Our 2019 climate change report

Aligned with recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)
ABOUT GOLD FIELDS

Gold Fields is a globally diversified gold producer with nine operating mines in Australia, Peru, South Africa and Ghana (including the Asanko JV), as well as one project in Chile. The Company’s attributable annual gold-equivalent production is 2.2Moz, and it has attributable gold-equivalent Mineral Resources of 115.7Moz and Mineral Reserves of 51.3Moz. Our shares are listed on the Johannesburg Stock Exchange (JSE) and our American depositary shares trade on the New York Stock Exchange (NYSE).

INTRODUCTION

a. Chief Executive Officer’s Statement
b. Understanding the risks and adapting to Climate Change
c. Gold Fields’ Climate Change Policy Statement
d. 2019 ICMM Position Statement on Climate Change

BUILDING CLIMATE CHANGE RESILIENCE

a. Our governance processes around climate-related risks
b. Climate Change and Gold Fields’ strategy
c. Gold Fields’ control, policies and strategies

CLIMATE CHANGE RISK AND VULNERABILITY ASSESSMENT

a. South Africa
b. Australia
c. Peru
d. West Africa
e. Global policies and laws

TRACKING OUR PERFORMANCE

a. Energy and carbon emissions
b. Renewable energy
c. Water management

STATISTICS

a. Regional and Group energy and carbon performance
b. Gold Fields’ carbon footprint – 2019

ABOUT THIS REPORT

This is our second Climate Change Report compiled in line with the recommendations of the Financial Services Board’s Task Force on Climate-related Financial Disclosures (TCFD). It is released as a companion to our 2019 Integrated Annual Report (IAR).

In 2018, Gold Fields became only the second South African company and the first South African mining company to publicly endorse the TCFD recommendations. The TCFD recommendations are backed by most financial regulators around the world and encourage companies to release details about their climate-related financial risks and opportunities to provide consistent information to investors, lenders, insurers, and other stakeholders. Our TCFD report replaced our previous annual submissions under the Carbon Disclosure Project (CDP).

The TCFD voluntary guidelines provide for strategic, comparable and reliable disclosure of climate-related information, which companies commit to publish at least once a year. The scope of our climate change performance and data covers our eight managed mines (including 100% of the new Gruyere mine, but excluding our Asanko Gold JV). While we report on relevant developments at our Salares Norte project in Chile, we do not include data from the project.
Managing climate change at Gold Fields

Gold Fields’ commitment to leadership in sustainable gold mining underlies everything we do as a business. As such, we are committed to addressing one of the defining global challenges society is facing, namely the impact of the rapidly changing climate on our business, our employees and host communities.

We continue to respond to this challenge through a range of strategic policy interventions as well as operational adjustments. The management of climate change impacts and our transition to a low carbon environment is a key component of environmental stewardship at all our operations and projects. Compared to other metals, such as steel, coal or aluminium, gold mining’s carbon emission intensity per unit value is among the lowest in the sector.

As a mining business, Gold Fields is fully cognisant of the fact that it is increasingly clear that the negative impacts of climate change are real and immediate, due to:

- The physical impacts of climate change on the Group’s operations and surrounding communities
- Increasing regulation and policy changes around carbon emissions
- Direct and indirect carbon taxes and levies imposed by governments to disincentive non-renewable energy consumption
- Growing interest by investors to understand the impacts of climate change on their portfolios

Our carbon emissions are primarily from diesel consumed by haulage trucks and electricity consumption in mining and gold processing.

Internally, Gold Fields has recently reviewed and updated a number of policy statements and guidelines, reflecting our environmental priorities. They cover the following areas of responsibility in the Company: energy and carbon management; environmental management; water management; tailings management and mine closure.

In 2017 the Board approved a Climate Change Policy Statement, committing us to identify and assess climate-related risks and opportunities; report and disclose our performance via various reporting frameworks; raise the proportion of renewable energy; and implement energy and water efficiency initiatives.

In addition, we have signed up to a number of global initiatives and programmes that support both corporate disclosure of climate change impacts and encourage multi-stakeholder commitments to combating it.

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Our climate change programme objectives are to improve preparedness and build operational resilience to climate-related risks, reduce the use of natural resources and improve climate reporting and disclosure. We aim to achieve these objectives by:

- Continuously reviewing and refining our understanding of climate-related risks and opportunities
- Assessing climate-related risks through project delivery studies and operational risk assessments
- Integrating energy, water, and carbon emissions management plans into our business strategic planning
- Improving efficiencies in the use of natural resources (energy and water)
- Harnessing innovation and technology to reduce our carbon footprint while managing regulatory risks

Gold Fields’ climate change programme is focused on a comprehensive assessment of climate change-related risks and mitigation opportunities, as well as the development and implementation of action plans. At operational level our integrated energy, carbon management and water strategies highlight the approach taken by our mines to achieve:

- Greater energy and water efficiencies
- Increased use of low carbon and renewable energy sources
- Security of water and energy supplies
- Responsible management of our water resources

The impact of this has been to achieve greater energy and water security, lower energy intensity and reduced carbon emissions.

Our next steps

Improving performance: As we strive to improve our water, energy and carbon emissions performance, we will be conducting studies for strategic interventions.

Risk assessments: During 2021, we will be updating our regional vulnerability and site risk assessments to inform our next five-year mitigation and adaptation plans, and integrating them with our business strategies.

Planning: Using assessments, we will be aiming to further improve our integration of climate change considerations into operational management.

Stakeholder engagements: We will seek to include climate-related challenges and developments into our key stakeholder engagements to discuss the impact of climate-related risks.
OUR CLIMATE CHANGE COMMITMENTS

Gold Fields’ Climate Change Policy Statement

Gold Fields Limited recognises that climate change is a serious challenge globally to society at large, our host communities and our operations. The Group’s climate change strategy is to identify and assess risks related to climate change, and develop action plans. Our objectives are to minimise our contribution to climate change and to build resilience to the physical impacts of climate change at our operations and growth projects.

To achieve our strategy, Gold Fields commits to:
- Reporting and publicly disclosing our greenhouse gas emissions footprint and performance.
- Regularly undertaking vulnerability risk assessments at all our operations and host communities.
- Developing and implementing regional climate change strategies that include mitigation and adaptation plans.
- Setting objectives and targets that give effect to the plans.
- Investing in renewable, low-carbon energy solutions and energy efficiency initiatives to reduce our greenhouse gas emissions, including carbon offset programmes.
- Investing in solutions for efficient utilisation of water at our operations, while ensuring the security of water supply.
- Supporting research and development to achieve our climate change objectives.
- Supporting transparent carbon pricing mechanisms that incentivise innovation to drive reductions in greenhouse gas emissions.
- Establishing an appropriate level of employee awareness and training employees who hold direct responsibility for activities that reduce our carbon emissions.
- Complying with applicable legal requirements and other requirements to which the organisation subscribes.
- Encouraging business partners and suppliers to adopt similar principles.
- Fostering dialogue and seeking collaboration with governments, investors, non-governmental organisations, host communities and other stakeholders to address climate change challenges.
- Integrating climate change considerations into business planning and processes, including carbon pricing.

All those working for and on behalf of Gold Fields, including employees, contractors, suppliers and partners, play a central role in meeting these commitments by:
- Taking responsibility for implementing applicable climate change adaptation and mitigation programmes and initiatives.
- Adhering to the Group’s climate change policy.
- Integrating climate change considerations into business planning and processes, including carbon pricing.

Nick Holland
Chief Executive Officer
February 2017

Gold Fields’ global commitments on climate change

2019 ICMM Position Statement on Climate Change

Recognition statements
ICMM members recognise:
1. The need for an urgent global response to the threat of climate change, across all areas of society and the economy.
2. The need to support the goals of the Paris Agreement to limit the increase in the global average temperature to 2°C and pursue efforts to limit the increase to 1.5°C.
3. The need to reduce emissions from the extraction and use of mining products, and support collaborative market-based approaches to accelerate the use of low-emission technologies as part of a transition to a low carbon energy mix.
4. That climate and energy policy should be technology neutral and rely on market-based approaches to enable least cost abatement solutions.
5. The vital role that a broad-based, predictable, long-term carbon pricing can play, alongside other market mechanisms to drive reduction of greenhouse gas emissions and incentivise innovation.
6. The importance of providing climate-related disclosure in order for all stakeholders to measure and respond to climate change risks and opportunities, including the transparency around climate-related risks the TCFD has brought.
7. The role of natural climate solutions and offsets in providing low cost options to address global greenhouse gas emissions.

Commitments
In addition to existing commitments under the ICMM Sustainable Development Framework, ICMM member companies commit to being part of the solution by:

Individually:
- Implement governance, engagement and disclosure processes to ensure climate change risks and opportunities are considered in business decision-making.
- Advance operational level adaptation and mitigation solutions, taking in consideration local opportunities and challenges.
- Engage with host communities on our shared climate change risks and opportunities and help host communities understand how they can adapt to the physical impact of climate change.
- Disclose scope 1 and 2 greenhouse gas emissions on an annual basis and set emissions reduction targets at a corporate level.

Collectively:
- Support the global transition to a low carbon economy by continuing to contribute to the sustainable production of commodities essential to the energy and mobility transition, working with our partners and key suppliers along our value chains.
- Engage with external parties to determine a preferred approach to reporting scope 3 emissions.

Either collectively or individually:
- Engage with governments, peers, and others to support the development of effective climate change policies.
- Support efforts to mitigate greenhouse gas emissions, in collaboration with our peers by promoting innovation, developing and deploying low emissions technology, and implementing projects that improve energy efficiency and incorporate renewable energy supply in our energy mix.
- Support carbon pricing and other market mechanisms, that drive the reduction of greenhouse gas emissions, deliver the least costly pathway to emissions reductions and support predictable long-term pricing that incentivise innovation.
BUILDING CLIMATE CHANGE RESILIENCE

Our governance processes around climate-related risks

Oversight over climate change-related strategy, performance and risks is held at Board level. The Board sets the strategic direction and approves policies that are relevant to the management of energy, carbon emissions, water and climate change.

The Gold Fields Board’s Risk Committee provides oversight on Group risks. The Committee undertakes and reviews company-wide risk assessments twice a year, with a view to ensuring effective and robust risk management strategies are in place.

The Safety, Health and Sustainable Development (SHSD) Committee of the Board reviews performance against climate-related strategies on a quarterly basis.

The Capital Projects, Control and Review Committee is responsible for capital allocation. Project deliverables include assessment of climate risks and opportunities.

At Group level, Gold Fields’ executive management is tasked with implementing Board-approved policies and strategies as well as related risk management plans. Quarterly updates on these issues are provided to the SHSD Committee of the Board, while the Risk Committee reviews updates to the risk register.

Permanent appointments at Group level of a Head of Water, Environmental Manager, and Head of Energy and Carbon provide central coordination through to Group executive management and the Board. A number of Group-wide teams from the regions and operations, led by corporate, collaborate to enhance management of water, carbon emissions, environment, energy and climate change-related risks.

Climate-related risks are identified and ranked in accordance with Gold Fields’ Enterprise-wide Risk Management (ERM) process, which is aligned with the ISO 31000 global risk management standard. At regional level, strategic and operational risk registers include contingencies for climate events such as floods, droughts, severe storms and regulatory changes.

Climate-related risk mitigation and adaptation measures are integrated into Gold Fields’ operational and strategic planning processes across short-, medium- and long-term planning horizons.

Climate change and Gold Fields’ strategy

Integrating management of climate-related risks into Gold Fields’ strategy

Climate-related risk mitigation and adaptation measures are integrated into Gold Fields’ operational and strategic planning processes across short-, medium- and long-term planning horizons.

Annual business plans

- Annual business and operational plans, from which performance scorecards are drawn, include energy, water, carbon emissions and environmental aspects.
- Regulatory and policy changes are considered when developing business plans.

Strategic planning

- Ensure that we quantify water, energy and carbon footprints for the various strategic business scenarios.
- Incorporate the impact of changing rain patterns in our mine plans.
- Quantify risk levels and, if necessary, adjust risk thresholds.

Life-of-mine planning

For the long term, in consideration of each assets’ life-of-mine, we seek to understand and quantify the longer-term climate change impacts on our mines. We also assess and consider post-closure risks and opportunities in our portfolio reviews.

Gold Fields’ controls, policies and strategies

Gold Fields’ Vision

- To be the global leader in sustainable gold mining.

Policy

- Three-year regional water plans developed (2018)
- Group Climate Change Policy (2017)

Strategy

- Integrated water management plans (2016)
- Climate change adaptation plans (2016)
- Energy security plans (2016)
- Integrated energy and carbon management strategy (2017)
- Water management strategy (2020)

Standards, systems and guidelines

- Updated water management guidelines to ICMM level (2019)
- Included in Project Study Standards (2017)
- Updated Energy & Carbon Guideline to ISO 50001 (2016)
- Included in water and tailings guidelines (2017)
- Part of Group ERM (as far back as 2009)

Risk management

- Review by the Board, SHSD, Risk, Audit Committees
- Align programme with ICMM standards
- Group risk register item (since 2009)
- Part of Group ERM (as far back as 2009)

Indicators and targets

- Energy, water and carbon emissions targets

Reporting and communication

- CDP and CDP Water disclosure since 2007 and 2013, respectively
- CDP submission: 2013
- Use of GRI standard

External assurance

- Data integrated into the non-financial data portal
- Independent external assurance of data

We continuously seek to improve our embedded controls, policies, strategies and disclosure.
## CLIMATE CHANGE RISK AND VULNERABILITY ASSESSMENT

### Gold Fields – South Africa

<table>
<thead>
<tr>
<th>Climate change impact</th>
<th>Risk</th>
<th>Vulnerability</th>
<th>Adaptations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underground</td>
<td></td>
<td>High</td>
<td>Potential for off-grid renewable energy systems, new mine ventilation and cooling technologies</td>
</tr>
<tr>
<td>Processing</td>
<td></td>
<td>High</td>
<td>Improved water storage, increased water recycling and reduced water consumption</td>
</tr>
<tr>
<td>Health and safety</td>
<td></td>
<td>Medium</td>
<td>Optimize mine ventilation and cooling systems; heat stress management programs</td>
</tr>
<tr>
<td>Suppliers</td>
<td></td>
<td>Medium</td>
<td>Budget for price increases and engage with suppliers</td>
</tr>
<tr>
<td>Workforce</td>
<td></td>
<td>Medium</td>
<td>Employees redeployment and training</td>
</tr>
<tr>
<td>Investors</td>
<td></td>
<td>Low</td>
<td>Publish South Deep’s climate change plans and achievements and increase awareness</td>
</tr>
<tr>
<td>Communities</td>
<td></td>
<td>High</td>
<td>Investments in host communities</td>
</tr>
<tr>
<td>National infrastructure</td>
<td></td>
<td>Low</td>
<td>Potential for off-grid renewable energy systems</td>
</tr>
<tr>
<td>Regulatory</td>
<td></td>
<td>Medium</td>
<td>Regularly review policy changes to ensure compliance</td>
</tr>
<tr>
<td>Carbon emission related tax/revenue and reporting requirements</td>
<td></td>
<td></td>
<td>Participate in industry bodies to shape policy</td>
</tr>
</tbody>
</table>

### Gold Fields – Australia

<table>
<thead>
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<th>Vulnerability</th>
<th>Adaptations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraction</td>
<td></td>
<td>Medium</td>
<td>Continually review flood management and storage capacities</td>
</tr>
<tr>
<td>Materials handling</td>
<td></td>
<td>Low</td>
<td>Develop life-of-mine water balances that are dynamic, predictive and probabilistic</td>
</tr>
<tr>
<td>Transport</td>
<td></td>
<td>Low</td>
<td>Flood prevention measures and vehicle safety protocols in high rainfall events</td>
</tr>
<tr>
<td>Waste disposal</td>
<td></td>
<td>Medium</td>
<td>Apply the Group guideline to tailings storage facilities with an emphasis on critical control management</td>
</tr>
<tr>
<td>Health and safety</td>
<td></td>
<td>Medium</td>
<td>Align to the new proposed Global Tailings Standard</td>
</tr>
<tr>
<td>Post-closure</td>
<td></td>
<td>Low</td>
<td>Utilise in-pit tailings disposal where possible</td>
</tr>
</tbody>
</table>

### NATIONAL PROJECTIONS

- Increased rainfall variability
- 3-5ºC increase in temperatures by 2035 (forecast from climate models)

### LOCAL PROJECTIONS

- Temperature increase
- Decrease in annual rainfall
- Increase in storms
- Increased water stress

### VALUE CHAIN

- Suppliers
- Employees heat exhaustion and dehydration
- Increased price of upstream products due to carbon tax
- Reduced share price or investor interest

- Workforce
- Disruption to operations

- Investors
- Reduced share price or investor interest

- Communities
- Increased tension in community around service delivery and living conditions
- More tension in community around service delivery and living conditions

- National infrastructure
- Disruption in electricity supply, increased electricity costs

- Regulatory
- Carbon emission related tax/revenue and reporting requirements

### BROADER NETWORK

- Communities
- Reduced share price or investor interest

- National infrastructure
- Disruption in electricity supply, increased electricity costs

- Regulatory
- Carbon emission related tax/revenue and reporting requirements

### CLIMATE CHANGE IMPACT RISK VULNERABILITY ADAPTATIONS

- Adequacy of flood management and storage capacities to safeguard personnel
- Declining availability of process water in terms of suitable quality and quantity
- Intermittences to the movement of waste and ore
- Tailings dam stability during periods of high rainfall
- Increased cooling costs and potential heat stress
- Inability to achieve closure objectives due to arid conditions

### NATIONAL PROJECTIONS

- Increased frequency and intensity of extreme events
- Reduced rainfall
- Temperature increases

### LOCAL PROJECTIONS

- Temperature increase
- Decrease in annual rainfall
- Intense storms

### VALUE CHAIN

- Suppliers
- Delays to transport of supplies

- Workforce
- Movement of personnel to sites and interruptions to flight schedules

### BROADER NETWORK

- Communities
- Potable water cost with increased competition and declining availability

- Regulatory
- Taxation on emissions, aggressive abatement requirements and removal of rebates

- Water scarcity

### Core Operations

- Underground
- Increased electricity costs

- Processing
- Reduced onsite water flows

- Health and safety
- Employee heat exhaustion and dehydration

- Suppliers
- Increased price of upstream products due to carbon tax

- Workforce
- Disruption to operations

- Investors
- Reduced share price or investor interest

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### Value Chain

- Suppliers
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- Regulatory
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### Broader Network

- Communities
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- Regulatory
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### National Projections

- Increased rainfall variability
- 3-5ºC increase in temperatures by 2035 (forecast from climate models)

### Local Projections

- Temperature increase
- Decrease in annual rainfall
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### Value Chain

- Suppliers
- Delays to transport of supplies

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- Movement of personnel to sites and interruptions to flight schedules

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### Value Chain

- Suppliers
- Increased price of upstream products due to carbon tax

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- National infrastructure
- Disruption in electricity supply, increased electricity costs

- Regulatory
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### Gold Fields – Peru

#### National Projections
- Increase in frequency and intensity of the El Niño weather pattern
- Sea level rise

#### Local Projections
- Temperature increase
- Decrease in annual rainfall
- Increase in storms
- Land slides

#### Climate Change Impact
- Extraction and deposition
  - Intense rains exceed pumping and treatment capacity, potentially compromising slope stability near open-cast mines
- Materials handling
  - Reduced water supply for operations. Higher moisture content of the ore
  - Intermittences of the transport system leading to bottlenecks in the storage of concentrates
- Transport
  - Interruption of cargo operations
- Port operations
  - Increase of respiratory illnesses
- Health and safety
  - Increase energy demand for pumping requirements
- Post-closure

#### Risk

<table>
<thead>
<tr>
<th>Activity</th>
<th>Risk</th>
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<tbody>
<tr>
<td>Extraction and deposition</td>
<td>Low</td>
</tr>
<tr>
<td>Materials handling</td>
<td>Low</td>
</tr>
<tr>
<td>Transport</td>
<td>High</td>
</tr>
<tr>
<td>Port operations</td>
<td>Medium</td>
</tr>
<tr>
<td>Health and safety</td>
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<td>Post-closure</td>
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#### Vulnerability

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#### Adaptation
- Implement leading practices for flood prevention, pit slope stability and TSF construction and operation
- Increase water recycling and reduce water withdrawal
- Increase the storage capacity at mine warehouse and port
- Study alternate roads for concentrate transport
- Increase storage capacity at port and scheduling logistics
- Application of safety and health policies
- Consider renewable energy for water pumping at post-closure

### Gold Fields – West Africa

#### National Projections
- Decrease in rainfall in the northern region
- Sea level rise
- Temperature increases
- Increase of frequency and intensity of the El Niño weather pattern

#### Local Projections
- Temperature increase
- Shifting of rain seasons
- Intense storms
- Increase in number of wet days

#### Climate Change Impact
- Extraction
  - Reduced production due to wet haul roads
- Transport
  - Larger volumes of mine water
- Materials handling
  - Increased operational costs linked to maintenance of roads and more frequent replacement of truck tyres
- Health and safety
  - Heat stress on mine employees
- Electricity provision
  - Disruption of electricity supply from hydro schemes
- Key materials and supplies
  - Weather-related delays in the transport of fuel
- Workforce
  - Increasing demand for jobs from people relocating to the mine area

#### Risk

<table>
<thead>
<tr>
<th>Activity</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraction</td>
<td>Low</td>
</tr>
<tr>
<td>Transport</td>
<td>Low</td>
</tr>
<tr>
<td>Materials handling</td>
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</tr>
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<td>Low</td>
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<tr>
<td>Electricity provision</td>
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</tr>
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<td>Key materials and supplies</td>
<td>Medium</td>
</tr>
<tr>
<td>Workforce</td>
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</tbody>
</table>

#### Vulnerability

<table>
<thead>
<tr>
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</tr>
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<td>Extraction</td>
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<td>Medium</td>
</tr>
<tr>
<td>Workforce</td>
<td>Low</td>
</tr>
</tbody>
</table>

#### Adaptation
- Further increase pumping capacity and effective pit-dewatering strategies to address flooding or heavy rainfall
- Continue mining the deeper areas within the pit to create sumps which allows for excess water to be collected and pumped out
- Consideration of augmenting engine operation at weather units in trucks with battery operated units to prevent operations being to keep cab-ins cool
- Implement heat stress management programmes
- Further increase water recycling and reduction of water withdrawal
- Increase the storage capacity at mine warehouse and port
- Study alternate roads for concentrate transport
- Increase storage capacity at port and scheduling logistics
- Application of safety and health policies
- Consider renewable energy for water pumping at post-closure
- Further increase pumping capacity and effective pit-dewatering strategies to address flooding or heavy rainfall
- Continue mining the deeper areas within the pit to create sumps which allows for excess water to be collected and pumped out
- Consideration of augmenting engine operation at weather units in trucks with battery operated units to prevent operations being to keep cab-ins cool
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- Increase the storage capacity at mine warehouse and port
- Study alternate roads for concentrate transport
- Increase storage capacity at port and scheduling logistics
- Application of safety and health policies
- Consider renewable energy for water pumping at post-closure

### Broader Network
- Communities
  - Vulnerable or displaced communities could put the social licence to operate at risk
- National infrastructure
  - Food insecurity, service incapacity and climatic impacts on subsistence based livelihoods leading to migration

#### Risk

<table>
<thead>
<tr>
<th>Activity</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communities</td>
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#### Vulnerability

<table>
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<tr>
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<tr>
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</tbody>
</table>
Tracking climate-related policies and laws

We have noted an increase in climate-related legislation, policies and litigations in the jurisdictions in which we operate. A snapshot across our host regions as at December 2019 is indicated in the map below:

**CLIMATE-RELATED LEGAL AND RELATED RISKS**

### Peru
- **Since 2000:**
  - Laws (7)
  - Policies (9)
  - Litigation cases (5)
  - Climate targets (6)
- **Since 1997:**
  - Laws (4)
  - Policies (5)
  - Litigation cases (6)
  - Climate targets (26)

### Chile
- **Since 2000:**
  - Laws (8)
  - Policies (19)
  - Litigation cases (2)
  - Climate targets (10)

### South Africa
- **Since 2008:**
  - Laws (7)
  - Policies (8)
  - Litigation cases (3)
  - Climate targets (15)
- **Since 1997:**
  - Laws (4)
  - Policies (5)
  - Litigation cases (96)
  - Climate targets (2)

### Australia
- **Since 2008:**
  - Laws (11)
  - Policies (7)
  - Litigation cases (96)
  - Climate targets (2)

**MONITORING NATIONALLY DETERMINED COMMITMENTS (NDC)**

Gold Fields uses the NDC scenarios to ensure close alignment of our strategies with those of the relevant national programmes and policies to address climate change. The parameters (and timeframe) used in these scenario analyses are geographically tailored to include the commitments of the various countries in which Gold Fields operates.

The NDC analyses are also considered across all business areas such as mining, processing and logistics. The outcomes of the scenario analyses have informed Gold Fields’ business plans and budget allocations. Gold Fields recognises that energy markets have been fundamentally redefined by the global drive to minimise contributions and build resilience to climate change. This has affected the types of energy sourced by business, the cost of energy, how energy is procured and how energy is utilised.

<table>
<thead>
<tr>
<th>HOST COUNTRY</th>
<th>COUNTRY COMMITMENT</th>
<th>COUNTRY POLICIES THAT IMPACT ON OUR BUSINESS</th>
<th>OUR KEY RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>A target of reducing GHG emissions, 26% to 28% below 2005 levels by 2030</td>
<td>Renewable energy – 22% of energy from renewables by 2020</td>
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</tr>
<tr>
<td>Chile</td>
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<tr>
<td>Ghana</td>
<td>Reduce GHG emissions by 15% relative to a business-as-usual scenario by 2030</td>
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<td>Assessing 10% renewable supply for our mines</td>
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<tr>
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<td>Emissions reduction of 20% – 30% below a business-as-usual scenario by 2030</td>
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<tr>
<td>South Africa</td>
<td>Emissions reductions of 34% against a business-as-usual scenario by 2030</td>
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**CLIMATE-RELATED LEGAL AND RELATED RISKS**

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Tracking our performance – renewable energy

In our quest to strengthen security of supply and decarbonise our energy sources, while at the same time creating resilience against oil price volatility, we have started incorporating renewable energy into our energy supply mix. Two of our Australian mines, Agnew and Granny Smith, have installed renewables and storage solutions. In 2019 renewables accounted for 1% of our Australian mines and less than 1% of our Group energy consumption. By the end of 2020, we project that renewable energy will account for approximately 10% of the total energy usage in our Australian region and 2% of Group consumption.

Our other mines around the world are also looking at raising the renewable energy portion of their energy consumption. The South Deep mine in South Africa is preparing to develop a 40MW solar plant, pending regulatory approval, while our mines in Ghana are investigating the feasibility of renewable energy supplies in line with legislation expected in the near future.

Following are profiles of our three key renewable energy initiatives:

- At Agnew, we commissioned a 10,000 panel solar photovoltaic plant, generating 4MW of power on sunny days reaching up to 25% of mining demand. By December 2019, Agnew had 8% of its electricity demand met by the solar farm to complement power from its gas plant. An 18MW wind farm (made up of five 3.75MW wind turbines) and a 13MW/48MWh battery energy storage system are coming online from March 2020 onwards. This A$112m project was supported by A$13m from the Australian government’s renewable fund to enable the wind and battery systems. The Agnew micro-grid will reduce our carbon footprint by some 45,000t CO₂-e per year.

- At Granny Smith, in 2016, we commissioned a 24MW gas power plant, to replace a diesel power plant; and in 2019 added a 20,000 panel 8MW solar farm with 2MW battery energy storage system facility, which was commissioned in March 2020. The Granny Smith mine solar power plant will reduce our carbon footprint by some 10,000t CO₂-e per year.

- Following our public commitment to have at least 20% renewable energy in all new mines, we completed evaluations at our recently approved Salares Norte project in Chile, located in the Atacama desert. We are planning to ramp up by 2023 with 15% of electricity supplied by a solar power plant, with future energy studies to be undertaken to increase this level.

Tracking our performance – water stewardship

Three of the regions in which we operate, South Africa, Australia and Peru, are considered water stressed. Climate change impacts our operations and communities in a number of ways – severe rainfall, shifts in rainfall patterns and prolonged droughts, among others – and responsible and effective water management is increasingly critical to Gold Fields. Not only will water scarcity or excessive rainfall adversely impact operations, as water is a vital resource for our mining and ore processing activities, it is also an essential need for our host communities – particularly where agriculture is an important economic activity. Managing our impacts on water catchment areas – by ensuring that we do not denude the quality of water or reduce the volume thereof – is therefore key to maintaining our social licence to operate.

In early 2020, we finalised our 2020 – 2025 Group water stewardship strategy, which includes regional water strategies and three-year management plans, many of them taking cognisance of the impact of climate change. The strategy has three objectives:

- To be a water efficient operator, which requires that we reduce our demand for freshwater from the catchment areas as much as possible due to the probability of water supply shortfalls and communities’ water requirements.
- To apply a proactive and risk-based approach to water management. As such, we are embedding water planning into core operational management, empowering informed management decisions and aligning water risks with resourcing over the life of our operations.
- To work with stakeholders in the catchment areas around our mines so that collaborative water actions can be identified and realised. These approaches will be different in each region. The diagram illustrates our long-term strategy:

In the short-term, the water management strategic objectives for 2020 comprise:

- Maintaining security of supply
- Effectively managing water at our operations
- Applying transparent corporate water governance
- Adopting a catchment approach to water management

During 2019, Gold Fields spent US$27m on water management by investing in methods to improve our water management practices, including pollution prevention, recycling and water conservation initiatives. Predictive and dynamic water balances are in place at all operations, enabling us to account for water inputs and outputs. Furthermore, we have set a target to recycle or reuse at least 66% of the water we use in our processes. In 2019, we achieved 66%. The graphs below highlight our key water management performance indicators.
### Regional and Group energy and carbon performance

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ELECTRICITY PURCHASED (MWH)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Americas</td>
<td>145,361</td>
<td>153,379</td>
<td>151,056</td>
<td>150,443</td>
<td>148,235</td>
</tr>
<tr>
<td>Australia</td>
<td>277,521</td>
<td>287,480</td>
<td>282,330</td>
<td>247,204</td>
<td>211,204</td>
</tr>
<tr>
<td>South Africa</td>
<td>484,256</td>
<td>525,749</td>
<td>497,814</td>
<td>449,728</td>
<td>436,441</td>
</tr>
<tr>
<td>West Africa</td>
<td>410,814</td>
<td>426,564</td>
<td>413,886</td>
<td>387,148</td>
<td>147,480</td>
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<tr>
<td><strong>Group</strong></td>
<td>1,322,353</td>
<td>1,400,422</td>
<td>1,366,086</td>
<td>1,283,940</td>
<td>1,253,338</td>
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<tr>
<td><strong>DIESEL CONSUMPTION (KL)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Americas</td>
<td>13,455</td>
<td>12,713</td>
<td>12,486</td>
<td>14,927</td>
<td>17,027</td>
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<td>Australia</td>
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<td>71,057</td>
<td>59,206</td>
<td>52,190</td>
<td>55,987</td>
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<tr>
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<td>3,060</td>
<td>3,019</td>
<td>1,967</td>
<td>2,106</td>
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<tr>
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<td>99,739</td>
<td>96,669</td>
<td>113,430</td>
<td>114,442</td>
<td>114,601</td>
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<tr>
<td><strong>Group</strong></td>
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<td>183,498</td>
<td>188,140</td>
<td>183,520</td>
<td>189,721</td>
</tr>
<tr>
<td><strong>TOTAL ENERGY CONSUMPTION (GJ)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Americas</td>
<td>1,012,363</td>
<td>1,014,336</td>
<td>997,030</td>
<td>1,082,421</td>
<td>1,150,338</td>
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<tr>
<td>Australia</td>
<td>3,250,575</td>
<td>3,604,448</td>
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<td>South Africa</td>
<td>1,850,467</td>
<td>2,009,575</td>
<td>1,920,705</td>
<td>1,650,253</td>
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<tr>
<td>West Africa</td>
<td>5,141,964</td>
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<td>5,712,920</td>
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<tr>
<td><strong>Group</strong></td>
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<td>11,697,895</td>
<td>12,178,116</td>
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<tr>
<td><strong>ENERGY INTENSITY (GJ/OZ PRODUCED)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Americas</td>
<td>3.42</td>
<td>3.75</td>
<td>3.25</td>
<td>3.45</td>
<td>3.93</td>
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<tr>
<td>Australia</td>
<td>3.28</td>
<td>3.62</td>
<td>3.89</td>
<td>3.56</td>
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</tr>
<tr>
<td>South Africa</td>
<td>9.27</td>
<td>6.91</td>
<td>6.77</td>
<td>10.76</td>
<td>7.42</td>
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<tr>
<td>West Africa</td>
<td>6.82</td>
<td>7.09</td>
<td>7.35</td>
<td>8.10</td>
<td>7.96</td>
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<tr>
<td><strong>Group</strong></td>
<td>5.02</td>
<td>5.27</td>
<td>5.46</td>
<td>5.64</td>
<td>5.87</td>
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<tr>
<td><strong>TOTAL ENERGY COSTS (US$M)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Americas</td>
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<td>22.07</td>
<td>25.79</td>
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<td>Australia</td>
<td>96.43</td>
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<td>80.78</td>
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<td>81.01</td>
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<tr>
<td>South Africa</td>
<td>31.00</td>
<td>31.55</td>
<td>34.40</td>
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<td>32.45</td>
</tr>
<tr>
<td>West Africa</td>
<td>163.19</td>
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<td>120.29</td>
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<td>167.83</td>
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<td><strong>Group</strong></td>
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<td>289.32</td>
<td>257.54</td>
<td>301.55</td>
<td>299.79</td>
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<tr>
<td><strong>ENERGY SPEND (% OF OPEX)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Americas</td>
<td>15%</td>
<td>14%</td>
<td>15%</td>
<td>16%</td>
<td>17%</td>
</tr>
<tr>
<td>Australia</td>
<td>18%</td>
<td>14%</td>
<td>15%</td>
<td>15%</td>
<td>13%</td>
</tr>
<tr>
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<td>12%</td>
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<tr>
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<td>32%</td>
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<td>20%</td>
<td>17%</td>
<td>21%</td>
<td>20%</td>
</tr>
<tr>
<td><strong>CO2 EMISSIONS (TONNES) (SCOPE 1 – 3)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Americas</td>
<td>124,030</td>
<td>126,096</td>
<td>128,106</td>
<td>149,819</td>
<td>152,313</td>
</tr>
<tr>
<td>Australia</td>
<td>536,792</td>
<td>565,044</td>
<td>563,459</td>
<td>508,359</td>
<td>572,867</td>
</tr>
<tr>
<td>South Africa</td>
<td>533,750</td>
<td>569,401</td>
<td>599,607</td>
<td>467,714</td>
<td>495,826</td>
</tr>
<tr>
<td>West Africa</td>
<td>561,273</td>
<td>702,718</td>
<td>737,914</td>
<td>726,838</td>
<td>720,383</td>
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<tr>
<td><strong>Group</strong></td>
<td>1,753,163</td>
<td>1,963,759</td>
<td>1,955,035</td>
<td>1,852,190</td>
<td>1,941,389</td>
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<tr>
<td><strong>CARBON EMISSION INTENSITY (TONNES CO2-E/OZ) (SCOPE 1 AND 2 ONLY)</strong></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Americas</td>
<td>0.27</td>
<td>0.31</td>
<td>0.28</td>
<td>0.28</td>
<td>0.31</td>
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<tr>
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<td>0.43</td>
<td>0.42</td>
<td>0.41</td>
<td>0.42</td>
</tr>
<tr>
<td>South Africa</td>
<td>2.50</td>
<td>1.92</td>
<td>1.78</td>
<td>2.81</td>
<td>2.11</td>
</tr>
<tr>
<td>West Africa</td>
<td>0.48</td>
<td>0.69</td>
<td>0.71</td>
<td>0.69</td>
<td>0.66</td>
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<tr>
<td><strong>Group</strong></td>
<td>0.59</td>
<td>0.69</td>
<td>0.66</td>
<td>0.66</td>
<td>0.66</td>
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</table>
### Gold Fields’ carbon footprint – 2019

#### Scope 1 emissions

<table>
<thead>
<tr>
<th>Operation</th>
<th>Diesel: haulage and other</th>
<th>Diesel: power generation</th>
<th>Petrol</th>
<th>LPG</th>
<th>Natural gas</th>
<th>Blasting agents</th>
<th>Acetylene</th>
<th>Total scope 1 emissions</th>
<th>Electricity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOUTH AFRICA</td>
<td>5,964</td>
<td>0</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>197</td>
<td>18</td>
<td>6,208</td>
<td>462,922</td>
</tr>
<tr>
<td>South Deep</td>
<td>5,960</td>
<td>0</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>197</td>
<td>18</td>
<td>6,205</td>
<td>462,927</td>
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<tr>
<td>Sandton office</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
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<tr>
<td>WEST AFRICA</td>
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<td>110</td>
<td>2,697</td>
<td>0</td>
<td>5,733</td>
<td>21</td>
<td>316,802</td>
<td>178,255</td>
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<tr>
<td>Tarkwa Gold Mine</td>
<td>215,905</td>
<td>0</td>
<td>0</td>
<td>324</td>
<td>0</td>
<td>4,302</td>
<td>9</td>
<td>220,540</td>
<td>128,962</td>
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<tr>
<td>Damang Gold Mine</td>
<td>86,897</td>
<td>3,327</td>
<td>2,070</td>
<td>0</td>
<td>1,431</td>
<td>19,038</td>
<td>12</td>
<td>96,938</td>
<td>48,995</td>
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<td>110</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>224</td>
<td>298</td>
</tr>
<tr>
<td>AUSTRALASIA</td>
<td>155,343</td>
<td>15,093</td>
<td>26</td>
<td>2,330</td>
<td>127,318</td>
<td>1,400</td>
<td>6</td>
<td>281,716</td>
<td>120,040</td>
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<tr>
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<td>0</td>
<td>849</td>
<td>0</td>
<td>294</td>
<td>2</td>
<td>65,857</td>
<td>86,225</td>
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<tr>
<td>Agnew Gold Mine</td>
<td>25,903</td>
<td>13,872</td>
<td>26</td>
<td>720</td>
<td>16,073</td>
<td>355</td>
<td>1</td>
<td>56,951</td>
<td>33,895</td>
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<tr>
<td>Granny Smith Gold Mine</td>
<td>26,139</td>
<td>1,022</td>
<td>0</td>
<td>955</td>
<td>62,813</td>
<td>340</td>
<td>2</td>
<td>91,251</td>
<td>0</td>
</tr>
<tr>
<td>Gruyere Joint Venture</td>
<td>13,139</td>
<td>218</td>
<td>0</td>
<td>6</td>
<td>48,432</td>
<td>411</td>
<td>1</td>
<td>63,240</td>
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<td>Perth office</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>120</td>
</tr>
<tr>
<td>SOUTH AMERICA</td>
<td>48,793</td>
<td>0</td>
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<td>227</td>
<td>0</td>
<td>1,415</td>
<td>1</td>
<td>47,465</td>
<td>44,039</td>
</tr>
<tr>
<td>Cerro Corona Gold Mine</td>
<td>45,751</td>
<td>0</td>
<td>30</td>
<td>227</td>
<td>0</td>
<td>1,415</td>
<td>1</td>
<td>47,423</td>
<td>44,026</td>
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<tr>
<td>Lima office</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>42</td>
<td>13</td>
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<td>GROUP</td>
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<td>5,654</td>
<td>127,318</td>
<td>8,745</td>
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<td>652,191</td>
<td>805,256</td>
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</table>

#### Scope 2 emissions

<table>
<thead>
<tr>
<th>Operation</th>
<th>Total scope 1 and 2 emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOUTH AFRICA</td>
<td>462,922</td>
</tr>
<tr>
<td>South Deep</td>
<td>462,927</td>
</tr>
<tr>
<td>Sandton office</td>
<td>295</td>
</tr>
<tr>
<td>WEST AFRICA</td>
<td>178,255</td>
</tr>
<tr>
<td>Tarkwa Gold Mine</td>
<td>128,962</td>
</tr>
<tr>
<td>Damang Gold Mine</td>
<td>48,995</td>
</tr>
<tr>
<td>Accra office</td>
<td>298</td>
</tr>
<tr>
<td>AUSTRALASIA</td>
<td>120,040</td>
</tr>
<tr>
<td>South Deep</td>
<td>86,225</td>
</tr>
<tr>
<td>Agnew Gold Mine</td>
<td>33,895</td>
</tr>
<tr>
<td>Granny Smith Gold Mine</td>
<td>0</td>
</tr>
<tr>
<td>Gruyere Joint Venture</td>
<td>0</td>
</tr>
<tr>
<td>Perth office</td>
<td>120</td>
</tr>
<tr>
<td>SOUTH AMERICA</td>
<td>44,039</td>
</tr>
<tr>
<td>Cerro Corona Gold Mine</td>
<td>44,026</td>
</tr>
<tr>
<td>Lima office</td>
<td>55</td>
</tr>
<tr>
<td>GROUP</td>
<td>805,256</td>
</tr>
</tbody>
</table>

#### Scope 3 emissions

<table>
<thead>
<tr>
<th>Operation</th>
<th>Total scope 3 emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOUTH AFRICA</td>
<td>26,865</td>
</tr>
<tr>
<td>South Deep</td>
<td>26,055</td>
</tr>
<tr>
<td>Sandton office</td>
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</tr>
<tr>
<td>WEST AFRICA</td>
<td>225,326</td>
</tr>
<tr>
<td>Tarkwa Gold Mine</td>
<td>167,722</td>
</tr>
<tr>
<td>Damang Gold Mine</td>
<td>32,474</td>
</tr>
<tr>
<td>Accra office</td>
<td>645</td>
</tr>
<tr>
<td>AUSTRALASIA</td>
<td>171,112</td>
</tr>
<tr>
<td>St Ives Gold Mine</td>
<td>76,198</td>
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<tr>
<td>Agnew Gold Mine</td>
<td>36,338</td>
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<tr>
<td>Granny Smith Gold Mine</td>
<td>28,203</td>
</tr>
<tr>
<td>Gruyere Joint Venture</td>
<td>31,288</td>
</tr>
<tr>
<td>Perth office</td>
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</tr>
<tr>
<td>SOUTH AMERICA</td>
<td>60,809</td>
</tr>
<tr>
<td>Cerro Corona Gold Mine</td>
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<td>Lima office</td>
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</tr>
<tr>
<td>GROUP</td>
<td>483,849</td>
</tr>
</tbody>
</table>

#### Scope 3 emissions categories

**CATEGORY** | Value | Comment
--- | --- | ---
3.8: Upstream leased assets | Zero | This is reported as zero because energy use after refining of gold is assumed to be negligible
3.11: Use of sold products | Zero | No franchises, therefore zero
3.13: Downstream leased assets | Zero | No franchises, therefore zero
3.14: Franchises | Zero | No franchises, therefore zero
3.15: Investments | Zero | No franchises, therefore zero
3.10: Processing of sold products | Zero | No franchises, therefore zero
3.12: End-of-life treatment of sold products | Zero | No franchises, therefore zero
3.13: Downstream leased assets | Zero | No franchises, therefore zero
3.14: Franchises | Zero | No franchises, therefore zero
3.15: Investments | Zero | No franchises, therefore zero
3.1: Purchased goods and services | Zero | No franchises, therefore zero
3.2: Fuel and energy-related activities not included in scope 1 or 2 | Zero | No franchises, therefore zero
3.3: Upstream transportation and distribution | Zero | No franchises, therefore zero
3.4: Waste generated in operations | Zero | No franchises, therefore zero
3.5: Employee commuting | Zero | No franchises, therefore zero
3.6: Business travel | Zero | No franchises, therefore zero
3.7: Upstream leased assets | Zero | No franchises, therefore zero
3.8: Use of sold products | Zero | No franchises, therefore zero
3.9: Upstream leased assets | Zero | No franchises, therefore zero
3.10: Processing of sold products | Zero | No franchises, therefore zero
3.11: End-of-life treatment of sold products | Zero | No franchises, therefore zero
3.12: Downstream leased assets | Zero | No franchises, therefore zero
3.13: Downstream leased assets | Zero | No franchises, therefore zero
3.14: Franchises | Zero | No franchises, therefore zero
3.15: Investments | Zero | No franchises, therefore zero
3.16: Downstream leased assets | Zero | No franchises, therefore zero
3.17: Use of sold products | Zero | No franchises, therefore zero
3.18: Upstream leased assets | Zero | No franchises, therefore zero
3.19: Franchises | Zero | No franchises, therefore zero
3.20: Investments | Zero | No franchises, therefore zero
3.21: Total scope 3 emissions | Total scope 3 emissions | Total scope 3 emissions
3.22: Total scope 3 emissions | Total scope 3 emissions | Total scope 3 emissions

The following categories of scope 3 emissions are zero.

**CATEGORY** | Value | Comment
--- | --- | ---
3.8: Upstream leased assets | Zero | This is reported as zero because energy use after refining of gold is assumed to be negligible
3.11: Use of sold products | Zero | No franchises, therefore zero
3.13: Downstream leased assets | Zero | No franchises, therefore zero
3.14: Franchises | Zero | No franchises, therefore zero
3.15: Investments | Zero | No franchises, therefore zero

**Comment**

- **Zero** This is reported as zero because energy use after refining of gold is assumed to be negligible.
- **No franchises, therefore zero** There are no franchises, therefore the emissions are zero.

---

**Note:** The data provided is a summary of the carbon footprint for Gold Fields in 2019, categorized by scope and operation, with specific emphasis on the carbon emissions from fuel and energy-related activities.
ADMINISTRATION AND CORPORATE INFORMATION

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PO Box 30170
College Station, TX 77842-3170

Overnight correspondence should be sent to:
BNY Mellon Shareowner Services
211 Quality Circle, Suite 210
College Station, TX 77845
e-mail: shrelations@spushareownerservices.com

Phone numbers
Tel: 888 269 2377 Domestic
Tel: 201 680 6825 Foreign

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Issuer code: GOGOF
ISIN: ZAE 000018123

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Tel: 0871 664 0300
Calls cost 12p per minute plus your phone company’s access charge.
If you are outside the United Kingdom, please call +44 371 664 0300.
Calls outside the United Kingdom will be charged at the applicable international rate.
The helpline is open between 09:00 – 17:30. Monday to Friday excluding public holidays in England and Wales.
e-mail: shareholderenquiries@linkgroup.co.uk
Our climate change report

Aligned with recommendations of the task force on climate-related financial disclosures (TCFD)