

IVANHOE MINES SUSTAINABILITY REPORT 2017

SUSTAINABILITY  
REPORT 2017

IVANHOE MINES  
NEW HORIZONS

# Table of CONTENTS

1.

Our approach to sustainability and reporting

1

1.1

About this report

1

1.2

Reporting guidelines

1

1.3

Independent assurance

1

1.4

Report scope

1

1.5

Message from our Executive Chairman and Founder

2

1.6

Message from our President and Chief Executive Officer

4

1.7

Message from the Chair of our Sustainability Board Committee

6

2.

Our business at a glance

8

2.1

Who we are

8

2.2

Our principal projects

9

2.3

Progressing our projects

10

2.4

Governance and management approach

16

3.

Our most material matters

18

4.

Our stakeholders

20

4.1

Stakeholder mapping

20

4.2

Engagement

22

5.

Our performance

27

5.1

Economic capital

27

5.2

Human capital

30

5.3

Social and relational capital

42

5.4

Natural capital

56

5.5

Intellectual capital

64

5.6

Infrastructure capital

68

6.

Conclusion

70

7.

Appendices

70

7.1

Qualified person's statement

70

7.2

Cautionary statement on forward-looking information

71

7.3

Global Reporting Initiative Standards Index for the *Ivanhoe Mines Sustainability Report 2017*

72

7.4

Alignment with International Council of Mining and Metals

84

7.5

The United Nations Global Impact

85

7.6

South African Mining Charter Performance

86

7.7

B-BBEE Scorecard – Platreef Project

88

7.8

Abbreviations

89

7.9

Stakeholder feedback form

91

7.10

Contact details and other information

92

COVER PICTURE:  
CONTOURS OF THE  
SURFACE AREA OF THE  
KAKULA RESOURCE



# OUR APPROACH to sustainability and reporting

## 1.1 About this report

This Sustainability Report augments filings and public disclosures made by Ivanhoe Mines Ltd (also Ivanhoe Mines, Ivanhoe or the Company) under applicable securities laws and stock exchange rules, copies of which can be found under the Company's profile on System for Electronic Document Analysis and Retrieval (SEDAR) at [www.sedar.com](http://www.sedar.com). It reinforces the Company's objective of transparency in reporting on its sustainability initiatives. This baseline report consists largely of information about the Company's sustainability policies, practices and performance for the reporting period from January 1, 2017 to December 31, 2017. Consequently, information has been provided for preceding years only where available. This report serves as an inaugural publication of the Company's sustainability reporting and aims to provide relevant disclosures and information that meet the needs of individuals and groups across various stakeholder groups, investment analysts and investors.

## 1.2 Reporting guidelines

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

- > The Global Reporting Initiative (GRI)
- > The Millennium Development Goals (MDGs)
- > The United Nations Global Compact (UNGC)
- > The United Nations Declaration of Human Rights (UNDHR)
- > The Carbon Disclosure Project (CDP)
- > The International Integrated Reporting Council's (IIRC) Integrated Reporting <IR> Framework
- > International Council on Mining and Metals' (ICMM) 10 Principles, a best practice framework for sustainable development

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

## 1.3 Independent assurance

This report establishes a guide for future Company sustainability reports and has not been externally assured by a third party. However, the Platreef Project has engaged Ernst & Young Incorporated in accordance with the International Standard on Related Services (specifically, ISRS 4400 Engagements to Perform Agreed-Upon Procedures) to provide quarterly independent assurance for the following:

- > Ownership
- > Local economic development plan
- > Enterprise and supplier development plan
- > Human capital development plan
- > Collaborative partnership with the University of Limpopo
- > Employment equity and local employment
- > Preferential procurement

Consequently, the information relating to these performance areas of the Platreef Project has been independently assured as part of the Project's quarterly regulatory reporting processes.

In addition, KPMG Services has provided guidance on applying the GRI Standards to the Ivanhoe Mines group Sustainability Report. Current group sustainability report planning makes provision for progressing towards a complete independent third-party assured sustainability report by 2019.

## 1.4 Report scope

This report discloses information only on projects over which Ivanhoe has direct management control. They are our three principal projects in Southern Africa, namely (1) the Platreef Project in Limpopo Province, South Africa, (2) the Kamoakakula Project in Lualaba Province, Democratic Republic of Congo (DRC) and (3) the Kipushi Project in Haut-Katanga Province, DRC. (This report excludes other exploration projects, operations, joint ventures and investments over which Ivanhoe Mines does not have management control.)

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

We disclose on the CDP platforms for water and climate change according to the CDP guidelines provided. Our full 2017 CDP water disclosure can be viewed on CDP's website, [www.cdp.net](http://www.cdp.net). We will submit our first CDP climate change disclosure in July 2018.

For occupational health and safety statistics purposes, total workforce in this report means the average of 2,586 employees and contractors who are eligible for induction and/or medical surveillance and contributing to the safety statistics, as at December 31, 2017.



## 1.5 MESSAGE FROM OUR EXECUTIVE CHAIRMAN AND FOUNDER: ROBERT FRIEDLAND

### To Ivanhoe Mines stakeholders

On behalf of all of our employees, I am pleased to introduce our first public Sustainability Report. We have been operating in Southern Africa for more than two decades; initially as an exploration-focused company seeking major new discoveries on the Northern Limb of South Africa's famous Bushveld Complex and along the prolific Central African Copperbelt in southern Democratic Republic of the Congo.

Ivanhoe's record of exploration success is second to none, with two of the best mineral discoveries on planet Earth: The Kamoa-Kakula copper discovery in the DRC and the Platreef platinum-group metals discovery in South Africa. Our third project, Kipushi, is the world's richest zinc deposit.

We are witnessing the dawning of an era of electric and hydrogen-fuel-cell vehicles – cars, trucks, buses, trains and even autonomous aerial vehicles. **Ivanhoe Mines plans to be at the forefront of the mining industry drive to produce some of the key metals – copper, nickel, platinum and palladium – that are essential for the new generation of environmentally friendly vehicles.**

KAMOA KANSOKO MINE –  
FIRST COPPER ORE TO  
REACH THE SURFACE

The virtually worldwide phenomenon of urbanization is the greatest social and economic transformation in the history of our species. We see it continuing for many decades, with profound implications for metals markets, miners and stakeholders. Our world had a population of 7.6 billion in 2017. It is gaining approximately 83 million people every year; by 2030, Earth will have a projected 8.5 billion people. About five billion are expected to live in urban areas – which would be one billion more urban residents than we have today.

Many of the world's cities now experience periods of toxic smog, a very unhealthy condition that is clouding the future of urbanizing Earth. Outdoor air pollution is linked to three million fatalities a year and ambient air is the greatest environmental risk to health, according to the United Nations' World Health Organization. Air pollution is a crisis that urgently needs a solution. One reality is that responsible mining can play a key role in supplying the metals critical to helping humanity meet this challenge.

The electrification of much of the transportation industry expected in the next 20 years, resulting in part from legislated orders to reduce air pollution, will be one of the most significant transformations of our time. We are witnessing the dawning of an era of electric and hydrogen-fuel-cell vehicles – cars, trucks, buses, trains and even autonomous aerial vehicles. Ivanhoe Mines plans to be at the forefront of the mining industry drive to produce some of the key metals – copper, nickel, platinum and palladium – that are essential for the new generation of environmentally friendly vehicles.

Our three mine development projects are based on distinctively thick, high-grade underground discoveries, with attractive economics, each of which has a small environmental footprint and "broad shoulders" that will help to enable them to be developed in an environmentally and socially responsible manner. The thick zones of high-grade mineralization that are hallmarks of our discoveries also will allow us to utilize cutting-edge, highly productive, mechanized mining technology that is designed to minimize the risks to our employees and contractors from accidents, injuries and exposure to health hazards.

While exploration still is a key part of our corporate culture, we now are steadily transitioning our initial three projects toward production. Our focus is on becoming a leading, low-cost producer of ethically-sourced copper, zinc and platinum group metals, as well as minerals that are vital to help sustain our urbanizing planet. Our shareholders and project partners include our employees, host communities, host governments, leading investment and pension funds from around the world, and strategic Japanese and Chinese partners. Their experience, knowledge, commitments and ideals are helping to shape our current and evolving sustainability practices.





## 1.6 MESSAGE FROM OUR PRESIDENT AND CHIEF EXECUTIVE OFFICER: LARS-ERIC JOHANSSON

### To Ivanhoe Mines stakeholders

Ivanhoe Mines' initial Sustainability Report details our health, safety, environmental and social responsibility performance in 2017. The report documents our strategic focus on sustainability considerations associated with the development of our three mining projects in Southern Africa. The report records how we work with our partners, host communities and employees to achieve sustainability objectives. It also outlines our business strategy, governance and active sustainability programs.

Our commitment to responsible exploration and mine development is central to our strategic vision. We operate under clear, value-based principles of excellence, personal accountability, integrity and social and environmental responsibility. Working with our employees, contractors and the people of the communities in which we operate, we strive to build strong and lasting relationships to address stakeholders' interests, employ leading-edge technology, improve safety practices and minimize our impact on the environment.

Africa boasts abundant natural resources and hosts many of the world's best mineral deposits. **For the past 24 years, Ivanhoe Mines has been part of that success story using technology, innovation and collaboration to impact positively on people's lives.**



IVANHOE MINES MANAGER:  
METALLURGY & PROCESSING  
READY TO GO UNDERGROUND  
AT THE PLATREEF PROJECT

Africa boasts abundant natural resources and hosts many of the world's best mineral deposits. For the past 24 years, Ivanhoe Mines has been part of the resources success story, applying technology, innovation and collaboration to help impact positively on people's lives.

Our successes are credited to our people. Our destinies share a reliance on effective sustainability practices. To attract and retain qualified and dedicated employees, we do all we can to make our working environment healthy, safe and pleasant. We have a multinational team building our three flagship projects. Each employee and contractor brings his or her contribution of value to the development of a diversified mining and exploration company.

Our continued success requires cooperation with local communities, local governments, national governments and non-governmental organizations. We have worked hard to form partnerships that can secure the delivery of sustainability benefits to the people living within our projects' host communities. In addition, our community development and health initiatives, and our stakeholder agreements with our host communities, local entrepreneurs and employees, help to ensure that the social and economic benefits from our discoveries are widely shared.

Ivanhoe's collaboration with Canada-based Fio Corporation to provide automated malaria testing and real-time reporting in two malaria-burdened regions that host our Kipushi and Kamoakakula projects is one example of positively impacting on the health of our employees, their families and the people who live in the communities that surround our projects. This Sustainability Report contains a number of significant success stories, in the form of 'special reports', of which we are immensely proud.

The development of a mine also generates opportunities for stakeholders to co-create their own economic futures. This report presents a number of success stories in which local entrepreneurs are benefiting from the economic opportunities afforded by our exploration and development activities. As we move our projects forward to production, we expect such opportunities to substantially increase.

We are well aware that responsible and effective corporate citizenship is essential to our long-term success in creating shareholder value. As we advance from discovery through current construction, and then into production, we are focused on ensuring that our high-quality, long-life discoveries are developed responsibly, and that our employees and contractors are motivated to maintain and enhance our reputation as a responsible and responsive business enterprise.



## 1.7 MESSAGE FROM THE CHAIR OF OUR SUSTAINABILITY BOARD COMMITTEE: GUY DE SELLERS

### Dear Ivanhoe Mines stakeholders

This inaugural Sustainability Report presents our overall approach to the responsible and sustainable development of our projects with details of some of our specific initiatives.

With three major, world-scale projects under construction, it is incumbent upon us to not only follow best international practices in our activities, but also to inform our stakeholders on how we fulfil our responsibilities toward them and toward our shared environment.

At Ivanhoe, we are indeed **proud of our achievements through sustainability management. But we are also aware that we need to expand our actions.** To maintain our social licence to operate, we recognize that we must continually demonstrate our commitment to our sustainability principles.



SINAH TJALE, PLATREEF'S  
FULL-TIME HEALTH AND  
SAFETY REPRESENTATIVE

At Ivanhoe, we are indeed proud of our achievements through sustainability management. But we are also aware that we need to expand our actions. To maintain our social licence to operate, we recognize that we must continually demonstrate our commitment to our sustainability principles.

Our ever-present operational, sustainability and social challenges call for innovative solutions that often are identified through our collaborations with interested external parties, including government representatives, non-governmental organizations, academia and business partners. These efforts are a key to the successful and responsible development of our projects.

We were guided by examples of best practices by other industry participants in the preparation of this report. But we also sought inputs directly from our stakeholder groups, which resulted in them identifying the four "most material matters" perceived to be impacting on their well-being and on the sustainability of our projects. We have ensured that all necessary issues were addressed in accordance with the relevant GRI Core option standards and principles established by the ICMM. References are shown in Appendix 7.3 and 7.4.

This report also presents a simple, but comprehensive, measure of the value that Ivanhoe Mines' projects create for all stakeholders, including our shareholders and society at large. For example, on page 28 you will find an estimate of the total value created and distributed in 2017. We plan to continue to update and publish this information every year so that all those who are interested will be better able to judge in a measurable and objective way our progress toward our goal of increasing each year the substance and value of benefits being generated by Ivanhoe through the development of our projects.

# 2. OUR BUSINESS at a glance

## 2.1 WHO WE ARE

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 the development of our principal projects in Africa.

We believe that broad common good can be attained by the consistent application of strategies and practices that treat people and the environment with respect, while pursuing the underlying business objective of building value.

In particular, the Company places a priority on the following:

- > Responsible exploration, development and production operations
- > Leadership through action
- > The value of human resources
- > Safety, health, skills development and the right to work
- > Sustainable community partnerships
- > Respecting and promoting diversity
- > Environmental responsibility and innovation
- > Corporate integrity, transparency and accountability
- > Respect for human rights with the United Nations Declaration of Human Rights (UNDHR) as guidance

We view our sustainable development strategy as a vehicle through which we can create shared value for all our stakeholders and mitigate our impact on the environment.

### IVANHOE MINES AND STAKEHOLDERS

ECONOMIC CAPITAL

HUMAN CAPITAL

SOCIAL AND RELATIONAL CAPITAL

NATURAL CAPITAL

INTELLECTUAL CAPITAL

INFRASTRUCTURE CAPITAL

REGULATORY AND BEST PRACTICE FRAMEWORK

→ CREATE SHARED VALUE ←

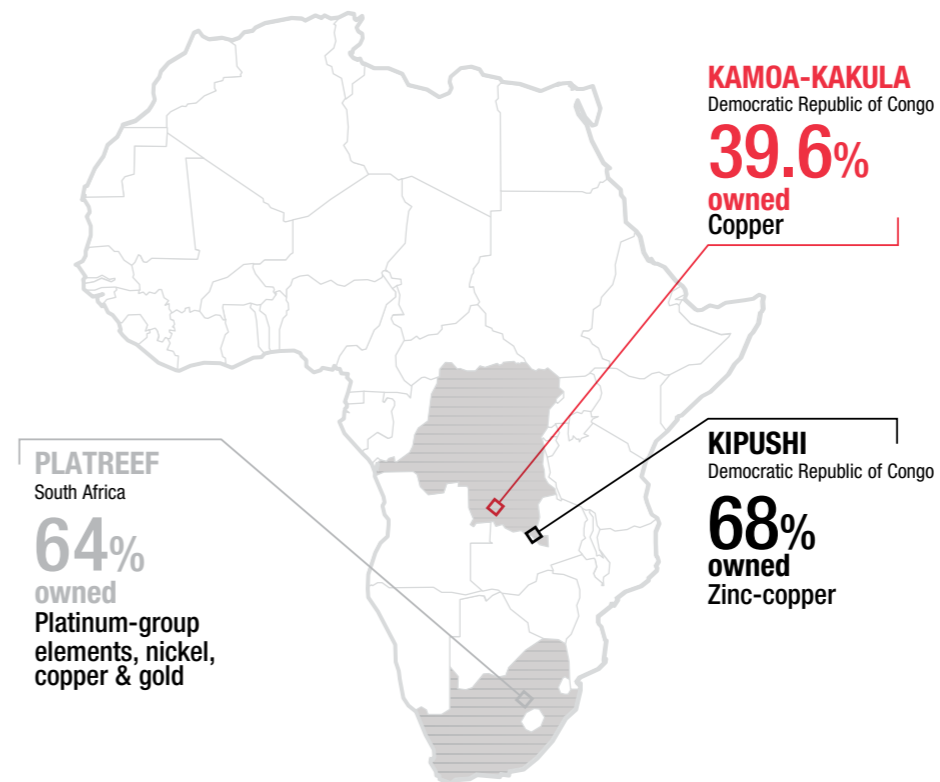
Our Code of Conduct (the Code) is fundamental to our business approach. The Code reflects our commitment to a culture of honesty, integrity, accountability and respect for the communities in which we operate. The Code also outlines the basic principles and policies with which every individual in the Company is required to comply. We require the highest standards of professional and ethical conduct from our employees, officers, directors, consultants, advisors and contractors. We have established broad-based communication programs to ensure that all individuals working on our projects take cognizance of how they conduct their duties.

Respect for human rights is the foundation of our corporate culture. It is ingrained in our values, and the way we do business, as well as how we expect the companies in our supply chain to deliver their products and services. Our statement of values and responsibilities is incorporated into the employee induction programs and supply-chain contracts and includes the following commitments:

- > Responsible global citizenship through support for human rights, social justice and sound environmental management
- > Responsible exploration and mining
- > Leadership through action
- > Recognizing that people are our true wealth
- > Providing a safe and healthy job environment and skills training
- > Sustaining communities and respecting diversity
- > Environmental responsibility and innovation
- > Corporate integrity, accountability and transparency
- > Respect for human rights as guided by the UNDHR

We recognize the importance of dialogue with our employees, contractors and external stakeholders who are, or potentially could be affected, by our actions. We pay particular attention to individuals or groups who may be at greater risk of negative human rights impacts due to their vulnerability or marginalization and recognize that women and men may face different risks.

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. The Company has established a whistleblower hotline whereby employees and third parties may anonymously submit either by telephone or via the Internet, any concerns they might have regarding financial irregularities and/or failed corporate governance.



### THE KAMOA-KAKULA COPPER PROJECT

The tier-one Kamoa-Kakula Project is a joint venture between Ivanhoe Mines, Zijin Mining Group Company Limited (Zijin or Zijin Mining) and the government of the DRC. It is located within the Central African Copperbelt in the southern Lualaba Province in the DRC. 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 DRC government, Ivanhoe Mines and Zijin Mining each hold an indirect 39.6% interest in the Kamoa-Kakula Project; Crystal River Global Limited holds an indirect 0.8% interest; and the DRC government holds a direct 20% interest. The Kamoa-Kakula Project is independently verified to be the largest copper discovery ever made on the African continent and already ranks as the world's fourth-largest copper discovery.



Our principal projects are:

### THE PLATREEF PROJECT

Construction of the planned Platreef Mine is well under way on the Company's discovery of platinum, palladium, rhodium and gold (3PE+Au), and nickel and copper on the Northern Limb of South Africa's Bushveld Igneous Complex. Ivanhoe holds a 64% interest in Platreef. The South African beneficiaries of a Broad-Based Black Economic Empowerment (B-BBEE) structure have a combined 26% stake in the Platreef Project; the remaining 10% is owned by a Japanese consortium of ITOCHU Corporation, Japan Oil, Gas and Metals Corporation and Japan Gas Corporation.



### THE KIPUSHI PROJECT

The historic Kipushi Mine is located on the Central African Copperbelt in the southern Haut-Katanga Province of the DRC, one of Africa's major mining hubs. The mine, which operated between 1924 and 1993, is approximately 30 kilometres southwest of the provincial capital, Lubumbashi, and less than 1 kilometre from the DRC-Zambia border. Ivanhoe holds a 68% interest in Kipushi; the DRC state-owned mining company, La Générale des Carrières et des Mines (Gécamines), holds the remaining 32% interest.

PLATREEF PROJECT  
SHAFT 1 SINKING  
ACTIVITIES IN  
PROGRESS

## 2.3 PROGRESSING OUR PROJECTS

### THE PLATREEF PROJECT

#### *Positive results of definitive feasibility study published*

On July 31, 2017, Ivanhoe Mines announced the positive results of an independent, definitive feasibility study for the planned first phase of the Platreef Project's platinum group elements, nickel, copper and gold mine in South Africa.

Phase 1 will include construction of a state-of-the-art underground mine, concentrator and other associated infrastructure to support initial concentrate production by 2022. As Phase 1 is being developed and commissioned, there will be opportunities to refine the timing and scope of subsequent phases of expanded production.

The results of the Platreef definitive feasibility study place the project at the

**BOTTOM OF THE CASH-COST  
CURVE AT AN ESTIMATED**

**\$351**  
per ounce of 3PE+Au  
produced.

### Highlights of the Platreef definitive feasibility study include the following:

- > Indicated Mineral Resources total 346 million tonnes at a grade of 3.77 grams per tonne (g/t) platinum, palladium, rhodium plus gold (3PE+Au), 0.32% nickel and 0.16% copper, at a cut-off grade of 2.0 g/t 3PE+ gold, containing 41.9 million ounces of 3PE+Au. At the same cut-off grade, it has additional Inferred Resources totalling 506 million tonnes at a grade of 3.24 g/t 3PE+Au, 0.31% nickel and 0.16% copper, containing 52.8 million ounces of 3PE+Au.
- > Increased Mineral Reserves totalling 124.7 million tonnes at a grade of 4.40 g/t 3PE+Au, 0.34% nickel and 0.17% copper, containing 17.6 million ounces of 3PE+Au – an increase of 13% – following stope optimization and mine sequencing work.
- > Development of a large, safe, mechanized, underground mine with an initial 4 million tonne per annum (Mtpa) concentrator and associated infrastructure.
- > Planned initial average annual production rate of 476,000 ounces (oz) of 3PE+Au, plus 21 million pounds of nickel and 13 million pounds (lb) of copper.
- > Estimated pre-production capital requirement of approximately \$1.5 billion, at a South African rand to the United States dollar (ZAR:USD) exchange rate of 13 to 1.
- > Platreef would rank at the bottom of the cash-cost curve, at an estimated \$351 per ounce of 3PE+Au produced, net of by-products and including sustaining capital costs, and \$326 per ounce before sustaining capital costs.
- > After-tax net present value (NPV) of \$916 million, at an 8% discount rate.
- > After-tax Internal Rate of Return of 14.2%.



## PROGRESSING OUR PROJECTS *continued*

PLATREEF SHAFT 1  
HEADGEAR AT DUSK

### *Shaft 1 development progressing well*

Shaft 1, with an internal diameter of 7.25 metres, will provide access to the Flatreef Deposit, enabling the initial underground capital development to take place during the development of Shaft 2. Ultimately, Shaft 1 will become the primary ventilation intake shaft during the project's 4 Mtpa production case. An average sinking rate of between 40 and 50 metres per month is expected during the main sinking phase.

### *Shaft 2 early works in progress*

Shaft 2 will be located approximately 100 metres northeast of Shaft 1. Shaft 2, with an internal diameter of 10 metres, will be sunk to a final depth of 1,100 metres below surface. The early works for Shaft 2 include the excavation of a surface box-cut to a depth of approximately 29 metres below surface and the construction of the concrete hitch (foundation) for the 103-metre-tall headgear (headframe) that will house Shaft 2's permanent hoisting facilities.

The main sinking phase is expected to reach its projected final depth of

# 980 metres below surface in 2019.

## THE KIPUSHI PROJECT

*Pre-feasibility study for Kipushi completed in December 2017; definitive feasibility study under way.*

On December 13, 2017, Ivanhoe Mines announced the results of a pre-feasibility study for the rebirth of the historic Kipushi Mine. The study 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 \$0.48 per pound of zinc.

Highlights of the pre-feasibility study, based on a long-term zinc price of \$1.10/lb, include:

- > After-tax NPV at an **8% real discount rate of \$683 million**
- > After-tax real **IRR of 35.3%**
- > After-tax project payback period of **2.2 years**
- > Pre-production capital costs, including contingency, **estimated at \$337 million**
- > Existing surface and underground infrastructure allows for **significantly lower capital costs** than comparable greenfield development projects
- > Life-of-mine average planned zinc concentrate production of **381,000 dry tonnes per annum**, with a concentrate grade of 59% zinc, is expected to rank Kipushi, **once in production, among the world's largest zinc mines**

Once in production, Kipushi is expected to rank in the bottom quartile of the cash-cost curve for zinc producers globally.

The definitive feasibility study to further refine and optimize the project's economics is under way and is expected to be completed in the second half of 2018.



SHAFT 5 CONTROL  
ROOM REFURBISHMENT  
COMPLETED

*Underground drilling program completed in November 2017 with updated Mineral Resource estimate expected in Q2 2018*

Ivanhoe initiated a second phase of underground drilling at Kipushi in April 2017, with the goal of upgrading Inferred Mineral Resources on the Southern Zinc and Fault Zone to Indicated, expanding Mineral Resources in the Série Récurrente Zone and collecting additional sample material for metallurgical flotation testing.

A total of 9,706 metres were drilled in 58 holes. Eight holes were drilled for metallurgy, 31 holes in the Southern Zinc and Big Zinc, five holes in the Nord Riche and 14 holes in the Série Récurrente. Logging and sampling of the holes was completed at the end of 2017 and the final assays are expected in Q2 2018. Geology interpretation of the results is ongoing and a new resource update is planned for release in Q2 2018. The updated Mineral Resource will be used in the preparation of the Kipushi definitive feasibility study.

### *Project development and infrastructure*

The Kipushi Mine was placed on care and maintenance in 1993, but flooded in early 2011. At its peak, water reached 851 metres below the surface. Ivanhoe restored access to the mine's principal haulage level at 1,150 metres below surface in December 2013. Since then, crews have been upgrading underground infrastructure to stabilize the water levels permanently.

Ivanhoe completed the refurbishment of a significant amount of underground infrastructure at the Kipushi Project, including a series of vertical mine shafts to various depths, with associated headframes, as well as underground mine excavations. A series

of crosscuts and ventilation infrastructure still are in working condition. The underground infrastructure also includes a series of pumps to manage the influx of water into the mine.

Shaft 5, the main production shaft for the Kipushi Mine, is eight metres in diameter and 1,240 metres deep. It has been upgraded and re-commissioned. The main personnel and material winder has been upgraded and modernized to meet international industry standards and safety criteria. The Shaft 5 rock-hoisting winder now is fully operational.

Underground upgrading work is continuing on the crusher and the rock load-out facilities at the bottom of Shaft 5 and the main haulage way on the 1,150-metre level, between the Big Zinc access decline and Shaft 5.



UNDERGROUND  
REFURBISHMENT  
IN PROGRESS



EXPLORATION DRILLING AT KAKULA

## THE KAMOA-KAKULA PROJECT

### February 2018 Mineral Resource estimate establishes Kamoa-Kakula as world's fourth-largest copper deposit

On February 26, 2018, Ivanhoe announced a new Mineral Resource estimate for the Kakula discovery on the Kamoa-Kakula Project. The updated Kakula Mineral Resource estimate, prepared under the direction of independent consultant Amec Foster Wheeler, covers a mineralized strike length of 13.3 kilometres. For the first time, the updated estimate incorporates Mineral Resources contained in the Kakula West discovery area and the saddle area between the main Kakula discovery area and Kakula West. The updated Mineral Resource estimate is based on results from approximately 151,000 metres of drilling in

271 holes completed by December 31, 2017. For more information about the updated Kamoa-Kakula Mineral Resource statement, refer to the Company's MD&A and Annual Information Form available online at [www.ivanhoemines.com](http://www.ivanhoemines.com) and [www.sedar.com](http://www.sedar.com).

### Kamoa-Kakula 2017 preliminary economic assessment (PEA) and Kamoa pre-feasibility study present three initial development scenarios

On November 28, 2017, Ivanhoe Mines announced positive findings of an expanded, independent preliminary economic assessment for the development of the Kakula discovery at the Kamoa-Kakula Project. The study was based on the November 2017 Mineral Resource estimate for Kamoa and May 2017 Mineral Resource estimate for Kakula.

The three potential development scenarios examined include:

- > Initial mine development scenario of a 6 Mtpa underground mine and surface processing complex at Kakula.
- > Expanded two-mine scenario for an integrated 12 Mtpa two-stage development beginning with initial production from Kakula, to be followed by a subsequent, separate underground mining operation at nearby Kansoko, along with the construction of a smelter.
- > Kamoa 2017 pre-feasibility study development scenario of building the Kansoko Mine as a stand-alone 6 Mtpa underground mine and surface processing complex.

For more information about the development scenarios examined, refer to the Company's MD&A and Annual Information Form for the year ended December 31, 2017, available online at [www.ivanhoemines.com](http://www.ivanhoemines.com) and [www.sedar.com](http://www.sedar.com).

Potential phased mine developments to 18 Mtpa and above are under evaluation for Kamoa-Kakula. In light of the successful step-out drilling at Kakula West, as well as the potential to find additional resources in high-priority targets located in the untested parts of the Kamoa-Kakula Project, development plans will be reassessed and amended as the project moves forward.



PROJECT TEAM DISCUSSING THE ADVANCE OF THE KAKULA DECLINE DEVELOPMENT

The Kakula 6 Mtpa pre-feasibility study has begun. The work will be based on an updated Kakula 3D resource model and the target date for completion is the second half of 2018.

### Exploration activities focused on expanding the Kakula discovery

Exploration activity in Q4 2017 focused on infill drilling at Kakula West and the saddle area between Kakula and Kakula West. Drilling for the resource estimate was extended to the end of Q4 2017 to ensure that almost the entire 13.3-kilometre strike length of Kakula was converted directly to Indicated Mineral Resources. A total of 31,433 metres of exploration drilling was completed in 60 holes. In addition to exploration drilling, 1,754 metres of hydro-geology drilling was completed in 10 holes and 400 metres of underground cover drilling was also completed.

Exploration drilling completed in 2017 at the Kamoa-Kakula Project totalled 121,899 metres in 239 holes. This total included 26 wedges for geotechnical and metallurgy test work. In addition, 3,420 metres of hydro-geology drilling and 664 metres of cover drilling were completed.

### Underground development at the Kakula Deposit advancing ahead of plan

Construction of the 18-metre-deep Kakula box-cut was successfully completed in October 2017, allowing access for the start of development of the twin declines in November.

CORE LOGGING IN PROGRESS AT KAMOA-KAKULA

The first blast for the twin declines at Kakula was carried out in November 2017; approximately 150 metres of development were completed by the end of 2017. As of March 15, 2018, each of the declines had been advanced more than 316 metres. The 3,535-metre decline development contract is scheduled to be completed by the end of 2018.

### First copper ore from Kansoko Mine reaches surface

Underground development at Kamoa-Kakula's Kansoko Mine, consisting of service and conveyor declines, was completed in September 2017. The high-grade Kansoko Sud copper mineralization was reached and approximately 13,500 tonnes of development ore was stockpiled at surface. Various development options for Kansoko are being assessed in conjunction with the ongoing mine development activities at Kakula.



SAFETY BRIEFING AT IVANHOE'S PLATREEF PROJECT

# 2.4 GOVERNANCE AND MANAGEMENT APPROACH

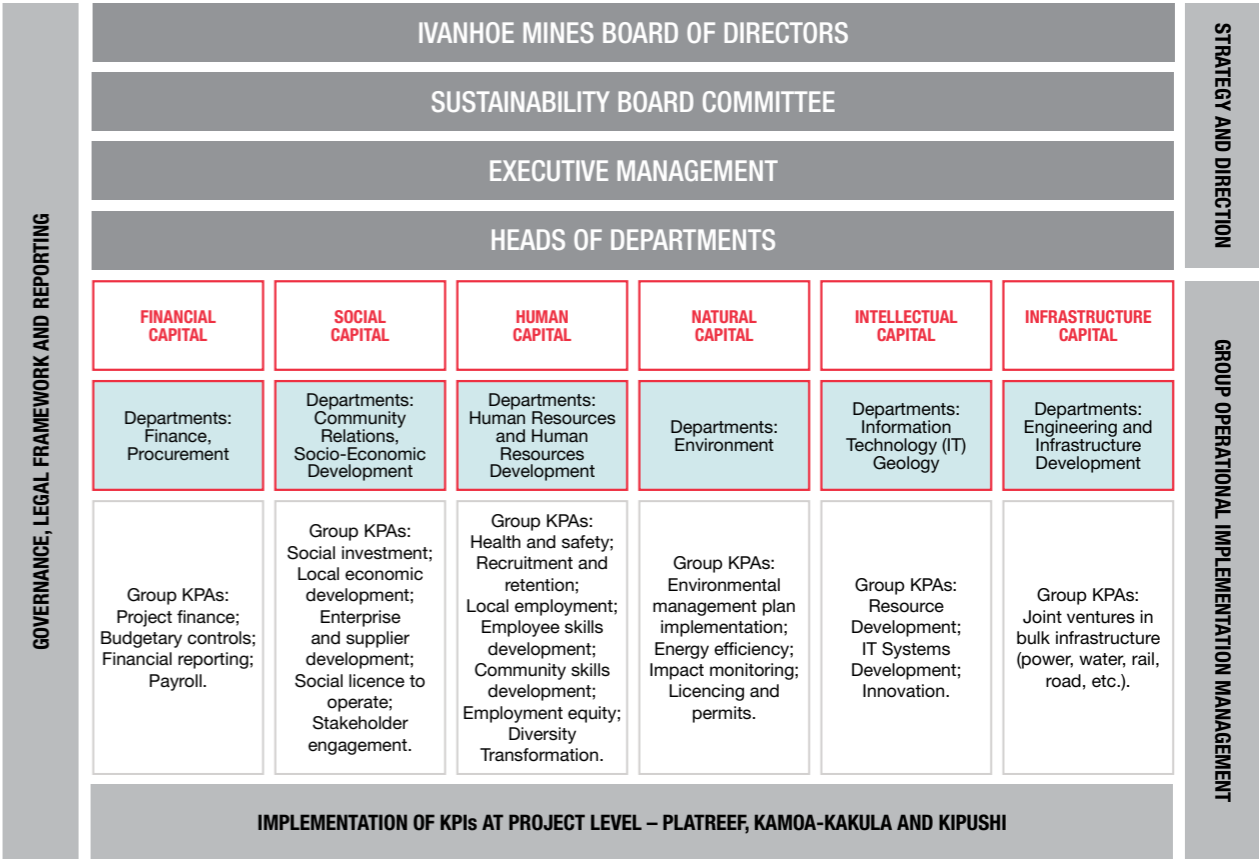
At Ivanhoe Mines we are guided by our sustainability strategy that includes our vision to create shared value with all of our stakeholders. We are committed to responsible mineral development by incorporating sustainability best practice standards in our industry. These include (1) ensuring a safe and healthy working environment in our business operations; (2) eliminating or controlling potential workplace hazards for the protection of all employees, contractors and local communities; (3) promoting sound environmental practices in all our activities; (4) continually improving the efficient use of resources, processes and materials; and (5) contributing to a socio-economic environment in which local stakeholders can thrive.

The Board of Directors has delegated certain responsibilities to the Ivanhoe Mines Sustainability Committee with the objective of incorporating internationally recognized standards of Corporate Social Responsibility in our internal policies by addressing issues such as labour, health, safety, environment, human rights and community engagement.

The Sustainability Committee reviews our business and sustainability strategies and activities bi-annually to ensure that they meet the needs of the enterprise and our stakeholders while protecting, sustaining and enhancing the human and natural resources that will be needed in the future. Our sustainability strategy is integrated into our decision-making by embedding it into corporate, operational and employee annual key performance areas (KPIs).

The figure below illustrates our management approach to the sustainable development of our key assets.

## Sustainable development management approach



Our approach to sustainability reporting is adapted from the International Integrated Reporting Council and is underpinned by the six-capital model of sustainable development. The six capitals include economic-, human-, social and relational-, natural-, intellectual- and infrastructure capital. The six capital model of sustainable development states that sustainable development is attained if all six capitals are given appropriate attention during development and operation. For reporting purposes we define each of the capitals as follows:

- > **Economic capital** consists of the Company's contribution to local and national economic growth.
- > **Human capital** consists of people's safety, health, knowledge, skills, wellbeing and motivation.
- > **Social and relational capital** refers to the Company's social licence to operate from its host communities and other stakeholders.
- > **Natural capital** refers to the management of the natural environment in which the Company operates.



- > **Intellectual capital** refers to the intangible assets in the Company that can produce wealth.
- > **Infrastructure capital** refers to the supporting infrastructure needed by the Company to develop each of its principal projects, such as bulk electricity provision, bulk water provision and transport infrastructure.

# 3.

## Our most MATERIAL MATTERS

Our most material matters are those risks, opportunities and other factors that could materially affect our ability to create long-term sustainable value. For the purpose of this report, we use the GRI definition of materiality: “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.”

Our risks are continually monitored and evaluated through Company-wide risk assessments to ensure that our strategies and daily actions address them in the most efficient way. We identify our most material matters through our risk management processes, ongoing review of internal performance and our impacts on the external environment, and robust engagement with internal and external stakeholders.

These matters are analyzed and prioritized according to the significance of their potential affects on the Company and our

key stakeholders, and are built into our strategy, governance frameworks, risk management systems and operational management processes. This analysis also formulates the information we report to stakeholders through the publication of our MD&A and Annual Information Form.

This sustainability report expands on Ivanhoe Mines’ financial reporting by highlighting opportunities and challenges according to the capitals that are chiefly impacted by our performance – economic capital, human capital, social and relational capital, natural capital, intellectual capital and infrastructure capital. In practice, each of these capital performance areas affect the others and impacts our ability to generate a sustainable financial return over the long term.

The following section shows the most material sustainability matters that have been identified, the stakeholders and performance areas to which they relate, and which mitigation strategies are in place to address these matters.



Our most material matters relating to sustainability are determined through engagement with internal and external stakeholders such as employees, contractors, affected people in our host communities and government representatives, at a project level and through an executive management survey at a group level. The information obtained from these engagements was analyzed and collated into the four material matters most representative of the sentiments of all stakeholder groups. The table below provides an overview of our four most material matters, as well as a short description of the performance areas involved and risk mitigation measures currently in place. Alignment with the GRI standards is provided in Appendix 7.3.

## IVANHOE MINES – MOST MATERIAL MATTERS

1	High social expectations of our local stakeholders because projects are being situated in emerging economies		
	STAKEHOLDERS AFFECTED	PERFORMANCE AREA INVOLVED	RISK MITIGATION MEASURES
	Communities	Social and relational capital	> Active community relations teams at all projects. > Sustainable development plans for host communities developed in collaboration with local governing bodies as well as interested and affected groups.
2	Recruiting and retaining qualified staff to work on projects situated in remote areas and instituting programs to train local staff to international standards		
	STAKEHOLDERS AFFECTED	PERFORMANCE AREA INVOLVED	RISK MITIGATION MEASURES
	Employees	Human capital	> Active regulated human resource development (HRD) programs in place at the Platreef Project as part of its Social and Labour Plan (SLP). > Development program for high-potential employees in place at the Kamoa-Kakula and Kipushi projects. > Planning for skills transfer programs for all the projects in progress.
3	The Company must develop significant infrastructure (electricity, rail and water availability) at its projects in order to commence development and mining operations		
	STAKEHOLDERS AFFECTED	PERFORMANCE AREA INVOLVED	RISK MITIGATION MEASURES
	All	Infrastructure capital	> Strategic partnerships and negotiations regarding local infrastructure development in place. > Active partnership with Société Nationale D’électricité (SNEL) in DRC for the provision of electricity to the Kamoa-Kakula and Kipushi projects. > Active partnership with Société Nationale des Chemins de Fer du Congo (SNCC) in DRC for the rehabilitation of the Kipushi spur railway to provide a product export solution. > Pursuing active partnerships with national, regional and local government as well as Eskom for the provision of water and electricity to the Platreef Project.
4	The Company must ensure responsible stewardship of its natural resources		
	STAKEHOLDERS AFFECTED	PERFORMANCE AREA INVOLVED	RISK MITIGATION MEASURES
	All	Natural capital	> Active Environmental Management Plans (EMPs) in place at Kamoa-Kakula and Platreef. > Full Environmental and Social Impact Assessment under way at Kipushi as part of the feasibility study. Continuous monitoring practices in place.



# Our STAKEHOLDERS

Ivanhoe Mines views stakeholders as any group or individual that has a material interest in, or is affected by, our projects. We are committed to an open door policy and our ongoing engagement with our stakeholders guides the Company's long-term direction. We heed the legitimate concerns of our stakeholders and endeavour to engage in a transparent and accessible manner.



PARTICIPANTS IN THE PLATREEF PROJECT YOUTH DAY

## 4.1 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 will maintain our social licence to operate. In addition to local stakeholders, each project has a unique set of employees, contractors, investors, government bodies (national, provincial and local), suppliers and non-governmental organizations interested in and affected by the respective projects.

### 4.1.1 THE PLATREEF PROJECT

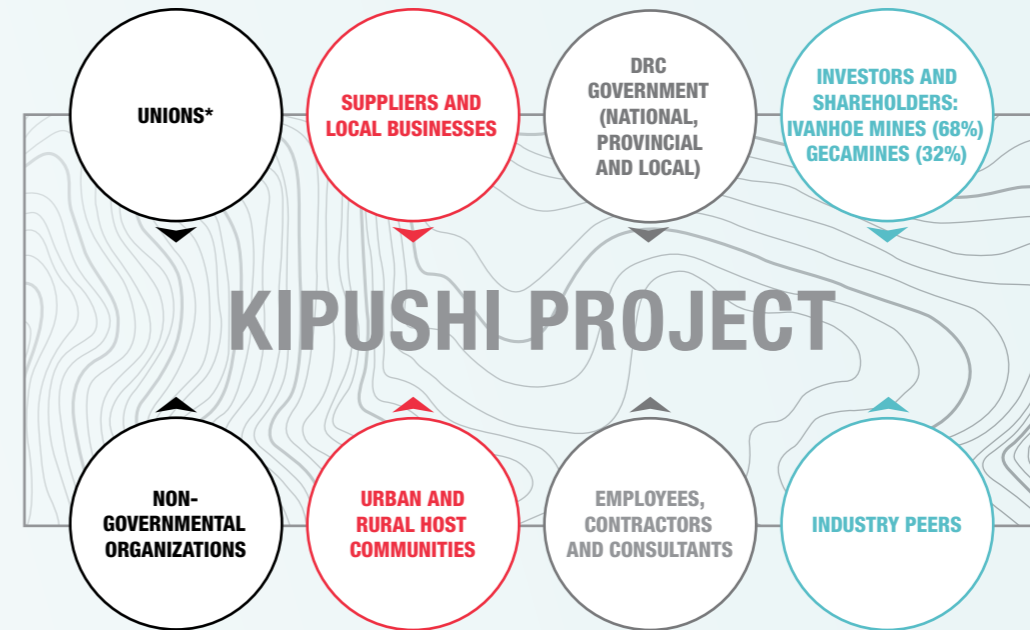
The Platreef Project is situated in the Limpopo Province, South Africa, close to the town of Mokopane. The region is characterized by semi-urban development and its 20 host communities comprise a total of approximately 150,000 individual residents governed by a traditional leader. Major stakeholder groups in the Platreef Project:



\* Broad-Based Black Economic Empowerment.

### 4.1.2 THE KIPUSHI PROJECT

The Kipushi Project is situated in the Haut-Katanga province in 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:

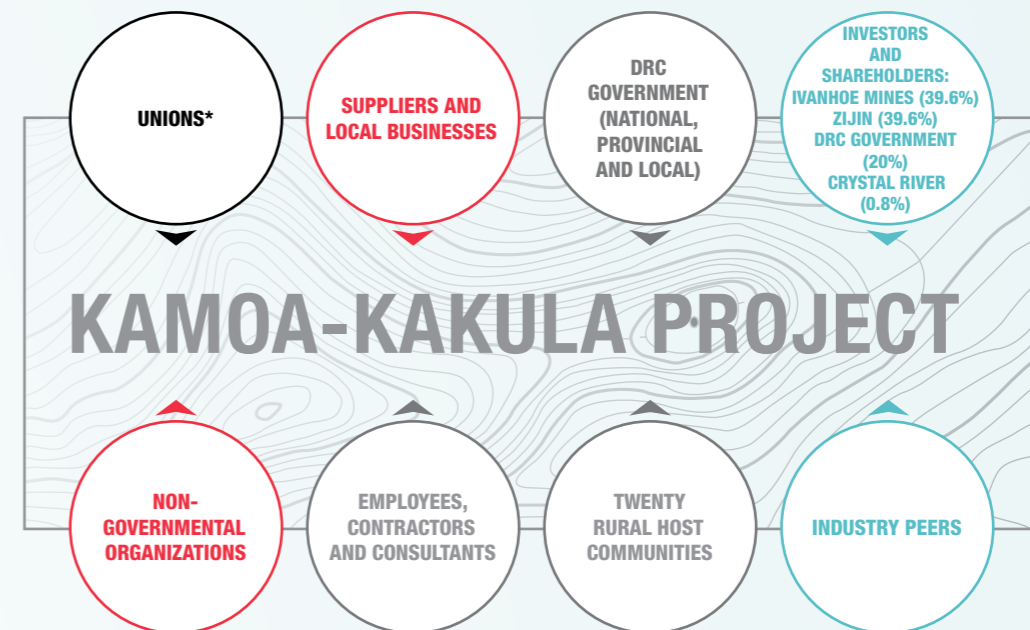


\* **Kipushi** employees are represented by a democratically elected group of union representatives that belong to the following union groupings:

- > Alliance des Travailleurs Avertis et Conscientieux (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'Éthique Syndicale (FORCES)

### 4.1.3 THE KAMOA-KAKULA PROJECT

The Kamoa-Kakula Project is situated in the Southern Lualaba province in the DRC, approximately 25 kilometres west of the mining hub of Kolwezi. The area adjacent to the Kamoa-Kakula Project footprint is characterized by widespread rural development and is home to approximately 20,000 people in 20 communities governed by two traditional leaders. Major stakeholder groups in the Kamoa-Kakula Project:



\* **Kamoa-Kakula** employees are represented by a democratically elected group of union representatives that belong to the following union groupings:

- > Travailleurs Unis des Mines (TUMEC), Métallurgies, Énergie, Chimie et Industries Connexes
- > Confédération Syndicale du Congo (CSC)
- > Conscience des Travailleurs et Paysans (CTP)
- > ATAC
- > Centrale Générale des Travailleurs du Congo (CGTC)



PLATREEF PROJECT MOBILE OFFICE  
COMMUNITY RELATIONS STAFF  
ENGAGING WITH COMMUNITY MEMBERS

## 4.2 Engagement

At Ivanhoe Mines, stakeholder engagement is an integrated business function providing support to other business units to ensure that different stakeholder groups are identified, considered and informed as the principal projects are being developed. Formal and informal engagements take place on an ongoing basis. Functional, accessible 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 all grievances received during the reporting period were closed out successfully without the need for escalation to the respective management committees.

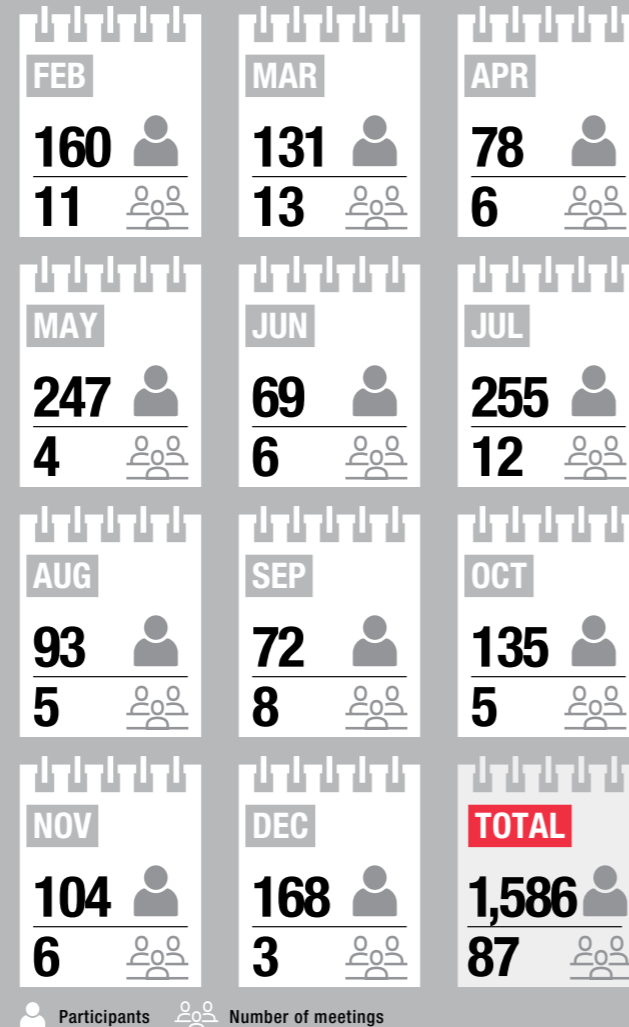
The statistics on the following pages list all stakeholder meetings per project, and indicate that the Platreef and Kamoakakula projects had more engagements than the Kipushi Project. This can be attributed to the fact that both the Platreef and Kamoakakula projects were subject to more processes needing engagement, such as economic displacement, than the Kipushi Project, which resulted in increased engagement with stakeholders.

### 4.2.1 THE PLATREEF PROJECT

The Platreef Project has a community relations team of 12 staff members dedicated to maintaining our social licence to operate through continual engagement with local stakeholder groups, including traditional authorities, local government, civic groups and individual local residents. The team engages with the community on various topics, including: employment; local procurement; livelihood restoration; and opportunities from the project's social development initiatives.

## NUMBER OF STAKEHOLDER MEETINGS

JAN-DEC 2017 PLATREEF PROJECT



## SPECIAL REPORT

### THE PLATREEF PROJECT BRIDGES THE DIGITAL DIVIDE

In addition to conventional engagement methods at the Platreef Project, the Company launched eight free Wi-Fi hotspots and a digital engagement portal titled Maru a Mokopane (Sepedi for the Clouds of Mokopane), through which local residents can access the Internet; view the latest opportunities and news; and engage with the Company. 17 local youths were contracted to train 10,000 residents to become digitally active using the Maru a Mokopane system from June 2017 to April 2018.



“ I am particularly proud of how Maru a Mokopane makes engagement with our host communities fair and transparent. My team came up with an innovative ‘best in class’ solution to connect our stakeholders in peri-urban Limpopo with the digital world. ”

Dr Patricia Makhesha,  
Managing Director, Ivanplats (Pty) Ltd

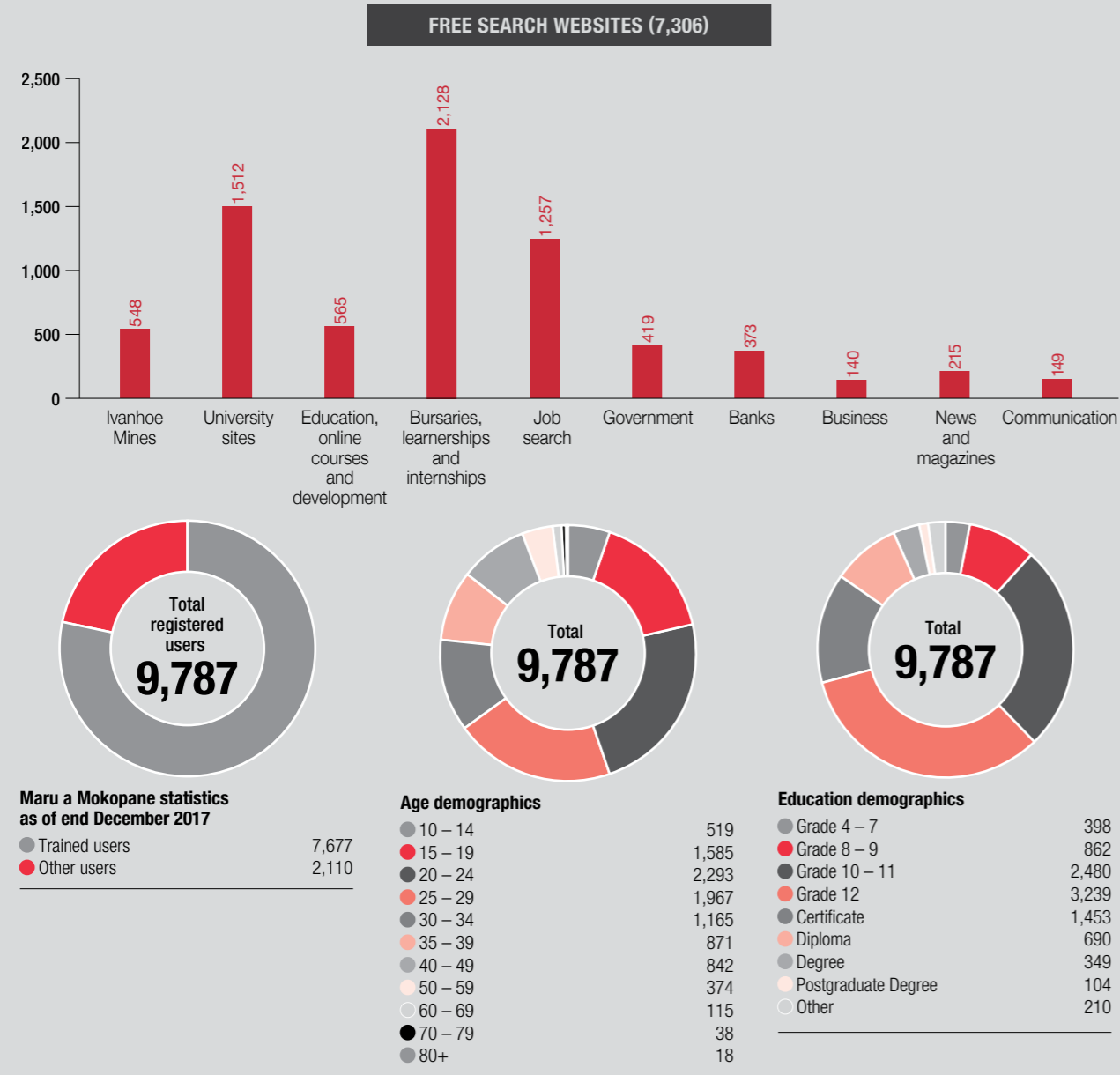
A DIGITAL TRAINER  
DEMONSTRATES THE USE  
OF THE MARU A MOKOPANE  
PORTAL TO A LOCAL RESIDENT





DIGITAL TRAINERS AND THEIR MENTORS READY TO START WITH THE LAUNCH OF MARU A MOKOPANE

The figures below provide an indication of how Maru a Mokopane is being used to bridge the digital divide and to provide and build skills and capacity in local communities. The data have been collected since the launch of Maru a Mokopane (June 16, 2017 – December 31, 2017).



The Platreef Project has various communication mechanisms in place through which communities can raise issues of concern to the community relations team. Direct communication channels exist between the traditional leadership and other groups or structures within the community and the Platreef Project team.

The community relations department has daily climate assessment meetings where staff members provide feedback on daily events and sentiments within the community that may have an impact on the current climate. These meetings are attended by security, human capital and community relations managers. Based on the communication received from the various channels available, the community relations department, in close alignment with human capital and security management, formulates the necessary interventions within the community 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 social licence to operate.



PLATREEF COMMUNITY RELATIONS STAFF MEMBER ENGAGING WITH LOCAL COMMUNITY MEMBERS ABOUT THE BI-ANNUAL PLATREEF PROJECT NEWSPAPER SHOWCASING LOCAL DEVELOPMENT PROJECTS IMPLEMENTED BY THE PROJECT TEAM

4.2.2 THE KIPUSHI PROJECT

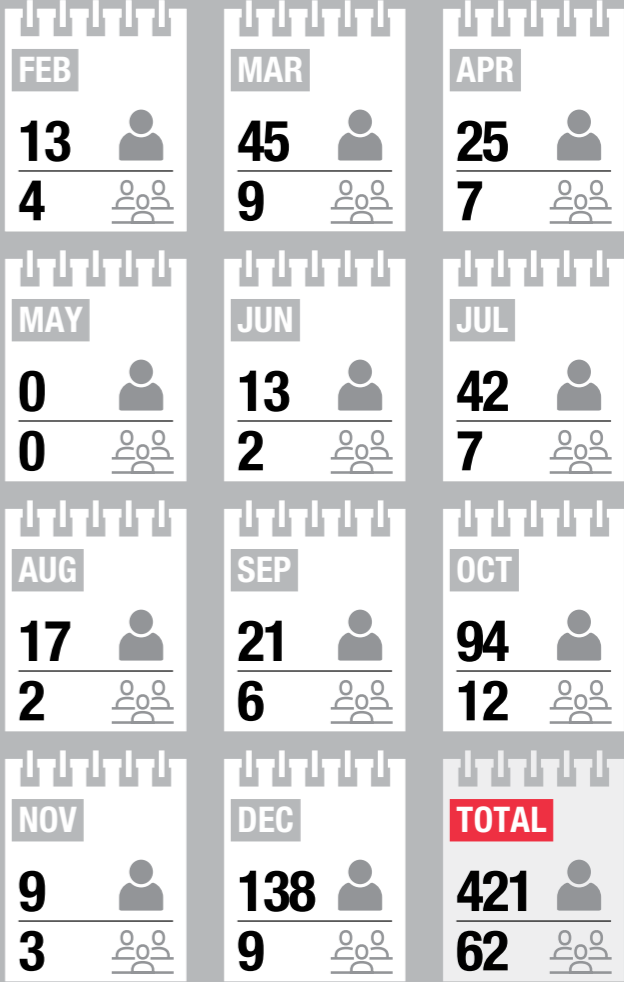
The Kipushi Project has a community relations staff complement of four members dedicated to maintaining our social licence to operate through continual engagement with local stakeholder groups including traditional authorities, local government, civic groups and individual local residents. The most discussed topics include employment, local procurement, project development and opportunities from the Project's social development initiatives.



CHIEF KAPONDA, THE TRADITIONAL LEADER OF THE KIPUSHI HOST COMMUNITIES

NUMBER OF STAKEHOLDER MEETINGS

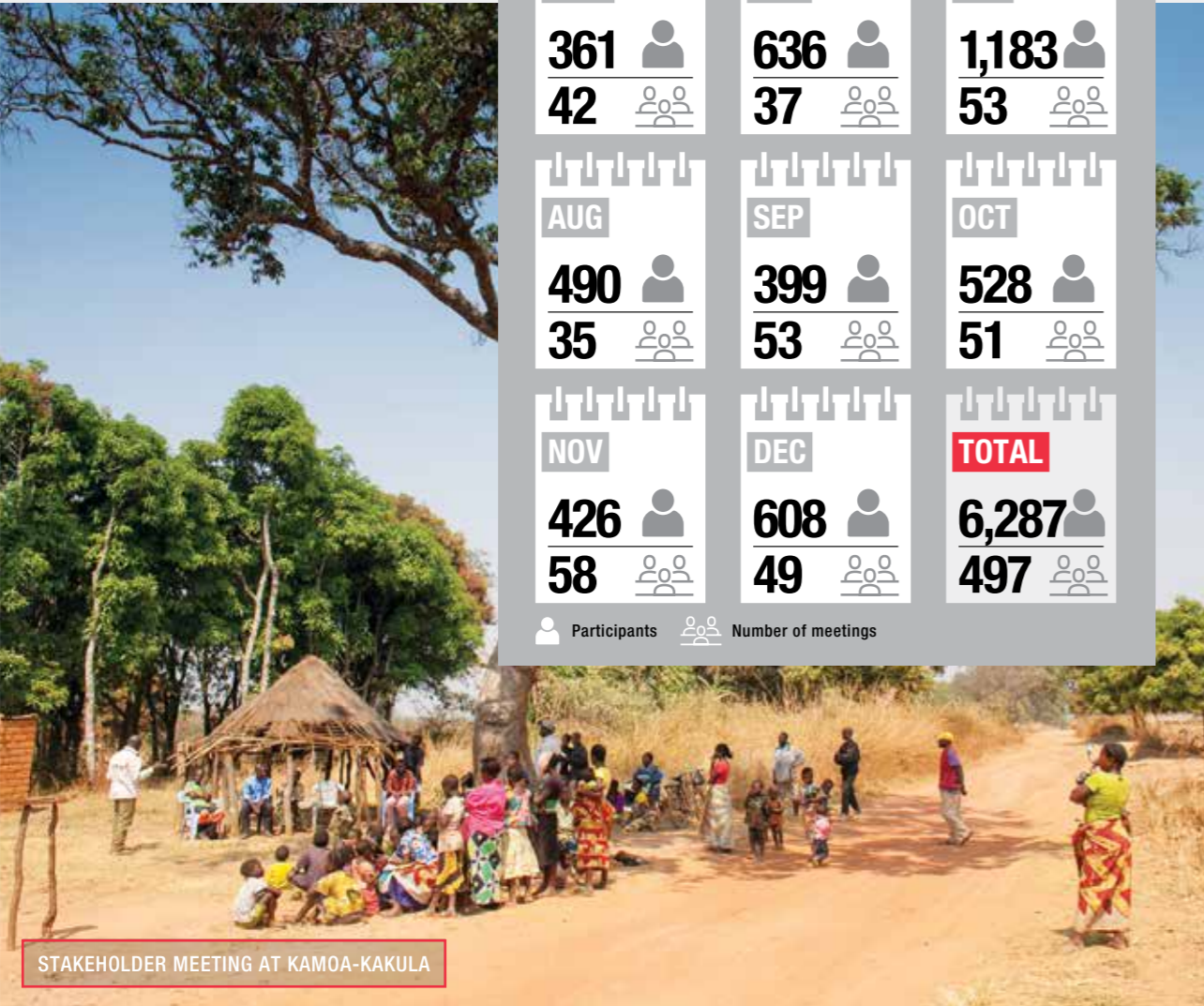
JAN-DEC 2017 KIPUSHI PROJECT



Participants Number of meetings

4.2.3 THE KAMOA-KAKULA PROJECT

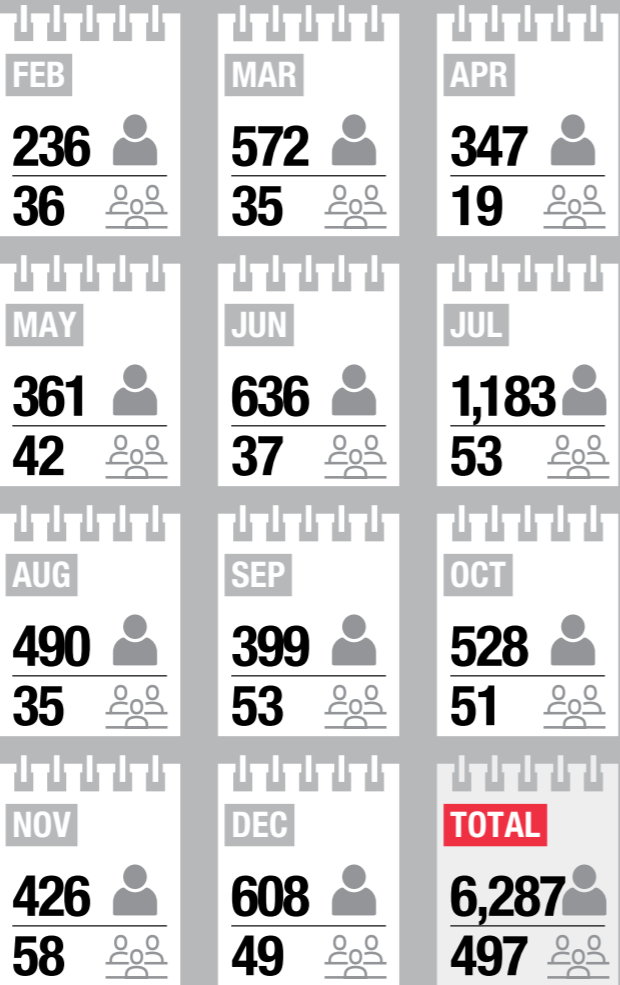
The Kamoa-Kakula Project has a community relations staff of four members dedicated to maintaining our social licence to operate through continual engagement with local stakeholder groups including traditional authorities, local government, civic groups and individual local residents. The most discussed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



STAKEHOLDER MEETING AT KAMOA-KAKULA

NUMBER OF STAKEHOLDER MEETINGS

JAN-DEC 2017 KAMOA-KAKULA



Participants Number of meetings

5. Our PERFORMANCE

5.1 ECONOMIC CAPITAL

The Company's economic performance is primarily affected by ongoing exploration and development activities being conducted at its three material projects. The Company has no producing operations and does not have any revenues. The Company expects to fund all of its exploration and development activities through debt and equity financing until operating revenues begin to be generated.

For more information regarding the Company's financial results for year that ended December 31, 2017, refer to the MD&A and annual financial statements online at [www.ivanhoemines.com](http://www.ivanhoemines.com) and [www.sedar.com](http://www.sedar.com).



UNDERGROUND DEVELOPMENT AT THE KAKULA DECLINE

Total value created and distributed

The following table shows the total value created and distributed by Ivanhoe Mines' three principal projects in South Africa and DRC respectively. To date, no operating revenue has been generated by any of the Company's principal projects.

Total value created and distributed \$US for the year ending December 31, 2017													
Project	Government					Socio-economic development	Procurement			National value distribution 2017	South Africa	Democratic Republic of Congo	Other African
	Payroll tax	VAT paid/(net refund)	Other tax	Parastatal companies	Employees		DRC	South Africa	Other African				
Platreef	2,273,457	6,996	–	457,327	5,966,558	1,630,335	–	44,653,746	–	54,988,418	54,988,418	–	–
Kamoa-Kakula	6,264,510	10,831,557	1,212,122	42,022,378	8,884,627	2,131,154	66,182,542	8,362,023	572,505	146,463,418	13,841,275	131,888,443	733,700
Kipushi	4,804,779	2,452,130	1,756,090	5,860,150	7,864,615	992,197	11,819,175	9,135,510	1,799,102	46,483,747	12,009,430	32,473,645	2,000,671
Total	13,342,746	13,290,683	2,968,212	48,339,855	22,715,799	4,753,685	78,001,717	62,151,280	2,371,607	247,935,584	80,839,124	164,362,089	2,734,371

\* Excluding acquisition costs for Kipushi Project  
\*\* As at December 31, 2017

SPECIAL REPORT

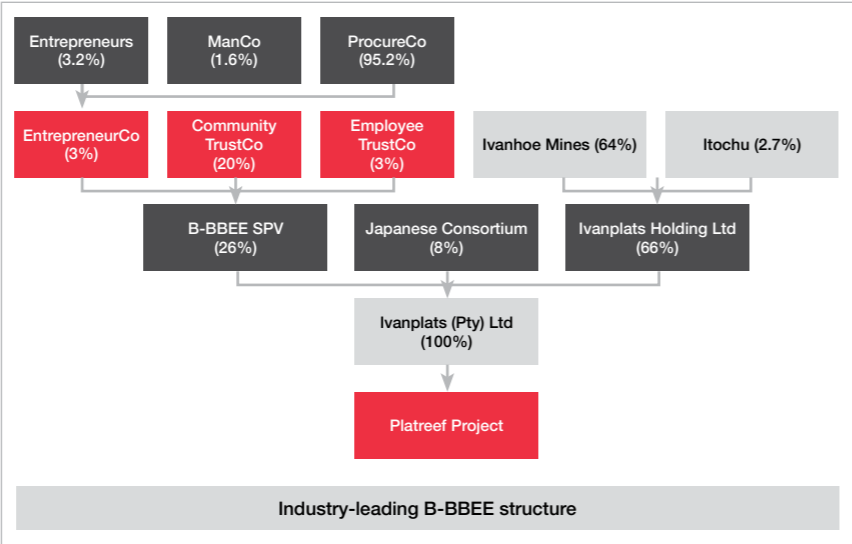
BROAD-BASED BLACK ECONOMIC EMPOWERMENT AT THE PLATREEF PROJECT

In conformance with South Africa's mining laws and in fulfilment of the requirements of the Company's Mining Right, a 26% interest in the Platreef Project was transferred by the Company's subsidiary, Ivanplats (Pty) Ltd (Ivanplats) on June 26, 2014, to a B-BBEE Special Purpose Vehicle (SPV). Within this industry-leading B-BBEE structure, 20 host communities, employees and local entrepreneurs own a combined 26% of the Platreef Project. The figure below details the ownership structure of the Platreef Project and illustrates the transformative, broad-based nature of local ownership.

The B-BBEE SPV is entitled to appoint two representatives each to the Ivanplats Management Committee and Technical Committee, as well as a director on the Ivanplats Board of Directors. The Company made a commitment to the Platreef Communities Umbrella Trust (Community Trust) to provide an annual fixed contribution of R11 million until such time as the Community Trust receives dividends. The Community Trust is governed by a Board of Trustees comprised of three community trustees, up to three independent trustees, a donor trustee and a trustee appointed by the professional administrator. The Community Trust is a registered non-profit organization and the Board of Trustees receives, assesses and supports qualifying projects originating from the 20 beneficiary communities. To date, the Community Trust has successfully implemented a number of projects.

I believe the B-BBEE structure will truly benefit the communities hosting the Platreef Project. This has been a long journey which, I am certain, will ensure that the people residing in the host communities, along with employees and small-businessmen and women, will share in the ownership of the project that will be developed on their doorstep.

Kgoshi LV Kekana,  
Traditional Leader of the  
Mokopane Communities



Projects currently being implemented by the Platreef Communities Umbrella Trust

Refilwe Drop-in Centre and Jacob Madiiba Centre	Refurbishment/construction of two drop-in centres in the communities of Sekgoboko and Masodi respectively. These centres take care of vulnerable children in the community, and collectively care for 258 children. 73 temporary job opportunities were created during the construction of the two centres; construction at both sites is progressing well and both projects are expected to be completed during Q3 2018.
Community Cleaning Campaign	The villages of Tshamahansi, Ga-Madiba, Ga-Magongoa, Ga-Kgobudi, Ga-Kgobudi 2 (Mzombane), Sekgoboko, Masodi, and Malepetleke participate in a clean-up project whereby volunteers pick up litter in their communities. The project contributes to environmental awareness and general cleanliness in the communities. A total of 270 volunteers participated in the project and the Community Trust has procured cleaning utensils and contributes a stipend for the volunteers.
Sekgagapeng graveyard fencing	Fencing of the Sekgagapeng graveyard was completed in December 2017.
Schools repair project	Several schools have been repaired to date. The Matsibe and Kgwahlele schools progressed well and renovations were completed during December 2017. Classrooms at both schools were renovated and new vegetable gardens were established. The infrastructure will benefit 560 learners and 15 educators at Kgwahlele Primary, as well as 340 learners and 13 educators at Matsibe High School.
Enrichment Classes	Two organizations involved in education assisted learners in Mokopane high schools with additional lessons in subjects such as mathematics, physical science and English. Lessons for the 2017 academic year were concluded in November. Thanks to the Star Enrichment Classes a 99% matriculation pass rate was achieved. Learners who attended the extra classes received 63 bachelor passes, 30 diplomas and six certificates.

In addition to the 26% regulatory ownership requirement, the Department of Trade and Industry's (dti) B-BBEE Codes of Good Practice for the Mining Industry stipulate required performance on management control, skills development, enterprise and supplier development and socio-economic development. The B-BBEE Codes of Good Practice for the Mining Industry also require companies to annually evaluate their performance against a B-BBEE Scorecard. The Platreef Project has consistently scored as a Level 3 contributor over the last three years, which positions the Project as one of the forerunners of transformation in the South African mining industry. Appendix 7.7 provides an independently verified B-BBEE Scorecard for the Platreef Project for the 2017 year.





THE FULL-TIME HEALTH AND SAFETY REPRESENTATIVE AT THE PLATREEF PROJECT GIVES A SAFETY BRIEF

# 5.2 HUMAN CAPITAL

At Ivanhoe Mines, our success relies greatly on our people. We place a premium on the health and safety of our workforce and are continually improving our training and education practices. Ivanhoe Mines is an equal opportunity employer and takes pride in our diverse workforce. Our recruitment and remuneration practices are guided by our corporate values, policies, standards and statement of corporate citizenship.

Ivanhoe Mines Employment Figures – December 31, 2017					
Total number of employees by:		Platreef	Kamoa-Kakula	Kipushi	Total
Total number of employees		161	300	471	932
Employment Contract	Permanent	133	257	389	
	Temporary	28	43	82	
Gender	Male	111	288	451	
	Female	50	12	20	
Total number of female employees by:		50	12	20	
Employment contract	Permanent	46	9	17	
	Temporary	4	3	3	
Total number of male employees by:		111	288	451	
Employment contract	Permanent	87	247	371	
	Temporary	24	41	80	
Total number of contractors by:		583	913	158	1,654
Gender	Male	480	906	158	
	Female	103	7	0	
Total Workforce					2,586

We are committed to promoting equal opportunities for all employees in our projects, within the local regulatory frameworks of the countries in which we operate. This commitment is captured in our employment equity, skills development and recruitment policies and procedures. Within regulatory boundaries, we endeavour to develop our female employees according to their individual development plans (IDPs). We are prioritising an increase in the number of female employees in our DRC projects during the recruitment process. At the Kipushi Project, Ivanhoe inherited a mostly male workforce from its partner, Gécamines, when the Company acquired its shares in the Project, and is working actively to redress gender inequality.

## 5.2.1 Health and safety performance

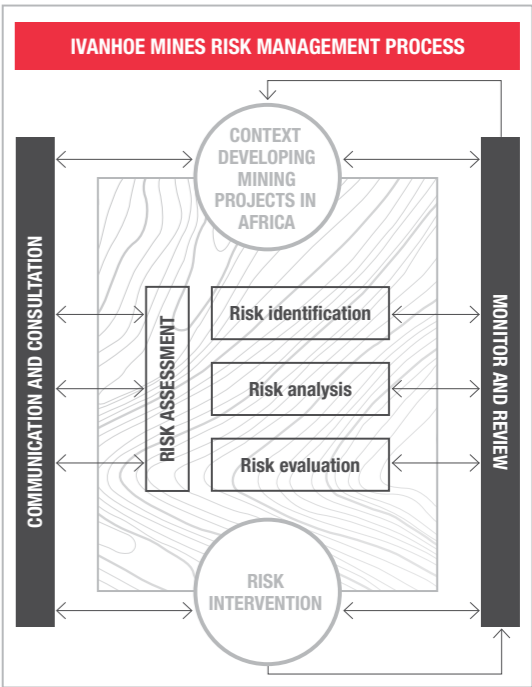
### Our approach to safety management

The health and safety of our employees, contractors and suppliers is of the utmost importance to us. We instituted a group Health, Safety and Environmental (HSE) policy and standard operating procedures to ensure that we are able to comply with our vision of 'Home without harm, everyone, every day'.

- In our HSE policy, we commit to:
- > developing, implementing and maintaining the highest practicable standards of occupational health, safety and environmental management;
  - > creating a culture of 'zero harm' in health, safety and environment, which aims to eliminate unsafe acts and conditions in the working environment;
  - > complying with applicable laws, standards and legal requirements;
  - > protecting people who are not employees, but who may be directly affected by our activities;
  - > communicating legislation, Company standards, policies and best practices regularly and effectively to all levels within the organization; and
  - > reviewing the HSE policy on an annual basis.

### Our approach to risk management

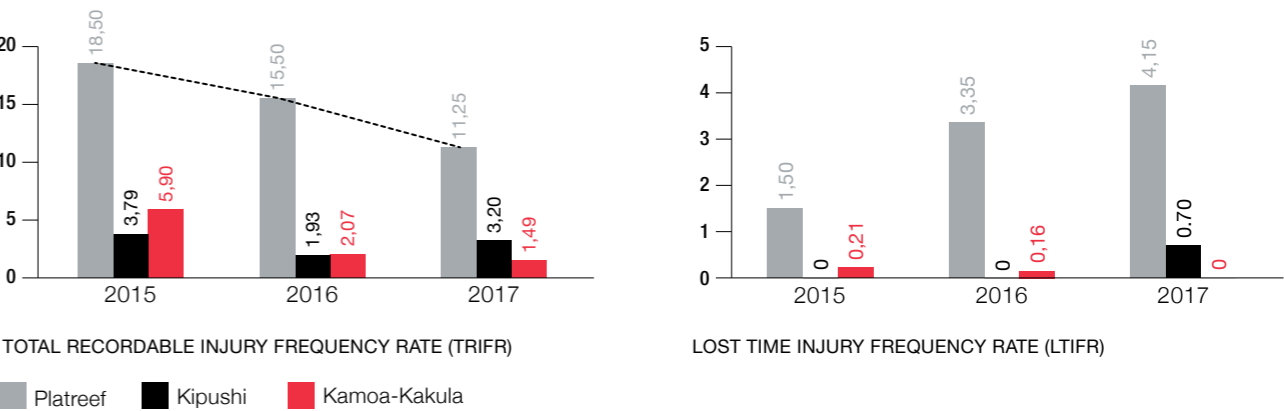
Our risk management strategy is at the core of creating a safe workplace. This includes baseline-, continual- and issue-based risk assessments, to plan for and prevent occurrence and reoccurrence of occupational hazards.



### Our safety statistics and initiatives

**Group safety performance improved in 2017. The Kamoa-Kakula Project achieved a full year without any lost time injuries (LTIs). There were significant downward trends in LTIs and total recordable injuries across all three of the Company's projects.** No fatalities were recorded during the reporting period. The incidents that occurred during the reporting period were reported through the standard operating procedures for safety incidents. These procedures include: root-cause analysis, issue-based risk assessment and measures to prevent reoccurrence.

On December 17, 2016, a serious injury occurred at the Platreef Project, during which Mr Johannes Qhanya, a Jumbo Operator with 26 years of shaft-sinking experience, employed by the main shaft-sinking contractor, Avenge, fell a distance of 14.2 metres from a safety net to shaft bottom. The incident was fully investigated and the Platreef Project team instituted remedial measures to prevent a reoccurrence of similar incidents. Mr Qhanya spent approximately six months in hospital, but sadly passed away on June 21, 2017. It is yet to be established whether his passing was due to injuries sustained during the accident or natural causes. A formal inquiry by the Department of Mineral Resources (DMR) in terms of the South African Mine Health and Safety Act 29 of 1996 was concluded on March 28, 2018. The main purpose of the inquiry was to establish the root causes of the accident, after which the DMR will follow its statutory duties.



**Definitions:** Lost time injury frequency rate (LTIFR) = LTIs\* 1,000,000/hours worked  
Total recordable injury frequency rate (TRIFR) = (Fatalities + LTIs + RWIs + medical treatment injuries (MTIs)\* 1,000,000/hours worked

PLATREEF PROJECT

Our Platreef Project workforce has worked 215,496 LTI-free hours at December 31, 2017. In accordance with its Health and Safety Management Plan, the Platreef Project instituted the following safety initiatives during the reporting period:

Objectives	Initiatives
Creating a safety culture	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Capacity building</li><li>&gt; Mid-shift stop and think – re-focus on hazard identification and changes to risks</li><li>&gt; Random shift end of cycle management visits</li><li>&gt; SLAM (Stop, Look, Assess and Manage) program</li><li>&gt; Empowerment and involvement of the health and safety representatives and organized labour representatives through capacity building regarding their rights and duties</li></ul></div></div>
Legal compliance verification	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Compliance and risk management reviews</li></ul></div></div>
Engineer solutions to reduce risk exposure	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Review baseline risk assessment</li><li>&gt; Perform issue-based risk assessments</li><li>&gt; Implementation of incident investigation close-out solutions</li></ul></div></div>
Monitoring, assessment and reporting	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Implementation of Isometrix digital HSE management system</li><li>&gt; Implementation of a digital management system for engineering and maintenance</li></ul></div></div>
Safety training initiatives	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Review of the training matrix for each department</li></ul></div></div>
Specific safety targets	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Reduction of the TRIFR by 27.5%</li></ul></div></div>



MASS SAFETY MEETING AT PLATREEF

KIPUSHI PROJECT

Our Kipushi Project workforce has worked 454,884 LTI-free hours at December 31, 2017. In accordance with its Health and Safety Management Plan, the Kipushi Project instituted the following safety initiatives during the reporting period:

Objectives	Initiatives
Creating a safety culture	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Capacity building</li><li>&gt; Regular safety audits</li><li>&gt; Regular toolbox talks and safety reminders</li></ul></div></div>
Perform workplace inspections	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Workplace inspections are being carried out by supervisors and safety personnel</li><li>&gt; Corrective actions are immediately taken and preventative measures instituted</li></ul></div></div>
Risk Management: The primary objective of the Risk Assessment Program is to assist managers to identify and eliminate/mitigate all reasonably foreseeable hazards and, whenever it is not possible to eliminate such hazards, to find ways and means that are formulated to control the effect of the identified hazard	<div><div></div><div><p>These assessments are conducted by a team of individuals who are competent in their various disciplines and relate to the following:</p><ul style="list-style-type: none"><li>&gt; When a new production process is introduced</li><li>&gt; Whenever new machines, equipment or methods are introduced.</li><li>&gt; Whenever near miss incidents occur as a result of ineffective operating procedures, works Instructions or standards</li><li>&gt; Whenever any changes take place which may have an effect on the health and/or safety of employees</li></ul></div></div>
Workplace assessments are conducted by line management and are carried out on a daily basis. Front line supervisors are included in this process	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Supervisors and operators complete logbooks, safe operating checklists, and pre-use checklists etc</li></ul></div></div>



INSTALLATION OF SAFETY NOTICE BOARD AT KIPUSHI SHAFT 5

KAMOA-KAKULA PROJECT

The current milestone achievement at the end of December 2017 is 8,686,769 LTI-free hours. In accordance with its Health and Safety Management Plan, the Kamoa-Kakula Project instituted the following safety initiatives during the reporting period:

Objectives	Initiatives
Creating a safety culture	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Weekly group safety meetings are held at the Kamoa camp and the Kakula work area during which relevant safety topics are emphasized in English, French and Swahili</li><li>&gt; Supervisors and Safety Personnel are involved in continuous safety coaching</li><li>&gt; HSE Committee meetings are held every second month and employee concerns are discussed and addressed</li></ul></div></div>
Review pre-work risk assessments systematically	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Pre-work risk assessments at all work areas with input and buy-in of all employees in the work group</li><li>&gt; Mitigating actions decided on by work groups are followed</li></ul></div></div>
Perform workplace inspections	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Workplace inspections are being carried out by supervisors and safety personnel</li><li>&gt; Corrective actions are immediately taken if any unsafe conditions and unsafe acts are identified</li></ul></div></div>
Safety training initiatives	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Ongoing safety employee training initiatives include Modern Risk Management and Construction Safety</li></ul></div></div>
Specific safety targets	<div><div></div><div><ul style="list-style-type: none"><li>&gt; The TRIFR achieved during 2017 is a 28% improvement on the previous year</li></ul></div></div>



KAMOA-KAKULA 7 MILLION LTI FREE HOURS CELEBRATION

Our health statistics and initiatives

Ivanhoe Mines prioritizes employee health and wellness. In addition to occupational health and hygiene services, a fully equipped medical emergency response team is deployed at each project site.



KIPUSHI EMERGENCY SERVICES STAFF READY FOR ANY EVENTUALITY



PLATREEF PROJECT

Health objectives

- The Platreef Project team set and achieved the following health targets for the reporting period:
- > No significant noise-induced hearing loss cases.
  - > No new cases of silicosis.
  - > All employees to be offered health counselling with an option of human immunodeficiency virus (HIV) testing before the end of 2017.
  - > All employees to be screened for tuberculosis (TB).

Objective	Intervention
Provide primary health care to employees at the on-site health clinic	<ul style="list-style-type: none"><li>&gt; 82 chronic patients visited the clinic monthly:<ul style="list-style-type: none"><li>– Chronic hypertension – 63</li><li>– Diabetes – 13</li><li>– Diabetes and hypertension – six</li></ul></li><li>&gt; Clinic patients for 2017 – 328</li><li>&gt; HIV testing 2017 – 403</li><li>&gt; Full TB testing 2017 – 74</li></ul>
Promote employee wellness in the workplace	<ul style="list-style-type: none"><li>&gt; Workplace peer education program in place</li><li>&gt; Minimum standard of fitness to perform work and medical surveillance instituted</li><li>&gt; Male and female condom distribution continued</li></ul>
Manage workplace health and hygiene	<ul style="list-style-type: none"><li>&gt; Noise monitoring conducted regularly</li><li>&gt; Active monitoring of airborne pollutants</li><li>&gt; Active monitoring of potable water quality</li><li>&gt; Biological monitoring of facilities</li><li>&gt; Active monitoring of underground ventilation</li><li>&gt; Monitoring of noxious and or flammable gasses</li><li>&gt; Surface blast monitoring</li></ul>
Conduct health initiatives in the Project’s host communities	<ul style="list-style-type: none"><li>&gt; Home-based peer education program implemented</li><li>&gt; Digital safety campaign focusing on road, child and home safety topics (199 employees have been trained by December 31, 2017)</li><li>&gt; Health campaigns on HIV/Acquired Immue Deficiency Syndrome (AIDS), TB, sexually transmitted diseases and general healthcare implemented</li></ul>
Implement health-based capacity building programs for employees and contractors	<ul style="list-style-type: none"><li>&gt; Health campaigns based on the National Health Calendar are an active part of the monthly HSE committee meetings</li></ul>



KIPUSHI PROJECT

Health objectives

In accordance with DRC regulation, the Kipushi Project provides primary health care services to all staff members and their families. Results achieved by the Kipushi medical care team during the reporting period are listed in the following table.

Objective	Intervention
Provide primary health care services to all employees	> 338 employees treated
Provide primary health care to the family members of employees	> 147 spouses treated > 264 children treated
Provide employees with transportation to hospital for primary health care issues	93 employees transported to hospital
Implement health-based capacity building programs in the work place	All 471 Kipushi employees and all 158 contractors have been trained in: <ul style="list-style-type: none"><li>&gt; Cardio-respiratory resuscitation</li><li>&gt; Malaria prevention</li><li>&gt; Hypertension</li><li>&gt; Trachoma (eye disease)</li></ul>



Health initiatives

In addition to the health care provided to employees and their dependants, the following health initiatives were implemented during the reporting period:

**Malaria awareness campaign in schools**  
The Kipushi community relations and medical teams visited 18 schools during the reporting period to raise awareness of the risks of misdiagnosing malaria. The team introduced the Know for Sure campaign, co-sponsored by Ivanhoe Mines, to approximately 3,045 school children, 65 teachers and 30 parents who attended the sessions.

**Malaria prevalence mapping in the Kipushi Project’s host communities**  
Kipushi staff used innovative geolocation software (What3Words) to map the prevalence of malaria in rural areas surrounding the Kipushi Project. The data gathered will be used to effectively plan future prevention campaigns. 375 households were surveyed.

**Vaccination program support**  
The Kipushi Project supported two national vaccination campaigns against polio and yellow fever during the reporting period, through provision of diesel for the vehicles of health care workers. This initiative ensures that health care workers can reach remote areas. Aproximately 42,000 children were vaccinated during these campaigns.

# KNOW FOR SURE MALARIA INITIATIVE AT KAMOA-KAKULA AND KIPUSHI

## SPECIAL REPORT

The groundbreaking Know for Sure Campaign is an Ivanhoe Mines initiative in collaboration with the DRC Ministry of Health and Fio Corporation, a Toronto-based global healthcare technology company. The initiative has introduced integrated diagnostic and data technology to provide automated, rapid and reliable testing and real-time reporting in the DRC provinces of Haut-Katanga and Lualaba – two malaria-burdened regions that host Ivanhoe Mines' Kipushi Project and the Ivanhoe-Zijin joint venture Kamoa-Kakula Project.

A significant benefit of Know for Sure is that a total of 248 private and public health facilities now offer on-the-spot malaria testing services to rural communities and urban centres, guiding treatment according to national protocols. Health workers at these facilities are using 300 Deki Readers, Fio's intelligent diagnostic device based on mobile telephone technology, to more accurately diagnose malaria and record results.

Deki Readers, used with commercially available, rapid diagnostic tests, offer step-by-step guidance for performing tests, automate the analyses and upload data to the Fionet web portal. They ensure the capture of patient information, symptoms and prescribed treatment information, and eliminate human error in reading diagnostic test results. Program health care managers are able to log on to the Fionet portal to review real-time reports automatically generated from the data.

PUPILS SHOW THEIR KNOW FOR SURE STICKERS RECEIVED AS PART OF A MALARIA AWARENESS CAMPAIGN

MAP OF MALARIA INCIDENCE IN KIPUSHI

Pink circles indicate the number of people in an area who reported to have malaria on the day of the survey. The large pink circles indicate more than 10 people with malaria within the radius of the circle.

## Program highlights

### Training of health care workers

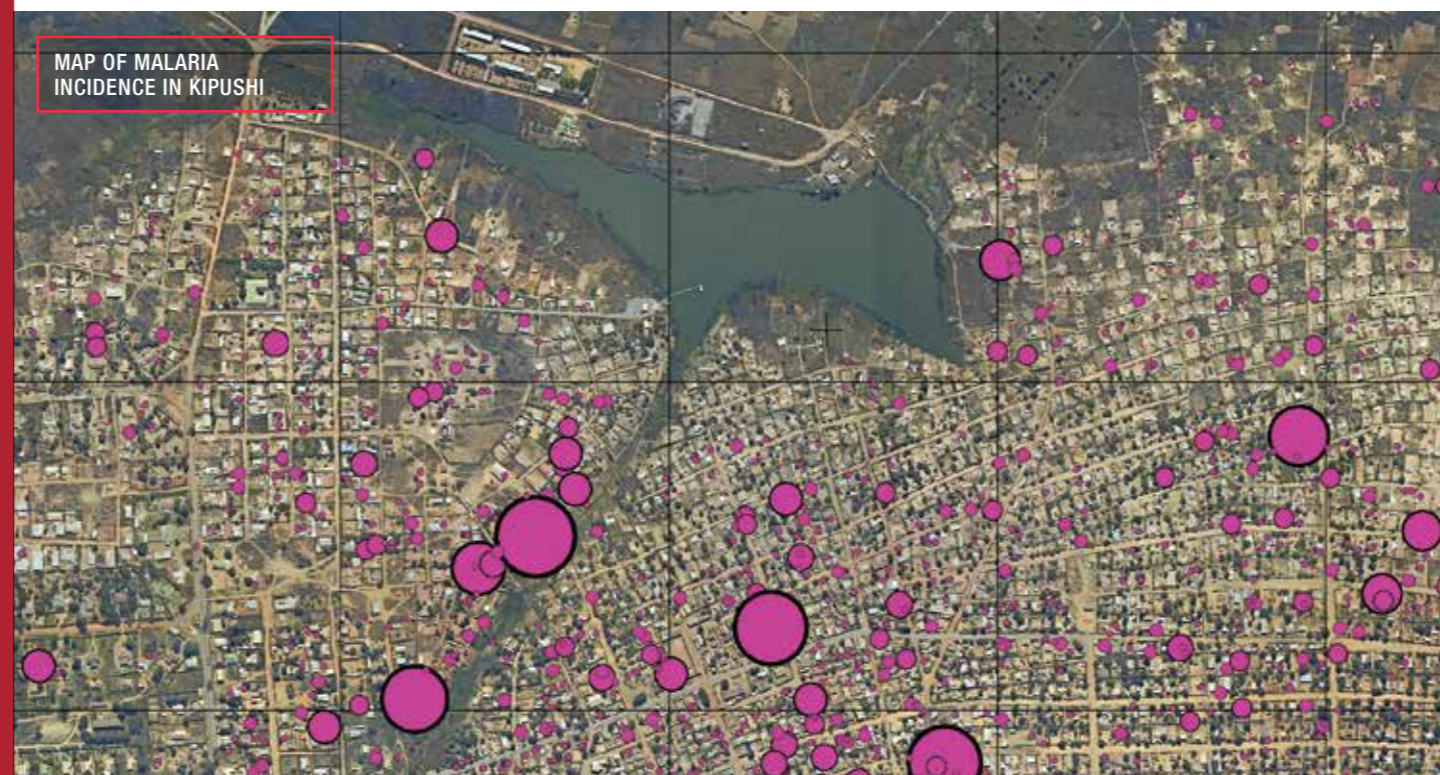
- > More than 600 health care workers have been trained to use Deki Readers for clinical diagnoses.
- > 12 Congolese "Master Trainers" have been trained to teach health workers and program managers how to integrate Deki Readers and the Fionet web portal into their operations.

### Remote data access

- > More than 100 DRC government officials in the health sector have access to the online healthcare management portal to improve data-driven decision-making.
- > National and provincial health managers use the portal more than 200 times each month to guide their program.

### Improved diagnostics and statistics

- > As at December 31, 2017, more than 100,000 patients reporting symptoms characteristic of malaria (fever, chills, headache, and sweats) were tested with the use of Deki Readers.
- > 66% tested negative for malaria, thereby saving unnecessary presumptive and costly medical treatment and allowing medical practitioners to focus on other possible causes of the illness.
- > Resource planning and identification of longer term trends.
- > Health care managers use Fionet data to monitor stock and consumption of commodities such as rapid diagnostic tests and treatment medication, and performance of health care workers measured by error rates and throughput.
- > Fionet positivity diagnostic data (people who report to clinics for treatment) can be used as a proxy for malaria prevalence to estimate the portion of people who are ill with the disease and to see changes and trends over time.
- > Decreasing annual trend in malaria positivity rate in all patients – from 49% to less than 24.6% (during the period January 1, 2016 – December 31, 2017).
- > Significant reduction in annual malaria positivity in children under the age of five – from 60% to 36.1% (during the period January 1, 2016 – December 31, 2017).



KAMOA-KAKULA

In accordance with DRC regulation, the Kamoa-Kakula Project provides primary health care services to all staff members and their families. The Kamoa-Kakula medical care team achieved the following results during the reporting period:

Objective	Intervention
Provide primary health care to employees and their families	<div><div></div><div><ul style="list-style-type: none"><li>&gt; 3,504 medical examinations and 1,360 health inductions have been conducted from January 1, 2017 – December 31, 2017. 12 toolbox talks have been held on disease prevention</li><li>&gt; A total of 17,828 male and female condoms have been distributed</li><li>&gt; Four HIV/AIDS counselling and HIV testing sessions have been arranged in Kamoa, Kolwezi and Kakula, during which 50 individuals were tested and one new HIV-positive case diagnosed. The HIV-positive individual is undergoing treatment</li><li>&gt; 213 cases of malaria have been reported during this period. The majority of these were Kakula-based employees and contractors, specifically from Titan Drilling International. Two awareness campaigns were launched to help reduce the occurrence of malaria in this area</li></ul></div></div>
Promote employee wellness in the workplace	<div><div></div><div><ul style="list-style-type: none"><li>&gt; A mental health awareness campaign was held with focus on how to avoid stress and depression, the importance of physical exercise and water consumption</li><li>&gt; Water dispensers have been placed in strategic locations in the workplace to increase individuals' intake of water</li><li>&gt; The facilities management company at the Kamoa camp purchases fresh fruit and vegetables from community gardens to provide healthier options during mealtime</li></ul></div></div>
Manage workplace health and hygiene	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Hygiene inspections at the kitchen and mess areas are conducted regularly</li><li>&gt; Ablution facilities are also inspected regularly to monitor hygiene conditions</li><li>&gt; Two awareness campaigns for employees and contractors were held on personal hygiene</li></ul></div></div>
Conduct health initiatives in the Project's host communities	<div><div></div><div><ul style="list-style-type: none"><li>&gt; Support refurbishment of the Kantala Clinic</li><li>&gt; Supply of selected medical equipment at Musokatanda and Mpala health care centers</li><li>&gt; Consumable and logistic support to vaccination campaigns organized by Kanzenze health zone</li><li>&gt; Malaria awareness campaign conducted in 15 hamlets involving 45 households with focus on pregnant women and children under the age of five years old. More than 100 individuals reached and 86 mosquito nets distributed</li><li>&gt; HIV awareness campaign conducted in four primary schools (Muvunda, Kamisange and Kaponda) reaching approximately 500 individuals with information on HIV prevention</li></ul></div></div>
Implement health-based capacity building programs for employees and contractors	<div><div></div><div><div>Topics covered:</div><ul style="list-style-type: none"><li>&gt; HIV/AIDS and sexually transmitted diseases</li><li>&gt; Family planning</li><li>&gt; Hypertension</li><li>&gt; Diabetes</li><li>&gt; Snake bite prevention</li><li>&gt; Depression</li><li>&gt; Malaria prevention</li><li>&gt; Cholera</li></ul></div></div>



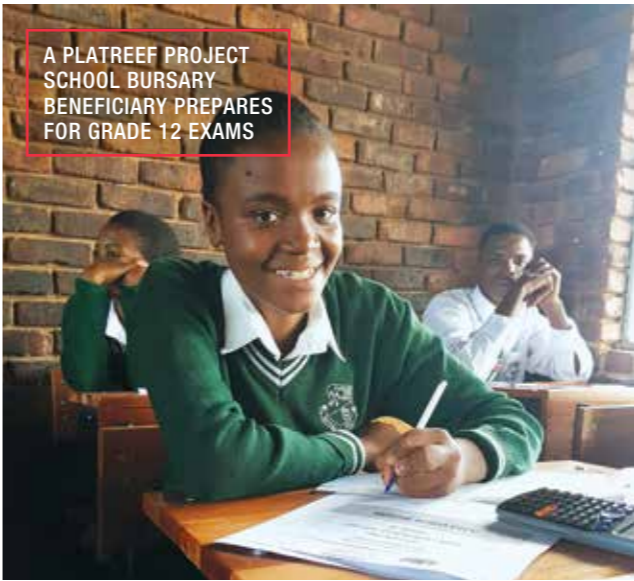
5.2.2 Human resource development

PLATREEF PROJECT

HRD at the Platreef Project is guided by operational requirements and mandated by the Project's SLP. An SLP is a social and labour development plan, implemented and reviewed in five-year intervals and regulated by South African mineral legislation. The table below provides an overview of the Platreef Project's HRD achievements against the five-year targets set in the SLP.

HRD interventions – Platreef Project SLP (2015 – 2019)					
Type of intervention	2015	2016	2017	Total achieved by Dec 2017	Total planned (2015 – 2019)
Adult education and training – community	167	199	217	583	450
Adult education and training – employees	12	12	13	37	27
Core and non-core training – community	578	563	336	1,477	2,185
Core and non-core training – employees	93	97	86	276	415
Internships	7	7	13	27	47
Bursaries – external	5	7	5	17	38
Bursaries – employees (study assistance)	30	8	8	46	25
Learnerships	0	3	9	13	27
Mentorships	20	0	0	20	10
Scholarships (secondary school)	60	60	80	200	265

ONE OF THE PARTICIPANTS IN THE PLATREEF PROJECT'S COMMUNITY NON-CORE TRAINING PLAN



KIPUSHI PROJECT

HRD at the Kipushi Project is based on the progressive need for a variety of skills as the mine returns to production. A formal skills transfer program is under way, through which expatriate workers build the skills bases of local employees. In addition, the creation of IDPs for all employees, Paterson Band C\* and above, are in progress.

- During the reporting period, the following training initiatives were conducted at Kipushi:
- > Ten managerial employees, directly involved in mining, attended a training session facilitated by officials from the National Department of Mines in Kipushi. The participants were issued with Mining Certificates by the Department.
  - > Cardiopulmonary resuscitation training was given to 489 employees by the emergency personnel on site.
  - > Nine local operators were trained in handling the newly acquired Rham load haul dumper.
  - > Five local operators were trained in handling newly acquired Bell equipment.
  - > 30 employees attended a defensive driving course to increase driver's safety in adverse circumstances.
  - > Employees were trained on Organization for the Harmonization of Corporate Law in Africa (OHADA) system analysis.
  - > Employees were trained as trainers in the Micro-MBA small business training programme.

KAMOA-KAKULA PROJECT

HRD at the Kamoa-Kakula Project is based on the progressive need for a variety of skills as the mines move into production. A formal skills transfer program is under way, through which expatriate workers build the capacity of local employees. In addition, the creation of IDPs for all employees, Paterson Band C and above, are in progress.

During the reporting period, the following training-related initiatives were conducted at Kamoa-Kakula:

Educational assistance

- > Four employees were supported financially in their studies.
- > The Chamber of Mines and the University of South Africa (Unisa) agreed to use the Kamoa-Kakula Project as an examination centre where the training coordinator is registered to supervise and observe examinations.

Skills transfer program training initiatives during 2017

- > 85 employees attended courses
- > 169 skills transfer sessions recorded
- > 102 recorded coaching sessions took place
- > A total of 356 training events were conducted



\* Paterson Job Grading System is used internationally to grade a job, based on decision-making requirements.

Operator training and multi-skilling completed

- > 17 local operators have been multi-skilled on at least two machines and, on average, five different types of machines.
- > A development program for volunteers on underground equipment was launched.
- > Eight operators trained on surface equipment.
- > Five operators trained on underground roadways.

Career development program

- > 22 employees were identified as high flyers or persons with potential. The high flyers were identified on the basis of four criteria set by a development panel consisting of the Head of Department team on site:
  - Proven ability to deliver under pressure
  - Delivered work improvement projects
  - Research into new methods and staying in touch with developments in their field
  - Demonstrated willingness to learn
- > The career development program consists of monthly mentor and program manager review sessions, quarterly manager assessment sessions and development panel assessments (two per year).
- > The participants in the career development program took part in two development panel assessment sessions in 2017, and each participant now has an updated schedule for 2018.

Individual development plan

- > The IDP is based on the performance management process started in January 2017. The aim of this program is to ensure that each employee has an individualized development plan.
- > 33 formalised IDP charters were agreed upon and the development interventions are being scheduled for 2018.

Succession planning

- > An organizational structuring process was completed to define the future labour needs of the organization.
- > A Congolese national employee was identified as successor for each of the positions at management and supervisory level.
- > A development program is in place for each of the candidates.

DRC National Training Institution (INPP) initiatives

- Employee participation in the INPP training interventions:
- > Three carpenters
  - > Nine electrical maintenance
  - > Three boilermakers
  - > Five painters and
  - > Three masons
  - > 16 departmental training instructors
  - > 19 artisans (entry level)

5.2.3 Local employment

Ivanhoe Mines' recruitment policy prioritizes local people from the projects' host communities. To this end, the Company has local recruitment procedures in place which ensure that all positions are advertised internally and locally first, and are filled externally only if a suitable local candidate cannot be found. All unskilled and casual labour requirements are sourced locally. Ivanhoe Mines ensures that all on-site contractors also comply with these local recruitment policies and procedures. In accordance with the Company's skills transfer and development program and South African regulatory requirements, an increasing number of management positions (Paterson Band D and above) are being filled by local employees.

Ivanhoe Mines local employment statistics

<b>Platreef Project</b>	
Non-local* employees	32%
Local employees	68%
<b>Kipushi Project</b>	
Non-local** employees	8%
Local employees	92%
<b>Kamoa-Kakula Project</b>	
Non-local** employees	15%
Local employees	85%

Local employees in management statistics

Percentage of local employees in management

Local employment rates		
<b>Platreef Project</b>		
Total management employees	45	100%
Historically disadvantaged South Africans (HDSAs)***	26	58%
Non-HDSAs	19	42%
<b>Kipushi Project</b>		
Total management employees	17	100%
Congolese nationals	10	59%
Expatriates	7	41%
<b>Kamoa-Kakula Project</b>		
Total management employees	32	100%
Congolese nationals	10	31%
Expatriates	22	69%

\* Not from Mogalakwena Local Municipality (MLM)

\*\* Not from DRC

\*\*\* HDSA refers to any person, category of persons or community, disadvantaged by unfair discrimination before the Constitution of the Republic of South Africa, 1993, came into operation.

At our Kamoa-Kakula and Kipushi projects, active management development programs are in place to progressively increase the number of Congolese nationals in the Company's management.

## 5.3 SOCIAL AND RELATIONAL CAPITAL

Ivanhoe Mines values the social licence to operate which we obtained from the host communities of our principal projects. To this end, the Company has developed sustainability, corporate social investment and community relations policies to ensure that we maintain our social licence to operate, whilst also creating shared value with our local stakeholders. Social development targets and initiatives are drawn up within the regulatory framework of the host countries and in consultation with affected stakeholder groups.

### 5.3.1 Local socio-economic development

Local socio-economic development focuses mainly on the establishment of local infrastructure, including agricultural infrastructure, to enable a healthy, thriving community which can partner in driving socio-economic growth.

At the Platreef Project, regulatory requirements for the development phase of a mine pursuant to the South African

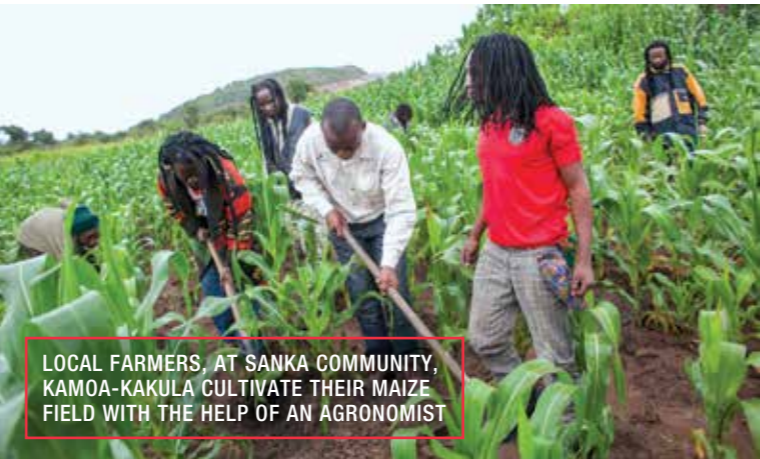


LEARNER STARTING A MATHS PROGRAM IN THE COMPUTER LABORATORY INSTALLED BY THE PLATREEF PROJECT

Mining Charter drive the SLP spending on these critical areas: local economic development (LED), employee and community skills development, enterprise and supplier development (ESD) and local procurement (see Appendix 7.6, page 86, for more information).

At the Kamo-a-Kakula Project, a large portion of local socio-economic initiatives are geared towards food security and education, as the project is situated in a rural area historically characterized by extreme poverty and low literacy levels.

At the Kipushi Project, existing town infrastructure and the need for potable water drove the decision to invest a large portion of the socio-economic budget in continuously providing potable water to the town of Kipushi. The long-term sustainable social development strategy for Kipushi is under review to ensure alignment with the regional development plan and technical studies that are being conducted.



LOCAL FARMERS, AT SANKA COMMUNITY, KAMOA-KAKULA CULTIVATE THEIR MAIZE FIELD WITH THE HELP OF AN AGRONOMIST



THE LESEDI EARLY CHILDHOOD DEVELOPMENT AND BUSINESS CENTRE AT THE PLATREEF PROJECT

The following local infrastructure and development support was provided at the prospective projects over the reporting period:

Platreef	Kipushi	Kamo-a-Kakula
Educational infrastructure and support		
146 waterless sanitation units commissioned to local schools. Maintenance contract awarded to a local company owned by people with disabilities.	Duck breeding program for sustainable food delivery scheme in schools.	Construction and furnishing of a primary school at Muvunda community.
Math and science foundational development in primary schools.	Readers are Leaders program – donation of learning materials.	Construction and furnishing of a secondary school at Kaponda community.
Vegetable gardens and rainwater harvesting at two schools.	Local artisan student development program.	Construction and furnishing of a primary school at Kamisangi community.
HIV/AIDS peer education program in five secondary schools.	School bursaries to 20 high-performing students.	Alpha Congo literacy program continues with 75 participants.
Six computer and five science laboratories installed at schools.	Alpha Congo literacy program with 80 female participants.	
Upgrading administrative offices at six schools.		



UPGRADED MAIN ASPHALT ROAD LEADING INTO KIPUSHI

Platreef	Kipushi	Kamoa-Kakula
Community infrastructure and support		
130 waterless sanitation units commissioned in 36 public spaces. Maintenance contract awarded to a local company.	Provision of potable water to the town of Kipushi.	Upgrading of the road infrastructure network from Luilu to Musokantanda main road at Tshimbundji village.
Upgraded Lesedi Community Care Centre in Ga-Kgobudi community.	Upgrading of the access road into the town of Kipushi and road signage for the access road into Kipushi.	Three boreholes drilled respectively at Musokantanda Clinic, Muvunda village and Mundjendje community.
Provision of a water tank for a previously informal community next to the National Road.	Refurbishment of local government offices.	Collaboration on upgrading the main airport road from Kolwezi in progress.
Eight free Wi-Fi hotspots installed in host communities.	Luvua community storm water drain repairs.	Upgrade in local power provision through SNEL partnership.
12 rain water harvesting units were commissioned in two directly affected host communities.	Provision of electricity to Cinquantenaire Hospital, schools and other social infrastructures.	
	Rehabilitation of manual potable water pump at Mimbulu village.	



BENEFICIARIES OF THE KAMOA-KAKULA POULTRY PROGRAM OPEN THEIR FIRST BANK ACCOUNTS

Platreef	Kipushi	Kamoa-Kakula
Special projects – focus on women and children		
Platreef Project Youth Day held on National Youth Day June 16, 2017: 3,000 – 4,000 participants.	Support to schools and Cinquantenaire Hospital during Women's Month.	Mosquito nets distributed to pregnant women and children under five years of age from 15 Kakula hamlets and five villages near mine area after malaria awareness campaign in May 2017 and December 2017.
	Support to government-led vaccination campaigns.	Awareness campaign conducted with youth around Kakula on safety issues before the Kakula first blasting.
	Fionet Know for Sure Campaigns at Mimbulu village and in Kipushi town.	
	Duck breeding program for sustainable food delivery to female artisanal miners.	



## SPECIAL REPORT

### PLATREEF PROJECT YOUTH DAY 2017

The Platreef Project declared 2017 as The Year of the Youth and hosted an event on National Youth Day, June 16, 2017, at the Mahwelereng Stadium in Mokopane.

The day included:

- > The launch of eight free Wi-Fi hotspots in local communities and training in the usage of Maru a Mokopane digital engagement platform
- > A career exhibition
- > Technology demonstrations
- > Dance competitions
- > A 5-kilometre fun run
- > Math, science and language games competitions such as chess and Scrabble
- > Performance by King Monada, a local music star
- > Access to legal, engineering and other subject matter experts

“The connection to the Internet Ivanplats will be providing to our villages is an essential resource in today's modern economy that none of us can afford to live without. This launch of free public Wi-Fi affirms our commitment as government to the National Development Plan's vision of a robust information society and knowledge economy that is both inclusive and prosperous.”

Mogalakwena Local Municipality Acting Mayor, Councillor Pheladi Olifant



### Youth day in numbers:



3,500 –  
4,000  
visitors

5 km  
splash  
dash

1,574  
people  
digitally  
activated

32  
corporate  
sponsors

6,000  
free  
meals

**IVANPLATS**  
An IVANHOEMINES company



AERIAL PHOTOGRAPH OF THE PERFORMANCE OF KING MONADA ON YOUTH DAY



COLOUR RUN ENTRANTS AT YOUTH DAY



PARTICIPANTS IN THE CHESS COMPETITION AT YOUTH DAY



DANCE COMPETITION PARTICIPANTS AT YOUTH DAY

SPECIAL REPORT

LIVELIHOOD PROGRAM  
AT KAMOA-KAKULA

The Livelihood Program at Kamoa-Kakula started in 2011 in response to a decree by the Governor of Katanga Province that all mining companies should have at least 500 hectares of maize under cultivation to strengthen food security in the region. Ivanhoe Mines made a strategic decision not to start a commercial farm, but rather to build capacity in local communities to enable local farmers to cultivate a collective 500 hectares of maize.

From modest beginnings, the program has grown into a large-scale operation, with hundreds of beneficiaries growing maize and vegetables and selling poultry and honey. Commercial fish ponds, pineapple and banana production are in scoping phase. The Livelihood Program has a demonstration garden where environmentally friendly farming practices are tested and adjusted before community members are trained on applying the practices in their own food gardens.

The program helps farmers to sell their products to the mine camp kitchens and further afield, process maize into flour and increase production incrementally. The program is also an essential part of the livelihood restoration program undertaken by the Kamoa-Kakula project for local farmers who lost access to their fields due to mine surface infrastructure development (refer to section 5.3.3 on page 50).



COMMUNITY EXTENSION WORKER AND KAMOA-KAKULA LIVELIHOOD AGRONOMIST WITH THE FIRST OF THE PINEAPPLE HARVEST



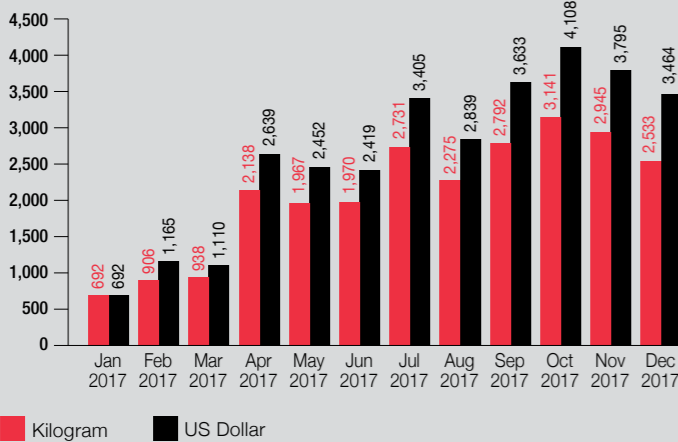
LOCAL WOMEN INVOLVED IN THE KAMOA-KAKULA POULTRY PROJECT WITH EGGS GATHERED TO SELL AT A LOCAL MARKET



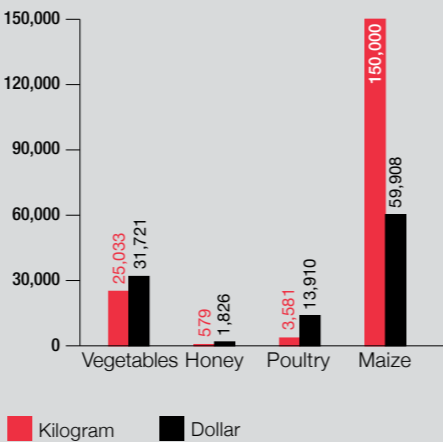
COMMUNITY BEEKEEPERS AT KAPONDA WITH A KAMOA LIVELIHOODS STAFF MEMBER

Current production and beneficiary statistics for maize, honey, vegetables and poultry are as follows:

Community vegetable sales trend 2017



Livelihood production 2017



KAMOA-KAKULA LIVELIHOOD EMPLOYEES HARVESTING THE DAILY CATCH FROM THE COMMUNITY FISHPONDS

### 5.3.2 Enterprise and Supplier Development

**Because Ivanhoe Mines' principal projects are being developed in emerging economies, we have instituted programs to build capacity in suppliers residing in our footprint areas to increase our local procurement statistics.** At our Platreef Project, this program is guided by the South African Mining Charter as well as the dti's B-BBEE Codes of Good Practice for the Mining Industry. We set internal targets at Kamoa-Kakula and Kipushi to ensure that the development of our projects bring direct benefit to local businesses through our supply chain.

#### Enterprise and Supplier Development initiatives

The presence of a mining development project brings indirect economic benefit to local communities by stimulating the local economy. Our business development initiatives target active suppliers, potential suppliers and other large and small enterprises.

#### PLATREEF PROJECT

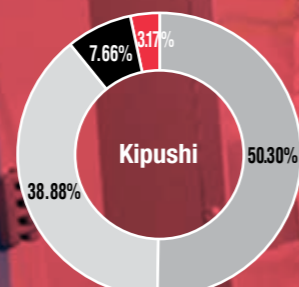
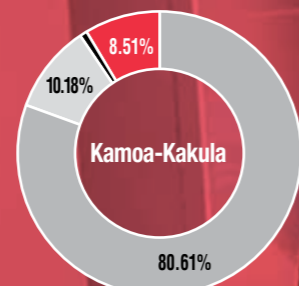
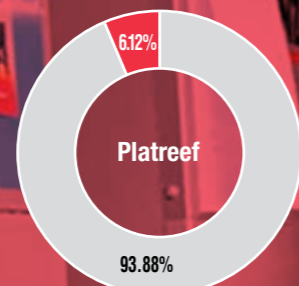
The Platreef Project has a well-developed ESD department which implements and supports projects undertaken in the Project's SLP. Initiatives include:

- > Negotiation for ring-fencing of specific products and services from local suppliers.
- > Engagement with primary contractors for commitment to the Platreef Project's local procurement and development policies.
- > Supplier training sessions lending support to comply with requirements, such as the contractor's pack.
- > Structured supplier development programs to build capacity in existing businesses. This program had 34 beneficiaries during the reporting period.
- > Small-, micro- and medium enterprise (SMME) training, coaching and development into the mine supply chain. This Micro-MBA had 14 beneficiaries during the reporting period.
- > Creation of locally-owned businesses in partnership with beneficiaries from the host communities. Interest-free financing for these start-up businesses is provided by the SLP-linked Lefa Trust. Once loans are repaid, the funds are made available to

support other entrepreneurial and economic business initiatives. The ESD department has established the following businesses successfully to date:

- HEMA Manufacturing – 14 local beneficiaries manufacturing dust masks.
  - Thlwekisha Laundry – ten local beneficiaries providing on-site laundry services for personal protective gear.
  - Skhaftin Site Kiosk – five local beneficiaries providing affordable and nutritious lunches to site workers.
  - Digital micro enterprises for Maru a Mokopane – 17 local beneficiaries on an online management system providing training to local residents on how to use the free Wi-Fi and online communication portal.
- > The ESD department works closely with the Platreef Project's procurement team to ensure that local suppliers are given opportunities to supply goods and services to the mine.

#### Our local procurement statistics



● DRC ● South Africa ● Other African ● Other

**BUSINESS OWNER AT THLWEKISHA LAUNDRY AT THE PLATREEF PROJECT**



**COMMUNITY SCHOOL IN KAPONDA AT THE KAMOA-KAKULA PROJECT BUILT BY A LOCAL CONSTRUCTION COMPANY**



#### KAMOA-KAKULA AND KIPUSHI PROJECTS

ESD at Kamoa-Kakula and Kipushi is in the planning phase. Initial planning included the participation of eight staff members (two at Kipushi and six at Kamoa-Kakula) in a Micro-MBA train-the-trainer course, during which they were equipped with the necessary skills to provide small business training and coaching. The course included modules on costing and pricing, money management and writing a business plan. Community-based participants in the Kamoa-Kakula Livelihood Program will commence with the first on-site Micro-MBA course early in 2018.

“Relocation of graves is a complicated, emotive matter, but our legal and compliance and community relations teams worked tirelessly to comply with all regulations governing this process, and to treat the next of kin with the utmost respect and sensitivity.”

Benjamin Sekano, General Manager, Platreef Project

### 5.3.3 Grave relocation and livelihood restoration program

#### PLATREEF PROJECT

To secure access to the surface area needed to develop the Platreef Project, the Company is required to engage in three prescribed land use processes: grave relocations, a long-term surface lease agreement and livelihood restoration of affected land users. The Platreef Project team followed all legal and cultural requirements during the grave relocation process.

The livelihood restoration and surface lease processes are under way.

Phase 1: January 2015 to February 2017  
75 graves successfully relocated

#### Grave relocation – high-level timeline and current progress

- > Identification of graves, affected communities and next of kin.
- > Graves divided into Phase 1, Phase 2 and Phase 3 graves based on location.
- > Engagement with community leadership, next of kin and regulatory authorities.
- > Appointment of a qualified archeological heritage consultant (PGS Heritage) to assist in: crafting the process, obtaining permits, engagement, exhumation and reburial.
- > PGS Heritage prepared and submitted the applications for the first phase of 94 graves to be relocated to the following authorities:
  - Mogalakwena Local Municipality (MLM);
  - Waterberg District Municipality;
  - South African Heritage Resources Agency (SAHRA); and
  - Limpopo Department of Co-Operative Governance, Human Settlements and Traditional Affairs (COGSTA).
- > Individual memorandums of understanding were signed with the deceased's next-of-kin.
- > Final permits were granted by all four authorizing bodies, following which all final arrangements were made with the affected next of kin for the exhumation and reburial process.
- > Process was temporarily paused due to a legal challenge by an individual unrelated to any of the deceased persons or their kin.
- > A South African High Court Judgment declared the grave relocation lawful and compliant and gave permission to proceed.
- > Seventy five graves were successfully exhumed and relocated to agreed upon locations.
- > Phase 2 includes 31 graves. Permits applications have been submitted to the authorities. Approvals have been received from the MLM and Waterberg Municipality. The SAHRA permit is still pending and has been delayed following an objection from an individual unrelated to any of the deceased or their kin.

Current: Phase 2

#### Long-term surface lease agreement background

- > The surface area on which the Platreef Project is being developed belongs to the local community and is held in trust for their benefit by the national government.
- > The surface rights to this area are distributed as agricultural land by the Traditional Authority in this area, the Mokopane Traditional Council headed by Kgoshi LV Kekana.
- > Individual subsistence maize farmers and livestock farmers from three communities lost access to their maize fields and/or for grazing due to the development of the project.
- > The project team compensated affected landowners in terms of the temporary surface lease agreements conclude with the affected communities.
- > These temporary agreements are to be replaced with long-term agreements including a livelihood restoration program for affected individuals.
- > A long-term surface lease will be based on an independent valuation of the land.
- > The following government departments are involved in this process: Department of Rural Development and Land Reform (DRDLR) and COGSTA. The long-term surface lease process is prescribed by the DRDLR.
- > This long-term surface lease agreement constitutes the communal compensation, for each affected community respectively.

#### Individual livelihood restoration process high-level timeline and current progress

- > The baseline survey has been completed with most affected land users (maize field owners and livestock owners). Final surveys are expected in the first half of 2018.
- > Alternative land and livelihood options are being investigated.
- > Valuation of assets and compensation framework based on the value of crops or grazing area is in progress.
- > Engagement regarding livelihood restoration options with affected individuals will commence once formal livelihood restoration agreements have been signed with affected individuals.
- > Individual livelihood restoration plans will be implemented and provided for livelihood restoration support provided for an agreed period of time.

“ I want to thank Kamoakakula, that after a long time of engagement we are seeing the results that were promised. Now, finally, our children can be educated. ”

Gina Kuyngu Fatima, a participant in Kamoakakula relocation process

KAMOAKAKULA PROJECT

Surface development at the Kamoakakula Project necessitated economic displacement of small-scale farmers and household relocation of families in the Kakula Mine surface infrastructure area. The following activities resulted in resettlements:

- > Surface infrastructure for Kakula mine.
- > Powerline and bypass road development.
- > Extension of the Kamoakakula residential camp fence.

Procedures were followed to manage the economic displacement and household relocation process:

- 1

Identify affected areas, farmers and household owners.
- 2

Create a Relocation Working Group in collaboration with affected people, local traditional authorities, the territorial administrator and local office of the Department of Agriculture.
- 3

Conduct a baseline survey to determine the sizes of farming land, types of crops and types and sizes of structures.
- 4

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.
- 5

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.
- 6

Assist affected people to open bank accounts to safely deposit compensation money.
- 7

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

During the reporting period, the Kamoakakula team made the following advances in the economic displacement and household relocation process:

Economic displacement	
Field compensation Kakula	> 109 fields surveyed at Kakula > Total surface area of 55 hectares of crop and 23 hectares of prepared fields
Field compensation for Kansoko-Kakula powerline and bypass road	> Seven affected fields surveyed
Field compensation for Kamoakakula camp extension	> Eleven affected fields surveyed
Livelihood restoration	> The Project replaced each field with another one of similar size. Field development, seeds and fertilizers are being provided by the Project > 13 hectares of prepared fields are cleared so far
Communal compensation	> Agreed to build a primary school at Muvunda and seven houses for school personnel. Construction to start in 2018
Household relocation	
Kakula surface area	> The agreed entitlement framework consisted of in-kind compensation for structures used for living > Every household will receive a house comprising a living room, two or three bedrooms (depending on the number of structures lost) and one veranda > 45 units will be built at Muvunda village, which has been chosen as the host area > A sample house was completed and the affected people expressed their satisfaction with the size and appearance of the structure > A local contractor was appointed to build the houses and construction was completed in Q1 2018



INDEPENDENT FIELDWORKERS UNDERTAKE A FIELD SURVEY WITH A GPS DEVICE IN COLLABORATION WITH A LOCAL FARMER AND THE DEPARTMENT OF AGRICULTURE AS PART OF THE ECONOMIC DISPLACEMENT PROCESS

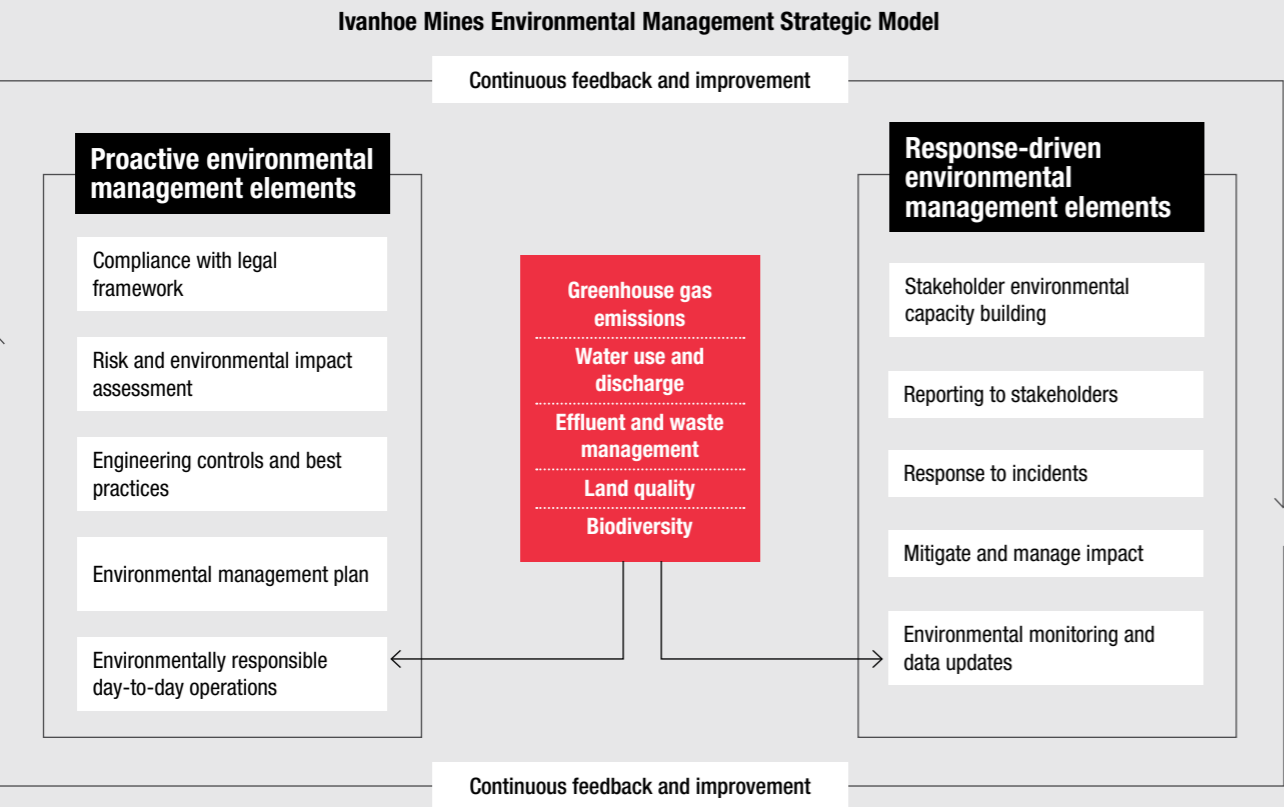


A GRASSY PLAIN AT THE KAMOA-KAKULA PROJECT

# 5.4 NATURAL CAPITAL

Ivanhoe Mines is committed to responsible stewardship of the natural environment in which we are developing our projects. We have in place proactive systems to limit the impact on the environment and mitigation measures in case of unavoidable environmental impacts.

## 5.4.1 Strategic approach to managing impacts and conserving natural resources



## 5.4.2 Compliance and continuous monitoring

Compliance with local regulations and best practice regarding our potential impact on the surrounding environment is important to us. Environmental impact assessments (EIAs) at our principal projects are at various stages of completion, depending on the study phase of the respective project. The table below provides an overview of progress to date.

Project	Study phase	EIA and compliance status
Platreef	4 Mtpa definitive feasibility study completed	> EIA completed > EIA amendment documentation submitted to authorities; currently awaiting approval > Waste licence variation application submitted to authorities pending approval > Active EMP in place
Kipushi	Pre-feasibility study completed. Definitive feasibility study beginning Q1 2018	> Baseline studies in place, supported by standard continuous monitoring practices > Full EIA update planned as part of the feasibility study
Kamoa-Kakula	Revised combined PEA being finalized. Pre-feasibility on Kakula commenced	> Approved EIAs in place > Active EMPs in place > Continued amendments to EIAs to be made as studies progress

Based on the approved EMPs at Platreef and Kamoa-Kakula and the best practice standards at Kipushi, the following environmental monitoring takes place on a continuous basis at the respective projects:

Continuous Monitoring Practices		
PLATREEF	KIPUSHI	KAMOA-KAKULA
Air quality	Air quality	Air quality
Surface water	Potable water (community)	Potable water (camp)
Ground water	Surface water	Surface water
Noise	Ground water	Ground water
Vibration (blasting)	Noise	Noise
Weather data	Vibration	Vibration
Greenhouse gas emission data	Weather data	Weather data
Waste monitoring	Greenhouse gas emission data	Greenhouse gas emission data

Monitoring reports are submitted to the respective regulators as per the requirements of the EMPs. No material impacts have been identified resulting from mining activities. Compliance with environmental regulations, licences and EMPs is managed from a central compliance tracking procedure as part of the environmental management system.



WATER ANALYSIS AT THE KIPUSHI LABORATORY



AIR QUALITY MONITORING AT KAMOA-KAKULA

### 5.4.3 Environmental targets and initiatives

The environmental targets for the respective projects are stipulated in the 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. Environmental initiatives at each project are summarized below.

Initiatives	Platreef	Kipushi	Kamoa-Kakula
Incident prevention and continuous risk management	Regular environmental audits in collaboration with site management		
Environmental inductions	Environmental inductions delivered as part of general induction		
Staff capacity building	Communication campaigns with the following topics: <ul style="list-style-type: none"><li>&gt; Snake awareness</li><li>&gt; Climate change</li><li>&gt; Water conservation</li></ul>	Communication campaigns with the following topics: <ul style="list-style-type: none"><li>&gt; Water conservation</li><li>&gt; Littering</li><li>&gt; Climate change</li></ul>	Communication campaigns with the following topics: <ul style="list-style-type: none"><li>&gt; Snake awareness</li><li>&gt; Littering</li><li>&gt; Recycling</li></ul>
Community capacity building	Communication campaigns with the following topics: <ul style="list-style-type: none"><li>&gt; Arbor Day</li><li>&gt; Water conservation</li><li>&gt; Littering</li></ul>	Collaboration with a public program on: <ul style="list-style-type: none"><li>&gt; Climate change</li><li>&gt; Deforestation</li><li>&gt; Littering</li></ul>	Communication campaigns with the following topics: <ul style="list-style-type: none"><li>&gt; Potable water in Israel community</li><li>&gt; Deforestation</li></ul>



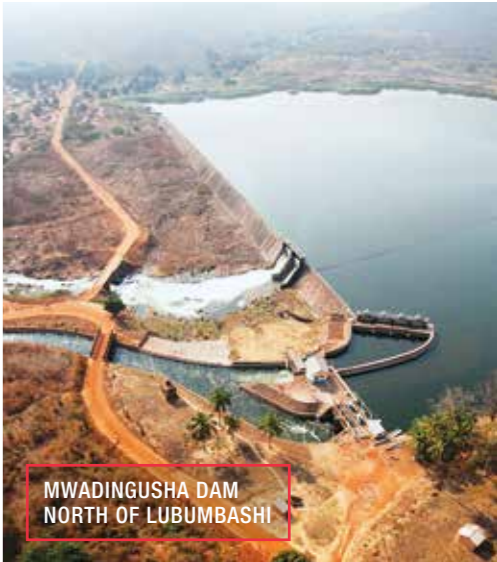
#### A. Our key water metrics

The following tables provide an overview of the key metrics of the water stewardship at our principal projects:

Ivanhoe Mines site-level water accounting (megalitres per year)				
	GROUP	PLATREEF	KIPUSHI	KAMOA-KAKULA
Withdrawals	26,735	10.4	25,404	1,321
Discharge	18,696	1.6	17,520	1,174
Consumption	8,040	8.8	7,884	147

The largest single quantity of groundwater (2,000 mega litres per year) currently being extracted is at the Kipushi Project for the portable water station which provides potable water to the town of Kipushi (180,000 people) as part of the social development initiatives. Kipushi Mine has an excess of groundwater which is being pumped to the surface to enable underground activities. Continuous pumping contributes to the Kipushi Project's high water withdrawal metrics. At the Platreef Project, all process water is being recycled for re-use.

Water withdrawal sources by project			
Water sources	Platreef	Kipushi	Kamoa-Kakula
Groundwater – renewable	✓	✓	✓
Groundwater – non-renewable		✓	✓
Process water	✓		





**B. Our response to water risk**

While water sources are abundant in the DRC and investigations to date indicate that there are multiple potential sources of water supply for the Kipushi and Kamoa-Kakula projects, both projects are continually at risk of underground flooding. Risk management strategies include primary dewatering systems to be used as backup systems in case of failure and flooding emergency response plans.

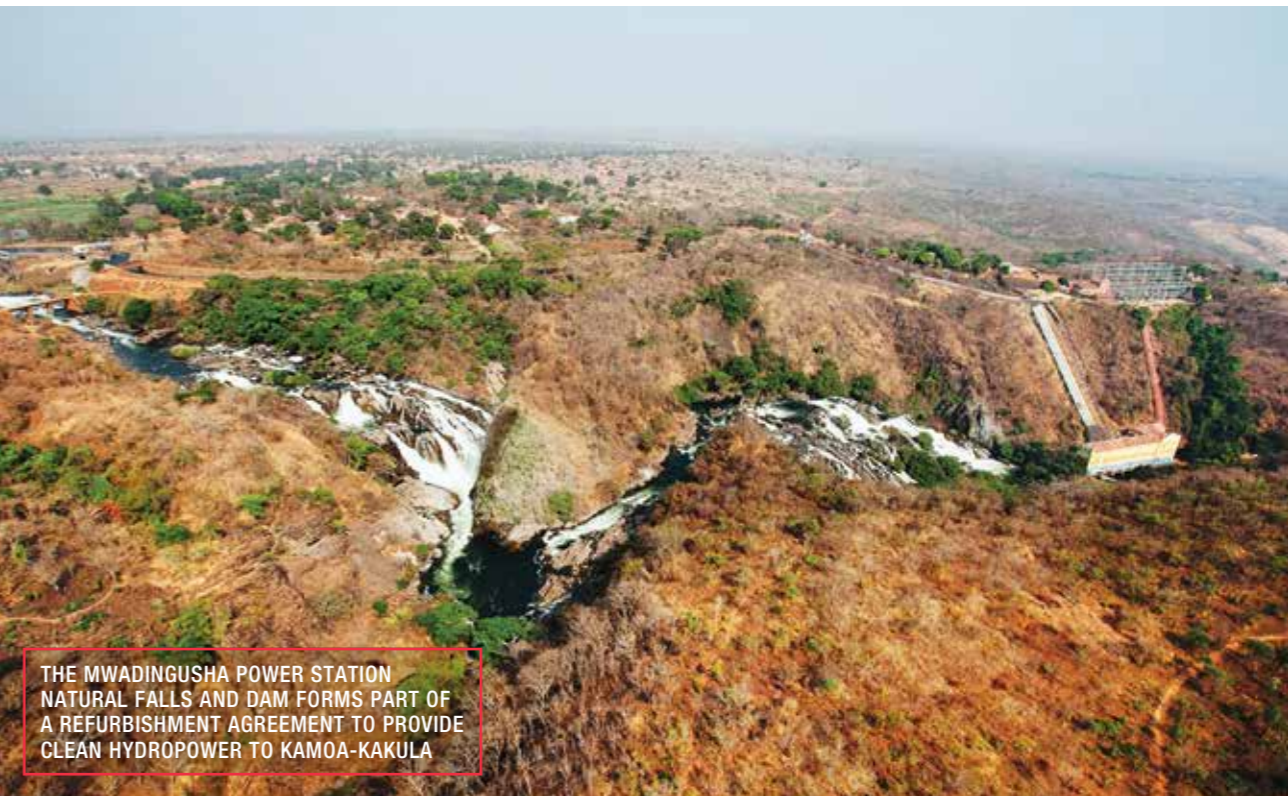
Due to the location of the Platreef Project in a water scarce area, securing sufficient sources and quantities of water poses a challenge. To mitigate this risk, the Platreef Project team will need to secure an interest in or access rights to forthcoming water development projects. The means of such access includes securing the commercial entitlement to the water source, developing the infrastructure to transport water to the Platreef Project and obtaining necessary government and regulatory permits. The Platreef Project team presently engages in the following activities to mitigate this risk:

- > Engagement with public policymakers
- > Engagement with other stakeholders in the river basin
- > Public water infrastructure investment
- > Public water infrastructure maintenance
- > Strengthening links with local communities through provision of potable water and a community water tank for a previously informal settlement

To date, the Platreef Project team has not selected a preferred method of obtaining bulk water. The ultimate decision will depend on the scope of water requirements, and the results of proposed water development projects in the area are currently in progress or under consideration. The investigative focus is the use of recycled grey water from the local Mogalakwena Municipality Waste Water Treatment Works. The proposed use of waste water for the operation of the Platreef Mine will mitigate the Company's impact on water resources in the area to a large extent.

5.4.5 Climate change and energy

Ivanhoe Mines' principal projects are exposed to physical and policy implications of a changing climate. We are acutely aware of the potential social, environmental, infrastructure and financial impacts that effects of climate change have on our developing projects. During this reporting period, we have formulated a plan for implementing an integrated climate change strategy into our core business functions.



The table below provides an overview of our progress in each of the elements of our climate change strategic plan implementation.

Climate change strategic plan implementation progress		
Element	Description	Progress
Governance	<ul style="list-style-type: none"><li>&gt; Ensure that all relevant company policies align with overall climate change strategy</li><li>&gt; Position reporting and assessment functions in the operational teams</li></ul>	<ul style="list-style-type: none"><li>&gt; Affected policies identified. Updates in progress</li><li>&gt; Responsible departments and individuals identified and notified</li></ul>
Emissions assessments	<ul style="list-style-type: none"><li>&gt; Create datasets for greenhouse gas emissions for each site with the help of a climate change specialist</li></ul>	<ul style="list-style-type: none"><li>&gt; Platreef Project dataset created and operational</li><li>&gt; Kamoa-Kakula and Kipushi datasets currently operational</li></ul>
Targets and initiatives	<ul style="list-style-type: none"><li>&gt; Set science-based targets and initiatives in how greenhouse gas emissions can be reduced/minimized based on the baseline data from first year of assessment</li></ul>	<ul style="list-style-type: none"><li>&gt; Our targets and initiatives are dependent on our baseline information and will be formulated once all datasets are operational</li></ul>
Opportunities and threats	<ul style="list-style-type: none"><li>&gt; Identify opportunities to reduce greenhouse gas emissions and the effects of climate change</li></ul>	<ul style="list-style-type: none"><li>&gt; A comprehensive list of opportunities and threats are in progress and will be finalised once all the site visits have been completed and the datasets are in place</li></ul>
Communication	<ul style="list-style-type: none"><li>&gt; Formulate a communication plan as to how different stakeholder groups will be informed about our climate change strategy and implementation progress</li></ul>	<ul style="list-style-type: none"><li>&gt; Employees and host communities – climate change awareness campaigns (including targets and initiatives)</li><li>&gt; External stakeholders – disclosure on the CDP online disclosure platform from June 2018</li></ul>

5.4.6 Biodiversity and land use

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 our projects. Furthermore, ensuring that our EMPs provide for safeguarding the biodiversity in the areas in which we operate is an important aspect of our environmental management strategy.



The table below provides an overview of our progress in biodiversity management at the respective projects.

PLATREEF	KIPUSHI	KAMOA-KAKULA
<div>&gt; A Biodiversity Management Plan was developed for the entire fenced project area on site</div> <div>&gt; Two protected tree species were identified and mapped on-site in 18 locations: <i>Combretum imberbe</i> and <i>Sclerocarya birrea</i>, subspecies <i>Caffra</i> (Marula)</div> <div>&gt; A permit has been obtained from the Department of Agriculture, Fisheries and Forestry (DAFF) for the removal of protected Marula trees in the proposed waste landfill area and the waste rock dump area</div> <div>&gt; Efforts are under way to capture fauna species on site for relocation to nature reserves</div>	<div>&gt; Baseline study for biodiversity completed as part of the environmental baseline studies</div> <div>&gt; Approved EMP (including biodiversity management) awaited as an outcome of the EIA that will be conducted as part of the definitive feasibility study</div>	<div>&gt; Active indigenous reforestation program in place</div> <div>&gt; Saplings grown locally for the reforestation program</div> <div>&gt; Continuous drill site inspection and rehabilitation in place</div> <div>&gt; Emphasis on community agroforestry farming techniques in the livelihoods program</div>

Legislative and regulatory developments as well as continuous engagement with different stakeholder groups guides the land use planning at the respective projects, in addition to baseline information provided by the studies currently in place.

No heritage impact has been identified in the Kamoia-Kakula EIA, nor in the Kipushi baseline study. At the Platreef Project, three archaeological sites (Stone Age and Iron Age) have been identified, of which only two sites required mitigation. A Conservation Management Plan for the two sites that require mitigation has been formulated and extended social consultation has been conducted, after which the Platreef Project team applied for a permit to remove artifacts from the sites. Mitigation permits were issued by the SAHRA, and artifacts from the two sites were removed and placed in safekeeping at the University of Witwatersrand's Archaeological Department. SAHRA has already issued a destruction permit for the Stone Age site; the destruction permit for the Iron Age site is pending approval. A chance-find procedure is in place for any heritage site not previously identified.

5.4.7 Waste management

At an operational level, Ivanhoe Mines focuses on reducing the amount of waste produced at each of our projects. Waste material is recycled where possible, including paper, organic materials and oil. In addition to managing our activities to reduce waste, we ensure compliance with relevant waste legislation to minimize our impact on the natural environment and surrounding communities.

Our waste management approach is informed, at operational level, by the relevant laws, regulations and licences applicable to the project. At the Platreef and Kamoia-Kakula projects, procedures for waste management are also prescribed in the respective EMPs.

Waste inventories are in place at all three sites. These describe the source, volume and type of waste generated by each process at the project as well as the disposal method. Domestic waste is disposed of in licenced landfills and hazardous waste such as oil is recycled through specialist service providers or disposed of through facilities with safe-disposal certificates.

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

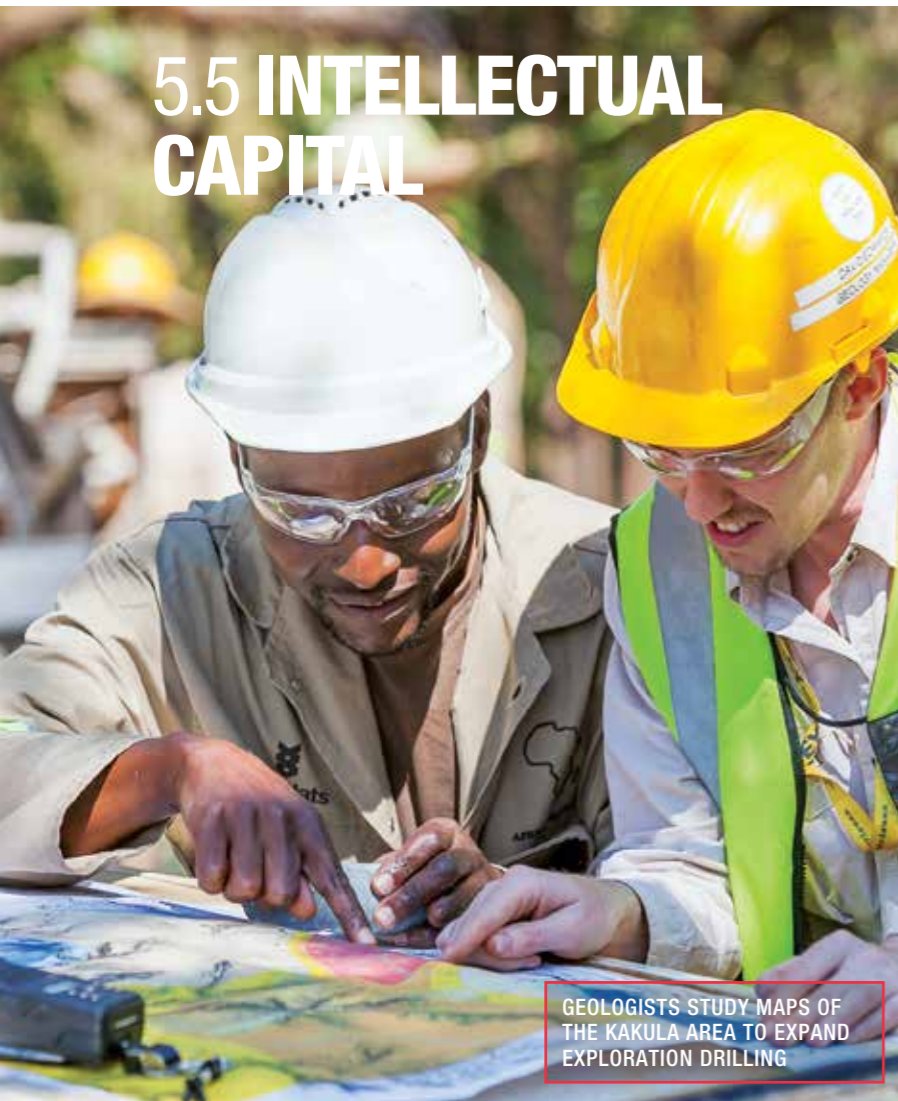
The proposed locations and designs for all our projects' tailings storage facilities are considered as part of the EIA processes and EMPs. The required mitigation measures are incorporated into the planning of the respective projects' studies.



During the reporting period, the following waste management-related activities took place:

PLATREEF	KIPUSHI	KAMOA-KAKULA
<div>&gt; Regular waste management inspection and audits</div> <div>&gt; Stockpiles vegetated</div> <div>&gt; Appointed an on-site waste management contractor to ensure that waste is reduced, re-used and recycled</div>	<div>&gt; Regular waste management inspection and audits</div>	<div>&gt; Regular waste management inspection and audits</div> <div>&gt; Waste management training at sub-contractor camp</div> <div>&gt; Kansoko Mine stockpiles vegetated</div>

## 5.5 INTELLECTUAL CAPITAL



GEOLOGISTS STUDY MAPS OF THE KAKULA AREA TO EXPAND EXPLORATION DRILLING

It 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 enhance the intellectual capital of the Company. This wealth of knowledge is 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 trained 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. 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.

### 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 invested in 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 enables a culture of innovative thinking.



THE KIPUSHI PROJECT COMPUTER APPLICATION SUPPORT TECHNICIAN, BERTHOLLET LUBANDA

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 our intellectual capital.

Intellectual capital within Ivanhoe Mines is built up through the participation of our employees in training initiatives and the collective learning that takes place when projects are implemented successfully, through sharing best practices and developing innovative solutions across our projects. Our intellectual capital gives the Company its competitive advantage while developing our three principal projects.

### Resource development

Ivanhoe Mines prides itself in the discovery and development of three highly unique mineral deposits. Our geological experts come from varied backgrounds with experience in a wide diversity 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.

## Innovative social solutions

Ivanhoe Mines prides itself on cultivating an innovative culture in its workforce. Given that the Company is developing two greenfield projects, employees are encouraged to think out of the box and to propose innovative solutions to set the Company apart from its competitors. We acknowledge that the social contexts in which our projects are being developed are of pivotal importance to the successful development and eventual operation of our mines. The social dynamics in these contexts provide ample opportunity for developing innovative solutions to maintain and improve the social licence to operate at the respective projects. In this regard, the digital communication platform at the Platreef Project, Maru a Mokopane (special report on page 23), the Livelihood Program at the Komoa-Kakula Project (special report on page 46) and the Know for Sure Campaign (special report on page 36) are prime examples of creative solutions pioneered by Ivanhoe Mines employees to address specific challenges in the social contexts in which we operate.



STUDENTS USING THE PLATREEF PROJECT'S MARU MOKOPANE FREE WI-FI HOTSPOT AT SEKGAGAPENG TO SUBMIT ONLINE UNISA ASSIGNMENTS IN COMPLETION OF THEIR DEGREE COURSES



SURVEY STAFF USE TECHNOLOGY TO MAP THE INCIDENCE OF MALARIA IN THE KIPUSHI'S PROJECT JOST COMMUNITY

## SPECIAL REPORT

### University of Limpopo and Laurentian University (UL-LU) partnership

Ivanhoe Mines formed a five-year partnership with the University of Limpopo, South Africa and the Laurentian University, Ontario, Canada in 2015, in keeping with its strategic objectives to expand the Company's intellectual capital capacity and to build a future local workforce.

The aim of the partnership is to develop and equip the University of Limpopo's geology department to become a centre of excellence in geosciences and to provide students from Limpopo with the opportunity to further their studies at Laurentian University. The UL-LU partnership achieved the following up to the 2017 reporting year:

- > Three Limpopo-based students were afforded the opportunity to follow a one-semester continual education course in Geology at Laurentian University.
- > Three Limpopo-based students enrolled in a one-year Master of Science (MSc) Geology course at Laurentian University.
- > Six Limpopo-based students are enrolled in a two-year thesis-based MSc Geology course at Laurentian University, of which two were upgraded to a Doctor of Philosophy (PhD) in Geology.
- > One Platreef employee is enrolled in a five-year part-time thesis-based PhD.
- > Seven Laurentian-based graduate students lectured at the University of Limpopo Geology Department during 2016 and 2017.
- > The Geosciences Department at the University of Limpopo received equipment, a vehicle and administrative support to strengthen its capacity.

“Clearly, all of the University of Limpopo students are achieving at high academic levels. I would like to highlight the academic performance of Michael Langa and Fransica Maepa. Michael is in the second year of a two-year MSc, whereas Fransica is approaching the halfway mark of her two-year MSc project. As a result of Michael and Fransica's strong academic achievements, both have been recommended to upgrade their two-year MSc programs to four-year PhDs, a reward that is granted to only the very best students.”

Dr Bruce Jago, PhD, PGeo, Executive Director, Goodman School of Mines, Laurentian University



LIMPOPO STUDENTS AT LAURENTIAN UNIVERSITY (FROM LEFT TO RIGHT): MICHAEL MALOSE LANGA, ETHEL TSAKANI SARILA, EDWARD MOLANTOA MOSWANE, FRANCISCA MAEPA, KEVIN NKHOLO BALOYI, CHARMINE SHIHLOMULE

# 5.6 INFRASTRUCTURE CAPITAL



5 MVA POWERLINE AT THE PLATREEF PROJECT

Developing mining projects in emerging economies poses a unique set of challenges, such as ensuring a consistent supply of electricity and access to export ports. Ivanhoe Mines has positioned itself as a leader in public-private partnerships for infrastructure in Africa.

## 5.6.1 Bulk power

At the Platreef Project, our management team negotiated partnerships with Eskom, the public electricity utility in South Africa, as well as with local government and communities to bring a 5 mega volt amp (MVA) powerline to the mine development site to provide electricity during the construction of the mine. In addition, the team has secured 70 MVA permanent electricity by negotiating a self-build option through which the Company will build the required powerline infrastructure.

Energy efficient design and planning was applied throughout the feasibility study to ensure efficient use of resources. The possibility of joining in a third party Independent Power Provider 100 MVA solar project in the region was also investigated during the feasibility study.

### SPECIAL REPORT

## PARTNERS IN CLEAN HYDROPOWER DEVELOPMENT IN DRC

An initiative launched by Ivanhoe Mines began to supply electricity from the first of three hydropower plants being upgraded in the DRC in support of mine development work at the Kamoa-Kakula Project on September 13, 2017. Upon completion, the program will be able to produce a combined 200 MW of long-term, clean electricity for the DRC's national grid.

The first refurbished turbine is supplying 11 megawatts of electricity from the Mwadingusha hydropower plant to the national grid in DRC. The upgrade is being conducted by Ivanhoe Mines and its joint-venture partner, Zijin Mining, in conjunction with the DRC's state-owned electricity company, SNEL.

At Kamoa-Kakula, the construction of a 120 kilovolt (kV) powerline was completed and a 120 kV mobile substation installed, commissioned and energized in Q4 2016. The Kamoa site is now connected to the national electrical grid and is receiving hydropower for work on site. An 8-kilometre, 11-kV overhead power line with mini substations was constructed from the mine site to the Kamoa camp to which it supplies hydropower. Line routes for the 120-kV power line and the 11-kV reticulation to Kakula have been finalized and connection was completed in Q4 2017.



A NETWORK OF ROADS WAS DEVELOPED IN THE KAMOA-KAKULA FOOTPRINT AREA

## 5.6.2 Access infrastructure

Reliable and safe infrastructure to the mining development areas is essential for efficient development work. Ivanhoe Mines' operational teams maintain 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 makes provision for efficient haulage of minerals when the mines go into production. The table provides an overview of progress regarding access infrastructure development at the respective sites.

PLATREEF	KIPUSHI	KAMOA-KAKULA
<div>&gt; Ongoing engagement with the South African National Roads Agency Limited (SANRAL) to upgrade the National Road (N11) that connects the Platreef Mine with the rest of the National Road network.</div> <div>&gt; The permanent N11 intersection construction works were successfully completed by Ivanhoe in September 2016 and is fully operational. The new intersection allows for improved traffic flow and overall traffic management to and from the mine site, as well as improved road safety conditions for surrounding communities.</div>	<div>&gt; A Memorandum of Understanding was signed with the Congolese National railway agency, SNCC, to upgrade the rail infrastructure from the Kipushi Project up to Munama Station.</div> <div>&gt; Ivanhoe refurbished the main access road into Kipushi.</div>	<div>&gt; A network of roads has been developed and maintained connecting Kamoa-Kakula to Kolwezi and the camp to the two development sites.</div> <div>&gt; Planning is under way to construct a community bypass road from Kansoko to Kakula to limit the impact of traffic on the Israel and Kaponda communities.</div> <div>&gt; A direct road between the Kolwezi Airport and Kamoa is under consideration in partnership with the DRC government and other companies in the area.</div>

# 6. CONCLUSION

Ivanhoe Mines is committed to adhering to international best practice guidelines with regards to taking care of its people, addressing stakeholder interests and minimizing the environmental impact of its exploration, development and operating activities in the areas in which it operates.

We encourage our stakeholders to share their views on Ivanhoe Mines' activities related to delivering on our strategic commitment to minimize negative impact and to promote meaningful social and economic growth.

# 7. APPENDICES

## 7.1 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. Mr Torr has verified the technical data disclosed in this sustainability report.

Ivanhoe has prepared a current, independent, NI 43-101-compliant technical report each for the Platreef Project, the Kipushi Project and the Kamoa-Kakula Project, available under the Company's SEDAR profile at [www.sedar.com](http://www.sedar.com):

- > The Kamoa-Kakula 2018 Resource Update dated March 28, 2018, prepared by OreWin Pty. Ltd., Amec Foster Wheeler E&C Services Inc., Amec Foster Wheeler Australia Pty. Ltd., MDM (Technical) Africa Pty. Ltd., Stantec Consulting International LLC, and SRK Consulting (South Africa) Pty. Ltd., covering the Company'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 the Company's Platreef Project; and
- > The Kipushi 2017 Pre-feasibility Study Technical Report dated January 25, 2018, prepared by OreWin Pty Ltd, The MSA Group (Pty) Ltd, SRK Consulting (South Africa) (Pty) Ltd and MDM (Technical) Africa Pty Ltd, covering the Company'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 in this 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.

## 7.2 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 the Company, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or information. Such statements can be identified by the use of words such as "may", "would", "could", "will", "intend", "expect", "believe", "plan", "anticipate", "estimate", "scheduled", "forecast", "predict" and other similar terminology, or state that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved. These statements reflect the Company's current expectations regarding future events, performance and results and speak only as of the date of this report.

All such forward-looking information and statements are based on certain assumptions and analyses made by Ivanhoe Mines' management in light of their experience and perception of historical trends, current conditions and expected future developments, as well as other factors management believes are appropriate in the circumstances. These statements, however, are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking information or statements including, but not limited to, unexpected changes in laws, rules or regulations (including retroactive application), the failure of contractual agreements with the State to be honoured in whole or in part, or in the enforcement or application of laws, rules and regulations by applicable authorities; the failure of parties to contracts to perform as agreed; social or labour unrest; changes in commodity prices, including the price of copper; unexpected failure or inadequacy of infrastructure, or delays in the development of infrastructure, the failure of exploration programs or other studies to deliver anticipated results or results that would justify and support continued studies, development or operations, and the results of economic studies and evaluations. Other important factors that could cause actual results to differ from these forward-looking statements also include those described under the heading "Risk Factors" in the Company's most recently filed MD&A as well as in the most recent Annual Information Form filed by Ivanhoe Mines. Readers are cautioned not to place undue reliance on forward-looking information or statements. The factors and assumptions used to develop the forward-looking information and statements, and the risks that could cause the actual results to differ materially are set forth in the "Risk Factors" section and elsewhere in the Company's most recent Management's Discussion and Analysis Report and Annual Information Form, available at [www.sedar.com](http://www.sedar.com).

In addition, all of the results of the pre-feasibility study of the Kamoa-Kakula Project and preliminary economic assessment of development options for the Kakula deposit, the feasibility study of the Platreef Project and the pre-feasibility study of the Kipushi Project, constitute forward-looking statements or

information, and include future estimates of internal rates of return, net present value, future production, estimates of cash cost, proposed mining plans and methods, mine life estimates, cash flow forecasts, metal recoveries, estimates of capital and operating costs and the size and timing of phased development of the projects. Furthermore, with respect to this specific forward-looking information concerning the development of the Kamoa-Kakula, Platreef and Kipushi projects, the Company has based its assumptions and analyses on certain factors that are inherently uncertain. Uncertainties include: (i) the adequacy of infrastructure; (ii) geological characteristics; (iii) metallurgical characteristics of the mineralization; (iv) the ability to develop adequate processing capacity; (v) the price of copper, nickel, zinc, platinum, palladium, rhodium and gold; (vi) the availability of equipment and facilities necessary to complete development; (vii) the cost of consumables and mining and processing equipment; (viii) unforeseen technological and engineering problems; (ix) accidents or acts of sabotage or terrorism; (x) currency fluctuations; (xi) changes in regulations; (xii) the compliance by joint venture partners with terms of agreements, (xiii) the availability and productivity of skilled labour; (xiv) the regulation of the mining industry by various governmental agencies; and (xiv) political factors.

This report also contains references to estimates of Mineral Resources and Mineral Reserves. The estimation of Mineral Resources is inherently uncertain and involves subjective judgments about many relevant factors. Estimates of Mineral Reserves provide more certainty but still involve similar subjective judgments. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. The accuracy of any such estimates is a function of the quantity and quality of available data, and of the assumptions made and judgments used in engineering and geological interpretation (including estimated future production from the Company's projects, the anticipated tonnages and grades that will be mined and the estimated level of recovery that will be realized), which may prove to be unreliable and depend, to a certain extent, upon the analysis of drilling results and statistical inferences that ultimately may prove to be inaccurate. Mineral Resource or Mineral Reserve estimates may have to be re-estimated based on: (i) fluctuations in copper, nickel, zinc, platinum group elements (PGE), gold or other mineral prices; (ii) results of drilling; (iii) metallurgical testing and other studies; (iv) proposed mining operations, including dilution; (v) the evaluation of mine plans subsequent to the date of any estimates and/or changes in mine plans; (vi) the possible failure to receive required permits, approvals and licences; and (vii) changes in law or regulation.

Although the forward-looking information and statements contained in this report are based on what management of the Company believes are reasonable assumptions, the Company cannot assure investors that actual results will be consistent with these forward-looking statements. These forward-looking statements are made as at the date of this report and are expressly qualified in their entirety by this cautionary statement. Subject to applicable securities laws, the Company does not assume any obligation to update or revise the forward-looking statements contained herein to reflect events or circumstances occurring after the date of this report.

## 7.3 Global Reporting Initiative Standards Index for the Ivanhoe Mines Sustainability Report 2017

### General Standard Disclosures

Material topics				
General Standard Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
Organizational profile				
102-1	Name of the organization		2.1 Who we are p.8	
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.	2. Our business at a glance p.8	
102-3	Location of headquarters		Appendix 7.10 p.92	
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.	2.2 Our principal projects p.9	
102-5	Ownership and legal form		2.2 Our principal projects p.9	Annual Information Form available on <a href="http://www.ivanhoemines.com">www.ivanhoemines.com</a>
102-6	Markets served	Markets served, including: a. geographic locations where products and services are offered; b. sectors served; c. types of customers and beneficiaries served.	2.2 Our principal projects p.9 4. Our stakeholders p.20	
102-7	Scale of the organization	Scale of the organization, including: a. total number of employees; b. total number of operations; c. net sales (for private sector organizations) or net revenues (for public sector organizations); d. total capitalization (for private sector organizations) broken down in terms of debt and equity; e. quantity of products or services provided.	1.4 Report scope p.1 2.2 Our principal projects p.9	iv. Annual Information Form available on <a href="http://www.ivanhoemines.com">www.ivanhoemines.com</a> iii. Net sales not applicable as our principal projects are in development phase; v. quantity of products or services provided not applicable

Material topics				
General Standard Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
Organizational profile continued				
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.	5.2 Human capital p.30	d. Not applicable e. Not applicable f. The data was compiled by the Human Resources departments of the relevant projects.
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.	5.1 Economic capital p.27	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 appropriate to the development phase of a 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: a. Changes in the location of, or changes in, operations, including facility openings, closings, and expansions; b. Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations); c. Changes in the location of suppliers, the structure of the supply chain, or relationships with suppliers, including selection and termination.	2.3 Progressing our projects p.10	
102-11	Precautionary Principle or approach	Whether and how the organization applies the Precautionary Principle or approach.	5.2.1 Health and safety performance p.31	
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.		> We are a member of the National Business Initiative (NBI) South Africa > Annual CDP water disclosure

Material topics				
General Standard Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
<b>Organizational profile</b> <i>continued</i>				
102-13	<b>Membership of associations</b>	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.		> South African Chamber of Mines > The South African Institute of Mining and Metallurgy
<b>Strategy</b>				
102-14	<b>Statement from senior decision-maker</b>	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.	1.5 Message from our Executive Chairman and Founder p.2 1.6 Message from our President and Chief Executive Officer p.4 1.7 Message from the Chair of the Sustainability Committee p.6	
<b>Ethics and integrity</b>				
102-16	<b>Values, principles, standards, and norms of behavior</b>	The reporting organization shall report the following information: a. A description of the organization's values, principles, standards, and norms of behaviour.	2.1 Who we are p.8 2.4 Governance and management approach p.16	
<b>Governance</b>				
102-18	<b>Governance structure</b>	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.	2.4 Governance and management approach p.16	
<b>Stakeholder engagement</b>				
102-40	<b>List of stakeholder groups</b>	The reporting organization shall report the following information: a. A list of stakeholder groups engaged by the organization.	4. Our stakeholders p.20	
102-41	<b>Collective bargaining agreements</b>	The reporting organization shall report the following information: a. Percentage of total employees covered by collective bargaining agreements.		100%
102-42	<b>Identifying and selecting stakeholders</b>	The reporting organization shall report the following information: a. The basis for identifying and selecting stakeholders with whom to engage.	4. Our stakeholders p.20	
102-43	<b>Approach to stakeholder engagement</b>	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.	4.2 Engagement p.22	

Material topics				
General Standard Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
<b>Stakeholder engagement</b> <i>continued</i>				
102-44	<b>Key topics and concerns raised</b>	The reporting organization shall report the following information: a. Key topics and concerns that have been raised through stakeholder engagement, including: i. how the organization has responded to those key topics and concerns, including through its reporting; ii. the stakeholder groups that raised each of the key topics and concerns.	4.2 Engagement p.22	
<b>Reporting practice</b>				
102-45	<b>Entities included in the consolidated financial statements</b>	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.	1. Our approach to sustainability and reporting p.1	
102-46	<b>Defining report content and topic Boundaries</b>	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.	1. Our approach to sustainability and reporting p.1	
102-47	<b>List of material topics</b>	The reporting organization shall report the following information: a. A list of the material topics identified in the process for defining report content.	3. Our most material matters p.18	
102-48	<b>Restatements of information</b>	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.		Not applicable as this is our first reporting cycle.
102-49	<b>Changes in reporting</b>	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 as this is our first reporting cycle.
102-50	<b>Reporting period</b>	The reporting organization shall report the following information: a. Reporting period for the information provided.	1.1 About this report p.1	
102-51	<b>Date of most recent report</b>	The reporting organization shall report the following information: a. If applicable, the date of the most recent previous report.		Not applicable as this is our first reporting cycle.
102-52	<b>Reporting cycle</b>	The reporting organization shall report the following information: a. Reporting cycle.	1. Our approach to sustainability and reporting p.1	
102-53	<b>Contact point for questions regarding the report</b>	The reporting organization shall report the following information: a. The contact point for questions regarding the report or its contents.	Appendix 7.10 p.92	

Material topics				
General Standard Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
Reporting practice continued				
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: i. 'This report has been prepared in accordance with the GRI Standards: Core option'; ii. 'This report has been prepared in accordance with the GRI Standards: Comprehensive option'.	1.1 About this report p.1	
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: i. the number of the disclosure (for disclosures covered by the GRI Standards); iii. the page number(s) or URL(s) where the information can be found, either within the report or in other published materials; iii. if applicable, and where permitted, the reason(s) for omission when a required disclosure cannot be made.	Appendix 7.3 p.72	
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: i. 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; ii. The relationship between the organization and the assurance provider; iii. Whether and how the highest governance body or senior executives are involved in seeking external assurance for the organization's sustainability report.		Not applicable as this is our first reporting cycle.

Management approach and material topics

Material topics				
General Standard Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
The company must ensure responsible stewardship of our natural resources				
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: i. where the impacts occur; ii. 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.	5.4 Natural capital p.56	
	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: i. Policies ii. Commitments iii. Goals and targets iv. Responsibilities v. Resources vi. Grievance mechanisms vii. Specific actions, such as processes, projects, programs and initiatives	5.4 Natural capital p.56 2.4 Governance and management approach p.16	
	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: i. the mechanisms for evaluating the effectiveness of the management approach; ii. the results of the evaluation of the management approach; iii. any related adjustments to the management approach.	5.4 Natural capital p.56	

Material topics				
General Standard Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
<b>The Company must develop significant infrastructure (power, rail and water availability) at its projects in order to commence development and mining operations</b>				
<b>GRI 103: Management Approach</b>	<b>103-1 Explanation of the material topic and its Boundary</b>	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: i. where the impacts occur; ii. 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.	5.6 Infrastructure capital p.68	The location of the Company's principal projects in countries with emerging economies requires additional investment to support local infrastructure development.
<b>GRI 103: Management Approach</b>	<b>103-2 The management approach and its components</b>	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: i. Policies ii. Commitments iii. Goals and targets iv. Responsibilities v. Resources vi. Grievance mechanisms vii. Specific actions, such as processes, projects, programs and initiatives	5.6 Infrastructure capital p.68	
	<b>103-3 Evaluation of the management approach</b>	For each material topic, the reporting organization shall report the following information: a. An explanation of how the organization evaluates the management approach, including: i. the mechanisms for evaluating the effectiveness of the management approach; ii. the results of the evaluation of the management approach; iii. any related adjustments to the management approach.	5.6 Infrastructure capital p.68	

Material topics				
General Standard Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
<b>The Company must develop significant infrastructure (power, rail and water availability) at its projects in order to commence development and mining operations <i>continued</i></b>				
<b>GRI 203: Indirect economic impacts</b>	<b>203-1 Infrastructure investments and services supported</b>	The reporting organization shall report the following information: a. Extent of development of significant infrastructure investments and services supported. b. Current or expected impacts on communities and local economies, including positive and negative impacts where relevant. c. Whether these investments and services are commercial, in-kind, or pro bono engagements.	5.6 Infrastructure capital p.68	
	<b>203-2 Significant indirect economic impacts</b>	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.	5.3.2 Enterprise and Supplier Development p.50	
<b>GRI 303: Water</b>	<b>303-1 Water withdrawal by source</b>	The reporting organization shall report the following information: a. Total volume of water withdrawn, with a breakdown by the following sources: i. Surface water, including water from wetlands, rivers, lakes, and oceans; ii. Ground water; iii. Rainwater collected directly and stored by the organization; iv. Waste water from another organization; v. Municipal water supplies or other public or private water utilities. b. Standards, methodologies, and assumptions used.	5.4.4 Water stewardship p.59	
	<b>303-3 Water recycled and reused</b>	The reporting organization shall report the following information: a. Total volume of water recycled and reused by the organization. b. Total volume of water recycled and reused as a percentage of the total water withdrawal specified in Disclosure 303-1. c. Standards, methodologies, and assumptions used.	5.4.4 Water stewardship p.59	

Material topics				
General Standard Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
Social expectations of our local stakeholders due to projects being situated in emerging economies				
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: i. where the impacts occur; ii. 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.	4. Our stakeholders p.20 5.3 Social and relational capital p.42 5.4.2 Compliance and continuous monitoring p.57	
	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: i. Policies ii. Commitments iii. Goals and targets iv. Responsibilities v. Resources vi. Grievance mechanisms vii. Specific actions, such as processes, projects, programs and initiatives	4. Our stakeholders p.20 5.2 Social and relational capital p.42 5.4.2 Compliance and continuous monitoring p.57	
	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: i. the mechanisms for evaluating the effectiveness of the management approach; ii. the results of the evaluation of the management approach; iii. any related adjustments to the management approach.	4. Our stakeholders p.20 5.3 Social and relational capital p.42 5.4.2 Compliance and continuous monitoring p.57	

Material topics				
General Standard Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
Social expectations of our local stakeholders due to projects being situated in emerging economies <i>continued</i>				
GRI 413: Local communities	413-1 Operations with local community engagement, impact assessments, and development programs	The reporting organization shall report the following information: a. Percentage of operations with implemented local community engagement, impact assessments, and/or development programs, including the use of: i. social impact assessments, including gender impact assessments, based on participatory processes; ii. environmental impact assessments and ongoing monitoring; iii. public disclosure of results of environmental and social impact assessments; iv. local community development programs based on local communities' needs; v. stakeholder engagement plans based on stakeholder mapping; vi. broad based local community consultation committees and processes that include vulnerable groups; vii. works councils, occupational health and safety committees and other worker representation bodies to deal with impacts; viii. formal local community grievance processes.	4. Our stakeholders p.20 5.3 Social and relational capital p.42 5.4.2 Compliance and continuous monitoring p.57	
GRI 203: Indirect economic impacts	203-1 Infrastructure investments and services supported	The reporting organization shall report the following information: a. Extent of development of significant infrastructure investments and services supported. b. Current or expected impacts on communities and local economies, including positive and negative impacts where relevant. c. Whether these investments and services are commercial, in-kind, or pro bono engagements.	5.1 Economic capital p.27 5.3 Social and relational capital p.42 5.6 Infrastructure capital p.68 5.5 Intellectual capital p.64	
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.	5.3 Social and relational capital p.42 5.5 Intellectual capital p.64	

Material topics				
General Standard Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
<b>Social expectations of our local stakeholders due to projects being situated in emerging economies <i>continued</i></b>				
<b>GRI G4 Guidelines: Mining and Metals Sector Supplement</b>	<b>MM4: Number of strikes and lock-outs exceeding one week's duration, by country</b>			None
	<b>MM9: Sites where resettlements took place, the number of households resettled in each, and how their livelihoods were affected in the process</b>		5.3.3 Relocation and livelihood restoration program p.52	
<b>Recruiting and retaining qualified staff to work on Projects situated in remote areas and instituting training programmes to train local staff to international standards</b>				
<b>GRI 103: Management Approach</b>	<b>103-1 Explanation of the material topic and its Boundary</b>	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: i. where the impacts occur; ii. 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.	5.2 Human capital p.30 5.5 Intellectual capital p.64	

Material topics				
General Standard Disclosure	Disclosure description	Disclosure detail	Reference	Further explanation where relevant and/or reason for omission
<b>Recruiting and retaining qualified staff to work on Projects situated in remote areas and instituting training programmes to train local staff to international standards <i>continued</i></b>				
	<b>103-2 The management approach and its components</b>	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: i. Policies ii. Commitments iii. Goals and targets iv. Responsibilities v. Resources vi. Grievance mechanisms vii. Specific actions, such as processes, projects, programs and initiatives	5.2 Human capital p.30 5.5 Intellectual capital p.64	
<b>GRI 103: Management Approach</b>	<b>103-3 Evaluation of the management approach</b>	For each material topic, the reporting organization shall report the following information: a. An explanation of how the organization evaluates the management approach, including: i. the mechanisms for evaluating the effectiveness of the management approach; ii. the results of the evaluation of the management approach; iii. any related adjustments to the management approach.	5.2 Human capital p.30	
<b>GRI 103: Management Approach</b>	<b>404-2 Programs for upgrading employee skills and transition assistance programs</b>	The reporting organization shall report the following information: a. Type and scope of programs implemented and assistance provided to upgrade employee skills. b. Transition assistance programs provided to facilitate continued employability and the management of career endings resulting from retirement or termination of employment.	5.2.2 Human resource development p.39 5.5 Intellectual capital p.64	
	<b>404-3 Percentage of employees receiving regular performance and career development reviews</b>	The reporting organization shall report the following information: a. Percentage of total employees by gender and by employee category who received a regular performance and career development review during the reporting period.	5.2.2 Human resource development p.39 5.5 Intellectual capital p.64	

## 7.4 Alignment with International Council of Mining and Metals

### 10 Principles of Sustainable Development

Our sustainable development initiatives align with the ICMM Sustainable Development Framework and the 10 Principles of the ICMM. The table below provides references to sections in this report for further detail on how we implement the principles.

ICMM Sustainable Development Principles	Section
1. Implement and maintain ethical business practice and sound systems of corporate governance.	2.4 Governance and management approach p.16
2. Integrate sustainable development considerations within the corporate decision-making process.	3. Our most material matters p.18 1.5 Message from our Executive Chairman and Founder p.2 1.6 Message from our President and Chief Executive Officer p.4 1.7 Message from the Chair of the Sustainability Committee p.6
3. Uphold fundamental human rights and respect cultures, customs and values in dealings with employees and others who are affected by our activities.	Appendix 7.5 United Nations Global Compact p.85 2.4 Governance and management approach p.16 5.2 Human capital p.30 5.3 Social and relational capital p.42
4. Implement risk management strategies based on valid data and sound science.	2.4 Governance and management approach p.16 3. Our most material matters p.18
5. Seek continual improvement of our health and safety performance.	5.2.1 Health and safety performance p.31
6. Seek continual improvement of our environmental performance.	5.4 Natural capital p.56
7. Contribute to conservation of biodiversity and integrated approaches to land-use planning.	5.4 Natural capital p.56 5.3 Social and relational capital p.42
8. Facilitate and encourage responsible product design, use, re-use, recycling and disposal of our products.	5.4 Natural capital p.56
9. Contribute to the social, economic and institutional development of the communities in which we operate.	5.2 Human capital p.30 5.3 Social and relational capital p.42 5.5 Intellectual capital p.64
10. Implement effective and transparent engagement, communication and independently verified reporting arrangements with our stakeholders.	4. Our stakeholders p.20

## 7.5 The United Nations Global Compact (UNGC)

Ivanhoe Mines is committed to upholding the 10 Principles of the UNGC. The table below provides references to sections in this report for further detail on how we implement these principles.

United Nations Global Compact		Section
Human Rights		
Principle 1	Businesses should support and respect the protection of internationally proclaimed human rights.	2.4 Governance and management approach p.16 5.3 Social and relational capital p.42
Principle 2	Businesses should make sure that they are not complicit in human rights abuses.	2.4 Governance and management approach p.16
Labour		
Principle 3	Businesses should uphold the freedom of association of the effective recognition of the right to collective bargaining.	5.2 Human capital p.30
Principle 4	Businesses should uphold the elimination of all forms of forced and compulsory labour.	2.4 Governance and management approach p.16
Principle 5	Businesses should uphold the effective abolition of child labour.	2.4 Governance and management approach p.16
Principle 6	Businesses should uphold the elimination of discrimination in respect of employment and occupation.	2.4 Governance and management approach p.16 5.2 Human capital p.30
Environment		
Principle 7	Businesses should support a precautionary approach to environmental challenges.	5.4 Natural capital p.56
Principle 8	Businesses should undertake initiatives to promote greater environmental responsibility.	5.4 Natural capital p.56
Principle 9	Businesses should encourage the development and diffusion of environmentally friendly technologies.	5.4 Natural capital p.56 5.6 Infrastructure capital p.68
Anti-corruption		
Principle 10	Businesses should work against corruption in all its forms, including extortion and bribery.	2.4 Governance and management approach p.16

## 7.6 South African Mining Charter Performance

Ivanhoe Mines seeks to comply with the letter and the spirit of the South African Mining Charter as far as its Platreef Project is concerned. Our transformation strategy is informed by the seven elements of the Mining Charter with local employment and procurement initiatives receiving particular focus. We endeavour to leverage on each element of the Mining Charter in order to create shared value for all Platreef Project's stakeholders.

Platreef Project – Mining Charter 2016 performance and 2017 progress								
Element	Description	Measure		Target	2016	Progress 2017	Weighting	Achieved Score
Reporting	Has the company complied with reporting requirements	Documentary proof of receipt from Department of Mineral Resources		Quarterly – SLP Report; Mining Charter Report – Annually	Yes	Yes	No	Yes
Ownership	Minimum target for effective HDSA ownership	Meaningful economic participation		Active Board participation	Yes	Yes	No	Yes
		Full shareholder rights		26%	26%	26%	No	Yes
Housing and living conditions	Conversion and upgrading of hostels to attain the occupancy rate of one person per room	Percentage reduction of occupancy rate towards 2014 target		Occupancy rate of one person per room	Majority of employees are local	Majority of employees are local	Yes	NA
	Conversion and upgrading of hostels into family units	Percentage conversion of hostels into family units		Family units established	Majority of employees are local and live with their families	Majority of employees are local and live with their families	Yes	NA
Procurement and enterprise development	Procurement spent from BEE entities	Capital goods		40%	99.82%	10000.00%	5%	Yes
		Services		70%	58.35%	57%	5%	Yes
		Consumables		50%	97.47%	76.89%	2%	Yes
	Multinational suppliers' contribution to social fund	Annual spend on procurement from multinational suppliers		0.5% of procurement value	0%	0%	3%	No
Employment equity	Diversification of the workforce to reflect the country's demographics to attain competitiveness	Top management (Board)		40%	67%	67%	3%	Yes
		Senior management (Exco)		40%	50%	55%	4%	Yes
		Middle management		40%	54%	58%	3%	Yes
		Junior management		40%	97%	97%	1%	Yes
		Core skills		40%	100%	100%	5%	Yes
Human resource development	Development of requisite skills, including support for South African-based R&D initiatives intended to develop solutions in exploration, mining, processing, technology efficiency (energy and water use in mining) beneficiation as well as environmental conservation	HRD spend as percentage of total annual payroll (excluding mandatory skills development levy)		5%	18.75%	9%	25%	Yes
Mine community development	Conduct ethnographic community consultative and collaborative processes to delineate community needs analysis	Implement approved community projects		1%	102,351.20%	151,297.88%	15%	Yes
Sustainable development and growth	Improvement of the industry's environmental management	Implementation of approved EMP's		100%	Yes	In progress	12%	
	Improvement of the industry's mine health and safety performance	Implementation of the tripartite action plan on health and safety		100%	Yes	In progress	12%	
	Utilisation of South African-based research facilities for analysis of samples across the mining value	Percentage of samples in South African facilities		100%	Yes	In progress	5%	
Beneficiation	Contribution of mining company towards beneficiation (this measure effective from 2012)	Additional volume contributory to local value addition beyond the baseline		Section 26 of the Mineral and Petroleum Resources Development Act (MPRDA) (percentage above baseline)	Yes	Yes	No	N/A
Total score							100%	

7.7 B-BBEE Scorecard – Platreef Project



Broad Based Black Economic Empowerment Verification Certificate

Issued to

Ivanplats (Pty) Ltd

Level 3 Contributor

Measured Entity

Company Name	Ivanplats (Pty) Ltd
Registration Number	1988 /000334/ 07
VAT Number	4090202880
Address	2nd Floor, 82 on Maude 82 Maude Street Sandton 2146

B-BBEE Status

B-BBEE Status Level	Level 3
Element Points Obtained	EO: 21.98 points; MC: 11.84 points; SD: 16.72 points; ESD: 37.04 points; SED: 5 points
Discounting Principle Applied	No
Empowering Supplier	Yes

*Black Owned: >=51% and 8 points for Net Value		*Black Women Owned: >=30% and 8 points for Net Value	
Black Voting Rights	26.00%	Black Women Voting Rights	2.46%
Black Economic Interest	26.00%	Black Women Economic Interest	2.46%
51% Black Owned *	No	30% Black Women Owned *	No
Black Designated Group Supplier	No	Normal Flow Through Principle Applied	

Issue Date	
Expiry Date	
Certificate Number	
Version	Provisional
Applicable Scorecard	Amended Codes - Generic
Applicable BBBEE Codes	Amended Generic Codes Gazetted on 11 October 2013

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



Per F Mphahlele  
Member - Verification Committee

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.

7.8 ABBREVIATIONS

ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION
3PE+Au	Platinum, palladium, rhodium and gold	IIRC	International Integrated Reporting Council
AIDS	Acquired Immune Deficiency Syndrome	INPP	DRC National Training Institution
ASLIC	Alternative Syndicale pour L'industrie au Congo	IRR	Internal rate of return
ATAC	Alliance des Travailleurs Avertis et Conscientieux	KPA	Key performance area
B-BBEE	Broad-based black economic empowerment	KPI	Key performance indicator
CDP	Carbon Disclosure Project	kV	Kilovolt 16 pound
CGTC	Centrale Generale des Travailleurs du Congo	lb	Pound
COGSTA	Limpopo Department of Co-Operative Governance, Human Settlements and Traditional Affairs	LED	Local economic development
CSC	Confederation Syndicale du Congo	LTi	Lost time injury
CTP	Conscience des Travailleurs et Paysans	LTIF	Lost time injury free
DAFF	Department of Agriculture, Fisheries and Forestry	LTIFR	Lost time injury frequency rate
DMR	Department of Mineral Resources	Maru a Mokopane	The Clouds of Mokopane (in Sepedi)
DRC	Democratic Republic of Congo	MD&A	Management's discussion and analysis
DRDLR	Department of Rural Development and Land Reform	MLM	Mogalakwena Local Municipality
DTI	Department of Trade and Industry	MDG	Millennium Development Goals
EIA	Environmental Impact Assessments	MPRDA	Mineral and Petroleum Resources Development Act
EMP	Environmental Management Plan	MSc	Master of Science
ESD	Enterprise and Supplier Development	MTI	Medical treatment injury
Eskom	South African electricity provider	Mtpa	Million tonnes per annum
FORCES	Force Ouvriere pour la Renaissance de la l'Ethique Syndicate	MVA	Mega volt amp
GRI	Global Reporting Initiative	NBI	National Business Initiative
GST	Garantie Sociale des Travailleurs	NPV	Net present value
HDSA	Historically disadvantaged South African	OHADA	Organization for the Harmonization of Corporate Law in Africa
HIV	Human immunodeficiency virus	PEA	Preliminary Economic Assessment
HRD	Human resource development	PhD	Doctor of Philosophy
HSE	Health, Safety and Environment	RWI	Restricted working injury
ICMM	International Council on Mining and Metals	SAHRA	South African Heritage Resource Agency
IDP	Individual development plan	SANRAL	South African National Road Agency Limited
		SEDAR	System for Electronic Document Analysis and Retrieval
		SLAM	Stop Look Assess and Manage

ABBREVIATION	DEFINITION
SLP	Social and Labour Plan
SMME	Small-, micro- and medium enterprise
SNCC	Société Nationale des Chemins de Fer du Congo
SNEL	La Société Nationale d'Electricite
SPV	Special Purpose Vehicle
the Code	Code of Conduct
TB	Tuberculosis
TRIFR	Total recordable injury frequency rate
TUMEC	Travailleurs Unis des Mines
UL-LU	University of Limpopo and Laurentian University Partnership
UNDHR	United Nation Declaration of Human Rights
Unisa	University of South Africa
USD	United States Dollar
VAT	Value Added Tax
ZAR	South African Rand

## 7.9 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.

Which stakeholder group do you belong to? (You may tick more than one)															
Employee				Shareholder				Investor				Customer			
Analyst				Supplier				Community				NGO			
Other															
Does the report address issues of greatest interest to you?															
Comprehensively				Partially				Not at all							
Please identify any additional matters that you think should be reported on:															
What was your overall impression of the report in terms of:															
		Excellent		Good		Fair		Poor							
Content and scope															
Design and layout															
Do you have any additional comments on the report – or on Ivanhoe Mines’ performance in general?															
Your name, e-mail address and other contact details:															

### Contact details:

Lisl Fair

Group Manager:

Social and Investment

Physical Address:

82 on Maude, 82 Maude Street, Sandton

Telephone:

+27 11 088 4319

E-mail:

lisl.fair@ivanplats.com

## 7.10 Contact details and other information

### Ivanhoe Mines Ltd.

Registration number: C0949887

Incorporation

Toronto Stock Exchange (TSX): IVN

OTCQX Best Market: IVPF

### 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

Website: [www.ivanhoemines.com](http://www.ivanhoemines.com)

### Sustainable Development

Name: Lisl Fair

Title: Group Manager: Social and Investment

Telephone: +27 71 493 0478

Email: [lisl.fair@ivanplats.com](mailto:lisl.fair@ivanplats.com)

### Investor Relations

Name: Bill Trenaman

Vice President Investor Relations

Telephone: +1.604.688.6630

Email: [billtr@ivancorp.com](mailto:billtr@ivancorp.com)

### Governance and Compliance

Name: Mary Vincelli

Vice President, Compliance and Corporate Secretary

Telephone: +1.604.688.6630

Email: [mary@ivancorp.net](mailto:mary@ivancorp.net)

### Auditors

Independent auditor:

PricewaterhouseCoopers Inc.,

### Directors

Robert Friedland

Egizio Bianchini

Ian Cockerill

William Hayden

Oyvind Hushovd

Livia Mahler

Peter Meredith

Kgalema Motlanthe

Guy de Selliers

### Transfer Secretaries

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