhodium (combined 477,000 ounces of 3PE+Au), plus 21 million pounds of nickel and 13 million pounds of copper; (x) the Kipushi mine anticipates annual production of an average of 381,000 tonnes of zinc concentrate over an 11-year initial mine life at a total cash cost of approximately US\$0.48 per pound of zinc; (xi) the Kipushi Project could rank among the world's largest zinc mines; (xii) the Company's plans to undertake a human rights due diligence in 2020/21; (xiii) the Company's expectation to fund all of its exploration and development activities through debt and equity financing until operating revenues are generated; (xiv) the Company's plans to plan to implement active management development programs, and the expectation that these interventions will normalize the proportion of local- and non-local employees in management at Kamoa-Kakula in the longterm; (xv) the Company's intention to intend to conduct a more detailed climate-related scenario analysis, on each project, within the next two years, in line with the TCFD recommendations; (xvi) the Company's intention to make use of climate change risk and vulnerability impact analyzes to implement adequate adaptation actions and resilience measures for both operating and community benefit; (xvii) the Company's intention to develop a carbon sink through our programs in the DRC; (xviii) the Company's intention to make every effort to ensure that better long-term, sustainable benefit is derived from the African nations' natural resources through the creation of a social compact between government, labour, business and communities; (xix) the Company's three principal mining projects in Southern Africa that will produce many of the metals that the world urgently needs for cleaner air and water; (xx) potential impacts on the Company's projects due to the new coronavirus, COVID-19; (xxi) the Company progressively becoming one of the world's largest producers of platinum group metal; (xxii) the Platreef Project becoming a significant producer of nickel; (xxiii) the Kipushi joint venture becoming the world's high-grade major zinc mine: (xxiv) the Platreef Project being established as one of the lowest-cost PGM producers in Africa; (xxv) statements regarding financing options to fast-track the Platreef Project development schedule and accelerate initial production; (xxvi) future phases of the Resettlement Action Plan at Kamoa-Kakula; (xxvii) construction of a water pump station during 2020 at the Kipushi Project; (xxviii) plans to formulate rigorous training and capacity-building programs related to tailings and waste management; (xxix) the expected completion in Q1 2021 of the refurbished Mwadingusha hydro-power plant and statements regarding its future capacity; (xxx) corporate social investment initiatives as part of the Ivanhoe-SNEL hydropower partnership; and (xxxi) the additional 70 MVA permanent electricity supply at the Platreef Project.

and copper by-products, and including sustaining capital

costs; (ix) Platreef's initial, average annual production rate will be approximately 219,000 ounces of palladium,

**FURTHER** 

In addition, all of the results (economic, financial and operational) of the Kakula PFS, Platreef FS, Kamoa PFS, Kamoa-Kakula PEA and Kipushi PFS constitute forward-looking statements or forward-looking information, including life of mine production, annual production estimates, cash, operating and mine site costs, capital costs, net present value, and payback periods.

With respect to forward-looking statements or forwardlooking information contained in this Sustainability Report, in making such statements or providing such information, the Company has made assumptions regarding, among other things: (i) the accuracy of the estimation of Mineral Resources and Mineral Reserves; (ii) that exploration activities and studies will provide results that support anticipated development and extraction activities; (iii) that studies of estimated mine life and production rates at the Projects will provide results that support anticipated development and extraction activities; (iv) that the Company or its joint venture partners, as required, will be able to obtain additional financing on satisfactory terms, including financing necessary to advance the development of any Project; (v) that infrastructure anticipated to be developed or operated by third parties, including electrical generation and transmission capacity, will be developed and/or operated as currently anticipated; (vi) that laws, rules and regulations are fairly and impartially observed and enforced; (vii) that the market prices for relevant commodities remain at levels that justify development and/or operation of a Project; (viii) that joint venture partners at the Kamoa-Kakula Project, the Platreef Project and the Kipushi Project comply with, and fulfill, all terms and conditions of joint venture and other agreements entered into with the Company that are required to be fulfilled by such joint venture partners; (ix) that the Company will be able to successfully negotiate land access with holders of surface rights at the Platreef Project; (x) that the Company will be able to obtain, maintain, renew or extend required permits; (xi) that there are no unexpected adverse changes in laws, regulations, or administrative policies affecting any of the Projects, or in the enforcement thereof, (xii) that war, civil strife, disease (including pandemics), terrorism and/or insurrection do not impact, impair, delay or suspend the Company's exploration activities or development plans or activities, and (xiii) the spread and effect of COVID-19.

In making the forward-looking statements and forward-looking information, the Company has made such statements based on assumptions and analyzes on certain factors which are inherently uncertain. Uncertainties include among others: (i) the adequacy of infrastructure and rehabilitation or upgrade of existing 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, PGE, gold or other minerals; (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) the impact of the COVID-19 pandemic; (xi) currency fluctuations; (xii) changes in laws or regulations; (xiii) the availability and productivity of skilled labour; (xiv) the regulation of the mining industry by various governmental agencies; and (xv) political factors and political stability, including the occurrence of local, state, provincial or national elections, including that elected officials continue to look favorably on foreign mining investment.

Forward-looking statements 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, including, but not limited to, the factors discussed above and below and under "Risk Factors", as well as unexpected changes in laws, rules or regulations, or their enforcement by applicable authorities, including potentially arbitrary action; the failure of parties to contracts with the Company to perform as agreed, including its joint venture partners; social or labour unrest; changes in commodity prices; unexpected changes in the cost of mining consumables; and the failure of exploration programs or current or future economic 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 readers that actual results will be consistent with these forward-looking statements. The Company's actual results could differ materially from those anticipated in these forward-looking statements, as a result of, amongst others, those factors noted above and those listed under the heading "Risk Factors". 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 assumes no 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 "Risk Factors" section and elsewhere in the company's <a href="MD&A">MD&A</a> for the year ended December 31, 2019.

# GLOBAL REPORTING INITIATIVE STANDARDS INDEX FOR THE IVANHOE MINES SUSTAINABILITY REPORT 2019

#### **General Standards Disclosures**

GENERAL STANDARD DISCLOSURE	DISCLOSURE DESCRIPTION	DISCLOSURE DETAIL	REFERENCE	EXPLANATION WHERE RELEVANT AND/OR REASON FOR OMISSION
Organizational	profile			
102-1	Name of the organization		About this Report, p4	
102-2	Activities, brands, products, and services	The reporting organization shall report the following information:  a. A description of the organization's activities.  b. Primary brands, products, and services, including an explanation of any products or services that are banned in certain markets.	Our business at a glance, p14	
102-3	Location of headquarters		Back cover	
102-4	Location of operations	The reporting organization shall report the following information:  a. Number of countries where the organization operates, and the names of countries where it has significant operations and/or that are relevant to the topics covered in the report.	Our businsess at a glance, p14 Our principal projects, p16	
102-5	Ownership and legal form		Our principal projects, p16	Annual Information Form available on www.ivanhoemine. com
102-6	Markets served	Markets served, including:  > geographic locations where products and services are offered;  > sectors served;  > types of customers and beneficiaries served.	Our business at a glance, p14 Our principal projects, p16 Our strategic stakeholder management, p36	
102-7	Scale of the organization	Scale of the organization, including:  > total number of employees;  > total number of operations;  > net sales (for private sector organizations) or net revenues (for public sector organizations);  > total capitalization (for private sector organizations) broken down in terms of debt and equity;  > Quantity of products or services provided.	About this Report, p4 Our principal projects, p16 Our performance, p44 Our workforce, p57	i. Annual Information Form available on www. ivanhoemines. com ii. Net sales not applicable as our principal projects are in development phase; iii. quantity of products or services provided not applicable

GENERAL STANDARD DISCLOSURE Organizationa		DISCLOSURE DETAIL	REFERENCE	FURTHER EXPLANATION WHERE RELEVANT AND/OR REASON FOR OMISSION
102-8	Information on employees and other workers	The reporting organization shall report the following information:  a. Total number of employees by employment contract (permanent and temporary), by gender.  b. Total number of employees by employment contract (permanent and temporary), by region.  c. Total number of employees by employment type (full-time and part-time), by gender.  d. Whether a significant portion of the organization's activities are performed by workers who are not employees. If applicable, a description of the nature and scale of work performed by workers who are not employees.  e. Any significant variations in the numbers reported in Disclosures 102-8-a, 102-8-b, and 102-8-c (such as seasonal variations in the tourism or agricultural industries).  f. An explanation of how the data have been compiled, including any assumptions made.	Human capital, p56	d. A number of contract workers are employed for shaft-sinking, construction and exploration activities. e. Not applicable f. The data was compiled by the Human Resources departments of the relevant projects, using standardized tracking templates, and verification against payroll.
102-9	Supply chain	The reporting organization shall report the following information:  a. A description of the organization's supply chain, including its main elements as they relate to the organization's activities, primary brands, products, and services.	Economic capital, p46	The supply chain of the Company's principal projects primarily includes mining consultants, mining construction companies, social-and environmental consultants and suppliers of goods and services, as appropriate to the development phase of each mine.
102-10	Significant changes to the organization's size, structure, ownership or supply chain	Significant changes to the organization's size, structure, ownership, or supply chain, including:  > Changes in the location of, or changes in, operations, including facility openings, closings, and expansions;  > Changes in the share capital structure and other capital formation, maintenance,  > and alteration operations (for private sector organizations);  > Changes in the location of suppliers, the structure of the supply chain, or relationships with suppliers, including selection and termination.	Report scope, p4 Our principal projects, p16	

GENERAL STANDARD DISCLOSURE	DISCLOSURE DESCRIPTION	DISCLOSURE DETAIL	REFERENCE	FURTHER EXPLANATION WHERE RELEVANT AND/OR REASON FOR OMISSION
Organizational	profile			
102-11	Precautionary principle or approach	Whether and how the organization applies the Precautionary Principle or approach.	Health and safety performance, p60 Natural Capital, p 82	
102-12	External initiatives	The reporting organization shall report the following information:  a. A list of externally-developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes, or which it endorses.	Reporting guidelines, p4	<ul> <li>We are member         of the National         Business Initiative         (NBI) South Africa</li> <li>We regularly         disclose on CDP</li> </ul>
102-13	Membership of associations	The reporting organization shall report the following information:  a. A list of the main memberships of industry or other associations, and national or international advocacy organizations.	The human rights lens, p30  Our strategic stakeholder management, p36  Mining Local Procurement Reporting Mechanism (LPRM), p49	<ul> <li>South African         Chamber of Mines</li> <li>The South African         Institute of Mining         and Metallurgy</li> </ul>
Strategy				
102-14	Statement from senior decision maker	The reporting organization shall report the following information:  a. A statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy for addressing sustainability.	Message from our Sustainability Committee Guy de Selliers, p6 Message from our President Marna Cloete, p8 Message from our Executive Vice President, Sustainability Patricia Makhesha, p10	
Ethics and Inte	grity			
102-16	Values, principles, standards and norms of behavior	The reporting organization shall report the following information:  a. A description of the organization's values, principles, standards, and norms of behavior.	Our Strategy, Governance and Priorities, p20 Business ethics, p26	
Governance				
102-18	Governance structure	The reporting organization shall report the following information:  a. Governance structure of the organization, including committees of the highest governance body.  b. Committees responsible for decision making on economic, environmental, and social topics.	Governance and accountability, p24	

GENERAL STANDARD DISCLOSURE	DISCLOSURE DESCRIPTION	DISCLOSURE DETAIL	REFERENCE	FURTHER EXPLANATION WHERE RELEVANT AND/OR REASON FOR OMISSION
Stakeholder ei 102-40	List of stakeholder groups	The reporting organization shall report the following information:  a. A list of stakeholder groups engaged by the organization.	Our strategic stakeholder managment, p36	
102-41	Collective bargaining agreements	The reporting organization shall report the following information:  a. Percentage of total employees covered by collective bargaining agreements.	Our workforce, p57	
102-42	Identifying and selecting stakeholders	The reporting organization shall report the following information:  a. The basis for identifying and selecting stakeholders with whom to engage.	Stakeholder mapping, p36	
102-43	Approach to stakeholder engagement	The reporting organization shall report the following information:  a. The organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process.	Materiality assessment, p26 Engagement, p38	
102-44	Key topics and concerns raised	The reporting organization shall report the following information:  a. Key topics and concerns that have been raised through stakeholder engagement, including:  > how the organization has responded to those key topics and concerns, including through its reporting;  > the stakeholder groups that raised each of the key topics and concerns.	Materiality assessment, p26 Engagement, p38 Complaints and grievance mechanism, p43	
Reporting Pra	ctice		l	
102-45	Entities included in the consolidated financial statements	The reporting organization shall report the following information:  a. A list of all entities included in the organization's consolidated financial statements or equivalent documents.  B. Whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report.	Our approach to sustainability and reporting, p4	
102-46	Defining report content and topic boundaries	The reporting organization shall report the following information:  a. An explanation of the process for defining the report content and the topic Boundaries.  b. An explanation of how the organization has implemented the Reporting Principles for defining report content.	Report scope, p4 Materiality assessment, p26	

GENERAL STANDARD DISCLOSURE	DISCLOSURE DESCRIPTION	DISCLOSURE DETAIL	REFERENCE	FURTHER EXPLANATION WHERE RELEVANT AND/OR REASON FOR OMISSION
Reporting Pra	ctice			
102-47	List of material topics	The reporting organization shall report the following information:  a. A list of the material topics identified in the process for defining report content.	Ivanhoe Mines' Materiality Matrix: Most Material Impacts, p28.	
102-48	Restatements of information	The reporting organization shall report the following information:  a. The effect of any restatements of information given in previous reports, and the reasons for such restatements.	About this Report, p4	
102-49	Changes in reporting	The reporting organization shall report the following information:  a. Significant changes from previous reporting periods in the list of material topics and topic Boundaries.		Not applicable.
102-50	Reporting period	The reporting organization shall report the following information:  a. Reporting period for the information provided.	About this Report, p4	
102-51	Date of most recent report	The reporting organization shall report the following information:  a. If applicable, the date of the most recent previous report.	About this Report, p4	Reference is made to "annual" report
102-52	Reporting cycle	The reporting organization shall report the following information:  a. Reporting cycle.	About this Report, p4	Reference is made to "annual" report
102-53	Contact point for questions regarding the report	The reporting organization shall report the following information:  a. The contact point for questions regarding the report or its contents.	p143	
102-54	Claims of reporting in accordance with the GRI Standards	The claim made by the organization, if it has prepared a report in accordance with the GRI Standards, either:  > 'This report has been prepared in accordance with the GRI Standards: Core option';  > 'This report has been prepared in accordance with the GRI Standards: Comprehensive option'.	About this Report, p4 Reporting guidelines, p4 Materiality assessment, p26 Aligning our reporting to ensure greater integration of climate related issues in our annual reporting, p87	

GENERAL STANDARD DISCLOSURE	DISCLOSURE DESCRIPTION	DISCLOSURE DETAIL	REFERENCE	FURTHER EXPLANATION WHERE RELEVANT AND/OR REASON FOR OMISSION
Reporting Prac	ctice			
102-55	GRI content index	The reporting organization shall report the following information:  a. The GRI content index, which specifies each of the GRI Standards used and lists all disclosures included in the report.  b. For each disclosure, the content index shall include:  > the number of the disclosure (for disclosures covered by the GRI Standards);  > the page number(s) or URL(s) where the information can be found, either within	Appendices, p113	
		the report or in other published materials; > if applicable, and where permitted, the reason(s) for omission when a required disclosure cannot be made.		
102-56	External assurance	The reporting organization shall report the following information:  a. A description of the organization's policy and current practice with regard to seeking external assurance for the report.  b. If the report has been externally assured:  A reference to the external assurance report, statements, or opinions. If not included in the assurance report accompanying the sustainability report, a description of what has and what has not been assured and on what basis, including the assurance standards used, the level of assurance obtained, and any limitations of the assurance process;  The relationship between the organization and the assurance provider;  Whether and how the highest governance body or senior executives are involved in seeking external assurance for the	Independent assurance, p4	This report has not been externally assured by a third party. The Company has engaged a leading audit form to perform an independent assurance readiness review on a limited number of key performance indicators. EY was also engaged by the Platreef Project to perform specific procedures over the accuracy of defined reporting elements.

organization's sustainability report.

# **Management Approach and Material Topics**

MATERIAL TOPICS

GRI Standard and Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
GRI CONTENT	INDEX			
GRI 103: Management Approach	103-1 Explanation of the material topic and its boundary	For each material topic, the reporting organization shall report the following information:  a. An explanation of why the topic is material.  b. The boundary for the material topic, which includes a description of:  > where the impacts occur;  > the organization's involvement with the impacts. For example, whether the organization has caused or contributed to the impacts, or is directly linked to the impacts through its business relationships.  c. Any specific limitation regarding the topic Boundary.	Materiality assessment, p26 Ivanhoe Mines' Materiality Matrix: Most Material Impacts, p28	
	103-2 The management approach and its components	For each material topic, the reporting organization shall report the following information:  a. An explanation of how the organization manages the topic.  b. A statement of the purpose of the management approach.  c. A description of the following, if the management approach includes that component:  > Policies  > Commitments  > Goals and targets  > Responsibilities  > Resources  > Grievance mechanisms  > Specific actions, such as processes, projects, programs and initiatives	Ivanhoe Mines' Materiality Matrix: Most Material Impacts, p28 Economic Capital, p46 Human capital, p56 Social and relational capital, p70 Natural capital, p82 Intellectual capital, p102 Infrastructure capital, p104	
	103-3 Evaluation of the management approach	For each material topic, the reporting organization shall report the following information:  a. An explanation of how the organization evaluates the management approach, including: the mechanisms for evaluating the effectiveness of the management approach; the results of the evaluation of the management approach; any related adjustments to the management approach.	Our Strategy, Governance and Priorities, p20	

		MATERIAL TOPICS (MOST MATERIAL IMPA	CTS)	
GRI Standard and Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
Land Manage	ement: Comm	unities' experiences of relocation and live	elihood restoration	on
GRI 103: Management Approach	103-1 Explanation of the material topic and its boundary	See above	Materiality assessment, p26 Ivanhoe Mines' Materiality Matrix: Most Material Impacts, p28 Economic and physical displacement, and livelihood restoration, p78	
	103-2 The management approach and its components	See above	Ivanhoe Mines' Materiality Matrix: Most Material Impacts, p27 Social and relational capital, p70. Economic and physical displacement, and livelihood restoration, p78	
	103-3 Evaluation of the management approach	See above	Our Strategy, Governance and Priorities, p20 Social and relational capital, p70 Economic and physical displacement, and livelihood restoration, p78	
Climate Char	nge Managem	ent		I
GRI 103: Management Approach	103-1 Explanation of the material topic and its boundary	See above	Materiality assessment, p26 Ivanhoe Mines' Materiality Matrix: Most Material Impacts, p28	
	103-2 Management approach and its components	See above	Ivanhoe Mines' Materiality Matrix: Most Material Impacts, p28 Natural capital, p82	
	103-3 Evaluation of the management approach	See above	Our Strategy, Governance and Priorities, p20 Natural capital, p82	

	MATERIAL TOPICS (MOST MATERIAL IMPACTS)				
GRI Standard and Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission	
Local procur	ement				
GRI 103: Management Approach	103-1 Explanation of the material topic and its boundary	See above	Materiality assessment, p26 Ivanhoe Mines' Materiality Matrix: Most Material Impacts, p28		
	103-2 The management approach and its components	See above	Ivanhoe Mines' Materiality Matrix: Most Material Impacts, p28 Economic capital, p46. and Local procurement, p47		
	103-3 Evaluation of the management approach	See above	Our Strategy, Governance and Priorities, p20. Economic capital, p46 Local procurement, p47 Alignment with Mining Local Procurement Reporting Mechanism, p128		
GRI 203: Indirect economic impacts	203-2 Significant indirect economic impacts	The reporting organization shall report the following information:  a. Examples of significant identified indirect economic impacts of the organization, including positive and negative impacts.  b. Significance of the indirect economic impacts in the context of external benchmarks and stakeholder priorities, such as national and international standards, protocols, and policy agendas.	Ivanhoe Mines Ltd. is committed to accelerating progress towards the United Nations' Sustainable Development Goals, p1 Our business at a glance, p14 Our principal projects, p16 Ivanhoe Mines' Materiality Matrix: Most Material Impacts, p28 Economic capital, p46		
GRI 204: procurement practices 2016	Disclosure 204-1 Proportion of spending on local suppliers	The reporting organization shall report the following information:  a. Percentage of the procurement budget used for significant locations of operation that is spent on suppliers local to that operation (such as percentage of products and services purchased locally).  b. The organization's geographical definition of 'local'.  c. The definition used for 'significant locations of operation'.	Local procurement, p47.  Our 2019 performance at a glance, p44 (economic capital)		

MATERIAL TOPICS (MOST MATERIAL IMPACTS)					
GRI Standard and Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission	
Information I	Management &	& Access to Technology			
GRI 103: Management Approach	103-1 Explanation of the material topic and its boundary	See above	Message from the Executive Vice President, Sustainability, p10 Materiality assessment, p26 Ivanhoe Mines' Materiality Matrix: Most Material Impacts, p28		
	Management approach and its components	See above	Ivanhoe Mines' Materiality Matrix: Most Material Impacts, p29 Social and relational capital, p70		
	103-3 Evaluation of the management approach	See above	Our Strategy, Governance and Priorities, p20 Social and relational capital, p70		

		MATERIAL TOPICS (MOST MATERIAL IMPA	CTS)	
GRI Standard and Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
Water (acces	s and health)			
GRI 103: Management Approach	103-1 Explanation of the material topic and its boundary	See above	Materiality assessment, p26 lvanhoe Mines' Materiality Matrix: Material Impacts, p29	
	103-2 The management approach and its components	See above	Ivanhoe Mines' Materiality Matrix: Material Impacts, p29 Natural capital, p82. and Water stewardship, p86	
	103-3 Evaluation of the management approach	See above	Our Strategy, Governance and Priorities, p20  Natural capital, p82;.and Water stewardship, p86	
GRI 303: Water And Effluents 2018	303-1 Interactions with water as a shared resource	The reporting organization shall report the following information:  a. A description of how the organization interacts with water, including how and where water is withdrawn, consumed, and discharged, and the water-related impacts caused or contributed to, or directly linked to the organization's activities, products or services by a business relationship (e.g., impacts caused by runoff).  b. A description of the approach used to identify water-related impacts, including the scope of assessments, their timeframe, and any tools or methodologies used.  c. A description of how water-related impacts are addressed, including how the organization works with stakeholders to steward water as a shared resource, and how it engages with suppliers or customers with significant water-related impacts.  d. An explanation of the process for setting any water-related goals and targets that are part of the organization's management approach, and how they relate to public policy and the local context of each area with water stress.	Water stewardship, p86 Water, p93	
	303-2 Management of water discharge- related impacts	The reporting organization shall report the following information:  a. A description of any minimum standards set for the quality of effluent discharge, and how these minimum standards were determined, including:  > how standards for facilities operating in locations with no local discharge requirements were determined;  > any internally developed water quality standards or guidelines;  > any sector-specific standards considered;  > whether the profile of the receiving waterbody was considered.	Water stewardship, p86 Tailings and waste management, p101	

ODI OL I	D: 1	MATERIAL TOPICS (MOST MATERIAL IMPA	1	F
GRI Standard and Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
Water (acces	s and health)			
GRI 303: Water And Effluents 2018	303-3 Water withdrawal	The reporting organization shall report the following information:  a. Total water withdrawal from all areas in megalitres, and a breakdown of this total by the following sources, if applicable:  > Surface water;  > Groundwater;  > Produced water;  > Third-party water.  b. Total water withdrawal from all areas with water stress in megalitres, and a breakdown of this total by the following sources, if applicable:  > Surface water;  > Groundwater;  > Seawater;  > Produced water;  > Seawater;  > Produced water;  > Third-party water, and a breakdown of this total by the withdrawal sources listed in i–iv.  c. A breakdown of total water withdrawal from each of the sources listed in Disclosures 303-3-a and 303-3-b in megalitres by the following categories:  > Freshwater (≤1,000 mg/L Total Dissolved Solids);  > Other water (>1,000 mg/L Total Dissolved Solids).  d. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used.	Water, p93	

MATERIAL TOPICS (MOST MATERIAL IMPACTS)				
GRI Standard and Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
Water (acces	s and health)			
GRI 303: Water And Effluents 2018	303-4 Water discharge	The reporting organization shall report the following information:  a. Total water discharge to all areas in megalitres, and a breakdown of this total by the following types of destination, if applicable:  > Surface water;  > Groundwater;  > Seawater;  > Third-party water, and the volume of this total sent for use to other organizations, if applicable.  b. A breakdown of total water discharge to all areas in megalitres by the following categories:  > Freshwater (≤1,000 mg/L Total Dissolved Solids);  > Other water (>1,000 mg/L Total Dissolved Solids).  c. Total water discharge to all areas with water stress in megalitres, and a breakdown of this total by the following categories:  > Freshwater (≤1,000 mg/L Total Dissolved Solids);  > Other water (>1,000 mg/L Total Dissolved Solids);  > Other water (>1,000 mg/L Total Dissolved Solids).  d. Priority substances of concern for which discharges are treated, including:  > how priority substances of concern were defined, and any international standard, authoritative list, or criteria used;  > the approach for setting discharge limits for priority substances of concern;  > number of incidents of non-compliance with discharge limits.  e. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used.	Water, p93	

		MATERIAL TOPICS (MOST MATERIAL IMPA	ACTS)	
GRI Standard and Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason fo omission
Water (acces	s and health)			
GRI 303: Water And Effluents 2018	303-5 Water consumption	The reporting organization shall report the following information:  a. Total water consumption from all areas in megalitres.  b. Total water consumption from all areas with water stress in megalitres.  c. Change in water storage in megalitres, if water storage has been identified as having a significant water-related impact.  d. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used, including whether the information is calculated, estimated, modeled, or sourced from direct measurements, and the approach taken for this, such as the use of any sector-specific factors.	Water, p93	
Water Stewa	rdship			
GRI 103: Management Approach	103-1 Explanation of the material topic and its boundary	See above	Materiality assessment, p26 Ivanhoe Mines' Materiality Matrix: Most Material Impacts, p29	
	103-2 Management approach and its components	See above	lvanhoe Mines' Materiality Matrix: Material Impacts, p29 Natural capital, p82	
	103-3 Evaluation of the management approach	See above	Our Strategy, Governance and Priorities, p20 Natural capital, p82	
Business Eth	ics			
GRI 103: Management Approach	103-1 Explanation of the material topic and its boundary	See above	Materiality assessment, p26 Ivanhoe Mines' Materiality Matrix: Material Impacts, p29	
	Management approach and its components	See above	Ivanhoe Mines' Materiality Matrix: Material Impacts, p29 Human capital, p56	
	103-3 Evaluation of the management	See above	Our Strategy, Governance and Priorities, p20 Human capital,	
	approach		<u>p56</u>	

MATERIAL TOPICS (MOST MATERIAL IMPACTS)				
GRI Standard and Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
Economic Pe	erformance			
GRI 103: Management Approach	103-1 Explanation of the material topic and its boundary	See above	Materiality assessment, p26 Ivanhoe Mines' Materiality Matrix: Material Impacts, p29	
	103-2 Management approach and its components	See above	Ivanhoe Mines' Materiality Matrix: Material Impacts, p29 Economic capital, p46	
	103-3 Evaluation of the management approach	See above	Our Strategy, Governance and Priorities, p20 Economic capital, p46 Our 2019 Performance at a glance p44	
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	The reporting organization shall report the following information:  a. Direct economic value generated and distributed (EVG&D) on an accruals basis, including the basic components for the organization's global operations as listed below. If data are presented on a cash basis, report the justification for this decision in addition to reporting the following basic components:  > Direct economic value generated: revenues;  > Economic value distributed: operating costs, employee wages and benefits, payments to providers of capital, payments to government by country, and community investments;  > Economic value retained: 'direct economic value generated' less 'economic value distributed'.  b. Where significant, report EVG&D separately at country, regional, or market levels, and the criteria used for defining significance.	Total value created and distributed, p46	

## **Alignment with Mining Local Procurement Reporting** Mechanism

LPRM DISCLOSURE STANDARD NUMBER	DISCLOSURE DESCRIPTION	DISCLOSURE DETAIL	PAGE REFERENCE	FURTHER EXPLANATION
LPRM 100	Context	Description of project and area of operation	Our business at a glance, p14 Our principal projects, p16	
LPRM 200	Procurement system	Disclosure 201: Policy on local suppliers	Economic capital, p47	
		Disclosure 202: Accountability on local suppliers	Economic capital, p47	
LPRM 300	Local procurement spending	Disclosure 301: Categories of local suppliers. Defining local	Economic capital, p47	
		Disclosure 302: Breakdown of procurement spend	Economic capital, p46	
LPRM 400	Local procurement due diligence	Disclosure 401: Local supplier grievances	Complaints and grievance mechanism, p43	
		Disclosure 402: Anti-corruption policy	Business ethics, p26	
		Disclosure 403: Training and guidance for suppliers	Economic capital, p47 – 53	
LPRM 500	Methods to incentivize local	Disclosure 501: Commitments (targets)	Economic capital, p49	
	procurement	Disclosure 502: Preference in scoring of bids	Economic capital, p49	
LPRM 500	Methods to incentivize local	Disclosure 503: Other methods to incentivize local purchasing	Economic capital, p49	
	procurement	Disclosure 504: Supporting local suppliers to understand the bidding process	Economic capital, p49	
		Disclosure 505: Special payment procedures for local suppliers	Economic capital, p49	
LPRM 600	External obligations and commitments	Disclosure 601: Compliance with local regulations	Economic capital, p47	

The International Council on Mining and Metals (ICMM) requires member companies to show commitment to the ICMM's 10 Principles of Sustainable Development, and all associated performance expectations. While Ivanhoe Mines is not a member

# Alignment of International Council of Mining and Metals (ICMM) and Global Compact Principles



















of the ICMM, we still adhere to these 10 Principles and to the ICMM Position Statements on various issues that are critical to

The following table references where further detail on how we implement the principles can be found in this Sustainability

PRINCIPLE	DESCRIPTION	SECTION IN REPORT
1	Apply ethical business practices	> Message from the Chair of the Sustainability Committee, p6
	and sound systems of corporate governance and transparency	> Our business at a glance, p14
	to support sustainable	> Our Strategy, Governance and Priorities, p20
	development.	> Business ethics, p26
		> Our performance (across the 6 capitals), remainder of Report
2	Integrate sustainable	> Message from our Chair of the Sustainability Committee, p6
	development in corporate strategy and decision-making	> Message from the President and CFO, p8
	processes.	> Our strategy, governance and priorities, p20
		> Governance and Accountability, p24
		> Materiality assessment, p26
		> Our performance (across the 6 capitals), remainder of report
3	Respect human rights and the	> Message from the Executive Vice President, Sustainability, p10
	interests, cultures, customs and values of employees and communities affected by our activities.	> Our strategy, governance and priorities, p20
		> The human rights lens, p30
		> Human capital, p56
		> Social and relational capital, p70
		> Natural capital, p82
		> Intellectual capital, p102
		> Infrastructure capital, p104
4	Implement effective risk-	> Our strategy, governance and priorities, p20
	management strategies and systems based on sound	> Materiality assessment, p26
	science and which account for stakeholder perceptions of risks.	> Our strategic stakeholder management, p36
		> Human capital, p56
		> Natural capital, p82
		> Intellectual capital, p102
		> Infrastructure capital, p104

PRINCIPLE	DESCRIPTION	SECTION IN REPORT
5	Pursue continual improvement in health and	> Message from the Chair of the Sustainability Committee, p6
	safety performance with the ultimate goal of	> Our strategy, governance and priorities, p20
	zero harm.	> Health and safety performance (human capital), p60
6	Pursue continual improvement in	> Our strategy, governance and priorities, p20
	environmental performance issues, such as water stewardship, energy use and climate	> Social and relational capital, p70
	change.	> Natural capital, p82
		> Infrastructure capital, p104
7	Contribute to the conservation of biodiversity	> Message from the Chair of the Sustainability Committee, p6
	and integrated approaches to land-use	> Special report, p77
	planning.	> Natural capital, p82
		> Infrastructure capital, p104
8	Facilitate and support the knowledge base	> Natural capital, p82
	and systems for responsible design, use, reuse, recycling and disposal of products	> Infrastructure capital, p104
	containing metals and minerals.	
9	Pursue continual improvement in social	> Message from the Chair of the Sustainability Committee, p6
	performance and contribute to the social, economic and institutional development of host countries and communities.	> Our strategy, governance and priorities, p20
		> Our 2019 performance at a glance, p44
		> Economic capital, p46
		> Human capital, p56
		> Social and relational capital, p70
		> Natural capital, p82
		> Intellectual capital, p102
		> Infrastructure capital, p104
10	Proactively engage key stakeholders on	> Our approach to sustainability reporting, p4
	sustainable development challenges and opportunities in an open and transparent manner. Effectively report and independently verify progress and performance.	> Our business at a glance, p14
		> Our strategy, governance and priorities, p20
		> Our strategic stakeholder management, p36
		> Economic capital, p46
		> Human capital, p56
		> Social and relational capital, p70
		> Natural capital, p82
		> Infrastructure capital, p104

# **The United Nations Global Compact**

We at Ivanhoe Mines are committed to upholding the ten principles of the UNGC, and demonstrate evidence thereof throughout this Sustainability Report. These principles include the following:

- > Supporting and respecting the protection of internationally proclaimed human rights.
- > Ensuring that we are not complicit in human rights abuses.
- > Upholding the freedom of association and the effective recognition of the right to collective bargaining.
- > Eliminating all forms of forced and compulsory labour.
- > Ensuring the effective abolition of child labour.
- > Eliminating discrimination in respect of employment and occupation.
- > Supporting a precautionary approach to environmental challenges.
- > Undertaking initiatives to promote greater environmental responsibility.
- > Encouraging the development and diffusion of environmentally friendly technologies.
- > Work against corruption in all its forms, including extortion and bribery.

The following table references where further detail is provided on how we implement these principles.

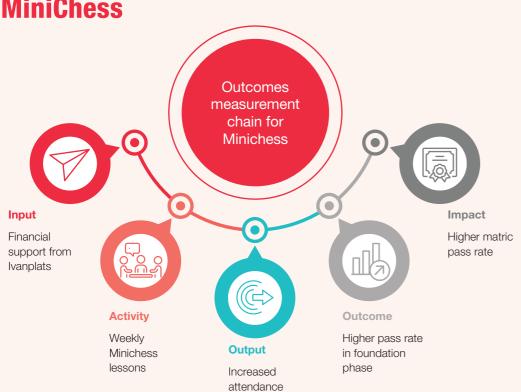
	UNITED NATIONS GLOBAL COMPACT	SECTION IN REPORT
Human Right	s	
Principle 1	Businesses should support and respect the protection of internationally proclaimed human rights.	Message from the Executive Vice President, Sustainability, p10 Governance and accountability, p24 The human rights lens, p30 Social and relational capital, p70
Principle 2	Businesses should make sure that they are not complicit in human rights abuses.	Governance and accountability, p24 The human rights lens, p30
Labour		
Principle 3	Businesses should uphold the freedom of association of the effective recognition of the right to collective bargaining.	The human rights lens, p30 Human capital, p56
Principle 4	Businesses should uphold the elimination of all forms of forced and compulsory labour.	Governance and accountability, p24 The human rights lens, p30
Principle 5	Businesses should uphold the effective abolition of child labour.	Governance and accountability, p24 The human rights lens, p30
Principle 6	Businesses should uphold the elimination of discrimination in respect of employment and occupation.	Governance and accountability, p24 The human rights lens, p30 Human capital, p56
Environment		
Principle 7	Businesses should support a precautionary approach to environmental challenges.	Message from the President and CFO,p8 Natural capital, p82
Principle 8	Businesses should undertake initiatives to promote greater environmental responsibility.	Natural capital, p82
	Businesses should encourage the development and diffusion of environmentally friendly technologies.	Natural capital, p82 Infrastructure capital, p104.
Anti-corrupti	on	
	Businesses should work against corruption in all its forms, including extortion and bribery.	Governance and accountability, p24 Business Ethics, p26



#### SPECIAL REPORT



## MiniChess







Improved self-esteem and confidence

Enhanced listening and communication skills

Improvements in cognitive and strategic thinking

Employment opportunity for facilitator



Improved grade average

Improved ability to engage and ask questions in class which results in better curriculum delivery

Learners are able to grasp complex concepts much quicker

Learners are able to intently understand what they are being taught at a deeper level

Community development, increased standard of living Higher matric pass rate

Entrance into university

Broader career prospective in STEM disciplines

Feed into mine's future workforce

Ability to affect change in youth substance abuse and overall improved wellbeing because facilitator has a sense of purpose and an income to provide for himself and his family



The program is developed to effectively focus on enhancing learners' Science, Technology, Engineering and Mathematics (STEM)-skills, creativity, strategic thinking, concentration, life-long learning, purpose-thinking and communication.

Through a partnership with the Entrust Foundation and approval from the Limpopo Department of Education in 2017, Ivanplats has been able to support the roll-out of the MiniChess program to schools within its host communities which contributes greatly to its education agenda embedded in their 2014-2019 Social Labour Plan (SLP).

For the purpose of this report, we have focused on the MiniChess program in Motshitshi Primary School in the Mokopane region as facilitated by the incommunity partner, teacher and mentor, Simon Mokhanda. The MiniChess initiative was rolled-out at the beginning of 2017 with the intent to increase the learners' cognitive skills in mathematics and other learning disciplines.

The program is now in its third year at the school and has been making a significant difference in the learners' educational experience as they are more enthusiastic about their lessons.

This is highly attributed to the incorporation of a 'play' element to their learning. The case study tracks the journey of the MiniChess program since its inception and details any outcomes in the learners' learning abilities that can be attributed directly to the program.

The case study shows changes in the learners' marks, their attendance as well as their general socio-psychological improvements to learning and being interactive in class.





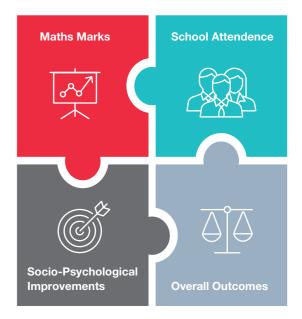


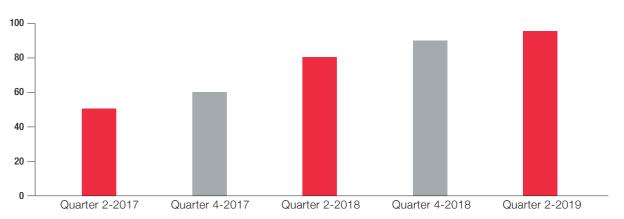
# Capital investment in project since inception

Time	Amount
> 2016/2017	> R398 560.00
> 2017/2018	> R423 260.44
> 2018/2019	> R317 445.33
> TOTAL:	> R1 139 265.77

The above funding gave room for the activities related to the initiative to take place on a weekly basis through the facilitator, Simon Mokhanda and is targeted at Grades 0-3 at Motshitshi Primary school.

There are various identifiable project outputs that were drawn from the reports generated by the Entrust Foundation through their quarterly monitoring and evaluation process. These outputs speak to an improvement in mathematics results as captured in the graph below, as well as a decrease in absenteeism and a range of socio-psychological improvements as captured on the following page.





TRENDS FOR PASS RATES IN MATHEMATICS SINCE MINICHESS IMPLEMENTATION AT MOTSHITSHI

## **Mathematics marks**

- > Beginning of 2017 highest pass rate in mathematics between Grade R- Grade 3 is below 50%
- > End of 2017 Students' highest pass rate has improved to just above 60%
- > Beginning of 2018 Students' highest pass-rate has now reached 80+% between Grade R-Grade 3
- > End of 2018 Students' highest pass rate at 90%
- > Beginning of 2019 Students' highest pass rate reached 95%

The drastic improvements in mathematics obtained through the implementation of the MiniChess program speak to the initial aim to align Ivanplats' SLP agenda with the broader NDP and SDG ideals.

This demonstrates Ivanplats' ability to create a sustainable impact in the future by creating these changes at the foundational stage of the learners' educational journey.

It further positions Ivanplats as a good corporate citizen but also ensures that the learners' grow up equipped with the necessary mathematical skills to carry them into university and in turn, their careers in the future.

137

#### School Attendance

The project is said to have a great influence on school attendance as learners are more eager to be at school so that they do not miss out on the MiniChess lessons. In the 2018 year-end report, it is reported that absenteeism has dropped by 50% since the start of the program. The improvement in school attendance is vital because there is no point offering quality education and improved resources in schools if the learners are not attending their lessons. This improvement in attendance ensures that the learners are being equipped with the knowledge they will need to progress throughout their schooling career. It also means that Ivanplats is better able to track its own impact because the resources they implement in the school are being utilised for their intended purpose.

IVANHOE MINES SUSTAINABILITY REPORT 2019

# Socio-psychological improvements

- > There have been self-esteem improvements, learners are now motivated to interact in class.
- Learners are now thinking more constructively and strategically through mathematical problem-solving questions.
- > Transitioning into the intermediate phase from the foundation phase has become more seamless for the learners because of the cognitive improvements that take place through MiniChess.
- > The learners are more disciplined; prior to the program implementation, it was reported that they tended to be restless in class.
- > The learners were listening and communicating more effectively by the end of 2018.
- Learners are now showing improved concentration capacity in all grades.

Over and above the hard skills that the initiative aids in improving, there are soft skills that have been improved on as well. These are just as important because they assist learners in being able to conduct themselves appropriately in future work spaces, they will have the confidence to speak up when they have ideas and questions and they will also be effective listeners and communicators.

These are underrated skills which are invaluable in every sphere of society and can take a person incredibly far. EQ is proving far more valuable than IQ in this fastpaced modern economy and if these soft skills can be developed at a foundation education stage, it ensures that the learners will be more than ready to go out into the world and excel in their respective fields.

# Overall outcomes that can be measured in future

Although not currently measurable, Ivanplats can aim to reach the following outcomes based on its MiniChess program:

- > Overall learner development on a case by case basis
- > Increased matric pass rate
- > Meeting university entrance requirements (downstream)
- > Improved employability prospects (downstream)
- > The flow of co-benefits to beneficiaries who are not the primary beneficiaries

This project is predominantly aimed at contributing towards the educational development of the learners at Motshitshi Primary School however, the outcomes may far surpass the learners' developments.

Simon Mokhanda, who is the in-community partner and teacher of the MiniChess program at Motshitshi, has been able to benefit from this employment opportunity which in turn, uplifts his earning potential and thus improves his livelihood on an individual basis too.

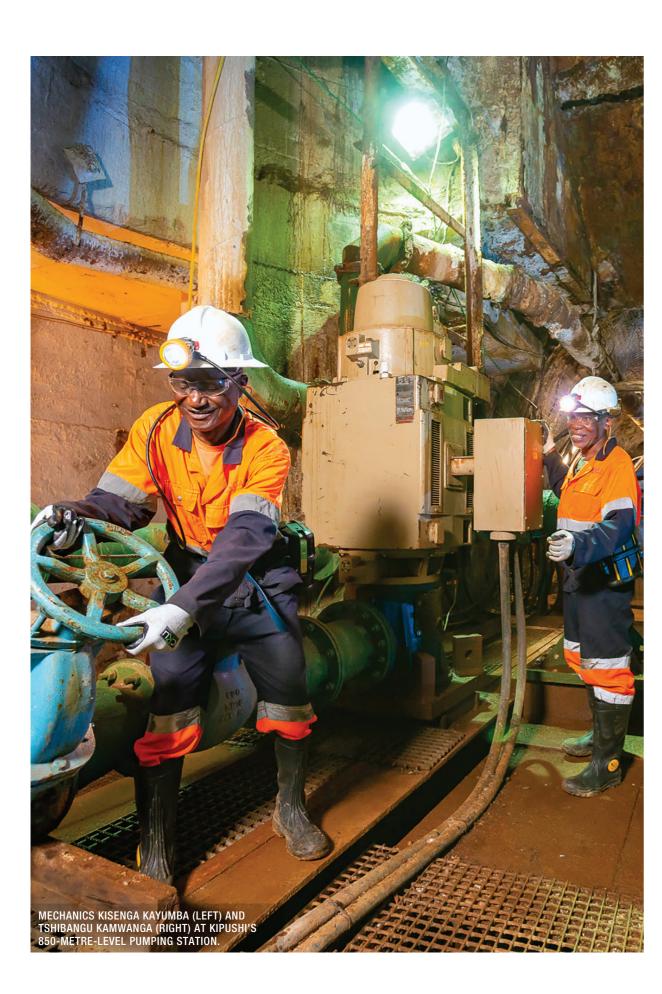
He reported that being involved in this program has been able to give him a sense of purpose in life by granting him the opportunity to change the lives of the children in his community who, without any guidance, are often plagued by drug and substance abuse problems.

From an Ivanplats perspective, the reputation amongst the community members and the Entrust foundation has been further praised through their constant supportive approach to the school and the broader community.

This is impactful for the company's social licence to operate, demonstrating Ivanplats' commitment to the community upliftment through education. By being able to track the impact over time, the true value of this initiative could be realised.







# **Broad-based Black Economic Empowerment** (B-BBEE) Scorecard 2019: Platreef Project



**Broad Based Black Economic Empowerment Verification Certificate** 

## Ivanplats (Pty) Ltd

#### **Level 2 Contributor**

#### **Measured Entity**

30% Black Women Owned \*

Normal Flow Through Principle Applied

**Company Name** Ivanplats (Pty) Ltd **Registration Number** 1988 /000334/ 07 4090202880 **VAT Number** 7 2nd Street Address Trimpark Mokopane

0601

	B-BB	EE Status	
B-BBEE Status Level	Level 2		
Element Points Obtained	EO: 20.47 p points; SE	oints; MC: 13.77 points; SD: 18.17 points D: 5 points	; ESD: 38.26
Discounting Principle Applied	No	Measurement Period Year End	31/12/2018
Empowering Supplier	Yes		
*Black Owned: >=51% and full points for Net Value	е	*Black Women Owned: >=30% and full points for No	et Value
Black Voting Rights	26.00%	Black Women Voting Rights	1.27%
Black Economic Interest	26.00%	Black Women Economic Interest	1.27%

**Issue Date** 05/06/2019 **Expiry Date** 04/06/2020 **Certificate Number** ELC8611RGENBB

Version Final **Applicable Scorecard** Amended Codes - Generic

Applicable BBBEE Codes Amended Generic Codes Gazetted on 11 October 2013

23.08%

51% Black Owned \*

Black Designated Groups

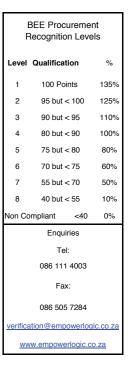
EmpowerLogic (Pty) Ltd Reg. No.: 1995/000523/07 BBBEE Verification Agency

Per Favours Mphahlele Member - Verification Committee

SANAS Accredited



This certificate supersedes any previous certificates issued to the Measured entity. This certificate is the result of an independent and impartial verification of the BBBEE status of the measured entity measured against the Codes of Good Practice on Broad Based Black Economic Empowerment. This certificate has been issued in accordance with the EmpowerLogic Verification Certificate Policy. EmpowerLogic uses the Law Trust advanced electronic signature system (AeSign) which is compliant with the Electronic Communications and Transactions Act no 25 of 2002. The validity of the certificate is ensured as long as the digital signature details corresponds with the Technical Signatory's details as displayed on the certificate



APPENDICES

# **Abbreviations**

ABCD	Asset-Based Community Development
AET	Adult Education and Training
B-BBEE	broad-based black economic empowerment
B-BBEE SPV	broad-based black economic empowerment special purpose vehicle
CDP	Carbon Disclosure Project
COVID-19	Novel Coronavirus 19
CPD	continuous professional development
CSI	corporate social investment
DFS	definitive feasibility study
DRC	Democratic Republic of Congo
EMP	Environmental Management Plan
ESD	enterprise and supplier development
ESG	environmental, social and governance
ESIA	Environmental and Social Impact Assessment
FAC	First-aid case
GIBS	Gordon Institute of Business Science
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
IDP	Individual Development Plans
IFC	International Finance Corporation
IIRC	International Integrated Reporting Council
INPP	National Institute for Preparation of Businesses
IPP	Independent Power Producer
KCS	Kamoa Consumer Substation
KFF	Kipushi Future Forum
LDV	light duty vehicle
LED	local economic development
LIPDIB	People Living with Disabilities in Business
LPRM	Local Procurement Reporting Mechanism

and Development  PAP Project-affected person  PBO Public Benefit Organization  PEA preliminary economic assessment  PFS pre-feasibility study  PGE platinum group element  PGMs platinum group metals  PSTN public switched telephone network  PWD people living with disabilities  Q quarter  RAP Resettlement Action Plan  RWI Recordable Work Injuries  SBT science-based target  SDGD Sustainable Development Goals Disclosure  SEDAR System for Electronic Document Analysis and Retrieval  SGD Sustainable Development Goal  SLA service-level agreement  SLO social licence to operate  SLP Social and Labour Plan  SMME small, medium and micro enterprise		
MEDUNSA Medical University of Southern Africa MLM Mogalakwena Local Municipality MTC medical treatment case MTI Medical Treatment Injuries MVA megavolt-ampere MW Megawatt NBI National Business Initiative NGO non-governmental organization NQF National Qualifications Framework OECD Organisation for Economic Co-operation and Development PAP Project-affected person PBO Public Benefit Organization PEA preliminary economic assessment PFS pre-feasibility study PGE platinum group metals PSTN public switched telephone network PWD people living with disabilities Q quarter RAP Resettlement Action Plan RWI Recordable Work Injuries SBT science-based target SDGD Sustainable Development Goals Disclosure SEDAR System for Electronic Document Analysis and Retrieval SGD Sustainable Development Goal SLA service-level agreement SLO social licence to operate SMME small, medium and micro enterprise	LTI	lost-time injury
MEDUNSA Medical University of Southern Africa  MLM Mogalakwena Local Municipality  MTC medical treatment case  MTI Medical Treatment Injuries  MVA megavolt-ampere  MW Megawatt  NBI National Business Initiative  NGO non-governmental organization  NQF National Qualifications Framework  OECD Organisation for Economic Co-operation and Development  PAP Project-affected person  PBO Public Benefit Organization  PEA preliminary economic assessment  PFS pre-feasibility study  PGE platinum group element  PGMs platinum group metals  PSTN public switched telephone network  PWD people living with disabilities  Q quarter  RAP Resettlement Action Plan  RWI Recordable Work Injuries  SBT science-based target  SDGD Sustainable Development Goals  Disclosure  SEDAR System for Electronic Document Analysis and Retrieval  SGD Sustainable Development Goal  SLA service-level agreement  SLO social licence to operate  SLP Social and Labour Plan  SMME small, medium and micro enterprise	LTIFR	lost-time injury frequency rate
MLM Mogalakwena Local Municipality MTC medical treatment case  MTI Medical Treatment Injuries  MVA megavolt-ampere  MW Megawatt  NBI National Business Initiative  NGO non-governmental organization  NQF National Qualifications Framework  OECD Organisation for Economic Co-operation and Development  PAP Project-affected person  PBO Public Benefit Organization  PEA preliminary economic assessment  PFS pre-feasibility study  PGE platinum group element  PGMs platinum group metals  PSTN public switched telephone network  PWD people living with disabilities  Q quarter  RAP Resettlement Action Plan  RWI Recordable Work Injuries  SBT science-based target  SDGD Sustainable Development Goals Disclosure  SEDAR System for Electronic Document Analysic and Retrieval  SGD Sustainable Development Goal  SLA service-level agreement  SLO social licence to operate  SLP Social and Labour Plan  SMME small, medium and micro enterprise	MD&A	Management Discussion and Analysis
MTC medical treatment case  MTI Medical Treatment Injuries  MVA megavolt-ampere  MW Megawatt  NBI National Business Initiative  NGO non-governmental organization  NQF National Qualifications Framework  OECD Organisation for Economic Co-operation and Development  PAP Project-affected person  PBO Public Benefit Organization  PEA preliminary economic assessment  PFS pre-feasibility study  PGE platinum group element  PGMs platinum group metals  PSTN public switched telephone network  PWD people living with disabilities  Q quarter  RAP Resettlement Action Plan  RWI Recordable Work Injuries  SBT science-based target  SDGD Sustainable Development Goals Disclosure  SEDAR System for Electronic Document Analysis and Retrieval  SGD Sustainable Development Goal  SLA service-level agreement  SLO social licence to operate  SLP Social and Labour Plan  SMME small, medium and micro enterprise	MEDUNSA	Medical University of Southern Africa
MTI Medical Treatment Injuries  MVA megavolt-ampere  MW Megawatt  NBI National Business Initiative  NGO non-governmental organization  NQF National Qualifications Framework  OECD Organisation for Economic Co-operation and Development  PAP Project-affected person  PBO Public Benefit Organization  PEA preliminary economic assessment  PFS pre-feasibility study  PGE platinum group element  PGMs platinum group metals  PSTN public switched telephone network  PWD people living with disabilities  Q quarter  RAP Resettlement Action Plan  RWI Recordable Work Injuries  SBT science-based target  SDGD Sustainable Development Goals Disclosure  SEDAR System for Electronic Document Analysis and Retrieval  SGD Sustainable Development Goal  SLA service-level agreement  SLO social licence to operate  SLP Social and Labour Plan  SMME small, medium and micro enterprise	MLM	Mogalakwena Local Municipality
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MW Megawatt  NBI National Business Initiative  NGO non-governmental organization  NQF National Qualifications Framework  OECD Organisation for Economic Co-operation and Development  PAP Project-affected person  PBO Public Benefit Organization  PEA preliminary economic assessment  PFS pre-feasibility study  PGE platinum group element  PGMs platinum group metals  PSTN public switched telephone network  PWD people living with disabilities  Q quarter  RAP Resettlement Action Plan  RWI Recordable Work Injuries  SBT science-based target  SDGD Sustainable Development Goals Disclosure  SEDAR System for Electronic Document Analysis and Retrieval  SGD Sustainable Development Goal  SLA service-level agreement  SLO social licence to operate  SLP Social and Labour Plan  SMME small, medium and micro enterprise	MTI	Medical Treatment Injuries
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SBT science-based target  SDGD Sustainable Development Goals Disclosure  SEDAR System for Electronic Document Analysis and Retrieval  SGD Sustainable Development Goal  SLA service-level agreement  SLO social licence to operate  SLP Social and Labour Plan  SMME small, medium and micro enterprise	RAP	Resettlement Action Plan
SDGD Sustainable Development Goals Disclosure  SEDAR System for Electronic Document Analysis and Retrieval  SGD Sustainable Development Goal  SLA service-level agreement  SLO social licence to operate  SLP Social and Labour Plan  SMME small, medium and micro enterprise	RWI	Recordable Work Injuries
Disclosure  SEDAR System for Electronic Document Analysis and Retrieval  SGD Sustainable Development Goal  SLA service-level agreement  SLO social licence to operate  SLP Social and Labour Plan  SMME small, medium and micro enterprise	SBT	science-based target
and Retrieval  SGD Sustainable Development Goal  SLA service-level agreement  SLO social licence to operate  SLP Social and Labour Plan  SMME small, medium and micro enterprise	SDGD	'
SLA service-level agreement  SLO social licence to operate  SLP Social and Labour Plan  SMME small, medium and micro enterprise	SEDAR	System for Electronic Document Analysis and Retrieval
SLO social licence to operate  SLP Social and Labour Plan  SMME small, medium and micro enterprise	SGD	Sustainable Development Goal
SLP Social and Labour Plan  SMME small, medium and micro enterprise	SLA	service-level agreement
SMME small, medium and micro enterprise	SLO	social licence to operate
	SLP	Social and Labour Plan
SNEL Société Nationale d'Électricité	SMME	small, medium and micro enterprise
OTTEE COOLOG TALLOT LICE & ELOCATORO	SNEL	Société Nationale d'Électricité
STEM science, technology, engineering and mathematics	STEM	
TB tuberculosis	TB	tuberculosis

# **Abbreviations**

TCFD	Task Force for Climate-related Financial Disclosure
TLB	tractor-loader-backhoe
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
UNGPBHT	United Nations Guiding Principles on Business and Human Rights
VPSHR	Voluntary Principles on Security and Human Rights
WASH	Water, sanitation and hygiene

# Glossary

2030 Agenda	2030 Agenda for Sustainable Development
Bidvest	Bidvest Protea Coin
Board	Board of Directors
Code	Mines Ltd.'s Our Code of Business Conduct and Ethics
Company	Ivanhoe Mines Ltd.
Crystal River	Crystal River Global Limited
Gécamines	Gécamines SA (Democratic Republic of Congo) state-owned mining company
Global Strake	Global Strake Security Services
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.



142 IVANHOE MINES SUSTAINABILITY REPORT 2019

#### 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 has on the environment.

Your opinion matters. Please share your views with us.

you belong to? (You m	•				
Shareholder	Invest	or	Custo	mer	
Supplier	Comn	nunity	NGO		
ues of greatest interest	to you?				
Partially	Not at	all			
al matters that you thin	k should be reported o	n:			
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#### 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: IVPAF
Website: 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**

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#### **Investor Relations**

Name: Bill Trenaman
Title: Vice President, Investor Relations
Telephone: +1 604 688 6630
Email: billtr@ivancorp.net

# Governance and Compliance

Name: Mary Vincelli
Title: Vice President, Compliance
and Corporate Secretary
Telephone: +1 604 688 6630

#### **Independent Auditor**

PricewaterhouseCoopers Inc

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.

#### Directors

Robert Friedland Yufeng "Miles" Sun Egizio Bianchini Tadeu Carneiro Jinghe Chen William Hayden Manfu Ma Livia Mahler Peter Meredith Kgalema Motlanthe 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

