ROYAL GOLD, INC

Responsible Progress on ESG

2022 Environmental, Social and Governance Report

FORWARD-LOOKING STATEMENT

This report includes "forward-looking statements" within the meaning of United States ("U.S.") federal securities laws. Forward-looking statements are any statements other than statements of historical fact. Forward-looking statements are not guarantees of future performance, and actual results may differ, possibly materially, from these statements due to various factors. Forward-looking statements herein include, among others, statements regarding the following: our approach to developing new business; our ability to attract, develop and maintain a talented workforce and to ensure internal policies and practices support our corporate culture; the anticipated benefits arising from our newly hired Vice President, Investment Stewardship; promoting long-term shareholder interests; strengthening management accountability and building public trust; building and managing a diversified and cash-flowing portfolio and assets that have future potential; our ability to acquire new stream or royalty interests; providing shareholders long-term exposure to resource upside and metal price optionality; resource growth and mine life extension enhancing returns; identifying and managing environment, social and governance ("ESG") and operating risks in new investments, acquisitions and existing stream and royalty interests, as well as in corporate strategy and oversight; commitment to sustainability and seeking counterparties who lead in ESG; engagement with counterparties; maintaining standards of ethics and integrity; maintaining a geographically and operationally diverse portfolio; potential for organic revenue growth and optionality through exploration success and future production expansions; stability of revenue and reduced exposure to individual assets; limited exposure to geopolitical volatility; competent evaluation of new opportunities and management of existing stream and royalty interests; scalable business allowing effective management with few employees; ability to influence counterparties through contractual arrangements and engagement; evolving content and focus of future ESG reports; the Company's ability to influence Operators of stream and royalty properties, address societal needs, and provide a challenging work environment; assisting Operators to achieve sustainability goals; evolving ESG contractual commitments; reflecting ESG in the management of every aspect of business; employing highly qualified employees; maintaining a board with diverse and relevant backgrounds for proper oversight; requiring accountability at all levels and measuring performance; impacting operations through investment; incentivizing Operator behavior with improved economics; requiring covenants to track performance and regular dialogue with Operator management; endeavoring to disclose statistics related to royalty and stream interests; developing Task Force on Climate-related Financial Disclosures ("TCFD") reporting and scenario analysis over time; playing a role in Operator efforts to address climate targets; Compensation, Nominating and Governance ("CNG") Committee continuing to monitor, guide and probe ESG goals and targets; playing a role in Operator transition to a low-carbon economy, improving water efficiency and working towards UN Sustainable Development Goals ("UN SDGs"); enhancing diversity within the Company; exceeding ESG standards; vision to be the gold standard in everything we do by operating in alignment with core values; ensuring a safe, respectful and inclusive work environment; supporting local communities and Operators to enhance sustainability efforts; caring for and deploying shareholder capital to create long-term value; striving to develop and nurture long-term relationships with all stakeholders; exemplifying honesty, transparency and accountability; managing our business and reporting progress according to our four pillars and providing a meaningful way for stakeholders to judge ESG performance; creating a culture of responsible investing through governance, engagement, maintaining a work environment free of harassment and discrimination, implementing appropriate policies and retaining skilled board members and management; aligning business strategy with sustainable development goals and incorporating ESG into investment and ownership; incorporating ESG principles into due diligence; incentivizing Operator ESG behavior; being active owners and working responsibly and encouraging sustainable practices; incorporating ESG into stream and royalty contracts and reporting; supporting community programs and addressing societal issues, and supporting portfolio site programs; reviewing and reporting on activities and being transparent about impacts; commitment to leading corporate governance practices and remaining the gold standard through ethical standards, communication and accountability; CNG Committee members applying ESG expertise to the exercise of oversight; an Enterprise Risk Management Committee that considers potential risks, determines appropriate mitigation and executes on mitigation strategies; annual review and modification of the ESG strategy; ESG considerations in annual incentive compensation, aligning management with stakeholders; striving to be a trusted steward of shareholder capital and a valued partner; policies reviewed and updated annually as necessary to align with corporate best practices; ensuring the health and safety of our employees; demonstrating a thorough approach to ESG in investment review; conduct, scope and goals of due diligence and new investment reviews and approvals; mitigating risks identified in due diligence; reporting results of monitoring, including ensuring concerns are communicated to management and the board; understanding the impacts of climate change and transition risks; conducting and reporting TCFD scenario analysis, including providing more detailed assessments, setting targets and determining actions to reduce or offset greenhouse gas ("GHG") emissions; commitment to carbon neutrality and reducing emissions and waste; measuring GHG and water intensity as key performance indicators ("KPIs"); increasing ESG transparency and disclosure; our ability to maintain a highly efficient business model; and the results of our community support program. Factors that could cause actual results to differ materially from these forward-looking statements include, among others, the following: a lower-price environment for gold or other metals; development activities relating to the properties in which we hold stream or royalty interests; adverse economic and market conditions; changes in, or the adoption of, new laws or regulations; and other factors described in our reports filed with the Securities and Exchange Commission ("SEC"), including our Form 10-K for the year ended December 31, 2022. Forward-looking statements speak only as of the date on which they are made. We disclaim any obligation to update any forward-looking statements, except as required by law. Readers are cautioned not to put undue reliance on forward-looking statements.

Statement Regarding Third-Party Information: Certain information provided in this report has been provided to us by third-party consultants or the Operators of the relevant properties or is publicly available information filed by these Operators with applicable securities regulatory bodies, including the SEC. Royal Gold has not verified, and is not in a position to verify, and expressly disclaims any responsibility for the accuracy, completeness or fairness of any such third-party information and refers the reader to the public reports filed by the Operators for information regarding those properties.

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About this report

This is Royal Gold's second Environmental, Social and Governance ("ESG") report, which covers the 2022 calendar year. Royal Gold is committed to publishing an ESG report annually. Our report is intended to provide our stakeholders with detailed information regarding our internal processes as they relate to ESG considerations and specific information on the ESG performance of the revenue-generating portion of our portfolio, including our "Principal Properties." Our Principal Properties consist of six existing interests which in 2022 constituted approximately 71% of our annual revenue. We define our investments as "interests" and we refer to our mining company counterparties as our "Operators."

We expect our future ESG reports will continue to evolve in both content and key areas of focus. The scope of this report includes ESG-related information for our Royal Gold corporate operations from December 31, 2021 to December 31, 2022. Our Operator data covers the period from December 31, 2020 to December 31, 2021. In cases where the report features forward- or backward-looking information to support the narrative, we have specified the referenced time period. In some instances, information and data from the six-month transition period from June 30, 2021 to December 31, 2021 is included, as we changed our fiscal year-end from June 30 to December 31 as of December 31, 2021.

Our management level ESG Committee and the Compensation, Nominating and Governance ("CNG") Committee of our Board of Directors (the "Board") have reviewed this report. This report has not been independently verified by a third party.

We have aligned with three ESG-focused standards for this report, which includes two new standards, the Global Reporting Initiative ("GRI") Standards and the United Nations Sustainable Development Goals ("UN SDGs" or "SDGs"). We've highlighted a key SDG contribution for each of our six Principal Properties where we have royalty or stream interests, which can be found on pages 9–14. We have also aligned our charitable donations with the SDGs, outlined in the "Supporting our Operators and communities" section on page 67. A complete list of our SDG contributions can be found in the SDG index on page 129. We have deepened our alignment with the Task Force on Climate-related Financial Disclosure ("TCFD") through the completion of a scenario analysis on the potential impact of climate change on ten jurisdictions generating more than 80% of our revenue in 2021. In many cases, the most fulsome data set and full scenario analysis for a given asset may be best reported by the Operator of that asset; however, we will endeavor to provide stakeholders with a straightforward assessment of the climate change risks associated with the localities that host our Principal Properties. For the first time, we have developed and presented an ESG performance scorecard summarizing what we believe are the key performance metrics of our royalty and stream assets. The scorecard (page 75) is supported by Operator data in the Appendices of this report (page 77). The Appendices also contains Royal Gold's disclosures with reference to the GRI Universal Standards and TCFD standards, and can be found on pages 106 and 109, respectively.

Unless otherwise noted, all amounts are in U.S. dollars.

We welcome your questions and feedback on our report or performance. Please send your questions or comments to investorrelations@royalgold.com.

ROYAL GOLD OPERATOR FOOTPRINT METHODOLOGY OVERVIEW

Royal Gold uses the attribution factor, net gold equivalent ounces production ("net GEO") for its weighted GHG emissions, energy consumption and water consumption from each Property in which we hold a stream or royalty interest. This allows us to compare royalty and stream interests on an equivalent basis. This methodology is used to determine the environmental footprint that can be attributed to our beneficial interests in Properties. Our Operators' GHG emission and energy and water consumption estimates were compiled by Skarn Associates, an independent ESG data analytics firm. We have relied on Skarn Associates' database for gold and copper mining operations. A detailed description of our methodology is included in our Glossary (page 132).

2022 highlights

$1.1M
contributed to support organizations in our office and mining Operator communities

3.4%
annualized employee turnover rate

1st year
reporting against the TCFD framework, with the completion of a climate scenario analysis and a compilation of climate-related risks and opportunities associated with stream and royalty interests that make up more than 80% of our revenue

100%
direct corporate Scope 2 and 3 emissions offset, achieving carbon neutrality for three consecutive years, from 2020 to 2022[1]

4 years
of stable Operator Scope 1 and Scope 2 emissions, with a declining trend in GHG emission intensity over that period (from 2019 to 2022)

98%
of Scope 3 Investment (Operator Scope 1 and Scope 2) Emissions were successfully tracked and reported[1]

20%
of our senior management identify as female, an increase due to hiring our first Vice President, Investment Stewardship, which also increased our technical and professional ESG expertise

1 In this report, we segment Scope 3 emissions into those arising from our direct corporate activities (which we refer to as our direct Scope 3 emissions) and those of our portfolio Operators (which we refer to as our Scope 3 Investment Emissions). We have done this because, as a passive investor, we do not have direct influence or control over the Operator's emissions, but do manage and assert more control over our own direct footprint. Our direct Scope 3 emissions are largely those associated with business travel, employee commuting, and office operations.

About Royal Gold

Royal Gold, Inc. and its consolidated subsidiaries ("Royal Gold," the "Company," "we," "us," and "our") is a leading precious metals stream and royalty company that owns passive stream and royalty interests in several of the world's most attractive mines operated by third parties. We refer to these third parties as our "Operators." Royal Gold common shares are listed and traded on the Nasdaq Global Select Market under the symbol "RGLD."

We align with experienced operators and focus on building and managing a diversified and cash-flowing portfolio of interests in producing mines while also creating a pipeline of earlier-stage assets that have the potential to be cash-flowing in the future.

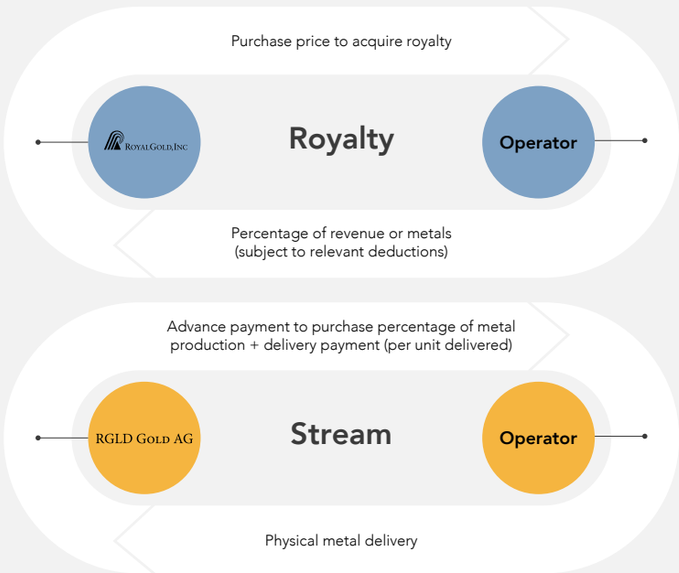
Metal stream and royalty interests are defined as follows:

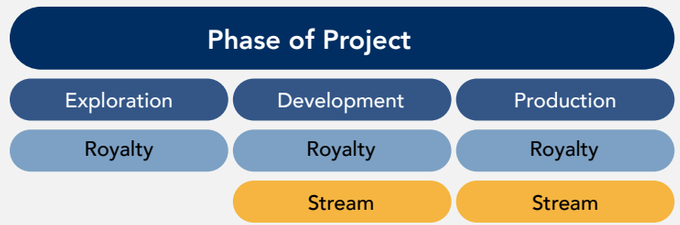
Stream: A metal stream is a purchase agreement that provides, in exchange for an upfront payment, the right to purchase all or a portion of one or more metals produced from a mine, at a price determined by the purchase agreement for the life of the transaction.

Royalty: A royalty is a non-operating interest in a mining project that provides the right to a percentage of revenue or metal produced from the mine after deducting contractually permitted costs, if any.

Stream and royalty interests can be acquired by Royal Gold either directly from a mining company or from a third party. In the case of new streams or royalties that are sold to Royal Gold by a mining company to raise capital, the financing provided by Royal Gold is typically directed by Operators towards three broad uses:

1. **Investing directly in mining assets (e.g., mine development and construction, mine expansion, funding exploration work)**
2. **Providing liquidity to strengthen Operator balance sheets**
3. **Funding merger and acquisition activity**





Royal Gold interests may include the right to finance future and/or further project development

Proceeds generally used towards exploration or early project development	Proceeds generally used towards project development	Proceeds generally used towards production expansion, development of new projects, or other corporate purpose
Typical Interest Size		
~$10M–$50M	~$50M–$300M	~$200M–$1B+

Royal Gold's business model is designed to provide shareholders with long-term exposure to production and exploration upside and metal price optionality for the entire life of a mining project. Resource growth and mine life extensions can significantly enhance our returns over time; accordingly, how Operators manage ESG matters associated with their assets and business operations is fundamental to our long-term success.

Royal Gold integrates ESG into our corporate practices, our investment decisions and our relationships with our Operators and local communities.

Who we are

As of December 31, 2022, Royal Gold employed a small team of 31 employees, 22 of whom work remotely or from our headquarters in Denver, Colorado. The remaining employees work remotely or from our offices in Lucerne, Switzerland, and Toronto and Vancouver, Canada.

We continually strive to be the gold standard in all that we do, including stream and royalty mine financing, by observing high ethical standards, maintaining a reputation for open communication and accountability, and meeting our obligations under law and publicly traded company listing rules.

How we manage our business

We strive to be a trusted steward of shareholder capital and a valued source of finance to Operators, by adhering to high standards of business ethics and personal integrity.

Our ability to identify and manage present and potential ESG risks in our business is central to our corporate strategy and risk management and integral to the long-term success of our Company. This includes our review of new opportunities for investment, the acquisition of existing stream or royalty interests obtained from third parties, and the ongoing oversight and management of our stream and royalty interests.

A thorough and disciplined approach to due diligence is embedded in our process for developing new business. We regularly monitor the ESG performance of our existing portfolio using public and non-public information and engage with Operators through site visits and other communications. Site visits typically occur on an annual basis for our Principal Properties (as defined below) and we may engage through other means more frequently when actual or potential issues are identified.

Where we are

As of December 31, 2022, Royal Gold owned stream and royalty interests covering 182 producing, development, evaluation and exploration-stage properties located in some of the world's most prolific mining regions, which are operated by some of the most well-known companies in the mining industry. Royal Gold's revenue is sourced from a geographically and operationally diverse portfolio of polymetallic and primary precious metals mines. The locations of our six Principal Properties, as well as our corporate offices, are shown on the following page. Additionally, the total number of producing, development, evaluation and exploration-stage stream and royalty interests is provided.

> Management periodically reviews the materiality of individual royalty and stream interests within the portfolio, and as of December 31, 2022 it was determined that we have six material stream and royalty interests: Andacollo, Cortez, Mount Milligan, Peñasquito, Pueblo Viejo and Khoemacau.[1]

PORTFOLIO MANAGER VS. MINE OWNER AND OPERATOR

Royal Gold does not actively own or develop mining properties or participate in mining activities at the properties where we hold stream and royalty interests; instead, our stream and royalty interests are passive interests in mine production.

Having significant industry experience, our management team is well equipped to evaluate new opportunities and manage the existing portfolio of stream and royalty interests. The scalable nature of our business model also allows us to effectively manage our business with a fraction of the employees required to operate a mining company.

The properties where we hold interests span various stages of mining projects, from the initial stages of exploration and evaluation through to development and production. Our Operators make all development and operating decisions, and in general, we have limited to no influence regarding the development or operation of the mineral properties through the contractual arrangements we put in place or are already in place when an investment is initiated and over the course of our relationship.

1 Royal Gold management periodically reviews the materiality of individual royalty and stream interests within the portfolio. In making this determination, management considers primarily estimated future revenue and, to a lesser extent, historical revenue. Estimated future revenue is based on several factors, including mineral reserves and resources subject to our stream and royalty interests, production estimates, feasibility studies, technical reports, metal price and mine life assumptions. Based on these factors, we no longer consider our stream interest at the Wassa Gold Mine in Ghana to be a Principal Property.

182
Total Properties

40
Producing

19
Development

52
Evaluation

71
Exploration

1 **Andacollo**
Coquimbo Region, Chile

2 **Cortez**
Nevada, U.S.

3 **Mount Milligan**
British Columbia, Canada

4 **Peñasquito**
Zacatecas, Mexico

5 **Pueblo Viejo**
Sánchez Ramírez, Dominican Republic

6 **Khoemacau**
Botswana

● Producing Properties

Revenue from our Principal Properties

Our Principal Properties consist of six producing mines subject to our stream and royalty interests (see list on page 8), which in 2022 constituted approximately 71% of our annual revenue. For each of the properties featured in this section, we've highlighted its Operator, the net revenue generated to Royal Gold, and what we believe the property contributes to the SDGs in the accompanying ESG highlight.

ANDACOLLO, TECK RESOURCES

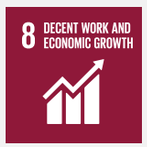
Coquimbo Region, Chile
2022 Revenue: $47,347,000

Andacollo is an open pit mine and milling operation located in central Chile, Coquimbo Region at 30.25°S latitude and 71.10°W longitude, at an elevation of approximately 1,000 m above mean sea level. It is near the southern limit of the Atacama Desert, approximately 2.4 km southwest of the town of Carmen de Andacollo and 55 km southeast of the regional capital of La Serena.

The mining operation uses conventional trucks and hydraulic shovels, with ore processed through a 55,000 tonne per day capacity copper flotation plant, to produce a marketable concentrate containing copper, gold and silver. Filtered concentrate is trucked to the port of Coquimbo, a distance of approximately 56 km, and shipped to smelters located predominantly in Europe.

Water supply for the operation is from groundwater wells, and the national grid supplies power with a power purchase agreement providing 100% renewable power.

The mine has been operating since 1996 and has a defined mine life out to 2035, with additional mineral resources that could extend mine life.



ESG HIGHLIGHT AND SDG CONTRIBUTION:

Teck was recognized as one of the 2023 Global 100 Most Sustainable Corporations by Corporate Knights, marking the fifth consecutive year Teck has been named to the list. The Global 100 companies are selected from over 6,900 publicly traded companies with more than $1 billion in revenues. Companies are evaluated based on a rigorous assessment involving sector-specific sustainability metrics, such as clean revenue percentage; water, energy and GHG productivity; and safety performance; board and executive diversity are also considered. We believe that the actions Teck has taken across its business to strengthen its commitment to sustainability and its ability to maintain the Corporate Knights recognition contribute to SDG 8, Decent Work and Economic Growth.

CORTEZ, NEVADA GOLD MINES

Nevada, U.S. | 2022 Revenue: $50,559,000

The Cortez Mine complex consists of open pit and underground mines and ore-processing facilities situated approximately 100 km southwest of Elko, Nevada, in Eureka and Lander Counties. The processing plant and administrative complex are located at 40.24°N latitude and 116.70°W longitude, and operations span an elevation range of 1,370–2,270 m above mean sea level.

Open pit operations use a conventional truck-and-shovel fleet, mining approximately 360,000 tonnes per day of ore and waste, with activities moving among the various pits. One underground mine is in operation, producing ore at the rate of about 4,000 tonnes per day; a second underground mine is in development and is expected by the Operator to start production in 2023. Non-refractory ores from the mines are treated on site through the oxide mill (which has a capacity of 16,330 tonnes per day) or on heap leach pads, while refractory ore is shipped to other Nevada Gold Mines ("NGM") operations (i.e., Gold Quarry and Goldstrike) for processing, with a trucking distance of 103 km and 132 km, respectively.

Consumptive water use for mining and processing is supplied by the mine dewatering wells. Electrical power is obtained from the grid and generated from the Western 102 (natural gas) and TS (currently coal but will be converted to natural gas) power plants.

Mining operations began in 1969, and the Operator estimates that defined mineral reserves and resources will support production past 2040, with opportunity for the further addition of mineral reserves.

ESG HIGHLIGHT AND SDG CONTRIBUTION:

NGM's ongoing efforts to improve the socioeconomic well-being of the communities surrounding its operations have earned the Company two awards from Nevada's leading business publications in 2022. These are the "Philanthropic Business of the Year" accolade from *Vegas Inc.*'s Angel Awards and the "Others First Philanthropy and Giving" award from *Nevada Business Magazine*. Both awards recognize the sustainable, long-term socioeconomic benefits NGM delivers to the state of Nevada. We believe that the actions that NGM has taken to improve the socioeconomic well-being of its nearby communities contribute to SDG 11, Sustainable Cities and Communities.

MOUNT MILLIGAN, CENTERRA GOLD

British Columbia, Canada | 2022 Revenue: $180,543,000

Mount Milligan is an open pit mine and milling operation located within the Omenica Mining Division in north–central British Columbia, at 55.12°N latitude and 124.01°W longitude at an elevation of approximate 1,120 m above mean sea level. The operation is accessed by road from Fort St. James, at a distance of 85 km.

The mining operation uses conventional trucks and electric shovels, with ore processed through a 60,000 tonne per day capacity copper flotation plant to produce a marketable concentrate containing copper, gold and silver. The concentrate is pressure-filtered, stockpiled and then trucked to the rail loadout facility in Mackenzie. The concentrate is then transported by rail via the Canadian National Railway approximately 1,254 km to North Vancouver, where it is loaded onto ships and sent to purchasers located around the Pacific Rim.

Water for the operation is collected from surface run-off and stored in the tailings pond; it is supplemented by groundwater pumping and pumping from other surface water resources.

Power is supplied by BC Hydro through a 92-km transmission line that is fed from the Peace River hydroelectricity generation facilities.

Commercial production was achieved in February 2014, and the operation has a mine life based on ore reserves through 2033, with exploration potential that the Operator estimates will extend the mine life.

ESG HIGHLIGHT AND SDG CONTRIBUTION:

At the 2021 Mine Reclamation Symposium hosted by the British Columbia Technical and Research Committee on Reclamation, Centerra Gold, Inc. (“Centerra”) and Chu Cho Environmental were co-recipients of the Jake McDonald Annual Reclamation Award for their ongoing research into innovative techniques to solve reclamation, remediation and ecological restoration issues at the Mount Milligan Mine, and for their partnerships with local communities. We believe that Centerra’s actions to support economic empowerment through local employment and procurement opportunities, combined with its collaborative efforts with Indigenous business leaders to help solve reclamation challenges, contribute to SDG 15, Life on Land.

PEÑASQUITO, NEWMONT

Zacatecas, Mexico | 2022 Revenue: $43,165,000

The Peñasquito open pit mine and ore-processing facilities are located approximately 200 km northeast of the city of Zacatecas and 27 km west of the town of Concepción del Oro, at 24.65°N latitude and 101.68°W longitude, at an elevation of about 1,900 m above mean sea level.

The Peñasquito mine comprises two open pit mines that utilize a conventional truck-and-shovel fleet. Sulfide ore is processed using a conventional crushing, milling and flotation facility to produce zinc and lead concentrates in a plant that has a capacity up to 119,000 tonnes per day. In late 2018, a pyrite leach circuit was added to increase gold and silver recoveries from pyrite utilizing cyanide leaching to produce gold and silver doré bars. Concentrates are shipped by truck to seaports for export, or to smelters within Mexico, while gold and silver doré are sold to refiners within Mexico.

Process water is drawn from groundwater wells in the Cedros basin and pumped to the site. Power is supplied under a power purchase agreement with the Comisión Federal de Electricidad, through the national power grid.

Open pit mining commenced in 2010 with a current mine life out to approximately 2031. Based on ore reserves, the Operator estimates that exploration potential could extend mine life.

ESG HIGHLIGHT AND SDG CONTRIBUTION:

For the 15th year in a row, Newmont was listed on the Dow Jones Sustainability™ World Index ("DJSI World"), representing the top 10% of the largest 2,500 companies in the S&P Global Broad Market Index. DJSI World membership is based on long-term economic factors, as well as leading ESG performance evaluated through the 2022 S&P Global Corporate Sustainability Assessment ("CSA"). In addition to being ranked number one in the metals and mining industry, Newmont received the top score for the governance and environment dimensions and earned top-decile performance in 23 of the 25 CSA performance categories. Year after year, Newmont continues to advance its actions on responsible mineral production, which in turn encourages other mine operators to improve their business practices. We believe Newmont's leadership in responsible mineral production contributes to SDG 12, Responsible Consumption and Production.

PUEBLO VIEJO, BARRICK GOLD

Sánchez Ramírez, Dominican Republic
2022 Revenue: $85,863,000

The Pueblo Viejo mine is located in the province of Sánchez Ramírez, at 18.94°N latitude and 70.17°W longitude and operations span an elevation range of 100–500 m above mean sea level. It is approximately 100 km northwest of the national capital, Santo Domingo.

Pueblo Viejo is a conventional open pit surface mine and a complex processing circuit designed to process 24,000 tonnes per day of refractory gold–silver ore, through a plant that uses pressure oxidation to oxidize sulfides and liberate gold and silver for recovery. The final products are gold and silver doré bars that are shipped to refiners for further processing. The plant is currently undergoing an expansion to increase the throughput to 38,000 tonnes per day, and this is expected to be completed in early 2023.

Water is supplied by two reservoirs that collect surface run-off.

The primary source of electric power for the mine is the Quisqueya 1 power plant, which was converted to a liquefied natural gas ("LNG") fuel source from heavy fuel oil in 2020. The power plant is located along the southern coast and connected to the mine through two 230-kV transmission lines.

Commercial production was achieved in January 2013. The mine life has been extended to the mid-2040s and the Operator estimates that exploration potential could extend the mine life.

7 AFFORDABLE AND CLEAN ENERGY

ESG HIGHLIGHT AND SDG CONTRIBUTION:

Until early 2020, the Pueblo Viejo mine energy supply was from the nearby Quisqueya power station, which ran on heavy fuel oil. As a result, Pueblo Viejo was one of Barrick's largest sources of GHG emissions. In 2020, the conversion of the Quisqueya power plant from heavy fuel oil to LNG was completed, resulting in GHG emissions reductions. The Quisqueya power station also provides electricity to the Dominican Republic's national grid. We believe that Barrick's efforts to convert the Quisqueya power plant from heavy fuel oil to natural gas play an important role in advancing clean energy, and thus contribute to SDG 7, Affordable and Clean Energy.

KHOEMACAU, CUPRIC CANYON CAPITAL

Ngamiland, Botswana | 2022 Revenue: $18,786,000

Khoemacau is a copper–silver mine located within the Ngamiland District of Botswana; it consists of an underground mine, Zone 5, and the Boseto ore-processing plant, separated by a distance of 35 km. The Boseto plant is located at 20.56°S latitude and 22.95°E longitude at an elevation of 950 m above mean sea level; it is accessed from the city of Maun and is approximately 25 km southwest of the town of Toteng.

The 10,000 tonne per day operation consists of a mechanized underground mine producing from the Zone 5 orebody and a sulfide flotation plant for processing, Boseto. The ore-processing plant uses conventional crushing, grinding and flotation facilities, producing a single copper–silver concentrate that is either trucked to the Port of Durban in South Africa, at a distance of 1,800 km, or to the Port of Walvis Bay in Namibia, at a distance of 1,200 km.

Power is provided to the project through an extension to the national power grid, with energy supplied by the Botswana Power Company. Process water for the Boseto mill is produced from a shallow well field that produces brackish water; water for Zone 5 is produced from dewatering wells and several freshwater wells.

Production was initiated in July 2021, with ramp-up occurring through 2022 and achieved the target mining rate in December of 2022. The operation has a mine life based on current ore reserves and resources of 20 years, with the Operator estimating high potential for mine life extension.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

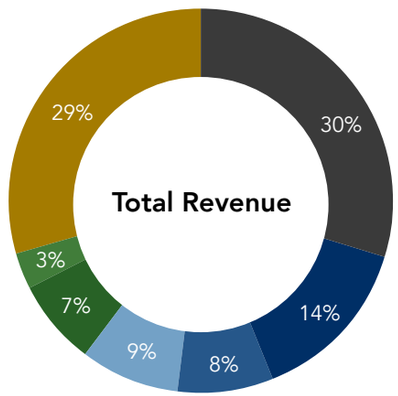
ESG HIGHLIGHT AND SDG CONTRIBUTION:

The Khoemacau management team engaged a third-party ESG expert to conduct an ESG-focused gap analysis in late 2020. The gap analysis evaluated the project's adherence and alignment with international standards, including the International Finance Corporation ("IFC") Standards on Environmental and Social Sustainability. The Company has made significant progress in filling gaps, training its staff on ESG matters and updating ESG policies and procedures to reflect ESG advancements. The integration of the IFC Performance Standards has helped Khoemacau reduce its environmental impact, improve its community relations and improve its overall approach to social and environmental management. We believe these actions contribute to SDG 12, Responsible Consumption and Production.

The figure below shows Royal Gold's revenue breakdown of its Principal Properties for the 2022 calendar year. Our six Principal Properties generated approximately 70.7% of net revenue and are the focus of this ESG report.

ROYAL GOLD'S REVENUE BREAKDOWN OF PRINCIPAL PROPERTIES FOR THE CALENDAR YEAR 2022

$USD



Mount Milligan	$180,543,000
Pueblo Viejo	$85,863,000
Andacollo	$47,347,000
Cortez	$50,559,000
Peñasquito	$43,165,000
Khoemacau	$18,786,000
Subtotal of Principal Properties	**$426,263,000**
Other properties	$176,943,000
Total revenue	**$603,206,000**

Letter from our Chief Executive Officer

Reflecting on Royal Gold's efforts in 2022, I see meaningful progress related to our ESG journey alongside a steadfast commitment to continue to bring value to investors. Our key investment principles guide us and help us advance on this journey through deliberate and thoughtful planning under four ESG pillars, as outlined in the "Pillars, progress and priorities" section of this report.

> "We will continue to look for similar opportunities that will help build the next generation of talent in the mining industry."

Informed decision making, disciplined processes and high standards of integrity and due diligence are the foundations of our pillars of Governance and Culture, Investment Strategy, Stewardship and Transparency, and these are detailed throughout this report.

In 2022 we took the pivotal step of strengthening our performance in Governance and Culture (and across all of our ESG pillars) with the hiring of our first Vice President, Investment Stewardship. This role, integral to our progress, will enhance our ability to analyze ESG risk in our business operations, communicate on ESG matters with our Board and stakeholders, increase our ESG engagement with our investors and Operators, better adapt to reporting and regulatory changes and enhance our review of ESG issues in connection with new investment opportunities.

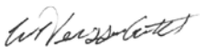
We remain carbon neutral with respect to our direct corporate emissions and are proud of our achievement of tracking and reporting on 98% of our portfolio's Scope 1 and Scope 2 emissions, which we refer to in this report as our Scope 3 Investment Emissions. Developing strategies to determine the most appropriate way to classify Scope 3 Investment Emissions is ongoing. As we work to access more information from the Operators of the Properties where we hold metal streams and royalties, we have also strengthened our commitment to all four of our ESG pillars (further discussed on pages 18–19), and, as a result, to our overall ESG program. Because we have relationships with many of our Operators, we can also look outside of operations for ways to support them, such as helping them achieve their own commitments to the SDGs in areas such as water, community healthcare and biodiversity, which are critical to their regions. Our work in 2022 with Project C.U.R.E. and the Khoemacau mine in Botswana (as discussed in the "Supporting our Operators" section of this report) is one example of how we can have a positive social impact as a metals stream and royalty company.

2022 marks a significant milestone in our climate-related reporting. This was the first year that Royal Gold disclosed under the TCFD guidelines, with the completion of a climate scenario analysis that addresses questions relating to climate-related risks and opportunities for our Company. We are also disclosing for the first time our alignment with the GRI and our support for the SDGs. We will continue to calculate and offset our own direct corporate Scope 2 and Scope 3 emissions and investigate considerations of realistic mitigation measures for our Scope 3 Investment Emissions, given our business model (e.g., understanding the pro rata amount of carbon generated at mining properties associated with our interests).

We are fortunate and grateful to have a small team with infrequent turnover; however, when we do seek new talent, we've been faced with the reality that there is a limited pool of highly experienced technical personnel from diverse backgrounds in our key locations. While we might not be able to affect the current talent pool in our particular local markets, we can aim to influence future generations, and so in 2022, we initiated three scholarships at three academic institutions known for their mining programs. These scholarships are directed to women and other underrepresented students, and we will continue to look for similar opportunities that will help build the next generation of talent in the mining industry.

I am proud of our team and our progress in 2022, and I thank you for taking the time to read this report.

Sincerely,



William H. Heissenbuttel
President and Chief Executive Officer

Q&A with Sybil Veenman, Board Member and Chair of the Compensation, Nominating and Governance Committee

Q: As you reflect on 2022, where would you say Royal Gold has made progress relating to ESG?

A: I am pleased with the increasing focus on emissions and understanding water usage in our interests and potential interests. Although as a company we have yet to ultimately conclude on our appropriate role with respect to Operator performance, we've made advances in our understanding of their performance by collecting, analyzing and disclosing relevant information. I would also say that we've further defined our philosophy, approach and internal processes around ESG and reporting, and are actively explaining to the outside world what we're doing and why, in greater detail than we have historically.

Q: What is one of the challenges Royal Gold faces as it increases its reporting and disclosure, and how did you overcome the challenge?

A: There are different frameworks that an asset manager or bank typically uses, and then there are disclosure frameworks used for mining companies. When we attempt to align with the specificities of these disclosure frameworks, many of them are not applicable due to the nature of our business. We have made some important strides by aligning with leading ESG standards, including TCFD, the GRI and SDGs, in addition to our commitments to ESG-focused mining industry standards such as the World Gold Council's ("WGC's") Responsible Gold Mining Principles ("RGMPs") and the International Council on Mining and Metals ("ICMM") Mining Principles. We continue to engage with investors and other stakeholders to help us understand the most important ESG factors for us, and to discuss what those are and how they are relevant to our business.

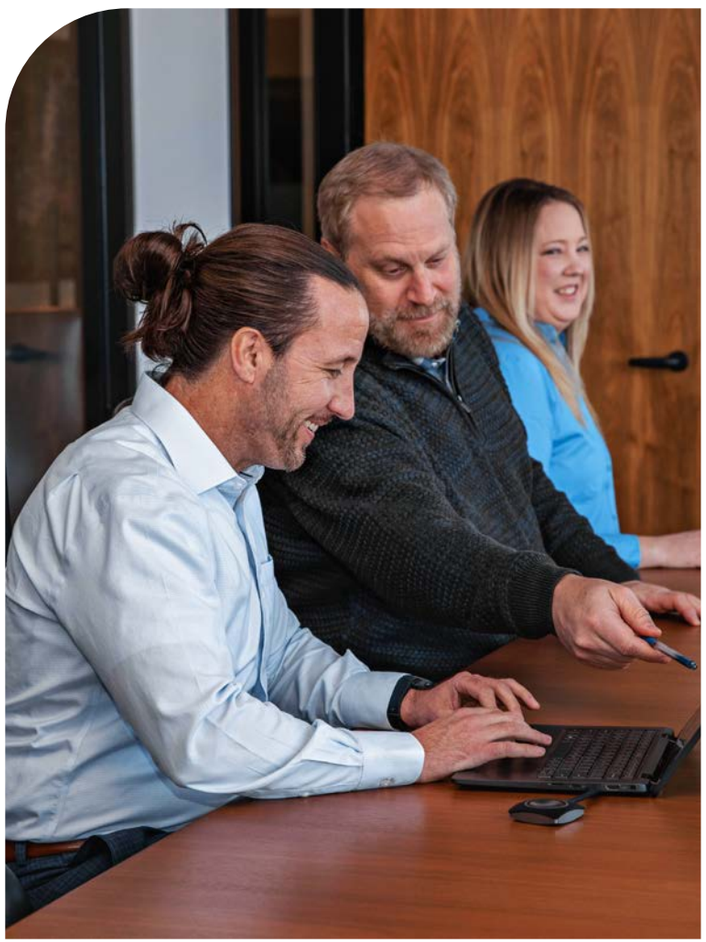
Q: How has ESG reporting and disclosure supported Royal Gold and its business strategy?

A: Disclosing our inaugural 2021 ESG Report to the world formalized our vision, our mission and our core values; it also more formally articulated our philosophy, what we have been doing, what we are doing, and where we are headed. That report was an important step forward, also because it reinforced how ESG has shifted from a framework for managing reputational risk to a lens for understanding our relationship to systemic risk and sustainable economic performance.

> "We continue to engage with investors and other stakeholders to discuss the ESG factors that are most relevant to our business and investments and the approach we are taking with respect to those."

Our Vision, Mission and Core Values

Royal Gold aspires to be the gold standard in everything we do, and we strive to operate in alignment with the following Vision, Mission and Core Values that are shared throughout the Company.



Vision

To be the gold standard as an employer, a financing partner, an investment and a community member.

Mission

To shape the future of mine finance through creativity, collaboration and a commitment to mutually beneficial outcomes for all stakeholders.

Core Values

Responsibility

We must ensure a safe, respectful and inclusive work environment; support our local communities; seek to support the sustainability efforts of our Operators; and care for and deploy our shareholders' capital to maximize value.

Partnership

We strive to develop and nurture long-term relationships with all stakeholders.

Integrity

We exemplify honesty, transparency and accountability in everything we do.

Pillars, progress and priorities

Our four ESG pillars

We believe four key ESG pillars are worthy goals that support Royal Gold's business model. Managing our business and reporting our progress in terms of these pillars will provide a meaningful way for our stakeholders to evaluate Royal Gold's performance.

GOVERNANCE AND CULTURE

We will create a culture of responsible investing and partnership through effective governance and stakeholder engagement, through the following:

- The maintenance of a work environment free from harassment and discrimination
- The implementation of appropriate policies regarding anti-corruption, bribery, whistleblowing and compliance with laws
- The retention of both a highly skilled and diverse Board and management team

"Our Governance and Culture pillar is especially important to our employees and our Board of Directors. Royal Gold recognizes that strong governance is necessary for us to be successful in executing on our business strategy, generating healthy returns for our stockholders, and fostering a collaborative working environment."

Laura Gill,
Vice President, Corporate Secretary and Chief Compliance Officer

INVESTMENT STRATEGY

We will seek investments in the projects of like-minded Operators that share our values, and will strive to integrate ESG terms into our due diligence, decision-making and investment documentation through the following:

- The consistent and robust integration of ESG matters into our investment decision-making
- The utilization of ESG subject experts when required

"Our approach to stream and royalty investments is evolving to increase our influence with our Operator partners through more comprehensive investment terms and innovative ESG structures."

Dan Breeze,
Vice President, Corporate Development, RGLD Gold AG

STEWARDSHIP

We will align our business strategy with sustainable goals and incorporate ESG issues, including the potential impacts of climate change, into investment analyses, decision-making processes and ownership practices, through the following:

- Seeking resilient investments by ensuring Operators have appropriate ESG systems in place
- Investment in community programs around the mines in which we are invested
- Agreement provisions that incentivize an Operator to achieve sustainability goals

"Royal Gold is a responsible investor that endeavors to partner with like-minded mining companies and seeks ways to meaningfully contribute to its local communities as well as its Operator's communities."

Allison Forrest,
Vice President, Investment Stewardship

TRANSPARENCY

We will periodically review and report on our activities, and be transparent about our positive and negative impacts, through the following:

- Our annual ESG progress report, annual report and proxy statement
- Disclosure on the environmental, GHG emissions, water efficiency, and other measures of our stream portfolio

"Through transparent communication, we endeavor to cultivate trust with our employees, build strong relationships with our Operators, and empower our stakeholders to make informed decisions."

Randy Shefman,
Vice President and General Counsel

Stakeholder and investor engagement

By engaging regularly and openly with stakeholders we learn, improve and ensure that our strategies, activities and reporting align with the needs and interests of the people affected by (or who will affect) our business.

We proactively engage with current and prospective investors as part of our investor relations program. Our engagement is focused on dialogue, transparency and responsiveness. Frequent and transparent communication with investors helps provide our Board and senior management with timely and valuable feedback on a range of topics. Recent engagement topics have included our financial performance, investment portfolio, corporate strategy, competitive environment, capital allocation and ESG matters.

In 2022 we held over 130 meetings with current and prospective investors. ESG matters were discussed in approximately 25% of those meetings, and they constituted the sole topic of discussion in approximately 5% of those meetings.

ESG topics discussed included key performance indicators ("KPIs"), feedback on our first ESG report, the integration of ESG considerations into new stream and royalty contracts, and how ESG factors are considered in the due diligence of new royalty and stream interests.

We value the feedback provided by our stakeholders and will continue to conduct open dialogue on corporate governance issues, ESG topics, and other matters relevant to our business. We aim to enhance our stakeholder engagement efforts as we advance our ESG program.

Further information on our stakeholder engagement practices during the due diligence phase is presented on page 36.

Royal Gold is evaluated by a number of independent ESG rating agencies that are used by a range of stakeholders to understand our relative ESG performance compared to that of mining companies and other peer groups.

We continue to increase our transparency through our ESG disclosure across our business, and these efforts are generally reflected positively in Royal Gold's improved ESG ratings. Given our unique business model, many ESG rating surveys require input that is not applicable to our Company.

Royal Gold has made an effort to participate in newer surveys such as the Bloomberg Gender-Equity Index survey, which in turn is helping us better understand stakeholder interests and expectations in topics such as diversity and inclusion.

The following table details our ratings since 2019 from these independent third parties. A short summary is provided on each rating agency and how our scores have evolved over time.

2022 ESG RATINGS

34
S&P Corporate Sustainability Assessment Score in 2022
2019: 7
2020: 22
2021: 22
TREND: IMPROVING

9.1
Sustainalytics
2019: 23.4
2020: 22.8
2021: 18.7
TREND: IMPROVING

AA
MSCI
2019: A
2020: A
2021: AA
TREND: CONSISTENT

C-
ISS ESG Corporate Rating
2019: n/a
2020: C-
2021: C-
TREND: CONSISTENT

1
ISS – Governance Score
2019: 2
2020: 2
2021: 1
TREND: CONSISTENT

8
ISS – Environment Score
2019: 9
2020: 10
2021: 10
TREND: IMPROVING

6
ISS – Social Score
2019: 9
2020: 7
2021: 8
TREND: IMPROVING

40.9%
Bloomberg Gender-Equality Index
2019: n/a
2020: n/a
2021: 35.0%
TREND: IMPROVING

S&P Corporate Sustainability Assessment Score

We have seen improvements in our S&P Corporate Sustainability Assessment score over time. Royal Gold has consistently scored well on governance and economic aspects, and we continue to make improvements on our public reporting of environmental metrics and GHG emission statistics. Scores are on a scale from 0 to 100 (where 100 is the best).

Sustainalytics

Royal Gold continues to improve its Sustainalytics ESG Risk Rating year over year, with a score of 9.1 in 2022. We maintained our ESG Risk Rating in 2022, and were third out of 123 companies in the Precious Metals Group (with a score of 1 indicating the lowest risk). We ranked second out of 96 for the Gold sub-industry and 128th among the 14,860 companies in the Sustainalytics database and received Sustainalytics' "ESG industry top rated" designation.

MSCI

We continued to maintain our MSCI "AA" ESG Rating in 2022. This places us in the top quartile of all companies graded. The MSCI ESG Rating distribution ranges from CCC (lowest) to AAA (highest). Royal Gold has maintained its AA rating due to our strong governance practices and transparency.

ISS Corporate

Royal Gold continues to score the highest possible score, 1, for our Governance practices. In 2022, we made significant improvements to both our Environment and Social scores. Our improvements can be attributed to increased disclosure and enhanced engagement with ISS on the applicability of metrics.

Bloomberg Gender-Equality Index

Royal Gold has participated in the Bloomberg Gender-Equality Index survey for the past two years. This Index is a modified market capitalization-weighted index that aims to track the performance of public companies committed to transparency in gender-data reporting. This index focuses on gender matters and not ESG broadly. While there are areas for improvement, Royal Gold has made progress on its internal diversity and inclusion practices and, as a result, we have seen an improvement in our 2022 score. Scores are on a scale of 0% to 100% (with 100% being the best).

We ranked second out of 96 for the Gold sub-industry and 128th among the 14,860 companies in the Sustainalytics database and received Sustainalytics' "ESG industry top rated" designation.

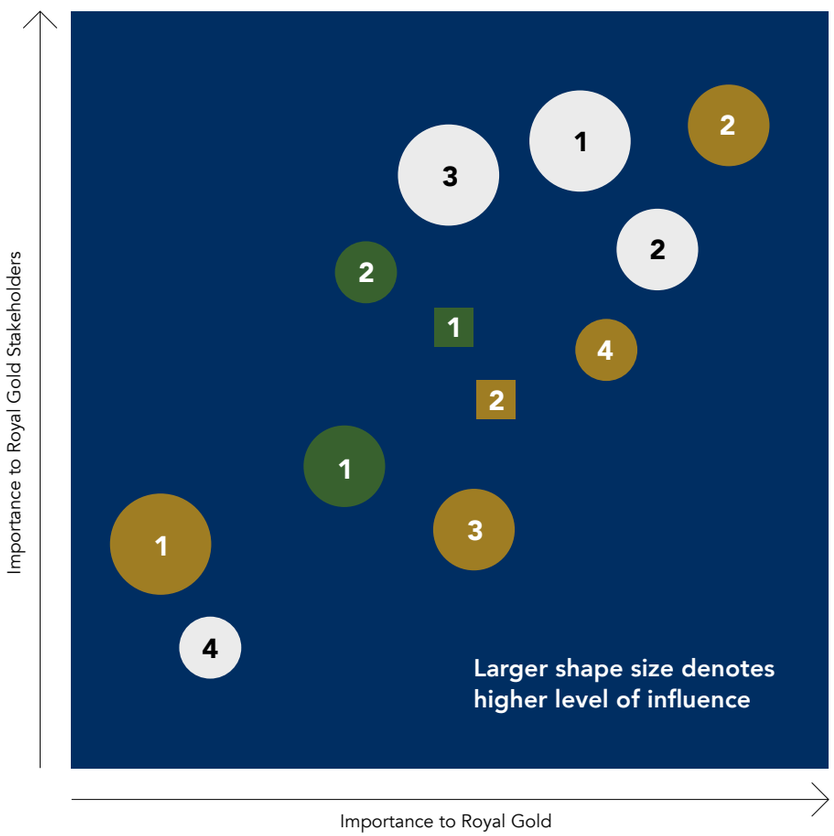
Priority ESG topics

The following ESG topics of interest to shareholders and other stakeholders were identified in 2021 through an ESG priorities assessment with an independent, third-party ESG consulting firm; these topics informed the development of our four pillars and they remain priorities for our business and are emphasized in this report. The topics are Governance, Talent, Product Design/Life Cycle of a Deal, Business Integrity, and Transition to a Lower Carbon Economy. Royal Gold plans to refresh its ESG priorities assessment in 2023, in order to capture the key ESG risks and concerns of our stakeholders.

These topics include issues that are key to Royal Gold's corporate operations, as well as those Corporate or mine site level risks that are managed by our Operators but nevertheless present indirect risks to Royal Gold. For example, an indirect but priority topic would be an Operator's risk associated with water availability, while employee development and retention is a priority area for both Royal Gold and its Operators. As another example, carbon emissions related to our corporate activities differ from the emissions generated at an active mine or development project owned by an Operator. Either area can be a source of risk to Royal Gold.

The figures below identify ESG risks that Royal Gold believes are the most important, the direct or indirect influence we may have on those risks, and our assessment of the relative importance of each risk to Royal Gold and our stakeholders.

PRIORITY TOPIC MATRIX



Category	Important ESG topics	Direct	Indirect
Environmental	Transition to a low-carbon economy	1 Climate change (Scope 2 and 3) 2 Climate change (portfolio)	1 Operator risk associated with energy intensity, transition to low-carbon fuels, water availability, and other risks related to climate change
Social	Talent	1 Health and safety 2 Employee development and retention 3 Stakeholder communication and relations 4 Diversity and inclusion	2 Operator risk associated with health and safety, human rights, labor rights and community relations
Governance	Product design/Life cycle of a deal Governance Business integrity	1 Ethics, integrity and compliance 2 Risk management (investment process and asset stewardship) 3 Corporate governance 4 Cybersecurity	

Progress on our 2022 ESG plans

The table below highlights the progress we've made against the 2022 ESG priorities disclosed in our 2021 ESG Report.

2022 plans	2022 progress and achievements
Climate change	
Achieve carbon neutrality for corporate emissions annually	Verified "Improved Forest Management Carbon-Removal" credits were secured, to offset our direct corporate Scope 2 and Scope 3 emissions
Disclose scenario analysis aligned with TCFD for our Principal Properties	We undertook a climate scenario analysis for ten jurisdictions in which we have stream and royalty interests (covering all of our Principal Properties, among others), with assistance from external experts; we identified physical and transition risks associated with the ten jurisdictions, along with a set of actions to further advance our understanding and management of climate-related risks
Assess potential to set emission intensity targets for our portfolio	We are evaluating ways to engage with our Operators who provide more than 2% of our revenue, and work to understand the actions they are specifically taking to reduce GHG emissions and, where appropriate, determine if we can be a source of financing to advance selected initiatives
Assess Scope 1 and Scope 2 emission estimates for our portfolio	An independent ESG data analysis firm, Skarn Associates, provided data by which to assess emissions estimates from our portfolio of revenue-generating streams and royalty interests; this allowed us to estimate the emissions associated with our beneficial interest in the operations, and we were further able to assess energy consumption data in concert with the emissions data
Community investment	
Support organizations that serve critical needs in the communities in which our corporate offices and Operators are located	In 2022, Royal Gold contributed to over 24 organizations globally totaling $1.1 million; we also started to align our donations program with the SDGs
ESG governance	
Build ESG expertise in all levels of the Company	Hired our first Vice President, Investment Stewardship in 2022 to lead the Company's ESG program and advance ESG policies and practices
Enhance our risk management process with climate analysis	The Royal Gold Enterprise Risk Management Program and our ESG due diligence process have been updated to reflect more in-depth climate analysis

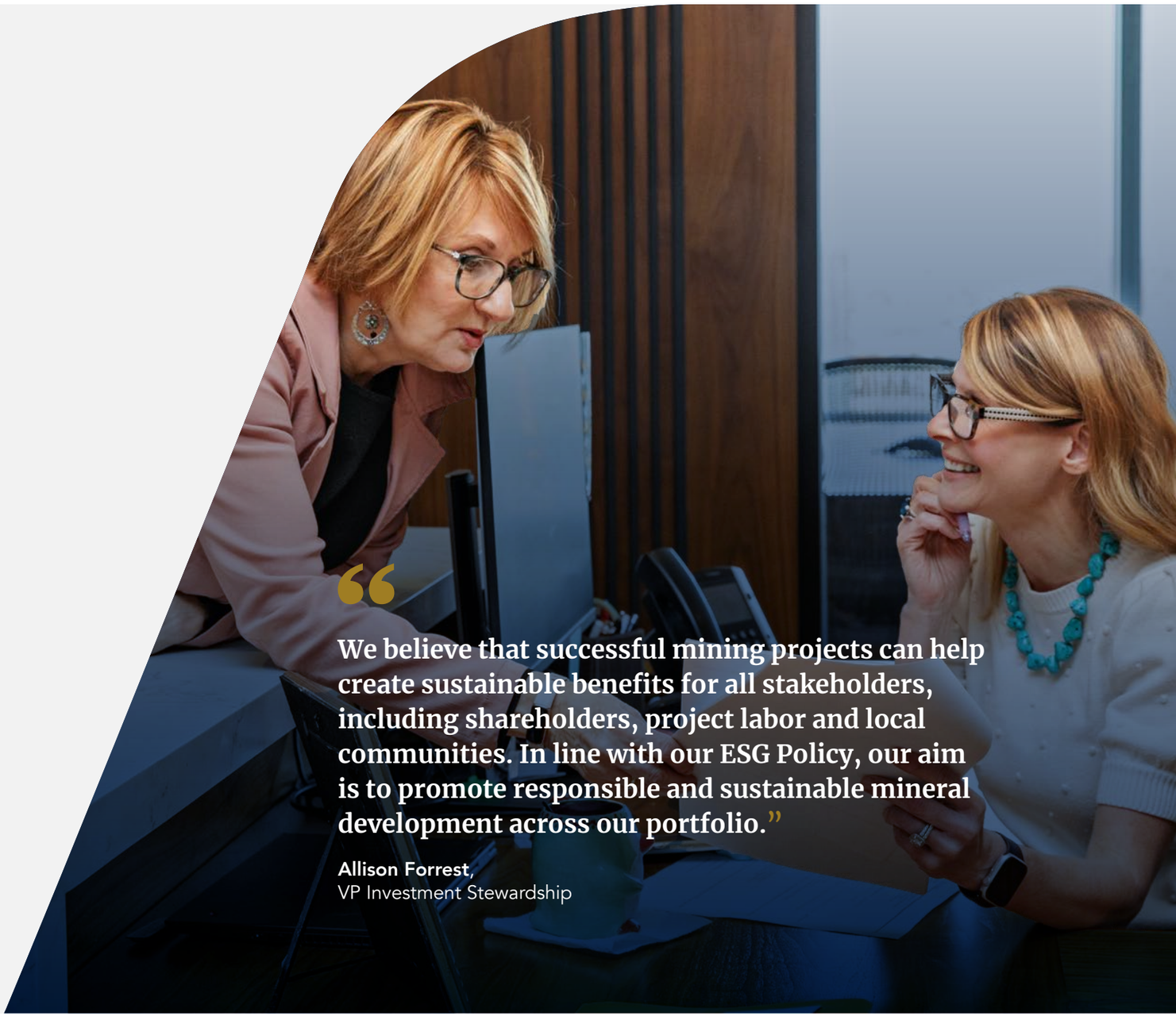
2023 ESG priorities

As we advance our ESG program, we continue to evaluate meaningful ways to make improvements across our business. The table below outlines Royal Gold's ESG priorities for 2023.

2023 ESG priorities
Climate change
We will continue to achieve carbon neutrality for our direct corporate Scope 2 and Scope 3 emissions and implement reduction strategies where we can.
From our work assessing Scope 3 Investment Emissions involving our portfolio of streams and royalty interests and the physical and transition risks identified by our climate scenario analysis, we will advance our thinking on the ways in which we might make a positive impact with respect to climate change on our interests and potentially reduce climate change risks to our business.
We aim to assess actions we can take to help reduce GHG emissions associated with our portfolio. Actions we can take to help reduce the GHG emissions associated with our portfolio are limited; however, we have expanded our GHG engagement with Operators and are tracking Operator targets and performance. We will engage with our Operators who provide more than 2% of our revenue and work to understand what actions they are specifically taking to reduce GHG emissions and, where appropriate, determine if we can be a source of financing to advance selected initiatives.
Diversity and inclusion
We plan to complete diversity and inclusion educational awareness training for employees.
Community investment
We aim to contribute $1.5 million in support to organizations that serve the critical needs of the communities in which our corporate offices and Operators are located, continuing to align with the SDGs.
ESG governance
We plan to complete ESG training for employees.
We plan to refresh our ESG priorities assessment.

Governance

The sustainability of our business depends to a significant measure on strong corporate governance and our ability to identify and manage ESG risks inherent in our corporate operations and portfolio interests. Rigorous oversight by our Board and its committees, and effective execution by our talented workforce, will allow us to advance our business and achieve our ESG goals.



We believe that successful mining projects can help create sustainable benefits for all stakeholders, including shareholders, project labor and local communities. In line with our ESG Policy, our aim is to promote responsible and sustainable mineral development across our portfolio.”

Allison Forrest,
VP Investment Stewardship

Corporate governance

Our approach

Royal Gold is committed to leading corporate governance practices that promote the long-term interests of our shareholders; creating strong oversight models with the Board of Directors ("the Board"); enhancing the accountability of management; fostering strong and open relationships with our Operators, employees and other stakeholders; and building public trust in our Company. Oversight of the management team is provided by our highly capable and independent Board, consisting of individuals with diverse skills and experience that align with our business strategy. Our Directors offer valuable perspectives that promote the best interests of Royal Gold and our stakeholders.

Our management team has significant industry and Company-specific experience and is responsible for implementing our policies and practices to enhance our corporate culture, which includes a human capital management strategy built on attracting, developing and retaining a talented and diverse workforce.

A significant portion of our Board's oversight responsibility is carried out through its standing committees. Several Board members have experience in various aspects of ESG and apply this perspective to their oversight responsibilities. This background allows for the alignment of our ESG practices with the interests of Royal Gold, its shareholders and other stakeholders.

The responsibilities of our Board and Board-level subcommittees are graphically shown in the figure below. Additional information on our Board and its committees can be found on our website.

> Our management team has significant industry and Company-specific experience and is responsible for ensuring that our policies and practices drive our defined corporate culture

Board composition[1]

Good governance begins with effective oversight by our Board and its committees, followed by effective execution by our talented workforce. Our Board comprises seven Directors. All Directors, excluding our Chief Executive Officer ("CEO"), are independent; our Chair and all members of each of the Board's two standing committees are also independent, namely the Audit and Finance Committee and the CNG Committee. The composition of our Board and Board-level subcommittees is presented in this table.

DIRECTOR	 William Heissenbuttel (President and CEO)	 Jamie Sokalsky	 Fabiana Chubbs	 William Hayes (Chair of the Board)	 Kevin McArthur	 Sybil Veenman	 Ronald Vance
DIRECTOR SINCE	2020	2015	2020	2008	2014	2017	2013
AGE	57	65	57	78	68	59	70
INDEPENDENT	No	Yes	Yes	Yes	Yes	Yes	Yes
GENDER (M/F)	M	M	F	M	M	F	M
SUBCOMMITTEE AND ROLE	n/a	Audit and Finance Committee Chair	Audit and Finance Committee Member	Audit and Finance Committee Member	Compensation, Nominating and Governance Committee Member	Compensation, Nominating and Governance Committee Chair	Compensation, Nominating and Governance Committee Member

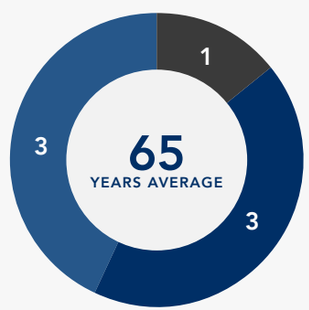
Board diversity

43%
Citizens of another country

29%
Women

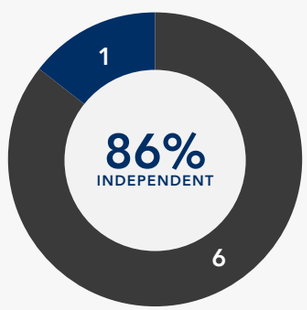
Other public board service
Our independent directors serve on an average of **one** outside public company board

AGE



- >70 years
- 61–70 years
- 51–60 years

INDEPENDENCE



- Independent
- Insider

TENURE

- 10+ years
- 6~10 years
- 1~5 years

1 Details in the Board of Directors chart are as of the report publication date.

ESG governance

The role of our Board in ESG

At the Board level, responsibility for ESG oversight is assigned to the CNG Committee, which includes three members who self-assess as having ESG expertise. All members are independent under Nasdaq and SEC rules, including enhanced independence rules applicable to audit and compensation committee members.

An effective Board consists of individuals with diverse qualifications and experience that align with our business strategy. Each Director contributes a distinct perspective to promote the best interests of Royal Gold and our stakeholders. Our CNG Committee has identified substantive areas of expertise that the Board as a whole should represent. This matrix summarizes the knowledge, skills and experiences related to ESG as held by our Directors and which our Board believes are relevant to our business.

BOARD SKILLS AND DIVERSITY MATRIX

Knowledge, Skills, and Experience	Chubbs	Hayes	Heissenbuttel	McArthur	Sokalsky	Vance	Veenman
Audit Committee Financial Expert	●	●	◐	◐	●	●	
Biodiversity		◐		◐			
Board Service at Other Public Companies	●	●		●	●	◐	●
Business Development	◐	●	●	●	●	●	◐
CEO or CFO Experience	●	●	●	●	●		
Climate Change	◐	◐	◐	◐			◐
Corporate Governance and Ethics	●	●	◐	●	●	●	●
Cybersecurity	◐	◐	◐	◐	◐	◐	◐
Environmental Matters	◐	●	◐	●	◐	◐	◐
Executive Compensation	●	●	◐	●	●	●	●
Finance	●	●	●	●	●	●	◐
Geology		◐		●		◐	
Health and Safety	◐	●	◐	●	◐	◐	◐
Human Capital Management	◐	●	●	●	●	●	◐
Indigenous Relations		◐		◐		◐	◐
Industry Association Participation	◐	●	◐	●	●	◐	
International Business	●	●	●	●	●	●	●

BOARD SKILLS AND DIVERSITY MATRIX (CONTINUED)

Knowledge, Skills, and Experience	Chubbs	Hayes	Heissenbuttel	McArthur	Sokalsky	Vance	Veenman
Labor Relations		◐		◐			
Leadership	●	●	●	●	●	●	●
Legal and Regulatory	◐	◐	◐	●	◐	◐	●
Marketing		◐	●	●		●	
M&A	●	●	●	●	●	●	●
Mining Industry	●	●	●	●	●	●	●
Mining Operations	◐	●		●	◐	◐	◐
Permitting		●		●	◐	◐	◐
Public Policy		◐	◐	◐	◐	◐	◐
Reputation in Industry	●	●	●	●	●	●	●
Risk Management	●	●	●	●	●	●	●
Stakeholder Engagement	●	●	●	●	●	●	●
Strategic Planning	●	●	●	●	●	●	●
Sustainability and ESG	◐	●	◐	●	◐	◐	●
Tailings		◐		◐		◐	◐
Water		◐		●		◐	◐
Board Tenure Years	2	15	3	9	7	10	6

◐ Some Experience ● Extensive Experience

The CNG Committee meets regularly with our senior management team to review ESG risks and opportunities related to our business strategy, including monitoring ESG management practices, and management's progress on company ESG initiatives. This is detailed further in subsequent sections, under "Investment strategy" and "Environmental stewardship."

Key responsibilities of the CNG Committee:

- Oversees our compensation strategy
- Reviews and approves the compensation to be paid to executive officers
- Recommends to the Board compensation to be paid to our non-employee Directors
- Administers our equity incentive plan
- Oversees the preparation of our compensation disclosures
- Identifies and recommends to the Board Director-nominees
- Advises the Board on corporate governance matters
- Reviews our corporate governance policies
- Oversees ESG, climate change and other sustainability initiatives
- Has the authority to retain independent consultants

2022 performance

- During 2022, the Board met 11 times and the CNG Committee held four formal meetings.
- The full Board reviewed the 2021 ESG Report in advance of publication. The report included an assessment of the GHG emissions from the revenue-generating properties in our portfolio and benchmarking of how our portfolio performed with respect to Scope 1 and Scope 2 GHG emissions, compared to the gold mining industry overall.
- Recommendations were presented to the Board for stream or royalty interests, which included GHG emission estimates for any proposed new interest.

Our management team's role in ESG

Direct management responsibility for ESG considerations, including climate change, is assigned to our President and CEO. The sustainability of our business depends to a significant degree on our ability to identify and manage ESG risks inherent in our interests. For this reason, consideration of ESG risks is central to the development of our corporate strategy and ongoing oversight.

Enterprise Risk Management Committee

Royal Gold maintains an enterprise risk management ("ERM") program aimed at actively identifying, assessing and mitigating the Company's top risks associated with its operations and revenue-generating properties.

We organize our risks within a set of broad subjects. Risks and mitigating actions associated with ESG and climate change are captured in several of these subjects, but captured more commonly in two subject areas:

Business sustainability: We look to identify issues associated with changing laws and social norms on portfolio investments and business opportunities; and

Investment portfolio performance: We look to identify issues that will impact the operations that generate revenue from our streams and royalties over the short, medium and long term, which would capture issues associated with increasing costs or revenue loss driven by actions addressing climate change, or underperformance in environmental management, social management or governance.

ESG and other enterprise risks are monitored by the members of the ERM Committee, which includes members of our senior management team. This committee receives input from other members of the Royal Gold team, including individuals with responsibility for new business generation, financial performance, legal compliance and the technical assessment of our stream and royalty interests. The ERM Committee meets quarterly to consider present and potential risks to Royal Gold's ongoing success, determine appropriate mitigation for risks that might arise and execute on mitigation strategies as appropriate.

The Board is responsible for oversight of enterprise risk. Each quarter, management reports to the board on enterprise risk and the board reviews the adequacy of the ERM program on an annual basis and provides direction to management on appropriate changes to the ERM program that align with the Company's business strategy.

ESG Committee

The Royal Gold ESG Committee is responsible for ensuring that Royal Gold's sustainability and ESG initiatives are effectively monitored, managed and fulfilled and that issues are reported to the CNG Committee as appropriate. The ESG Committee's specific responsibilities, set out in its charter, include the following:

- Review all ESG-related policies annually for compliance and relevance and make recommendations on updates to the CEO for review and approval by the CNG Committee
- Recommend ESG strategy, including ESG priorities, objectives, and initiatives to the CEO for approval. This includes but is not limited to ESG-related training, target setting and achievement, due diligence approach, ESG surveys and ratings, internal and external ESG reports, ESG-related communication, ESG standards review, and evaluating emerging ESG-related risks and opportunities for alignment with Royal Gold's ERM program
- Review Operator ESG performance and, together with the legal department, Operator compliance with ESG-related contractual standards
- Review Operator charitable/social initiatives and review opportunities for Royal Gold participation
- Review significant ESG events which could present material reputational and/or financial risk to Royal Gold and/or its Operators

The ESG Committee is a cross-functional management committee and consists of members of Royal Gold senior management with ESG-related expertise in the following areas: ESG, Operations, Compliance, Finance, Investor Relations, and Legal and is led by the Vice President, Investment Stewardship.

Senior management team

The review of all new investment opportunities is the responsibility of Royal Gold's senior management and is led by our CEO. These individuals bring extensive experience in the technical, financial and legal aspects of mining project investment, development and operations, and may be supported by external experts in subject matter areas including, but not limited to, the following: permitting, geology, resource estimation, construction, mining operations, geotechnical, metallurgy, ore processing, water, tailings management, community and Indigenous engagement, biodiversity, political risk and offtake marketing and sales.

Our process for considering ESG issues in corporate strategic planning and risk management is summarized in the figure below.

ESG alignment in executive compensation

The CNG Committee sets annual targets for ESG performance as part of our annual short-term incentive compensation (bonus) program for all company personnel, which are intended to align company ESG performance with the interests of our shareholders and other stakeholders.

In 2022, these ESG-related efforts and achievements accounted for 18.75% of the total short-term incentive compensation for our team, representing the highest-percentage bonus criterion and equal to one other bonus measure. The ESG factors that the Board considered in 2022 included issuing our first annual ESG report, addressing issues commonly raised in investor engagement, demonstrating advancement of work on TCFD disclosure, and improving diversity within the Company and industry.

> In 2022, Royal Gold hired a Vice President, Investment Stewardship, our first senior manager dedicated entirely to advancing our ESG practices and policies. This addition to our team reflects the importance we place on growing internally in this area as we increase our ESG reporting and disclosure.
>
> Our ESG strategy is reviewed annually, at minimum, by our President and CEO with senior management, and is modified as necessary as part of our corporate strategic planning and ERM processes. Senior management then presents relevant updates to the members of the CNG Committee. This input from Royal Gold management to the Board and its committees enables an integrated approach to ESG as part of our overall risk management effort.

Key policies related to ESG

For Royal Gold, ESG governance is grounded in a suite of Board-approved policies and codes that collectively establish the framework by which we conduct our internal and external business operations. All policies are reviewed by our Board or by a Board committee and updated as necessary. These policies apply to Royal Gold, Inc. and all of its subsidiaries. Links to all of our corporate policies may be found in the ESG Document Library section of our website, where you can also find our bylaws and Board committee charters. The list below highlights policies with significant ESG relevance.

Environmental, Social and Governance Policy

Our ESG Policy sets forth our core commitment to furthering responsible mineral development as a means of creating long-term value for our stakeholders.

Diversity and Inclusion Policy

The Royal Gold Diversity and Inclusion Policy was updated in 2022 to better reflect our commitment to inclusion. This policy defines our diversity and inclusion practices which focus on fostering an inclusive work environment where individuals are treated fairly and with respect and are given equal opportunity to develop and advance.

People Policy

We believe that our employees and officers are our most important assets. Our People Policy outlines our dedication to maintaining a safe and healthy workplace that is free from harassment and discrimination.

"ESG is a driver of sustainable economic performance and its principles have always played a role in how we operate, given our focus on investing in assets with sustainable long-term returns. Striving to be the gold standard in everything it does, the Company focuses on continuous improvement in ESG management within the context of its role as a largely passive investor."

Sybil Veenman,
Chair of the Compensation, Nominating and Governance Committee

Code of Business Conduct and Ethics

Our Code of Business Conduct and Ethics provides the framework by which we commit to maintaining the highest ethical standards in our operations and our relationship to our employees, counterparties and other stakeholders.

Anti-Corruption Policy

Our Anti-Corruption Policy outlines our prohibitions against illegal and improper conduct, including bribery and corruption in all forms.

Human Rights Policy

Our Royal Gold Human Rights Policy provides a framework to ensure human rights are respected in all company operations. Royal Gold believes that human rights are basic standards aimed to secure dignity and equality for all people. Royal Gold is committed to respect internationally recognized human rights standards.

Supplier Code of Conduct

Our Supplier Code of Conduct outlines expectations regarding the standard business practices of Suppliers that conduct business with Royal Gold, Inc. and its subsidiaries and affiliates.

Cybersecurity Disclosure Policy

Our Cybersecurity Disclosure Policy and Incident Response Plan are designed to establish acceptable uses of electronic devices, communications systems and network resources, and a framework for reporting and managing cybersecurity incidents. Our Board and senior management oversee matters relating to cybersecurity. Under its Charter, the Audit and Finance Committee of our Board is responsible for reviewing the security of our information technology systems and operations, including programs and defenses against cyber threats.

The full Board is briefed on cybersecurity at least annually and receives more frequent updates as needed. Our Chief Financial Officer and Treasurer is responsible for cybersecurity matters at the management level. Employees complete cybersecurity training program semi-annually or more frequently as warranted by changes to the business operating environment. In 2022, 100% of Royal Gold employees completed cybersecurity training.

In 2022, ISS ESG Rating services made updates to its Governance QualityScore methodology with new factors on information security, including whether a company discloses its third-party information security risks and the likelihood a company could suffer a material cybersecurity breach. Royal Gold has been rated by ISS as "low risk."

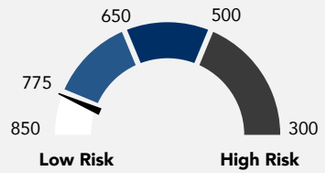
Whistleblower Policy

Royal Gold's Whistleblower Policy encourages and enables the reporting of any suspected illegal activities, unethical behavior, or other misconduct. The Whistleblower Policy is intended to provide a means for Directors, officers and employees of the Company to report serious concerns that could have a negative impact on Royal Gold or its stockholders, such as actions that may lead to false or inaccurate financial reporting, are unlawful, are not in line with company policy or otherwise amount to serious improper conduct. As indicated in the figure to the right, there were no whistleblower complaints between 2019 and 2022.

Political contributions

Royal Gold's Code of Business Conduct and Ethics provides that corporate funds may not be provided to political candidates, entities or organizations without the written consent of our CEO, or the Chair of the Audit and Finance Committee of our Board in the case of a political contribution suggested by our CEO. This includes direct cash contributions, the donation of property or services, and purchases associated with fundraising events. As indicated in the figure to the right, we made no political contributions between 2019 and 2022.

CYBER RISK SCORE



780

ISS 4.2.0 Cyber Risk Score

as of 23 January 2023

0

Whistleblower complaints from 2019 to 2022

TREND: CONSISTENT

0

Political contributions from 2019 to 2022

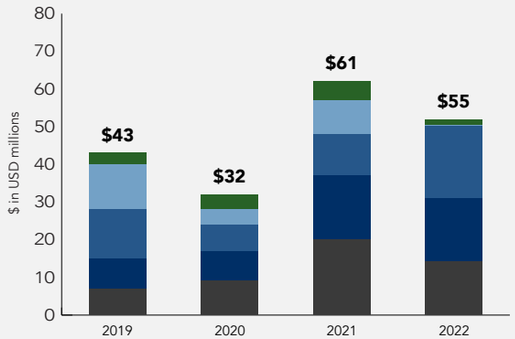
TREND: CONSISTENT

Taxes we pay

Royal Gold's Tax Policy provides a framework to ensure that tax strategy and compliance measures are consistent with all applicable laws and company policies. We strive to act with integrity in all tax matters and provide full disclosure under applicable law. We are subject to income and other taxes in various jurisdictions where we operate and/or have stream or royalty interests. As shown in the figure to the right, we paid significant income and withholding taxes during 2019–2022, with the majority of these taxes paid in the United States, Mexico, Switzerland and Canada.

In addition to income and withholding taxes, certain royalty payments we receive are subject to production taxes (or mining proceeds taxes), and we pay other government royalties, mineral rights taxes, VAT, and HST/GST. For 2022, these non-income taxes are included in the costs and expenses section of our consolidated statements of operations and comprehensive income in our annual report on Form 10-K for the year ended December 31, 2022.

INCOME AND WITHHOLDING TAXES PAID



Includes income and withholding taxes.
Fiscal years ended June 30.

- U.S.
- Mexico
- Switzerland
- Canada
- Other (Argentina, Australia, Bolivia, Burkina Faso, Nicaragua, Spain, U.K.)

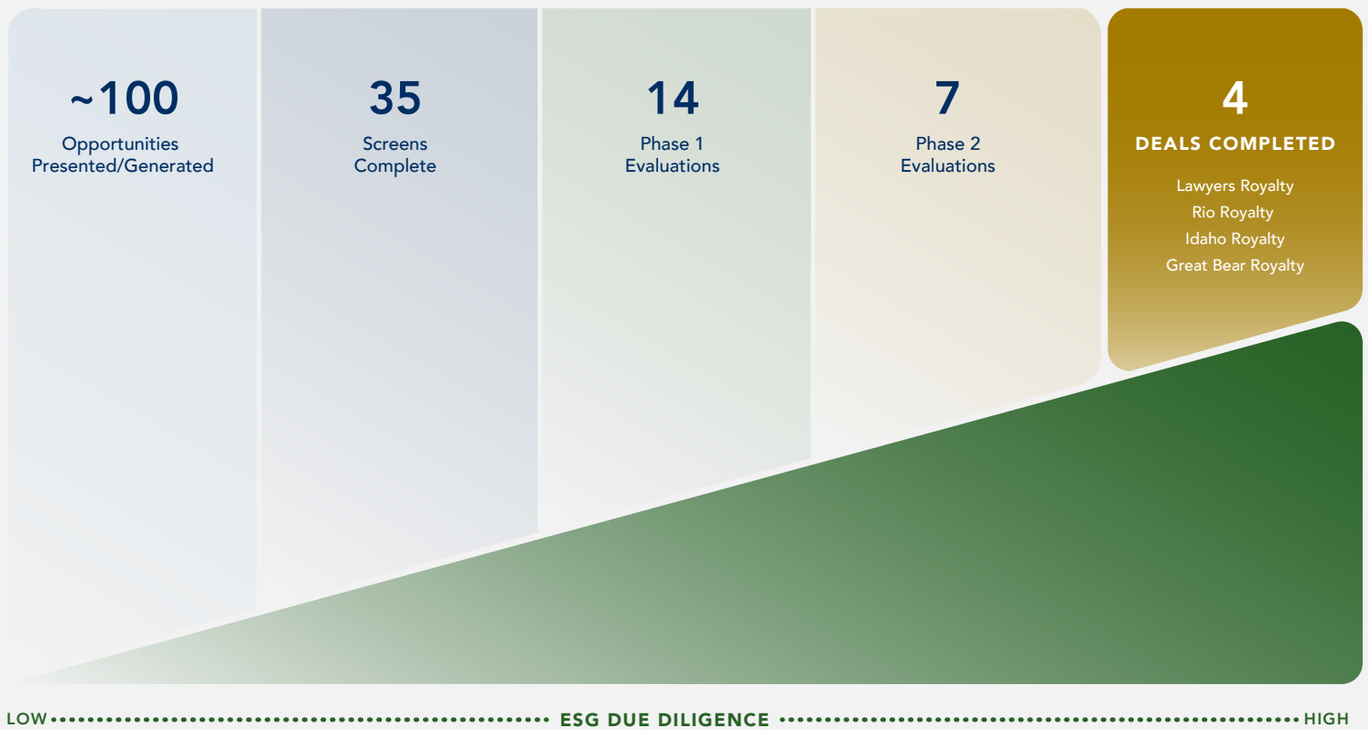
Investment strategy

Royal Gold provides shareholders with exposure to precious metal-based revenue through the acquisition and management of streams and royalties. The evaluation of ESG factors is a key part of our extensive due diligence process on prospective stream and royalty investments to identify which opportunities will provide long-term value. Our active monitoring of stream and royalty interests within the portfolio also considers ESG factors which contribute over the long term.

We understand that sustained economic performance cannot be obtained without sound ESG practices; therefore, the sustainability of our stream and royalty interests is fundamental to our long-term success.

Below: Site visit, Manh Choh Project – Matthew Bidwell, Royal Gold Principal Geologist since 2011, Alaska, U.S.

BUSINESS DEVELOPMENT PIPELINE



Due diligence

Our approach

While we do not take an active role in the management of the mining projects in which we hold stream and royalty interests and generally have limited influence over the decisions of our Operators, it has always been central to our business model that successful mining projects create sustainable benefits for all stakeholders, including shareholders, project labor and local communities. In line with our ESG Policy, we therefore seek to promote responsible and sustainable mineral development across our portfolio.

Royal Gold endorses the ICMM Mining Principles and the RGMPs, both of which promote ethical and sustainable resource development. These principles are integrated into Royal Gold's business planning and operations, as appropriate, and we encourage our Operators, whom we consider to be members of our supply chain, to adhere to these or similar principles in their management and operations. For the 2022 calendar year, Operators responsible for generating more than 93% of our revenue endorsed either the WGC's RGMPs, the ICMM Principles for Sustainable Development, and/or subscribed to one or more similar international charters respecting ESG issues. Please see the Appendices on page 103, which identifies our Operators, their calendar year 2022 contribution to Royal Gold revenue, and the ESG charters to which each Operator subscribes.

Our process

The initial ESG due diligence process is a critical time to identify any potential ESG risks prior to entering into an agreement with an Operator.

Royal Gold's operations and senior management teams are responsible for completing due diligence reviews and assessing findings from those reviews. For each potential new interest our Operations Team undertakes, we undertake an internal "Phase 1" review – a high-level review focused on financial, technical, ESG and political risk considerations. If the results of the Phase 1 review are positive, the review moves to "Phase 2." For this more detailed evaluation, a team of subject matter experts provides in-depth assessments across various topics.

We recognize that each investment opportunity is unique, requiring project-specific due diligence reviews and teams. This includes engaging third-party experts that can provide technical knowledge with respect to the local operating environment, including specific knowledge of permitting within a given jurisdiction.

Our phased approach to project reviews allows the use of our Phase 1 review findings to inform a tailored due diligence scope of work and determine the skills needed on the team that will assess Phase 2. A summary example of our typical Phase 2 due diligence team is provided in the figure below.

PHASE 1 TOPICS MAY INCLUDE THE FOLLOWING:

- Geology, including exploration potential
- Resource estimation
- Mining methodology
- Mine geotechnical stability
- Metallurgy and ore processing
- Location and proximity to communities, protected areas, Indigenous Peoples, and climate hazards
- Community relations and social setting
- Governance policies and management frameworks
- GHG emissions and climate change
- Permitting, including a local view of ongoing or future permitting requirements
- Political risk
- Project execution and capital cost
- Tailings storage and waste rock management
- Water supply and water management and the potential competition for water
- Infrastructure
- Closure plans and reclamation

PHASE 2 DUE DILIGENCE TEAM:

CORE TEAM:

- Project Coordinator (Royal Gold leader)
- Geologist
- Resource Geologist
- Mining Engineer
- Metallurgist
- Tailings Facility Engineer
- Environmental/Permitting/ Social Expert
- Infrastructure Expert

FOR GREENFIELD PROJECTS:

- Capital Cost Estimator/Project Controls Expert
- Capital Cost Benchmarking Expert

SPECIALTY EXPERTS:

- Hydrologist/Hydrogeologist
- Geotechnical Engineer
- Metallurgical Expert
- Biodiversity Expert
- Community Relations Expert
- Country/Political Risk Expert
- Climate/GHG Expert

Royal Gold management coordinates all Phase 2 due diligence activities that typically involve the review of publicly available information and confidential information provided by the potential counterparty. Phase 2 is typically the stage at which we can interact with the project personnel and its corporate management. This interaction can include virtual presentations, video conference calls, in-person question and answer sessions, site tours and meetings with project stakeholders. Assessing the potential counterparty's capacity to successfully execute their plan is a critical component of the due diligence process.

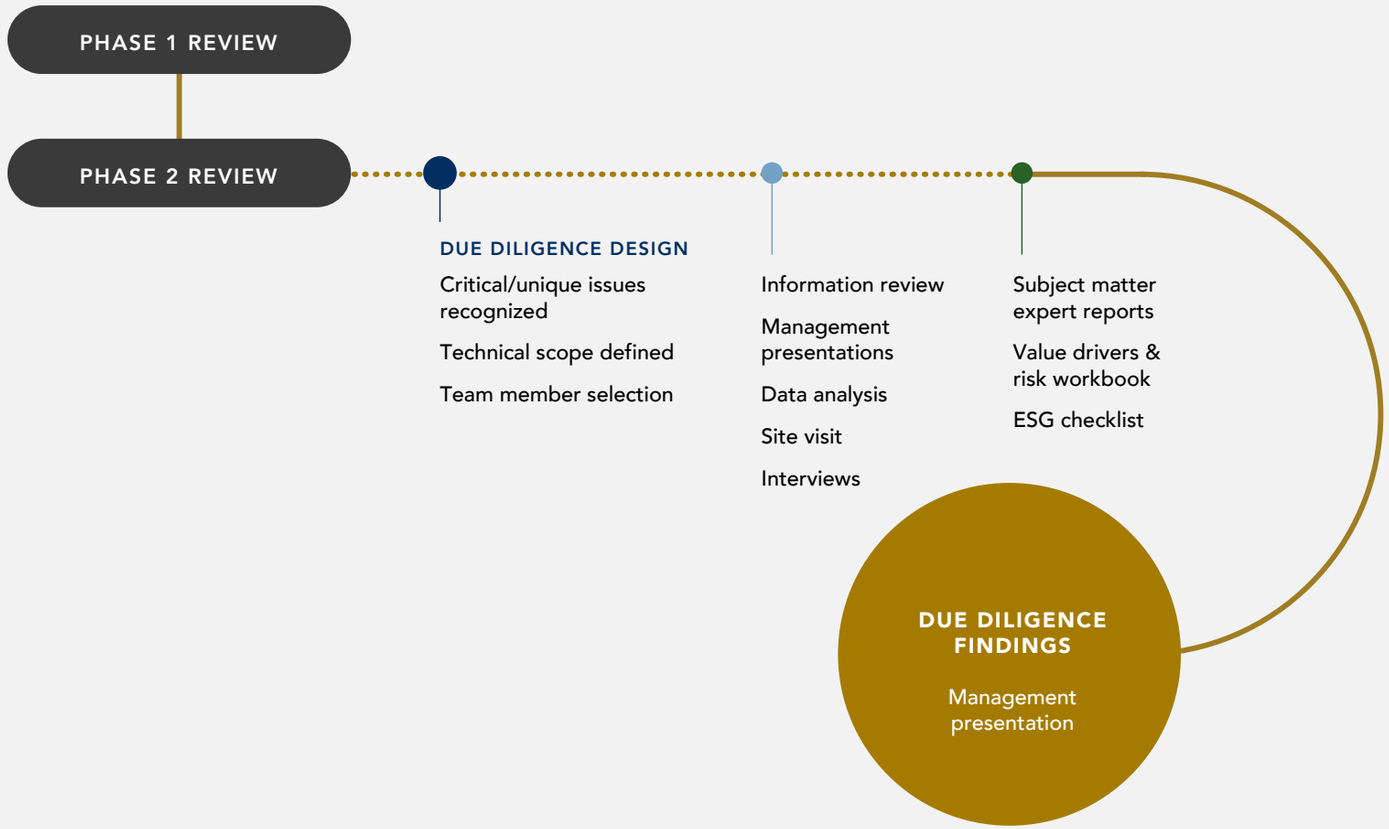
Royal Gold tries to interact with project management as directly as possible; however, the investment opportunity determines the level of interaction. As an example, when reviewing an opportunity to purchase a third-party royalty on a mining operation, we might not have the ability to review confidential information with respect to the Operator, or property, because the royalty is not being sold by the operation's owner; however, when reviewing an opportunity to purchase a metal stream from the operator of a property, we often have direct access to the management team and technical data for the property.

PHASE 2 REVIEW OUTPUTS INCLUDE THE FOLLOWING:

- Subject Matter Expert Reports: Reports prepared by team members for their thematic review area
- A Value Drivers & Risk Workbook: A compilation of key findings, risks and actions to mitigate identified risks, with contributions from all due diligence team members
- ESG Checklist: A comprehensive document driving the collection and recording of ESG information (as discussed on page 37)

ROYAL GOLD DUE DILIGENCE PROCESS

These findings provide the content for a presentation of technical due diligence findings to our senior management team, including critical findings from all team members. The process described earlier is graphically represented in the figure below.



Assessment of technical, legal, environmental, social and governance issues

Understanding the geographic setting where a project is or will be developed is an important part of our due diligence process. This includes gathering information about existing or potential environmental and social impacts, the regulatory framework and the stakeholders who are involved and their views towards the project, among other considerations.

In addition to geographic considerations, each investment opportunity requires the development of a specific ESG scope of review that includes factors related to project jurisdictions, climate risk, ore-processing methodology, water availability and competing uses of water, biodiversity and the potential for cumulative impacts.

The following table lists some key issues and related areas that are typically included in the ESG risk assessment of a potential stream or royalty interest.

Site visit – Jason Hynes, Royal Gold Vice President, Business Development and Strategy since 2013, Brazil, South America

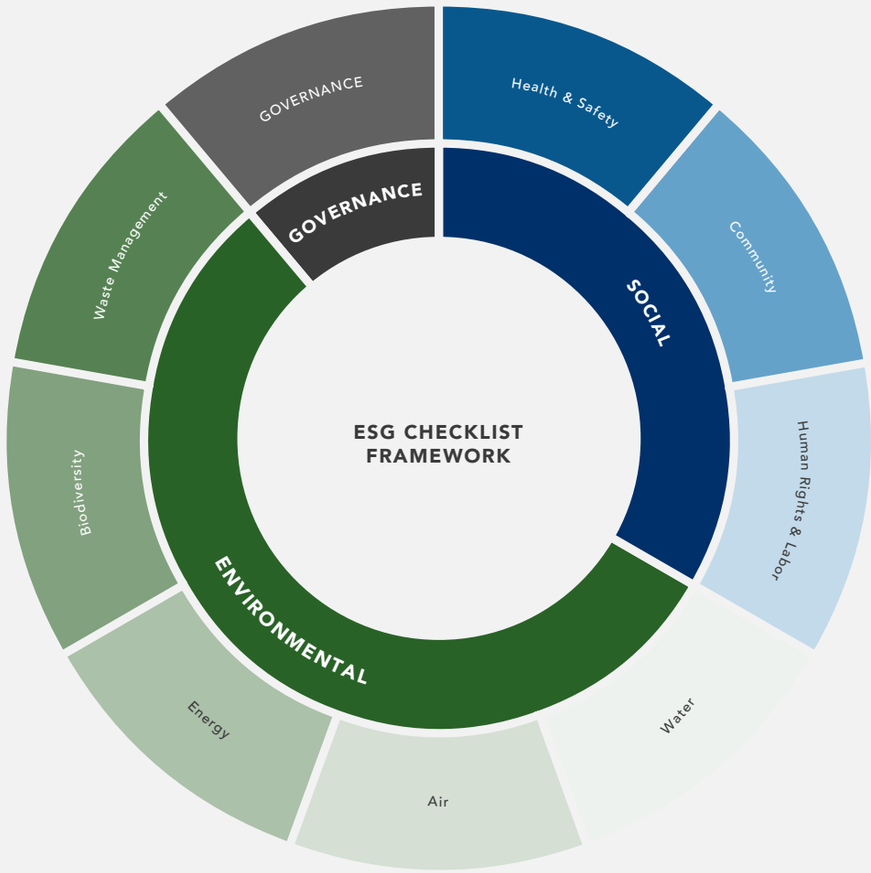
Plans and approvals:	– Project permitting status, including held and pending permits (i.e., understanding the permits required to build the planned project, if not already in existence, and future or ongoing permits required)	– Surface rights required by the project, including the identification of any pending requirements – Project operational plans, including applicable environmental and social management
Environmental management plans, along with impact mitigation plans:	– Reclamation and closure plans and costs, as available at the project development stage, including a review of project planning to meet bonding requirements – Biodiversity action plans, including a review of avoidance and mitigation actions	– Tailings facility management plans and dam failure planning – Tailings storage facility designs and references to internationally accepted standards
Operating practices and performance:	– Environmental and social monitoring plans and results to date – Surface and groundwater monitoring results – Regulatory correspondence regarding compliance – Response planning in the event of spillage from ore-processing operations – Processing plant designs, including measures to control fugitive dust and emissions – Labor policies, protections and standards, including the identification of any adherence to international labor standards, such as those promulgated by the International Labour Organization	– Workplace safety records, policies and standards – Site-specific employee hygiene issues (i.e., exposure to mercury, silica dust, lead, etc.) – Status of third-party certifications and/or adherence to practices in environmental and social governance, which could include a commitment to Equator Principles IV, the IFC Performance Standards, the ICMM Principles, the Extractive Industries Transparency Initiative, the United Nations Global Compact, the International Cyanide Management Code ("ICMC"), and other relevant industry standards or guidelines – Operator GHG emissions and approach to climate change
Site characterization/ data collection:	– General environmental baseline data – Material characterization test work to determine if results support conclusions used in operations and closure planning with regards to the potential for acid rock drainage and metal leaching – Water requirements and water supply provision (i.e., the water balance) to ensure the sustainability of long-term water supply in relation to the demands of other water resource users	– Foundation conditions underneath waste storage facilities – Historic or legacy environmental liabilities and responsibilities, including financial reserves for the implementation of any required mitigation – Tailings storage facility failure analysis or dam break analysis
Stakeholder engagement and community management plans, including social performance:	– Stakeholder relations, via a stakeholder engagement process as required under regulation, or equivalent – Relocation activities, and whether they have been or will be carried out in accordance with widely used international guidance (e.g., IFC Performance Standard 5), including the adequacy of any follow-on resettlement action plans	– Social programs, community initiatives and engagement with Indigenous peoples to determine a project's existing "social license to operate" – Grievance processes in place and whether they are functioning, including the resolution of any recent complaints

ESG checklist and assessment of Environmental Management Systems

Royal Gold maintains a comprehensive systemic evaluation framework of ESG considerations for a project site and the quality of ESG management practices. This is known internally as our "ESG checklist" and it includes the evaluation of nine thematic areas through the lens of seven evaluation criteria, as presented in the figure on the right.

Information related to the checklist's specific areas is received and logged, and a rating mechanism can be used to evaluate a project under consideration. The ESG checklist also allows for the recording of field observations, when available, to define the extent to which the environmental and social management system of an operation is addressing each topic as well as highlighting areas of elevated risk. We view this ESG checklist as a "living" document and periodically update the content to reflect evolving ESG practices.

Site visit – Julian Varaschin (right), Royal Gold Senior Operations Engineer since 2019, Nevada, U.S.



EVALUATION CRITERIA

1. Policy & Framework
2. Permits & Approvals
3. Compliance
4. Performance
5. Monitoring
6. Documentation
7. Field Inspection

Jurisdictional review

Understanding the jurisdictional context of a project's ongoing or planned operations is a key component of our due diligence review. As part of our evaluation of a potential new business opportunity, we will assess geopolitical risk and consult third-party experts when necessary for an independent perspective on the political, social and permitting environment in the country where the opportunity is located.

As part of our review for new business opportunities, we consult RepRisk, an ESG data provider, to understand the ESG risks associated with both the potential new business partner and the jurisdiction of interest.

The RepRisk Index ("RRI") for Countries ("Country RRI") quantifies ESG and business conduct risks within a country. Updated daily, the RRI gives accurate and dynamic information on ESG risks and how they impact companies doing business or investing in a specific country. It provides meaningful insights into potential financial, reputational, and compliance risks, such as human rights violations, poor working conditions, corruption and environmental degradation.

The RRI ranges from zero (lowest) to 100 (highest). The higher the value, the higher the risk exposure:

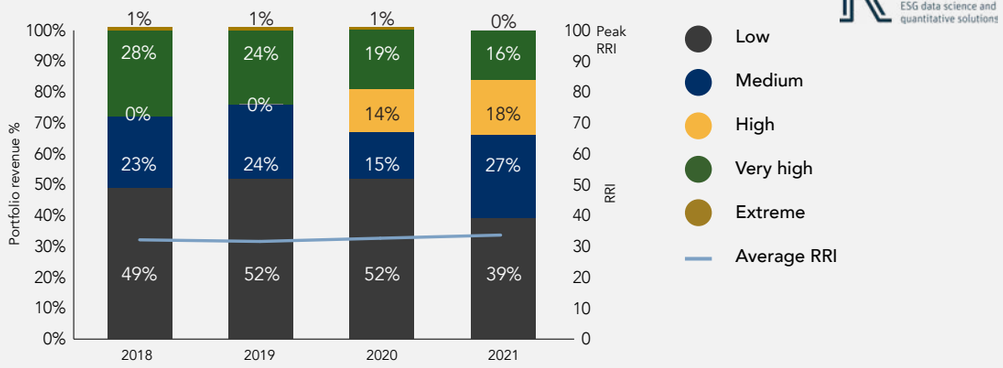
- 0–25 generally denotes low risk exposure
- 26–49 denotes medium risk exposure
- 50–59 denotes high risk exposure
- 60–74 denotes very high risk exposure
- 75–100 denotes extremely high risk exposure

The following graphics provide an assessment of jurisdictional risk for our portfolio of revenue-generating assets through an ESG lens over the period of 2018 through 2021, weighted by net revenue from each jurisdiction. The results indicate that over the four-year period we have no meaningful revenue from jurisdictions with an extremely high ESG risk rating and a reducing number in the very high risk category, declining from 28% to 16% over that period. Principal Properties that fall into the Very High ESG risk country classification include Pueblo Viejo (located in the Dominican Republic) and Khoemacau (located in Botswana).

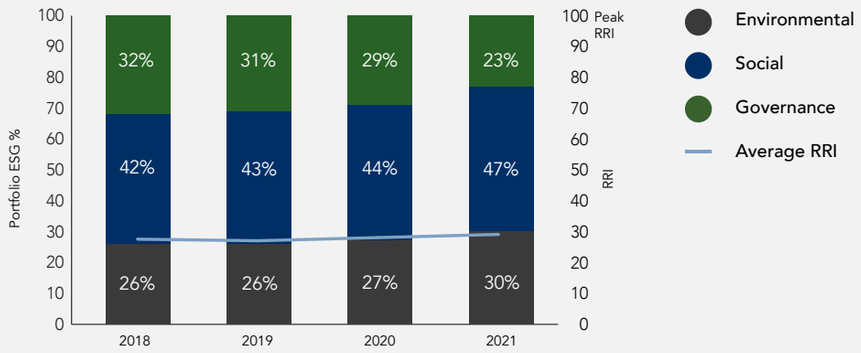
Our overall revenue-weighted RRI score for country risk has increased slightly over the four years but remains within the medium ESG risk range, with a score of 35 in December 2021.

RepRisk develops their Country RRI scores while considering ESG risks. Further review of our annual portfolio scores indicates that the RRI scoring percentages associated with environmental and social factors show an increase in importance or weight associated with those factors, while risk associated with governance shows a corresponding reduction.

REPRISK PORTFOLIO REVENUE WEIGHT SCORE[1, 2]



REPRISK PORTFOLIO REVENUE WEIGHT SCORE



1 RepRisk scores presented in the graph represent the peak RRI value as of December each year. The peak RRI is the highest monthly RRI recorded for the jurisdiction over the preceding two years.

2 Based on a revenue weighted average from RepRisk ratings.

ESG risk evaluation

To gain a comprehensive understanding of the potential risks of each investment opportunity, our due diligence processes take a risk-based approach. Identifying risks associated with environmental and social impacts can be paramount in our reviews, particularly those we classify as "red flags." Red flags are risks we consider to be largely uncontrollable, unpredictable or unusual, or where an Operator has a different perspective on addressable issues. If red flags are identified in a review, a recommendation to invest will not proceed until additional due diligence is undertaken to reduce the risk classification, or until actions to reduce the risk classification are implemented. We have withdrawn from investment processes in the past solely for environmental, social or governance reasons.

Identifying risks associated with environmental and social impacts can be paramount in our reviews, particularly those we classify as "red flags."

A summary of our ESG risk rating categorization following our due diligence is shown in the figure below.

Risk Indicator		Potential ESG Impacts
 Low Risk	Risks that could or may have a relatively insignificant impact on the character or nature of the project, its stakeholders and/or its economics. Generally, can be mitigated by normal management processes combined with minor cost adjustment or schedule allowances.	Not anticipated to be significant
 Moderate Risk	Risks that are considered to be average or typical for a project of this nature. These risks are generally recognizable and, through good planning, managerial and technical practices, can be minimized so that the impact on the project, stakeholders or economics is manageable.	Temporary disruption due to environmental or social issues
 High Risks (Red Flag)	Risks that are largely uncontrollable, unpredictable, unusual, or are considered not to be typical for an operation of a particular type. Good technical practices and quality planning are no guarantee of successful operation. These risks can have a major impact on the economics of the project including significant disruption of schedule, significant cost increases, and/or degradation of physical environment or loss of "Social License to Operate."	Situation could require Royal Gold to not proceed with investment

Senior management investment decision-making

The final investment recommendation is the responsibility of the Royal Gold senior management team following the due diligence process. This team, which is led by our CEO, collectively brings extensive technical, commercial, financial and legal expertise related to the aspects of mining project investment, development and operations.

The investment recommendation process involves incorporating the results of technical due diligence, including ESG components. Findings are presented to senior management, with each subject matter expert presenting findings during the technical review:

Business Development: Gathers information on the structure of the transaction and manages negotiations with the corresponding Operator

Legal: Evaluates legal risk associated with the project, Operator and/or transaction

Finance: Assesses the tax profile and accounting treatment of the transaction and evaluates the sources of liquidity available to the Company for making investments

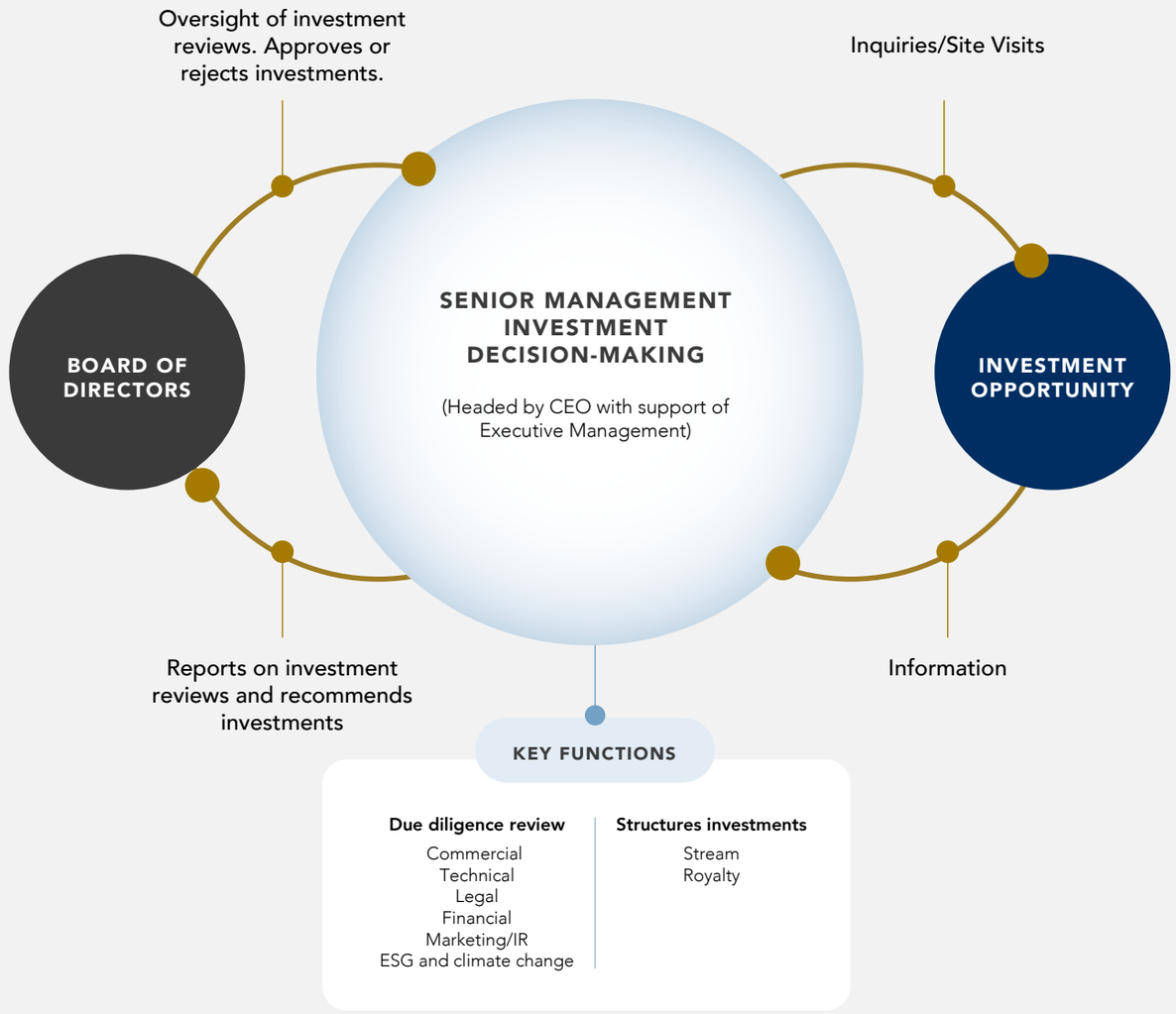
Investor Relations: Assesses the "fit" of the new business and Operator with Royal Gold's portfolio and evaluates public perception of the Operator

ESG: Assesses Operator ESG-related policies and practices, including community engagement and climate change-related risk mitigation, and potential ESG impacts of investment to Royal Gold's portfolio

These inputs feed to senior management, which then presents the business case and recommendations to the Board of Directors.

This information flow is displayed graphically in the figure on the right.

SENIOR MANAGEMENT INVESTMENT DECISION-MAKING INFORMATION FLOW



Deal creation and ESG

If a favorable investment decision is made, a stream or royalty agreement is then developed. We actively integrate ESG considerations into our contracts when feasible and monitor the ESG performance of the mining operations in which we have interests.

When entering into a new agreement for a metal stream or royalty, we seek durable contract structures that typically include the following elements, which are intended both to limit the ESG risks associated with our interest and provide for adequate communication or investigation of ESG risks that might arise from time to time, notwithstanding our passive business model.

Operating covenants: Require Operators to conduct project operations in compliance with host country laws and permits and, where possible, industry-recognized best practices for mine operations and the management and mitigation of ESG risks

Information rights and reporting obligations: Provide for transparency and regular and exception-based reporting of material developments in project operations, labor matters, environmental issues and the concerns of local communities and other stakeholders

Inspection and audit rights: Allow for regular inspection of project operations and audit of operator books and records

Delivery standards: Where we take delivery of precious metals under stream agreements, requiring that those deliveries satisfy the London Bullion Market Association's ("LBMA's") "Good Delivery" standards, including adherence to LBMA's "Responsible Sourcing Programme," designed to combat money laundering, terrorist financing and human rights abuses in the precious metals markets

Transfer restrictions: Create reasonable restraints on the transfer of project ownership to ensure that projects continue to be owned and operated by financially and technically capable counterparties

Remedies: Allow for appropriate legal remedies, including contract termination and recovery of Royal Gold's economic interest under certain circumstances

Royal Gold will also actively seek to contribute to our Operators' mine site community development efforts.

Above: Peñasquito, Newmont, Zacatecas, Mexico

When entering into a new agreement for a metal stream or royalty, we seek durable contract structures that are intended both to limit the ESG risks associated with our interest and provide for adequate communication or investigation of ESG risks.

Understanding our assets

Asset monitoring

We actively monitor our stream and royalty interests to understand their economic and operational health and their reputation in the jurisdictions and nearby communities where they operate, also known as "social license to operate." While our stream agreements include extensive information rights, this is not the case with our royalty agreements; in these instances, we rely on public information and a positive working relationship with the Operators to obtain our monitoring data. Where we have the right to do so, we will conduct site visits to interact with Operator management teams. The frequency of site visits in 2022 returned to pre-pandemic levels.

On the right is a graphic representation of initiatives that help us understand our assets and our third-party information providers.

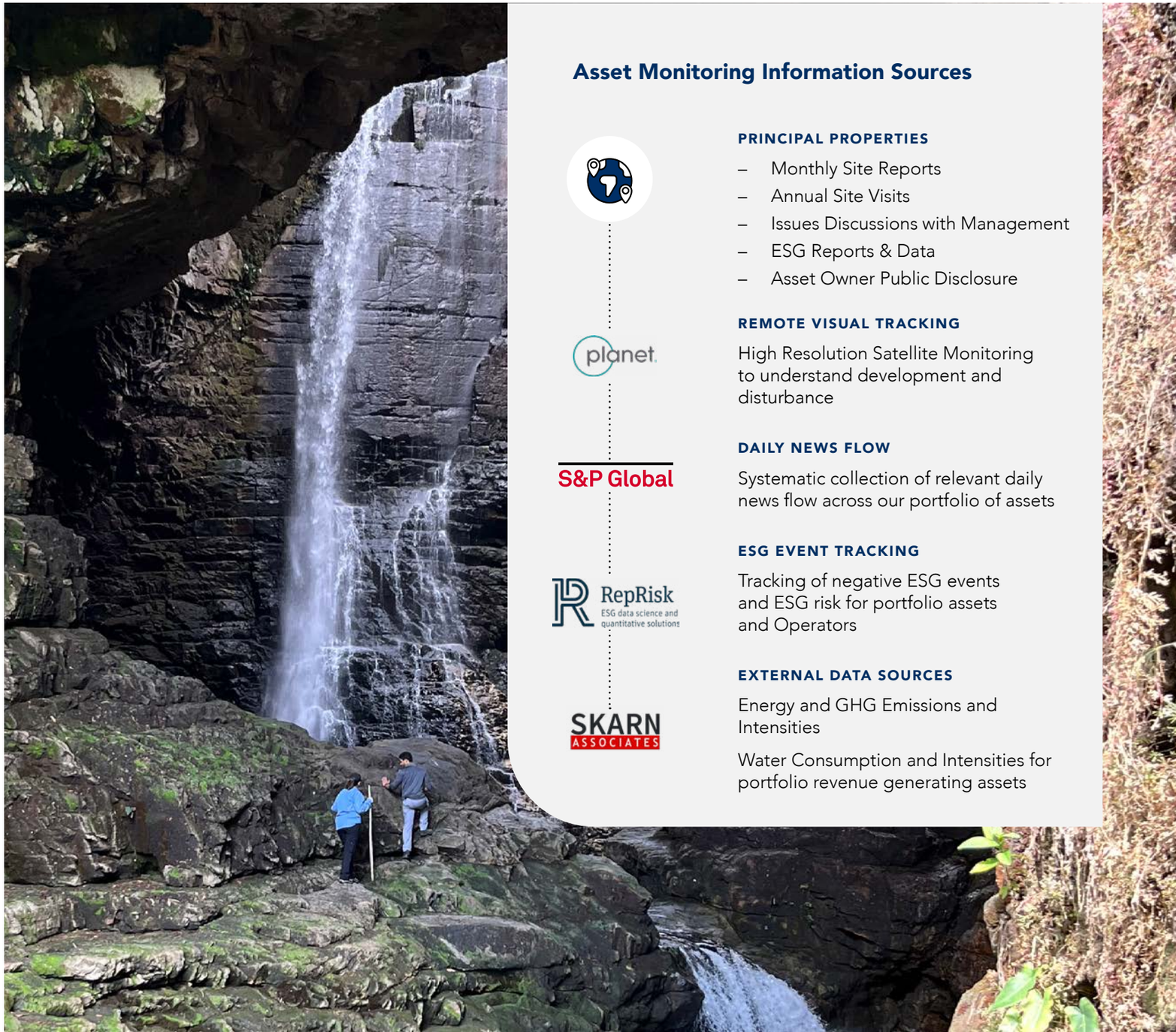
Asset reporting

Information from all sources is aggregated and provided to our senior management and Board through a monthly reporting process that provides asset-specific comments on our Principal Properties, through quarterly Board presentations that more broadly report on the performance of our stream and royalty interests, and through our ERM reviews. This system ensures that ESG events of significant concern are identified in a timely manner so that management can react as required and communicate with the Board for feedback.

The Asset Assurance Committee, staffed by selected executive and senior management members, completes active monitoring and auditing of our stream and royalty interests and takes action to protect our interests as needed.

The ERM Committee is staffed by senior management who also actively monitor external and internal risk issues and assess Board risk appetite in key areas, including metal prices, growth potential, financial condition, portfolio health, human resources, legal compliance and ESG sustainability.

Right: Site visit, TriStar Castelo de Sonhos Gold Project – Brazil



Asset Monitoring Information Sources

PRINCIPAL PROPERTIES

- Monthly Site Reports
- Annual Site Visits
- Issues Discussions with Management
- ESG Reports & Data
- Asset Owner Public Disclosure

REMOTE VISUAL TRACKING

High Resolution Satellite Monitoring to understand development and disturbance

DAILY NEWS FLOW

Systematic collection of relevant daily news flow across our portfolio of assets

ESG EVENT TRACKING

Tracking of negative ESG events and ESG risk for portfolio assets and Operators

EXTERNAL DATA SOURCES

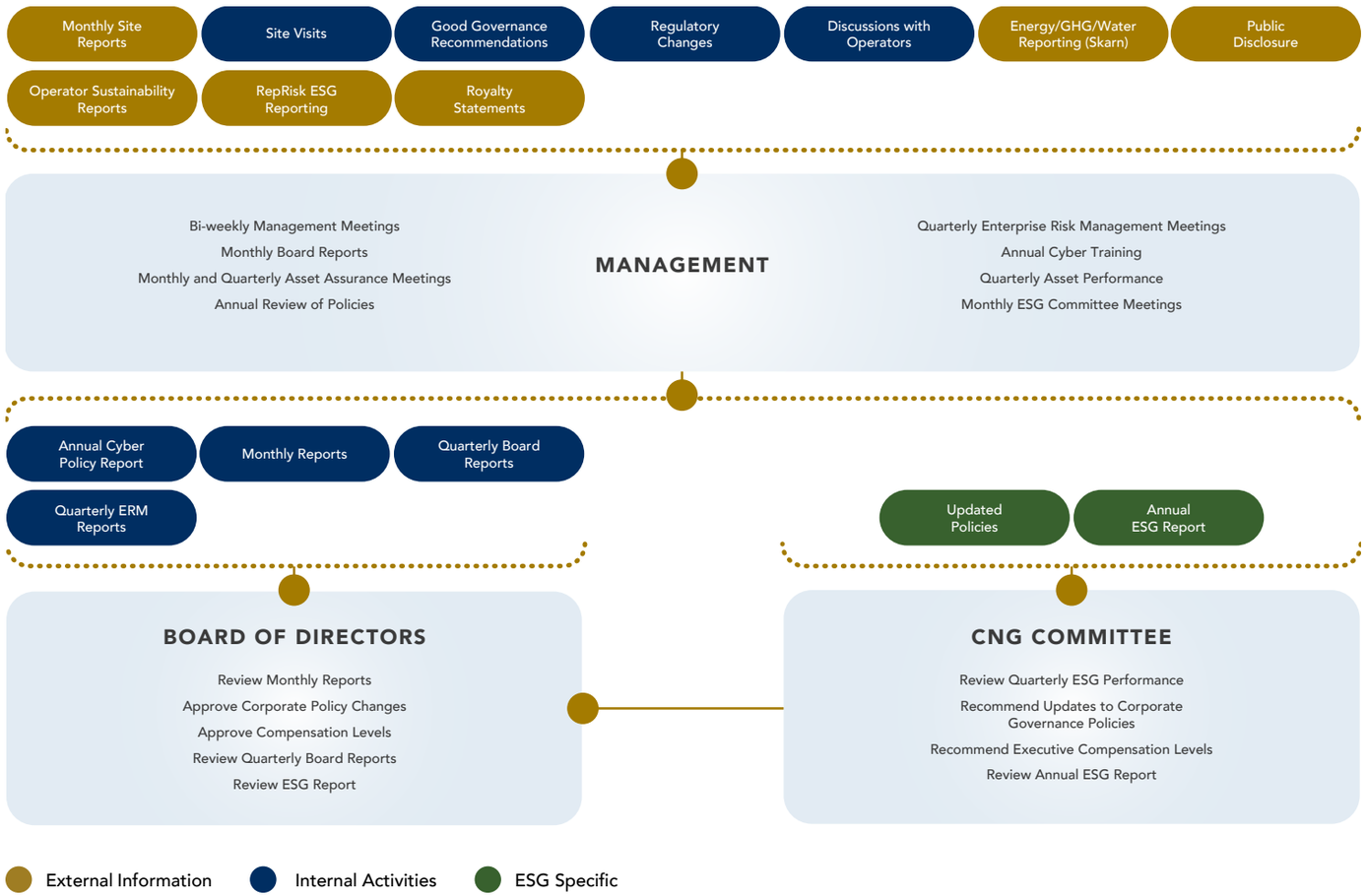
Energy and GHG Emissions and Intensities

Water Consumption and Intensities for portfolio revenue generating assets

The frequency of Royal Gold asset monitoring and reporting activities is shown in the table below.

	Daily	Monthly	Quarterly	Annual
Senior Management Monitoring				
Material Events	●			
Operator Site Data Review		●		
Asset Assurance		●	●	
ERM Updates			●	
Principle Property Site Visits				●
ESG Report Reviews				●
Board Reporting				
Reports		●		
Asset Performance Presentation			●	
ERM Updates			●	
ESG Report Review				●

The asset-monitoring inputs to management and subsequent flow to our CNG Committee and Board are shown in the figure below.



ESG Stewardship

Understanding environmental and social risks, opportunities and impacts of the stream and royalty interests we hold is one of our key investment principles. Our disciplined and deliberate approach to ESG stewardship reflects our business model and the level of influence and the relationships we have with the Operators of our stream and royalty interests.

Carbon neutral
since 2020[1]

88%
of our Operators have disclosures in line with the TCFD

1 Across Corporate Scope 2 and Scope 3 GHG emissions

"Royal Gold is committed to understanding how both the physical impacts of climate change and the transition to a low-carbon economy might affect our business. Integrating these factors into our strategic planning to help reduce the impacts while increasing our disclosure of climate-relevant information will help our investors and other stakeholders understand our approach and the potential for climate change to impact our business."

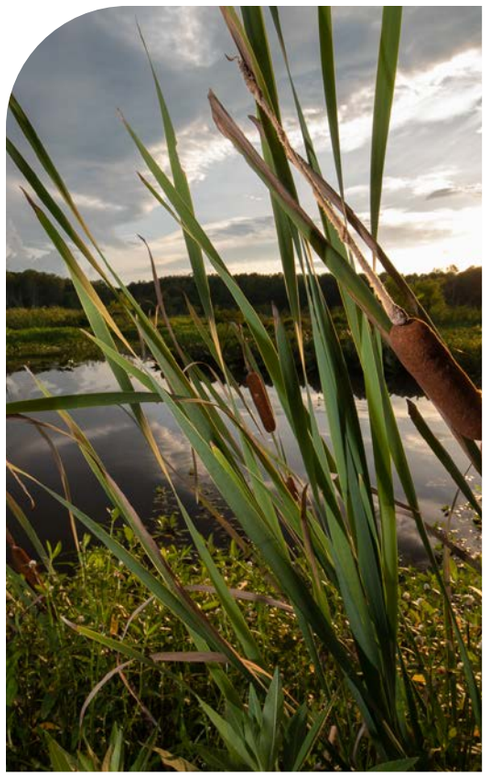
Mark Isto,
Royal Gold Executive Vice President and Chief Operating Officer since 2015

Golden Star Oil Palm Project, Ghana, West Africa (Royal Gold-supported community program)

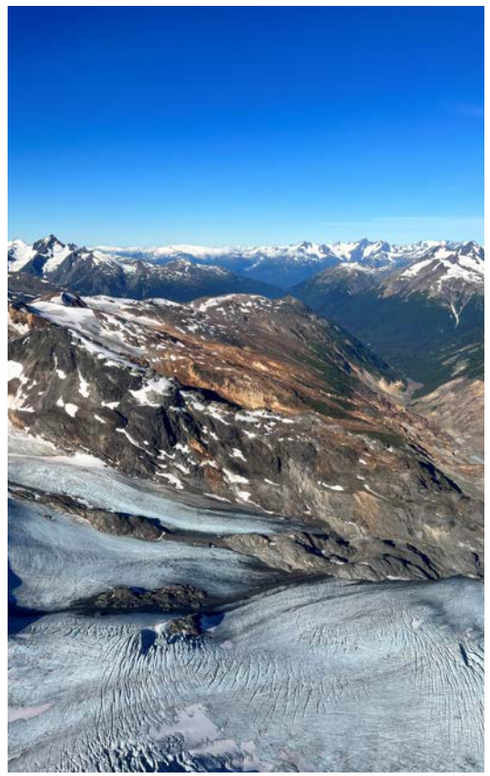
Our approach

Stewardship means continually maintaining an understanding of the stream and royalty interests we hold with respect to production, operational, environmental, social, governance and safety criteria, among other considerations. Understanding the ESG performance of Operators and properties in which we hold stream and royalty interests begins with collecting information through a monitoring process. This monitoring process supports the systematic reporting of relevant information to senior management and the Board. We obtain monitoring data and other information via contractual rights as discussed previously, from our Operators' public disclosures and from third-party data sources. Operator annual ESG reports are also important sources of data.

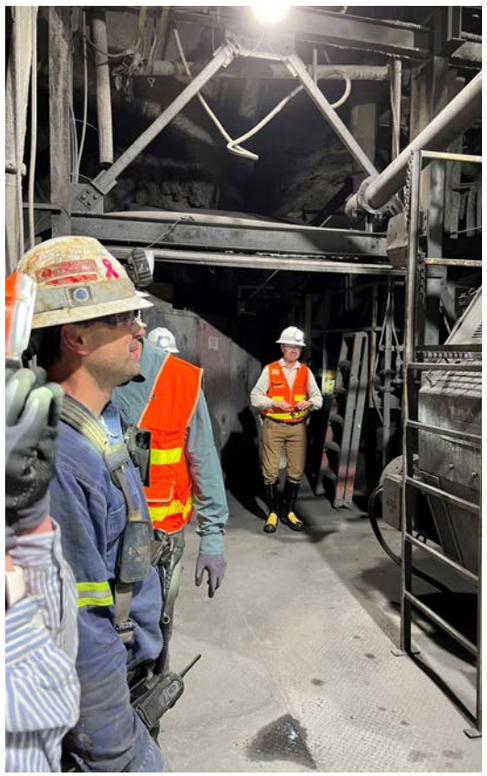
We recognize the areas highlighted below have the potential to generate ESG and operating risks for our Operators and, hence, pose significant risks to our interests.



Energy and climate change



Water availability



Safe operation

These three areas of focus are far from an exhaustive list of ESG considerations but provide the basis for a monitoring scorecard that can be easily communicated. We provide discussion of these three areas of focus after first discussing our asset monitoring and reporting processes.

Energy and climate change – Bluesource – Blue Ridge Escarpment Improved Forest Management Project. Photographer – Mac Stone; Water availability – Site visit, British Colombia, Canada; Safe operation – Site visit, Nevada, U.S.

Climate change and TCFD alignment

Our approach

Climate change has the potential to transform the planet, the way we live and the way we conduct business. We recognize the growing expectations of our stakeholders in understanding how climate change can impact our business and how our activities have direct and indirect potentials to impact climate over the short, medium and long terms.

Our business makes passive investments in mining operations. We recognize mining activities are inherently energy intensive and acknowledge that our interests facilitate mining operations that contribute to GHG emissions.

Our approach to climate change and climate risk is informed by three fundamental principles: understanding the risks, measuring and reducing to the extent practicable our impacts on climate change, and disclosing our performance.

Royal Gold is committed to understanding how both the physical impacts of climate change and the transition to a low-carbon economy might affect our business, and how integrating these factors into our strategic planning can help reduce the impacts. We are also committed to increasing our disclosure of climate-relevant information to help our investors and other stakeholders understand our approach and the potential for climate change to impact our business. To do this, we are working to meet the recommendations of the Financial Stability Board's TCFD. We aspire to disclose the potential financial impacts of climate-related change on Royal Gold and its business strategy and to disclose the resilience of that strategy so that investors and other stakeholders are well informed about how Royal Gold is positioning itself in relation to climate-related risks and opportunities.

Our actions

This report presents our continuation of and advancement in assessing how climate change could impact our business and how we are managing the associated risks. We continued our practice of tracking GHG emissions associated with our revenue-generating properties and supplemented that emissions information with energy consumption data for each of the properties. The Portfolio Data Appendix to this report presents energy consumption and GHG emissions data associated with our property portfolio over the period 2018 through 2021; it also provides an accounting of the emissions that may be attributed to our beneficial interest in the properties.

We will model estimated emissions from our stream and royalty interests for each asset's life-of-mine and take into account defined actions and pledges by each Operator to understand our future attributed emissions (our Scope 3 Investment Emissions).

PROMOTING CLEAN TECH

Since 2020, we have joined leading mining companies to sponsor the Colorado Cleantech Industry Association's Mining Cleantech Challenge, an industry-judged competition to promote new clean technologies for mining projects.

Mining Cleantech Challenge
A Product Innovation Showcase

TCFD achievements and future plans

Moving forward, we will seek to provide our stakeholders with more detailed assessments of how climate-related risks and opportunities could impact our business. The figure below sets out our key TCFD achievements for 2022 and our 2023 aspirations for further progress.

GOVERNANCE

Disclose the organization's governance around climate-related risks and opportunities

STRATEGY

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's investment portfolio, strategy and financial planning where such information is material

RISK MANAGEMENT

Disclose how the organization identifies, assesses and manages climate-related risks

METRICS AND TARGETS

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material

2022 ACHIEVEMENTS

GOVERNANCE

Issued inaugural ESG Report with included emissions disclosures for our corporate footprint and our portfolio and stream and royalty interests

Carried out a gap analysis with respect to planned TCFD disclosure with the 2022 ESG Report

STRATEGY

Completed qualitative climate scenario analysis on jurisdictions that generated >80% of our 2021 net revenue

RISK MANAGEMENT

Systematically included an assessment of GHG emissions for new business opportunities and internally communicated the impacts of adding new assets to our portfolio of revenue generating properties.

METRICS AND TARGETS

Assessed Scope 2 and 3 emissions associated with our offices and obtained carbon offsets (Royal Gold has no Scope 1 emissions)

Assessed energy use intensity, Scope 1 and Scope 2 GHG emissions, and GHG emission intensity for our streaming and royalty interests and benchmarked results

2023 PLANS

GOVERNANCE

We will update our ESG priorities assessment for the 2023 ESG Report

STRATEGY

We will engage with the larger revenue-generating Operators in our stream and royalty portfolio to understand what actions they are taking to reduce their GHG emissions and where appropriate, determine if there are opportunities for us to be a source of financing for those projects

RISK MANAGEMENT

Based on the knowledge gained in our climate scenario analysis, we will systematically include climate risk analysis in our due diligence process, consistent with our learnings, and include the impacts of carbon pricing in our financial analysis

METRICS AND TARGETS

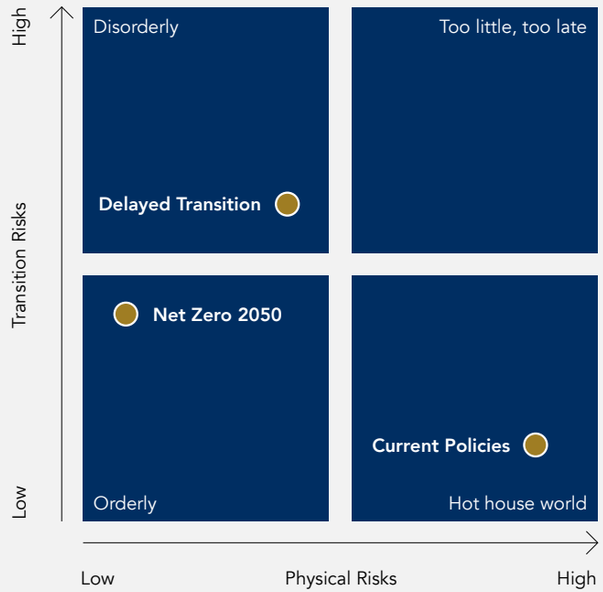
We will model emissions from our stream and royalty interest for each asset's life-of-mine and take into account defined actions and pledges by each Operator to understand our future attributed emissions (our Scope 3 Investment Emissions)

Climate scenario analysis

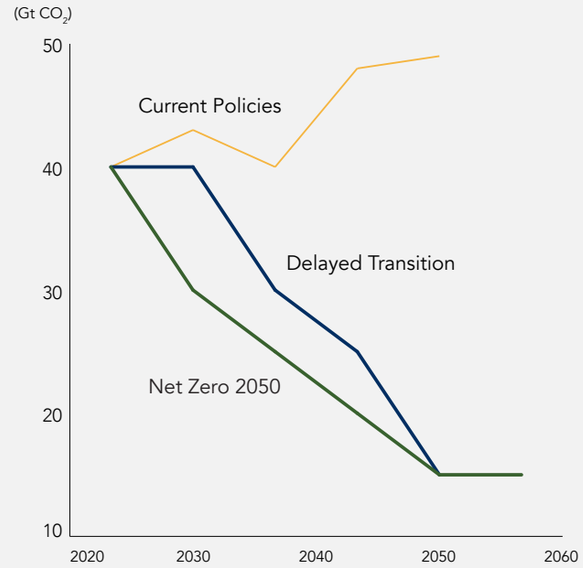
As owners of metal stream and royalty interests, we indirectly bear the potential physical and transition risks to which our Operators are exposed. Our assessment of the impacts of climate change on our Operators has been informed by climate scenarios defined by the Network for Greening the Financial System ("NGFS"). The scenarios are not meant to be forecasts or comprehensive: rather, they explore different plausible but intentionally adverse transition pathways consistent with achieving specific climate targets. We have chosen three climate scenarios, listed to the right, to assess the potential physical and transition impacts on the mining operations and jurisdictions that are important to us and how those impacts may affect our business.

- **Current policies scenario** (business as usual) generates the most significant physical risk outcomes, as there is little effort to control GHG emissions, and these physical risks will increase over time as more carbon is allowed to build in the atmosphere.
- **Delayed transition scenario** (business as usual until 2030, with a disorderly transition to a low-carbon economy starting in 2030) generates the most significant transition risks through the application of high carbon prices, but implementation is delayed until after 2030 and continues to increase past 2050. We used this scenario to investigate each of our ten important jurisdictions with respect to transition risks in detail.
- **Net zero 2050 scenario** (orderly transition to a low-carbon economy, reaching net zero carbon dioxide (CO_2) equivalent emissions by 2050) is a scenario that represents significant medium and long-term transition risks through an escalating carbon price starting immediately and continues to increase through 2050.

NGFS CLIMATE SCENARIOS



CO_2 EMISSIONS BY SCENARIO



Source: NGFS Climate Scenario Database, (average of REMIND, GVAM 5.3, MESSAGE ix models)

We have chosen to evaluate five physical risk drivers shown below against our portfolio, after completing a screening analysis to test the potential relevance of the drivers. We do not view the five physical risk drivers as exhaustive but feel they provide a good cross-section for our first climate scenario analysis review.

In our scenario analysis, we assessed the ten jurisdictions and associated mineral properties most important to our stream and royalty business, and were supported in this exercise by Millani, an ESG advisory firm located in Québec, Canada. Data to support our climate scenario analysis were obtained from the NGFS's Climate Impact Explorer, the World Bank's Climate Change Knowledge Portal, World Resource Institute's ("WRI's") Aqueduct™ Water Risk Atlas and Skarn Associates' GHG and energy database for gold and copper mines.

Physical risk drivers are changes in both weather and climate that impact economies or assets. These risk drivers can be categorized as acute (i.e., related to extreme weather events) or chronic (i.e., associated with gradual shifts in climate). These drivers may appear with a significant time lag, and the frequency and severity of each type of risk may also vary considerably and become increasingly difficult to predict.

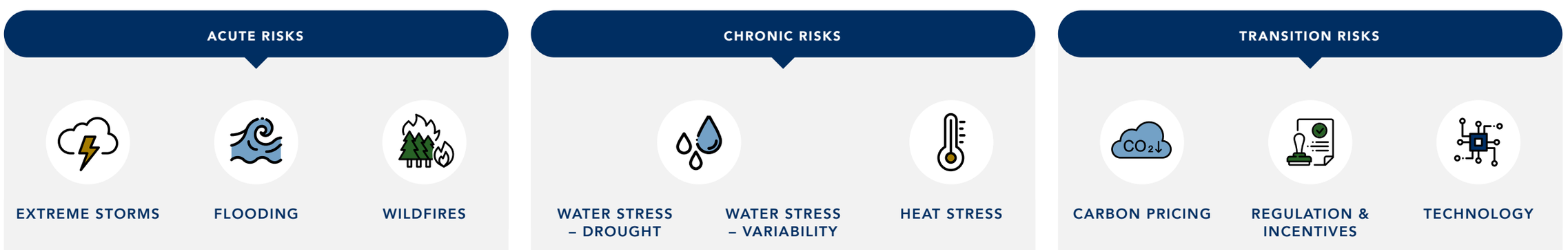
We have chosen to evaluate five physical risk drivers against our portfolio, after completing a screening analysis to test the potential relevance of the drivers. We do not view the five physical risk drivers as exhaustive but feel they provide a good cross-section for our first climate scenario analysis review.

Transition risk drivers are the societal changes arising from a transition to a low-carbon economy. They can arise through changes in public sector policies, innovation and changes in the affordability of existing technologies (e.g., that make renewable energies cheaper or allow for the removal of atmospheric GHG emissions) or investor and consumer sentiment towards a greener environment. Transition risk drivers are global, although the specific nature of the risk drivers will vary by economy.

We have chosen to evaluate three transition risks against our portfolio: carbon pricing, regulation and incentives, and technology. A description of our climate scenario analysis process and a summary of the physical and transition risks identified by jurisdiction are presented on pages 111 and 118, respectively, in the TCFD Appendix to this report.

PHYSICAL RISK DRIVERS

TRANSITION RISK DRIVERS



Resilience to climate change impacts

We assess the resilience of our business through our stream and royalty interests that generate our revenue, and the ability to identify and add stream and royalty assets that have characteristics supporting operational resilience under the range of physical and transitional risks identified in our climate scenario analysis. The resilience indicators by which we assess our portfolio are:

- Asset and geographic diversification
- Commodity diversification
- GHG emissions intensity

Our business model provides some insulation from certain financial risks that our Operators of our assets face directly. We typically do not have direct exposure to increases in operating and sustaining capital costs or carbon taxes, which would include costs incurred to manage climate risks and impacts as well as costs associated with transiting to a low-carbon economy. However, capital and operating cost increases can impact the classification of material as ore or waste, which could impact our revenue through less mineralized material being classified as ore and/or less incentive for Operators to explore and extend production life.

Asset and geographic diversification

We have more than 40 assets providing revenue, with the ten most important jurisdictions contributing more than 83% of our net revenue in 2021. The largest revenue-generating asset was Mount Milligan, which generated 24.7% of our net revenue in 2021. Although elevated in revenue contribution, Mount Milligan is a well-established mining operation in a regulatory environment with established carbon pricing regulation.

All jurisdictions are subject to physical risks, and our geographic diversification ensures that acute climate risk events are not likely to impact multiple sites; additionally, no single chronic risk condition is likely to impact multiple sites within a select time frame.

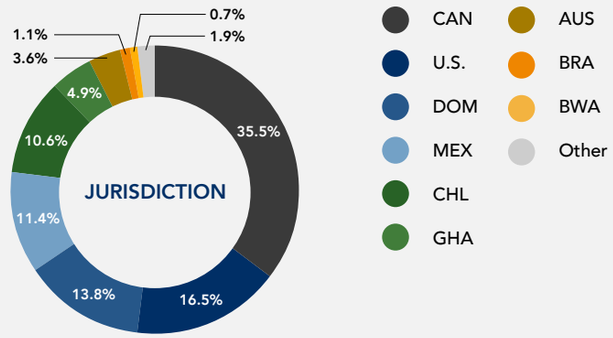
Commodity diversification

Our net revenue is heavily weighted towards gold and silver, while primary gold mines generated 48% of our net revenue in 2021; primary copper mines or mines with a significant copper revenue generated 39% of our net revenue. In an economy focused on energy transformation from fossil fuels, the need for copper will increase support for current and future copper mines. We see the metal mix in our portfolio supporting portfolio resilience with respect to transition risks.

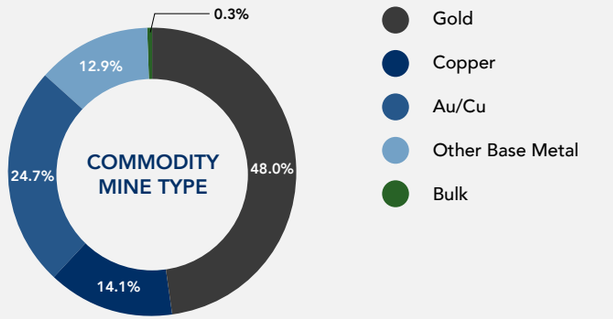
GHG Emission intensity (Scope 1 and Scope 2)

Our portfolio in 2021 had a weighted average GHG emission intensity of 0.74 tCO_2e/GEO (i.e., tonnes of CO_2 equivalent per gold equivalent ounce). Approximately 49% of our total Investment Emissions are associated with the Pueblo Viejo operation, which generated 13.8% of our net revenue. The remaining 86.2% of our portfolio net revenue has an emission intensity of 0.44 tCO_2e/GEO, which puts this portion of our portfolio in the lower third of the gold industry emissions intensity curve. This is an attractive position with respect to transition risks, driven by carbon pricing.

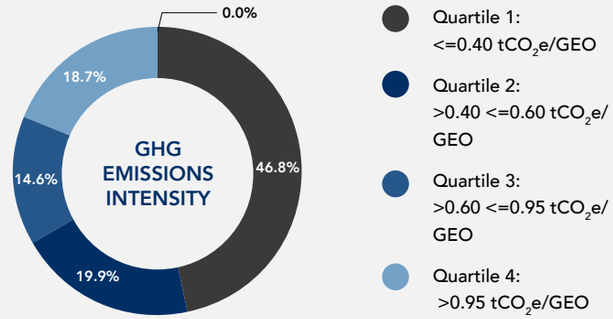
ASSET AND GEOGRAPHIC DIVERSIFICATION



COMMODITY DIVERSIFICATION



GHG EMISSION INTENSITY



Resilience of gold

The World Gold Council offers the following views on the financial return performance of gold with respect to a range of warming levels (from 1.5°C to 4°C) in comparison to other asset classes.

In general, transition impacts will be more prominent in earlier time frames and therefore affect asset classes more acutely in rapid transition (1.5°C and 2°C) scenarios; however, physical risks are most prominent in the higher temperature scenarios (3°C and 4°C) where impact overshadows transition aspects.

Gold may lose some investment flows to low-carbon transition sectors in a 1.5°C scenario, due to risk factors that could negatively impact gold's performance as an asset. These include an erosion of consumer confidence and shrinking discretionary spending levels, particularly in developing economies. Meanwhile, the urgent diversion of investment – either to build net zero carbon infrastructure (as part of transition strategies) or repair, replace or reconstruct resources resulting from physical damage – may significantly limit gold investment demand.

In summary, gold generally performs well across most scenarios, due in part to its traditional role as a safe haven market insurance.[1]

Andacollo Pit – Principal Property

1 Gold and climate change: Current and future impacts, World Gold Council, 2019

Our commitment to carbon neutrality

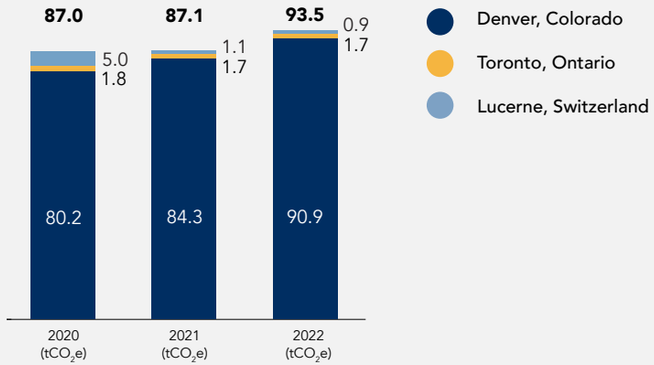
GHG emissions are generated from the direct combustion of fuels (Scope 1) and from purchasing electricity from independent suppliers (Scope 2) and from activities not owned or controlled by the reporting organization but which the organization indirectly affects through its value chain (Scope 3).

In this report, we segment Scope 3 emissions into those arising from our direct corporate operations and those of our Operators (our Scope 3 Investment Emissions). This method was selected because, as a passive investor, we do not have direct influence or control over our Operators' emissions but can more meaningfully impact our own footprint. We report on our Operators' emissions in greater detail in the "Operator GHG emissions" section.

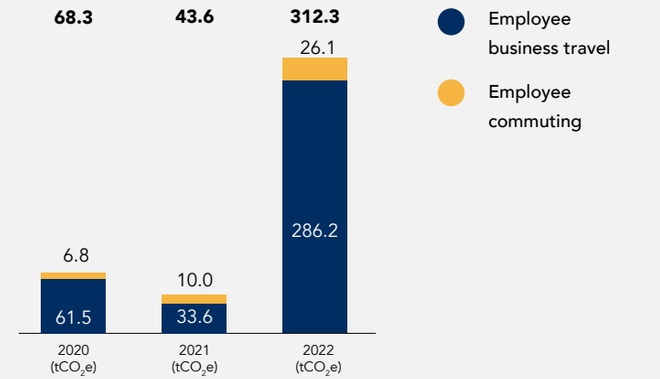
Royal Gold's direct environmental impact is low, with 31 employees across three offices in the United States, Switzerland and Canada. We continue to subsidize and encourage employees to use public transportation for daily commuting. The transition to a hybrid office model, coupled with 14% of our Denver-based employees working exclusively from home, also reduces in office emissions broadly and those associated with commuting to work. Two-thirds of our employees are based in our Denver Headquarters, a LEED Gold certified building. COVID-19 expedited an upgrade of our information technology systems and the adoption of new technology that has allowed us to increase virtual meetings, reducing the need for employee business travel.

The tables on the right detail our energy consumption and corporate Scope 2 emissions, which primarily consist of emissions related to the energy consumed in our corporate offices. We have also reported our corporate Scope 3 emissions, which include employee travel and employee commuting. We have no corporate Scope 1 emissions.

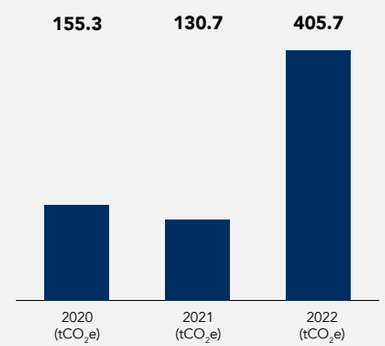
ROYAL GOLD CORPORATE SCOPE 2 GHG EMISSIONS[1]



ROYAL GOLD CORPORATE SCOPE 3 GHG EMISSIONS[2]

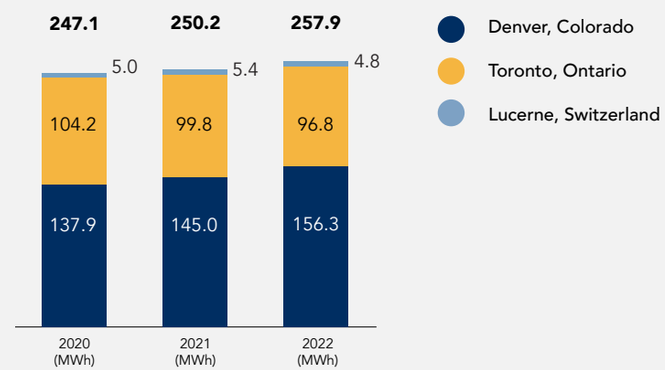


TOTAL SCOPE 2 AND 3 GHG EMISSIONS



ROYAL GOLD CORPORATE ENERGY CONSUMPTION

Estimated indirect grid electricity purchased (market-based)



1 Our direct corporate Scope 2 GHG emissions are calculated internally and include our Denver, Toronto and Lucerne offices, which cover about 97% of our Company (30/31 employees in 2022). Our Vancouver office, which consists of a single office let in a third-party space, is omitted from the totals as associated energy consumption data are not readily available. Royal Gold uses emissions factors from the Greenhouse Gas Protocol's GHG Emissions Calculations Tool to determine direct Scope 2 emissions.

2 Our direct Scope 3 GHG emission calculations include employee business travel; these are provided by a third party, Egencia. Our employee commuting emissions are calculated internally. Egencia uses emissions factors from the United Kingdom's Department for Environment, Food and Rural Affairs. Our Scope 3 GHG emissions cover 100% of all Royal Gold employees.

Offsetting our corporate footprint

Since 2020, we have acquired verified carbon credits to offset direct corporate Scope 2 and 3 emissions that we otherwise have been unable to eliminate, thus achieving carbon neutrality in our corporate operations. We commit to achieving carbon neutrality for our corporate operations moving forward and will continue to work to reduce our carbon footprint. Historically, we have purchased verified carbon credits generated from the Manantiales Behr Wind Power Plant located in Argentina from Mercuria Energy, a global energy and commodity trader with offices worldwide. Most recently, we have purchased verified carbon credits through Anew Climate, LLC, a leading climate solutions company that offers environmentally focused products, services and investments that support decarbonization, including the sale of verified carbon credits. Our most recent carbon offsets were sourced from the Blue Ridge Escarpment Forest Management Carbon Removal Project in South Carolina, US.

Protecting 6,000 acres of forest at Blue Ridge Escarpment in South Carolina

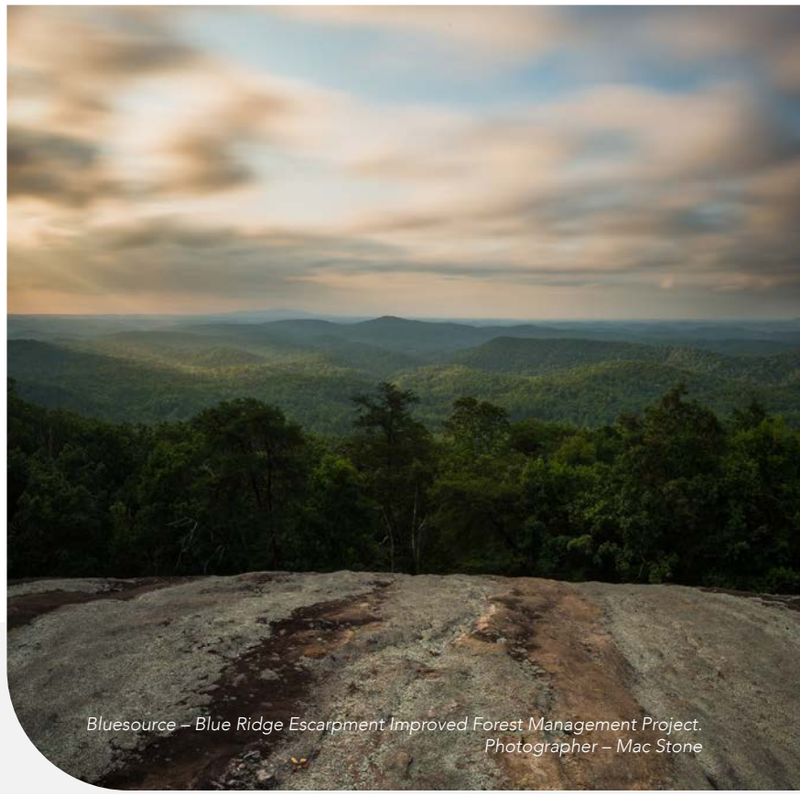
This project protects over 6,000 acres of northern South Carolina forest, which is home to several endangered species. Nestled among the arrowhead plants, endangered green salamanders have refuge here as do rare wetland plants that are now only found in one additional county as a result of rapid habitat loss.

The Naturaland Trust works to protect this ecologically diverse area of the Blue Ridge Mountains and Piedmont. There is no harvesting on this property, allowing the trees to sequester approximately 68,000 metric tons of CO_2e each year. The funding made possible through the project's carbon credits will be used for additional land acquisition and conservation costs.

The property bridges critical corridors for black bears and bobcats, and provides safety for species like deer, turkey and grouse. Located within the Saluda Watershed, the property's abundant riparian areas and mountain springs provide protected drinking water for communities downstream. Blue Ridge's meandering streams are also home to countless aquatic species including native trout.

This ecological lifeline is an equally vital hub for environmental education for all who visit it. Frequented by state and federal biologists, the area provides research grounds for Furman and Clemson Universities. Local law enforcement also uses these forests for search-and-rescue training. The area also includes a vast trail network enables visitors to enjoy the forest through hiking, biking, bird watching, rock climbing and fishing.

While this project generates both removal and avoided emission offsets, this listing is for removal credits only. The registry allows us to distinguish between credit types upon retirement and so the credit will be tagged as "Verified Removals."



Bluesource – Blue Ridge Escarpment Improved Forest Management Project. Photographer – Mac Stone

Improvements to forest management techniques protect and increase the productivity of existing forests.

TECHNOLOGY

Improved Forest Management

Mechanism:	**Project Partner:**	**Standard:**	**Registry:**
Removal	Anew	American Carbon Registry	590

HIGHLIGHTS

- **Creates local educational opportunities**
- **Improves local air quality**
- **Conserves local biodiversity and habitats**

SDG CONTRIBUTION

4 QUALITY EDUCATION · 6 CLEAN WATER AND SANITATION · 13 CLIMATE ACTION · 15 LIFE ON LAND

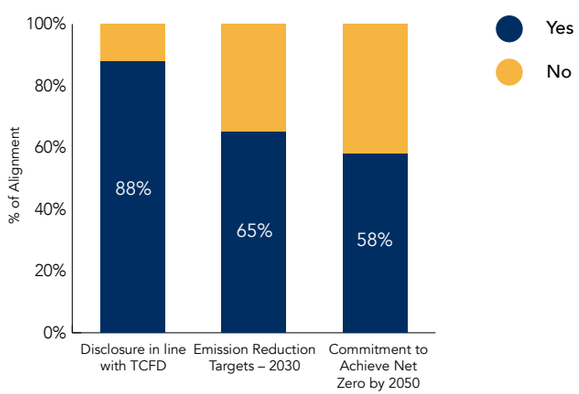
Operator ESG performance

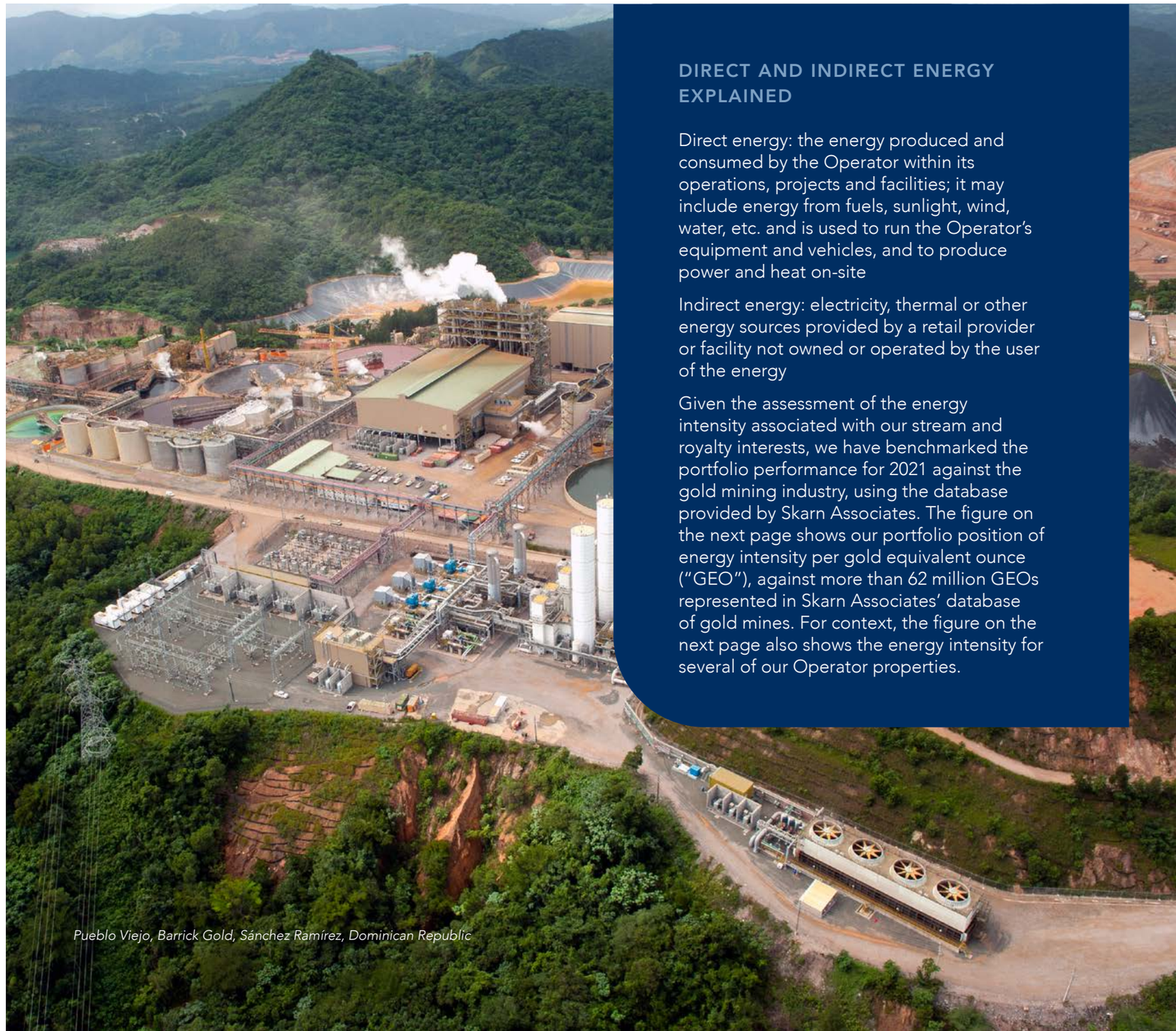
Operator climate change commitments

We see that 88% of our net revenue is generated from assets where the operating company has initiated climate disclosure with reference to the TCFD framework. However, the level of disclosure maturity varies greatly among companies, and we look at the statistic as indicating a high degree of climate risk awareness.

With respect to emission reduction targets by companies contributing to our 2021 net revenue, 65% is associated with operating companies that have set targets to be achieved by 2030 or earlier, and 58% of the same set of companies have made a formal commitment to net zero GHG emissions by 2050.

CLIMATE CHANGE REPORTING





Pueblo Viejo, Barrick Gold, Sánchez Ramírez, Dominican Republic

DIRECT AND INDIRECT ENERGY EXPLAINED

Direct energy: the energy produced and consumed by the Operator within its operations, projects and facilities; it may include energy from fuels, sunlight, wind, water, etc. and is used to run the Operator's equipment and vehicles, and to produce power and heat on-site

Indirect energy: electricity, thermal or other energy sources provided by a retail provider or facility not owned or operated by the user of the energy

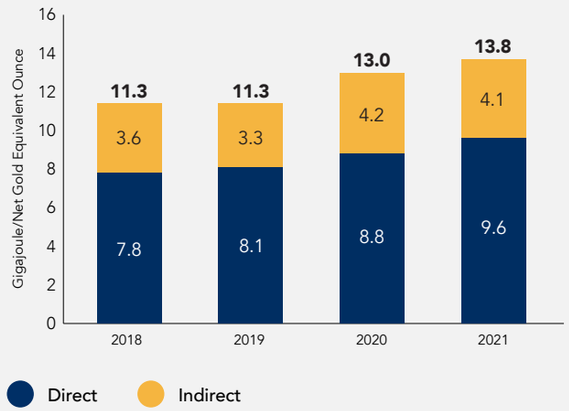
Given the assessment of the energy intensity associated with our stream and royalty interests, we have benchmarked the portfolio performance for 2021 against the gold mining industry, using the database provided by Skarn Associates. The figure on the next page shows our portfolio position of energy intensity per gold equivalent ounce ("GEO"), against more than 62 million GEOs represented in Skarn Associates' database of gold mines. For context, the figure on the next page also shows the energy intensity for several of our Operator properties.

Operator energy intensity

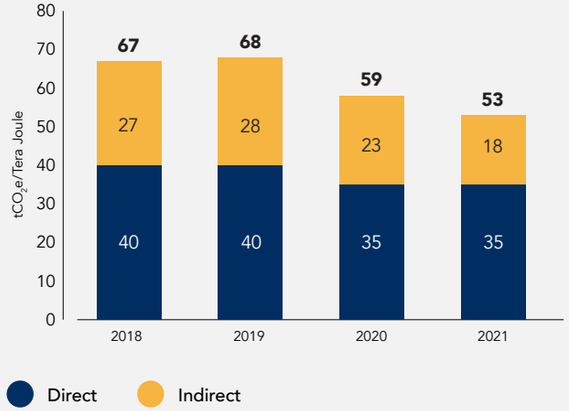
We track the energy intensity of our portfolio of assets as a useful metric to assess ongoing performance. Generally, as the processing of ore on-site increases, energy use also increases. As mines become deeper and cover more area, more energy is required for mine ventilation and dewatering, and more fuel is needed to haul ore and waste rock over greater vertical and horizontal distances. We collect and assess direct and indirect energy usage intensity (i.e., gigajoules (GJ) per GEO, and GJ per tonne of ore processed), which allows us to understand the efficiency with which production attributed to our stream and royalty interest is produced, to benchmark our portfolio performance, to better understand Scope 1 and Scope 2 GHG emission generation, and to evaluate risks and opportunities associated with our investment portfolio.

Total energy (direct + indirect) intensity per GEO shows an upward trend from 2018 through 2021, which we have been able to assess with the help of an energy and emissions database of mining operations compiled by Skarn Associates. With the increasing total energy intensity requirement, we see a downward trend in the amount of GHG emissions associated with each unit of total energy being used; this appears to be a result of some fuel switching from diesel to LNG, in the case of the Pueblo Viejo mine, where they generate their own electricity and the purchase of more renewable electrical energy from grid-supplied power. Teck Resources' Andacollo mine in Chile, a Principal Property in our portfolio, entered into a long-term contract to purchase 100% renewable energy, significantly reducing the GHG emissions associated with each unit of electrical energy. Both of these improvements impacted performance in 2020 and 2021.

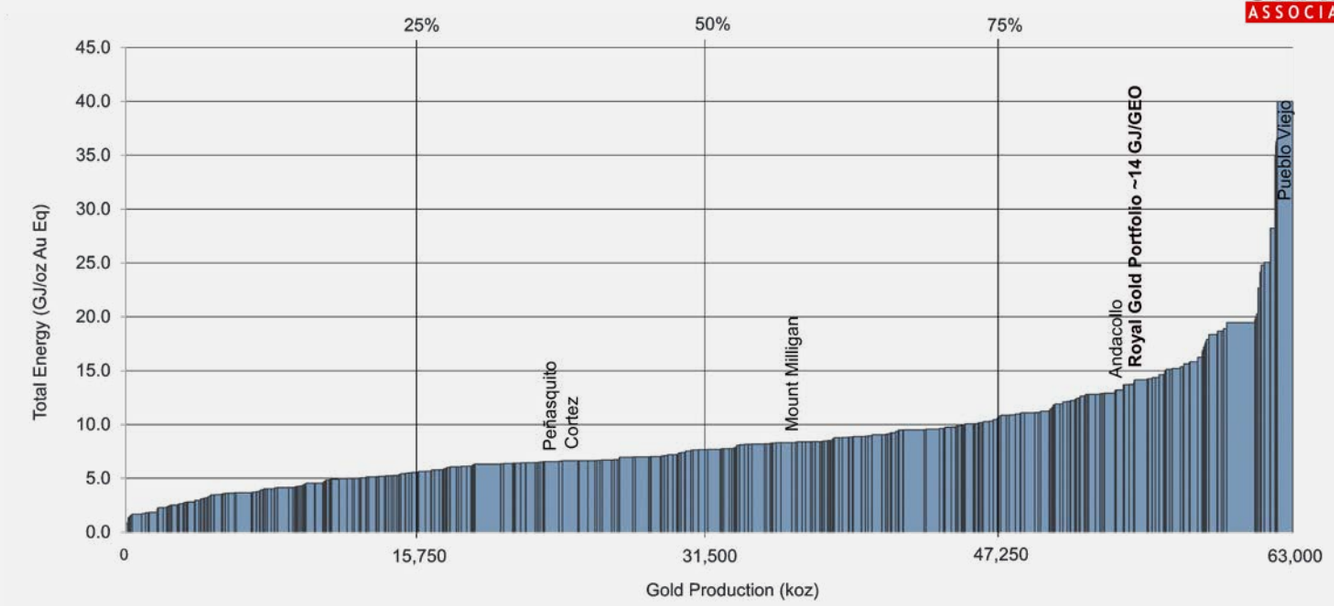
DIRECT AND INDIRECT ENERGY INTENSITY



DIRECT AND INDIRECT ENERGY EMISSION FACTOR



GOLD INDUSTRY TOTAL ENERGY INTENSITY 2021 WITH ROYAL GOLD PRINCIPAL PROPERTIES[1,2]



1 © Skarn Associates Limited
2 Khoemacau not shown as data were not available for 2021.

Operator GHG emissions

As part of our TCFD strategy, we continued to compile a Scope 1 and Scope 2 GHG emissions inventory of our stream and royalty interests that generate revenue for Royal Gold. We have been able to track Operator Scope 1 and Scope 2 emissions (our Scope 3 Investment Emissions) estimates for approximately 98% of the net revenue generated in the four-year period from 2018 through 2021. These emissions are illustrated graphically in the figure to the right. An Appendix included with this report (page 89) details our revenue-generating assets and their associated GHG emissions data, as compiled by Skarn Associates. We have weighted the emissions intensity from each stream and royalty interest, based on the net GEOs we receive as a proportion of the total GEOs produced by each asset, to determine our Scope 3 Investment Emissions. A more detailed description of the asset weighting process to estimate portfolio intensity is provided in the Glossary on page 132.

Understanding the GHG emission performance of individual assets and our portfolio of stream and royalty interests is a fundamental building block in our climate scenario analysis. It also helps us strategically consider ways to reduce or offset the GHG emissions associated with our stream and royalty interests. GHG emissions at a mine site are driven by the amount of diesel fuel consumed during mining, the amount of electrical energy consumed by the operation, the fuel sources used to generate grid power and the type of ore processing, among other factors. The GHG emissions connected to our portfolio (our Investment Emissions) are dominated by Scope 1 emissions, which are associated with using fossil fuels to power mobile equipment and in some cases generate power. Scope 1 emissions comprised approximately 84% of the total Scope 1 and Scope 2 Investment Emissions from the calendar year 2021.

Site visit, Nevada – U.S.

Operator GHG emission intensity

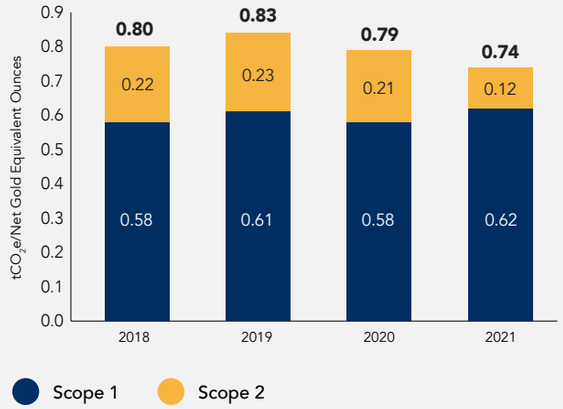
As part of our TCFD strategy, we have assembled GHG emission intensity data for our stream and royalty interests, which is a useful metric to assess ongoing performance on a portfolio basis. GHG emission intensity is measured as the tonnes of Scope 1 and Scope 2 CO_2 (equivalent) emissions per net GEO produced. The average emission intensity for the revenue-generating portion of our stream and royalty portfolio is shown in the figure to the right. Using a GHG intensity measurement as a KPI allows for the ability to track performance over time, regardless of changes in the annual production attributable to our stream and royalty interests. GHG intensity performance over the four-year period of 2018–2021, representing approximately 98% of our net revenue, shows GHG emissions intensity has experienced a modest improvement trend.

With an assessment of the Scope 1 and Scope 2 GHG emission intensity associated with our stream and royalty interests, we have benchmarked this performance against the gold mining industry using a 2022 GHG emission database compiled by Skarn Associates, which presents reported energy and emissions information for 2021 for gold mining operations. The figure to the right shows that our stream and royalty interests are in the third quartile of GHG emission intensity per GEO for the 62 million GEOs represented in the database. For context, the figure to the right also shows the GHG emission intensity for several of our Operator properties.

Above: Quisqueya power plant, Dominican Republic

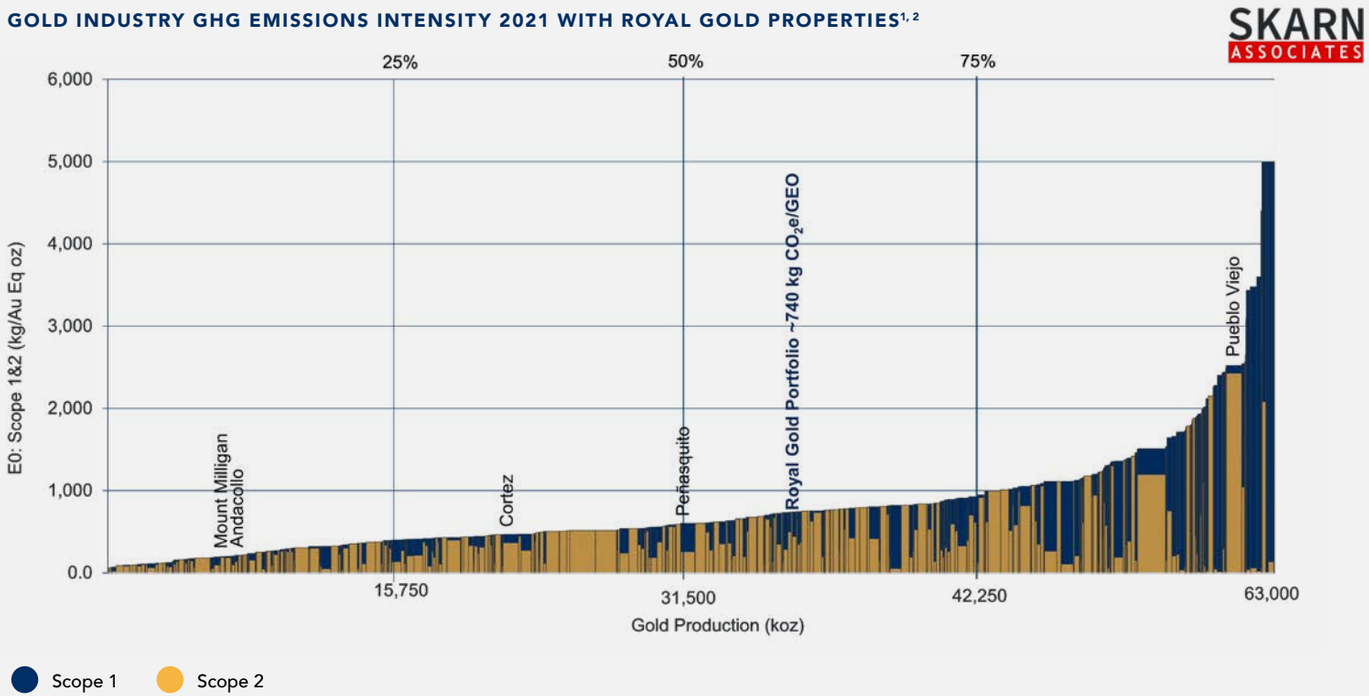
1 © Skarn Associates Limited
2 Khoemacau not shown as data were not available for 2021.

SCOPE 1 AND 2 GHG EMISSION INTENSITY



Using a GHG intensity measurement as a KPI allows for the ability to track performance over time, regardless of changes in the annual production attributable to our stream and royalty interests.

GOLD INDUSTRY GHG EMISSIONS INTENSITY 2021 WITH ROYAL GOLD PROPERTIES[1,2]



Operator water availability and risk

Mining and ore-processing operations require significant amounts of water. Water sourcing and consumption can be prominent concerns for local communities and established water users, and unique water supply strategies are often used at mining operations to allow production while addressing local environmental and social concerns. Many of the opportunities we evaluate are in areas of elevated water stress, which require in-depth reviews of the Operator's water management plans, including stakeholders' concerns. In our due diligence for new opportunities, we review the project water balance, the sustainability of water supply sources and the potential for water competition with other users in the region. We routinely benchmark the actual or estimated water consumption performance of a project against similar operations.

Ongoing monitoring of water availability and risk is required to understand if there is a change in risk exposure from the period when our initial due diligence was conducted. We collect water consumption data to understand water use intensity, and also consult external sources that assess water-related risks. These data collection activities support our efforts to understand how climate change could impact our stream and royalty interests.

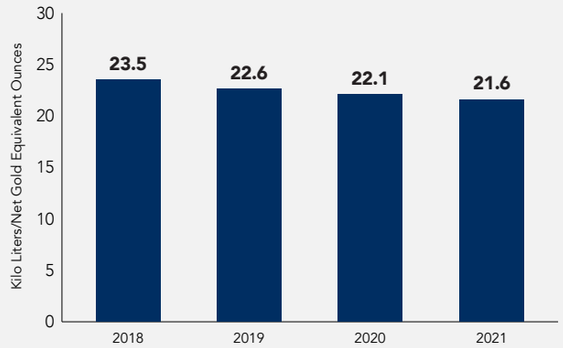
Operator water consumption intensity

We track water consumption intensity as a useful metric to assess performance. Water consumption intensity is measured as cubic meters of water consumed per net GEO produced by each operation. Using an intensity measurement as a KPI allows changes to be tracked over time, and it remains relevant regardless of changes in annual production.

An Appendix starting on page 95 details our revenue-generating assets for the 2018–2021 period and their associated water consumption data, as compiled by Skarn Associates. There has been a modest improvement trend (as seen in the chart to the right) in water consumption intensity performance over those four years, which is associated with more than 95% of our net revenue each year.

1 © Skarn Associates Limited
2 Khoemacau not shown as data were not available for 2021.

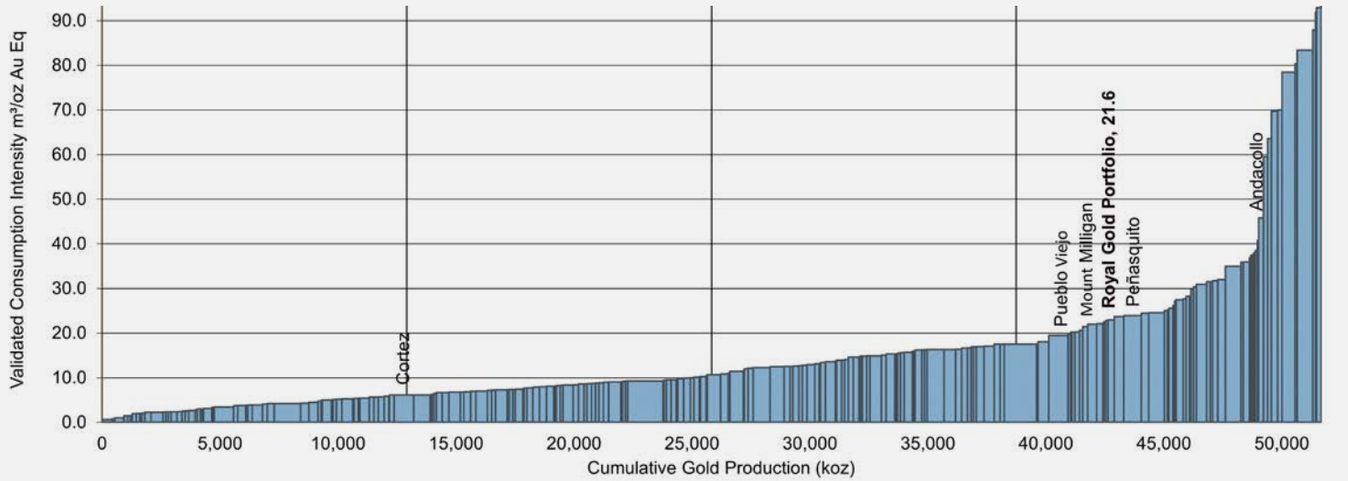
WATER CONSUMPTION INTENSITY



The figure below shows that our stream and royalty interests are in the fourth quartile for water consumption per GEO produced for the 56 million GEOs represented in the database.

GOLD INDUSTRY WATER CONSUMPTION INTENSITY 2021 WITH ROYAL GOLD PRINCIPAL PROPERTIES[1,2]

SKARN ASSOCIATES



Operator water risk

Water-related risks are one of the parameters we use to assess climate-related risks and potential impacts on our stream and royalty interests as we advance our TCFD climate scenario analysis. We will also aim to understand the water-related risks to our interests, and mitigate risks by implementing corresponding action plans, when possible; wherever possible, we will seek to understand how to incentivize Operators to improve water use intensity and water management.

Our approach

Our stream and royalty interests are geographically and climatologically diverse. In 2021 we looked to systematically understand the risk in our portfolio associated with water supply, to be able to independently and effectively communicate our findings to stakeholders; we have updated that review for this report. We based this initial assessment of our Principal Properties on a global water risk mapping tool, Aqueduct™ Water Risk Atlas, developed by the WRI. The Atlas is based on a framework of eight physical water risk indicators: water stress, water depletion, interannual variability, seasonal variability, groundwater table decline, riverine flood risk, coastal flood risk and drought risk. We did not note any changes to the physical risk indicators since our prior reporting.

We have chosen to focus on three indicators – water stress, interannual variability and drought risk – as these directly correlate to our Principal Properties having sufficient water to operate. An assessment of all water risk indicators for our Principal Properties is presented in the Appendices, on page 101.

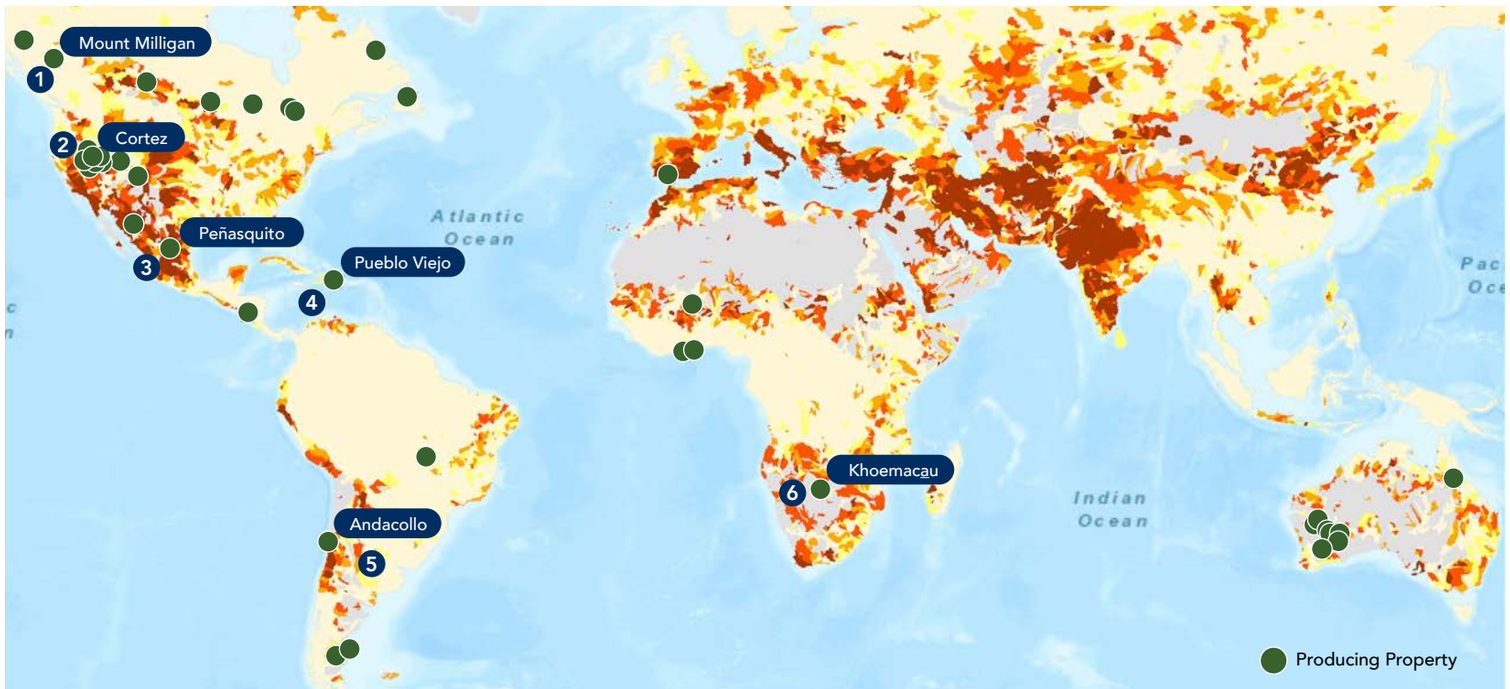
The review shows that all our Principal Properties have at least one elevated physical water risk indicator. For example, Mount Milligan is assessed as having low water stress risk, as there is limited competition for water resources in the region. However, the interannual variability is classified as medium–high, indicating elevated risk in annual precipitation rates. This is important for an operation like Mount Milligan that collects run-off from snow melt as its water supply. As another example, Andacollo's water stress indicator is classified as extremely high, as it is located in a very low-precipitation region with significant competition for available water resources from agriculture and domestic uses. The interannual variability is classified as medium–high, indicating elevated risk in annual precipitation rates. In 2022, Andacollo experienced unusually high precipitation events that caused the curtailment of operations for five days due to flooding and impacted open pit operations for months.

The assessment of our Principal Properties associated with the three risk indicators is summarized in the figures on the following page. A portfolio review shows that 13% of our net revenue in 2021 was produced from jurisdictions with extremely high water stress, which is dominated by the Andacollo operation; however, Khoemacau, Peñasquito and Cortez all are characterized as posing high water stress risk, with the potential for climate change to increase risk.

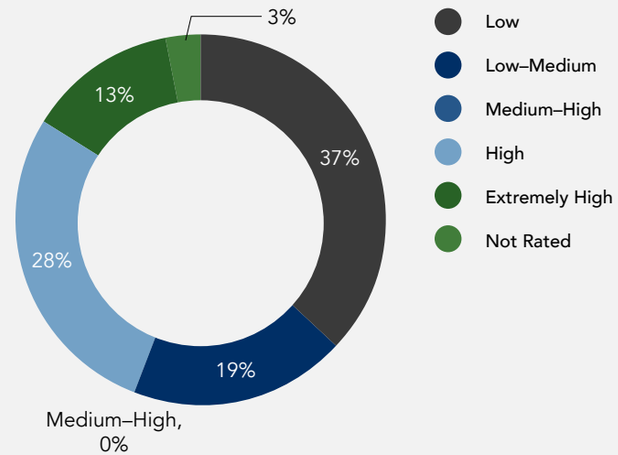
Site visit – Chile, South America

"We see water-related risks facing many of our Operators in the form of competition for limited water resources or water stress, high annual precipitation variability which can create either water shortages or excess water leading to flooding and susceptibility to drought. Layering in changes associated with climate change further magnify these risks. Being able to systematically assess impacts of these water-related risks associated with our current interest as well as new business opportunities is essential to having a sustainable business."

Mark Isto,
Executive Vice President and
Chief Operating Officer



PORTFOLIO BASELINE WATER STRESS AQUEDUCT™[1,2]



Mine	Country	Water Stress	Interannual Variability	Drought Risk
1 Mount Milligan	Canada	Low	Medium–High	Low
2 Cortez	U.S.	High	High	Low–Medium
3 Peñasquito	Mexico	High	Medium–High	Medium
4 Pueblo Viejo	Dominican Republic	Low–Medium	Medium–High	Medium–High
5 Andacollo	Chile	Extremely High	Extremely High	Medium
6 Khoemacau	Botswana	High	Extremely High	Low–Medium

Legend: Low (<10%) | Low–Medium, Medium (10–20%) | Medium–High (20–40%) | High (40–80%) | Extremely High (>80%)

Aqueduct™ Indicators provide estimates of the stated indicators of water risk with a resolution of approximately 10 km x 10 km.

Baseline Water Stress measures the ratio of total water withdrawals to available renewable surface and groundwater supplies. Water withdrawals include domestic, industrial, irrigation and livestock consumptive and nonconsumptive uses. Available renewable water supplies include the impact of upstream consumptive water users and large dams on downstream water availability. Higher values indicate more competition among users.

Interannual Variability measures the average between year variability of available water supply, including both renewable surface and groundwater supplies. Higher values indicate wider variations in available supply from year to year.

Drought Risk measures where droughts are likely to occur, the population and assets exposed, and the vulnerability of the population and assets to adverse effects. Higher values indicate higher risk of drought.

1 Graphic is based on net revenue.
2 Hofste, R., S. Kuzma, S. Walker, E.H. Sutanudjaja.et. al. 2019. "Aqueduct 3.0: Updated Decision – Relevant Global Water Risk Indicators." Technical Note. Washington, DC: World Resources Institute. Available online at: https://wri.org/publication/aqueduct-30.

Operator tailings management

The safety of our people, the communities near to our Operators and environmental protection are key priorities. The waste products that are generated as a result of mining and ore processing, known as tailings, are of great concern to public safety and regulators, and they must be managed and stored to ensure chemical and physical stability.

Our approach

As part of our due diligence with respect to new business opportunities, we identify potential risk associated with tailings storage, including reviews of a site's seismic, hydrological and geotechnical characterization; the design of facilities used to store waste; management monitoring plans for the storage facilities; and emergency planning in the event of a facility failure.

Geotechnical expertise is engaged to support the review, based on each site's circumstances. Understanding how facility designs and operation practices compare with international guidelines – such as those promulgated by the Canadian Dam Association and the Global Industry Standard on Tailings Management – provides comparatives and other information to support our evaluation of how Operators manage this important aspect of their project. On occasion, our due diligence efforts have identified projects where we felt tailing storage practices were not at an acceptable standard, and thus ceased pursuing those opportunities.

We have limited site and information access to all of the properties where we have stream agreements, as well as site access to all of the properties we classify as Principal – which includes Cortez and Peñasquito – where we have royalty interests. Engaging with site personnel helps us understand how the tailings storage facilities are being constructed and operated, and confirms that facilities are being inspected on a regular basis by both the Engineer of Record and an independent third party.

In 2022, all six Operators of our Principal Properties disclosed details of their tailings storage facilities and operating practices, and we estimate that properties generating 95% of our net revenue provide some level of disclosure on their tailings storage facilities. Given the heightened public profile associated with tailings storage, we have provided links on our website to the tailings management disclosures presented by our stream and royalty Operators.

Khoemacau, tailings storage facility, Cupric Canyon Capital, Ngamiland, Botswana

Operator safety

We share with our stream and royalty Operators a commitment to the health and safety of workers, families, local communities and society, and look to partner with companies that demonstrate these same values.

We use two metrics to track the performance of our portfolio of revenue-generating stream and royalty interests: the Total Reportable Incident Frequency Rate ("TRIFR") and the number of fatal accidents. TRIFR is the number of fatalities, lost-time injuries, substitute work, and other injuries requiring treatment by a medical professional per million hours worked, and is an established internationally accepted performance metric collected and reported by most companies.

A compilation of 2020 and 2021 TRIFR statistics from operators that generated 84% and 82% of our net revenue, respectively, showed our portfolio has an estimated 3.1 and 3.8 TRIFR per one million work hours. A comparative benchmarking was completed using TRIFRs for 2021 from 26 mining companies compiled and published by the ICMM, representing almost 2.54 billion work hours, with the estimated TRIFR for Royal Gold shown for comparison. Royal Gold's portfolio underperformed in 2020 and 2021 against the ICMM benchmark dataset, with both years significantly impacted by performance at one of our Principal Properties.

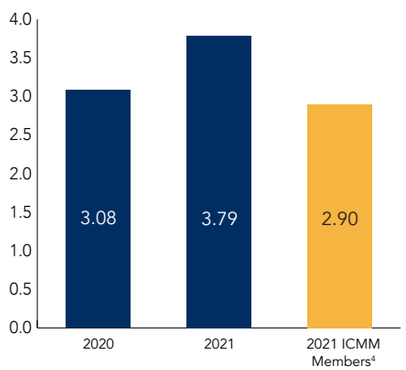
Between 2020 and 2022, there was one reported fatal accident at the Bogoso/Prestea mine, operated by Golden Star Resources at the time; and in 2021, both El Limon, operated by Calibre Mining, and Williams, operated by Barrick, experienced fatal accidents. In 2022, one fatal accident occurred at the Cortez mine. An accident at Khoemacau occurred in May 2022, which resulted in a double fatality.

The benchmarking results indicate a need on our part to better understand the health and safety risks to our interests and consider actions we can take to incentivize improvement.

Operator ESG-related policy statements and standards

From a governance and disclosure perspective we look to the Operators of the revenue-generating portion of our portfolio to provide an annual ESG report and policy statements, standards or detailed descriptive content in their ESG reports or websites, around 15 subject areas. A review of disclosure weighted by our 2021 net revenue indicates that more than 90% of our portfolio revenue is provided by companies that disclose against 11 of the 15 areas. We see that some of the Operators in our portfolio need to catch up in several areas of disclosure, including biodiversity, TCFD climate reporting, child labor and supply chain. Portfolio performance also falls below 100%, as some of our revenue is generated by private companies, which have no disclosure obligations.

TOTAL REPORTABLE INCIDENT FREQUENCY RATE[1,2,3]



Policy/standard/statement disclosure[4]	% of 2021 net revenue covered
ESG Reports for 2021	93%
Environmental	
Environmental/Sustainability Policy	97%
Biodiversity Policy/Standard	88%
TCFD Framework Climate Change Disclosure	88%
Tailings Management Practices Disclosure	90%
Social	
Safety & Health Policy	97%
Human Rights Policy/Statement	92%
Child Labor Policy/Statement[5]	81%
Diversity Policy	93%
Community/Sustainability/Stakeholder Engagement Policy	93%
Formal Community Grievance Mechanism	89%
Governance	
Code of Conduct	93%
Anti-bribery/Corruption Policy	90%
Supply Chain Policy/Standards	83%
Whistleblower Policy/Process	93%

1 TRIFR per 1,000,000 work hours.
2 TRIFRs and work hours for employee and contractors were compiled from public and confidential information sources for all assets contributing to net revenue. The percentage of our net GEOs for each asset was compared to each operation's total GEO production to determine our percentage of beneficial interest. This beneficial percentage interest was multiplied by the number of work hours used to determine the TRIFR for each property that reported work hours. To determine a weighted average TRIFR for the portfolio, the beneficial interest work hours for each site were multiplied by the TRIFR reported for each site, with the result being divided by the total of the beneficial work hours.
3 Represents data compiled by the ICMM from its members and consists of 2.54 billion work hours worked in 2021.
4 1) Compliance with the criteria is given for having a standalone policy or part of a broader policy; 2) a description provided on the Company website or ESG report that provides enough detail to define the approach to the defined subject
5 Compliant if "child labor" referenced in Human Rights Policy.

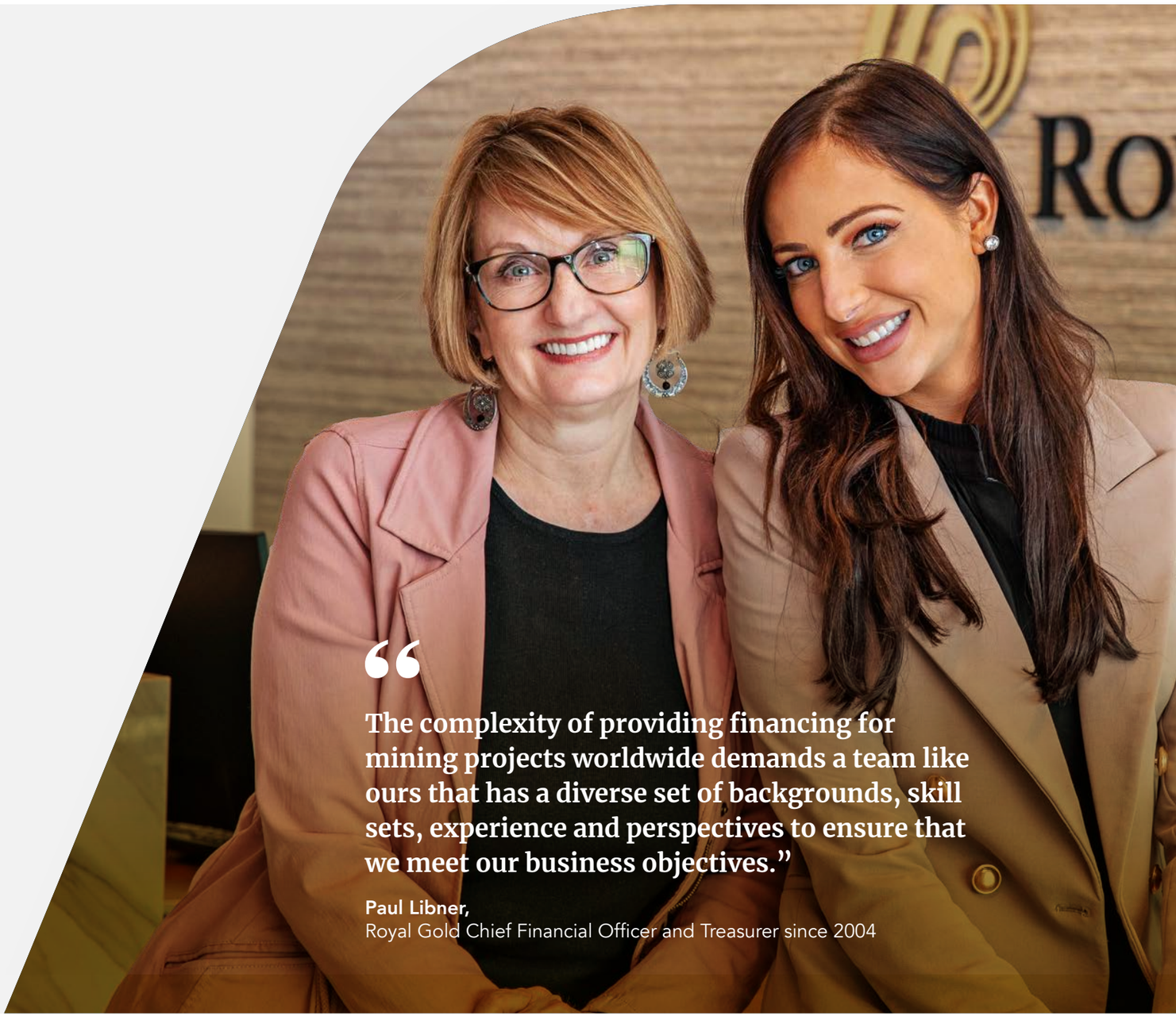
Our People

The ability to attract, develop, retain and challenge a talented workforce remains critical to our success. Beyond basic wages, benefits and career opportunities, we recognize that today's workforce wants to understand the core values of a company and how they personally align with their employer.

2022 employee statistics

44%
of our employees are female[1]

3.4%
annualized employee turnover rate



"The complexity of providing financing for mining projects worldwide demands a team like ours that has a diverse set of backgrounds, skill sets, experience and perspectives to ensure that we meet our business objectives."

Paul Libner,
Royal Gold Chief Financial Officer and Treasurer since 2004

1 Three employees elected not to disclose their gender and, therefore, are not reflected in the total numbers.

Human capital

The ability to attract, develop, retain and challenge our employees remains critical to our success. Beyond basic wages, benefits and career opportunities, we recognize that today's workforce wants to understand a company's core values, and how they as people personally align with their employer.

Additionally, the complexity of providing financing for mining projects worldwide requires that we bring together diverse backgrounds, skill sets, experiences and perspectives to ensure that we meet our business objectives.

Our approach

Royal Gold has a talented staff with backgrounds in the key disciplines of geology and mining operations, as well as project development, finance, accounting and law. Our organization is structured in such a way that a high percentage of individuals are involved in key decision-making and are therefore hired on account of having significant experience in their field. We seek to challenge and empower them through exposure to the variety of projects and interests in which we are involved and to all aspects of the business.

Our comprehensive compensation package includes competitive wages, health and dental benefits and various insurance coverage. We regularly benchmark all levels of wages and total compensation and ensure that the majority of all short-term incentive compensation is based on corporate-wide, shared benchmarks.

Along with attractive wages and benefits, the following personal development opportunities inspire and motivate our team:

Continuing education and skill expansion support: We support our employees through the accommodation of time and financial support in order to complete courses and further advance expertise in relevant disciplines.

Secondments: Although we have a small team, we are still able to offer secondment opportunities to key employees in our domestic and overseas offices which further broadens their skills and perspectives, which can then be applied to their role when the secondment is completed.

Succession planning: A well-developed plan for succession in all senior management levels, including our Board, is critical due to the flat nature of our organizational structure. We ensure that rising employees have exposure to the boardroom, the field and educational opportunities, to gain a well-rounded understanding of the Company in a positive environment that promotes knowledge-sharing.

Diversity and inclusion

Royal Gold recognizes and values the introduction of varied voices and opinions in all aspects of our business. A diverse workforce fosters the type of inclusive work environment envisioned in our Diversity and Inclusion Policy and our People Policy. With respect to our Board, one-third of our independent Directors identify as women and one of our independent Directors identifies as a minority. When identifying new candidates for our Board we endeavor to include diverse candidates in any search. As of December 31, 2022, a total of 44 % of our employees and 20% of our senior management team self-identify as female. Given the limited turnover of our workforce, and no need to add multiple staff at any single point in time, we seek to improve the diversity of our people by including diverse candidates in all employment searches.

As Royal Gold continues to advance its diversity and inclusion practices, an employee survey was administered in 2022 and early 2023 to collect information from our employees on these important topics. The 2023 survey was enhanced by the addition of questions focusing on Royal Gold's approach to diversity and inclusion, and it solicited ideas for improvement. We view this survey as an initial step in helping us determine our diversity and inclusion priorities for 2023, which include awareness training and other similar initiatives.

The figures on the right highlight employee statistics from 2019 to 2022.

1 Three employees elected to not disclose their gender and, therefore, are not reflected in the totals.
2 Total employee headcount is not based on the employee survey.
3 A visible minority is defined as a person who is non-Caucasian in race or non-white in skin color. The visible minority population consists mainly of the following groups: South Asian, Chinese, Black, Filipino, Arab, Southeast Asian, West Asian, Korean and Japanese.

2022 employee statistics

15
number of male employees[1]
2019: Not surveyed at the time
2020: Not surveyed at the time
2021: 17
TREND: DECREASING

12
number of female employees[1]
2019: Not surveyed at the time
2020: Not surveyed at the time
2021: 12
TREND: CONSISTENT

31
total number of employees[2]
2019: 25
2020: 27
2021: 29
TREND: INCREASING

44%
female employees[1]
2019: Not surveyed at the time
2020: Not surveyed at the time
2021: 41%
TREND: INCREASING

56%
male employees[1]
2019: Not surveyed at the time
2020: Not surveyed at the time
2021: 59%
TREND: DECREASING

20%
female senior management
2019: 0%
2020: 12.5%
2021: 12.5%
TREND: INCREASING

80%
male senior management
2019: 100%
2020: 87.5%
2021: 87.5%
TREND: DECREASING

7%
of employees identify as a visible minority[3]
2019: Not surveyed at the time
2020: Not surveyed at the time
2021: 4%
TREND: INCREASING

97%
employee survey respondents
2019: Not surveyed at the time
2020: Not surveyed at the time
2021: 89%
TREND: INCREASING

Health and safety

The health and safety of our employees does not relate solely to workplace safety or travel precautions, but include the whole of our employees' Royal Gold experience, from work environment to work–life balance. While Royal Gold is office-based, many of our employees also travel to remote parts of the world. Our policies require compliance with legal and health and safety requirements in all locations, including compliance with the health and safety procedures instituted by our Operators while visiting a site. We conduct regular safety training for our offices, including responses to threats such as fire, extreme weather and office intrusions, and have engaged outside resources to provide medical and emergency response and evacuation assistance for our employees when traveling overseas.

Turnover and talent retention

The continued growth and success of our business depends on the wellbeing of our people, and Royal Gold believes that our approach to fostering personal and career development opportunities, along with a strong record of internal promotion, has led to our very low voluntary turnover rate.

As of December 31, 2022, Royal Gold had a small team with a total of 31 employees. The value generated per employee indicates a highly efficient business model and highlights the importance of employee retention. Royal Gold has a strong record of employee retention and, excluding the retirement of long-serving employees, the average voluntary employee turnover rate has remained low.

2022 employee statistics

0
recordable health and safety incidents from 2019–2022

1
employee turnover
2019: 1, 2020: 3, 2021: 1

31
number of employees[1]
2019: 25, 2020: 29, 2021: 29

0
retirements of long-serving employees
2019: 0, 2020: 2, 2021: 1

3.4%
annualized employee turnover rate[2]
2019: 0%, 2020: 7%, 2021: 3%

1 Headcount at December 31, 2022
2 Calculated based on employee headcount at January 1, 2022


Royal Gold Board Site Visit, Khoemacau, Ngamiland, Botswana

Supporting Our Operators and Communities

Responding to the needs of communities through leading charitable organizations where we live and work builds social resiliency and an opportunity for our people to give back to causes that matter to them. Helping our Operators achieve their Sustainable Development Goals is one way we can drive meaningful impact as a passive investor.

TARGET

$1.5M in 2023 to support organizations that serve the critical needs of the communities in which our corporate offices and Operators are located

CONTRIBUTED NEARLY

$1M over the past 10 years to develop the industry's next generation of leaders

"Our work in 2022 with Project C.U.R.E. and the Khoemacau mine in Botswana is one example of how we can have a positive social impact as a metals stream and royalty company."

William H. Heissenbuttel,
President and Chief Executive Officer

Toteng Medical Clinic – Boikobo Bashi Paya, Executive Director Stakeholder Engagement, Sustainability and Legal Compliance, Ngamiland, Botswana (Khoemacau and Royal Gold-supported community program)

Community contributions

Our approach

Supporting our Operators' communities and those closer to home is an important component of Royal Gold's ESG effort. Helping our Operators and local communities achieve their SDGs is a way we can drive meaningful impact on ESG topics and remain neutral as a passive investor with respect to influencing operations. By responding to the needs of communities (through leading charitable organizations where we live and work) we build social resiliency and an opportunity for our people to give back to causes that matter to them.

In 2022, Royal Gold contributed a total of $1.2 million to support organizations that serve critical needs in the communities near our corporate offices, and to support our Operators' initiatives. Royal Gold has contributed over $4.5 million to support organizations in our office and mining operator communities since inception. A complete list of NGOs and charities we support can be found on our website.

Above: Royal Gold Project C.U.R.E. Volunteer Day, Colorado, U.S.

"What this past year has taught us more than ever is that there's such a need for people to connect to something bigger than themselves. For a company like Royal Gold, it's not just the CEO but the employees who are seeking purpose and ways to have an impact. The Royal Gold team volunteered in the warehouse and helped us sort and prepare medical supplies for upcoming shipments to developing countries. We are so grateful for our partnership with Royal Gold, who so generously aids in our mission of delivering health and hope to the world."

Sharon Wagner,
Director, Corporate Philanthropy,
Project C.U.R.E.

Mining community contribution highlights

Royal Gold's Mining Community Contribution Program looks to support programs in the communities where we hold stream or royalty interests that promote sustainable development on a global scale. Royal Gold endeavors to support programs that aim to achieve impactful, measurable and sustainable outcomes that align with one or more of the SDGs.

Khoemacau Copper Mine, Botswana, Africa

A site visit in 2019 to review project progress led to discussions with the CEO of the Khoemacau copper mine, Johan Ferreira, about the project's ESG programs. After gaining a deeper understanding of the community's lack of medical facilities and equipment, Royal Gold committed to financially supporting the completion of the construction of the Toteng Medical Clinic, which had been stalled by the COVID-19 pandemic; this facility would support the mine's surrounding communities. Given our strong partnership with Denver-based Project C.U.R.E., the world's largest distributor of donated medical supplies, equipment and services to doctors and nurses, we suggested that some of the clinic's medical equipment could be secured through Project C.U.R.E.

After funding Project C.U.R.E.'s "needs assessment" site visit to Botswana in early 2022, Project C.U.R.E. determined that the facility would need to be able to serve as the main clinic for the communities of nearby villages, in addition to the mine workers. After many meetings with the Government of Botswana, Khoemacau and Project C.U.R.E. are getting closer to a final import approval to bring medical supplies and equipment into the country, but approval remains uncertain. The provision of supplies and equipment is crucial not only to helping increase the availability of services to almost 95% of the hospitals on their receiving end: in some circumstances, this provision will allow wages to be paid to staff rather than be redirected to purchasing supplies and equipment.

We worked with the Khoemacau team to identify areas in need and successfully contributed $200,000 to complete the construction at the Toteng Medical Clinic, including the water tanks, pumping and cooling systems and mechanical equipment required by a medical clinic. We continue to work with Project C.U.R.E. to obtain approval to ship used medical equipment to support the Toteng clinic.

SDG contribution:

Social investment funding contributes to the health and well-being of Khoemacau's workforce and surrounding communities. It also conveys sustainable development efforts by the project to the Ministry of Health and the Ministry of Foreign Affairs while responding to growing expectations by stakeholders that the needs of the local communities be met. Our partnerships with Project C.U.R.E. and the Khoemacau management team, along with our economic contribution, have helped advance the construction of a health clinic that will improve the community's access to health services; in this way, it contributes to SDG 3, Good Health and Well-Being.

SDG CONTRIBUTION:

"Royal Gold's support spans across the technical and the critical but also softer ESG issues. As an advisory member on our ESG Board subcommittee, I know its members cannot make any operational decisions. Still, Royal Gold is a valuable contributor in the whole ESG conversation, about where specific initiatives are required, or improvements can be made. A true supporter, Royal Gold will even give the team a pat on the back for a job well done."

Johan Ferreira,
Chief Executive Officer, Khoemacau Copper Mining and Cupric Group

Centerra Gold, Inc., British Columbia, Canada

Royal Gold contributed C$40,000 to the "Nothing About Us Without Us" Project organized by Centerra to build First Nation capacity and utilize traditional knowledge to improve reclamation and closure planning. Specifically, the financial contribution helped fund a reclamation training and skills development pilot program run by Chu Cho Environmental LLP, for summer students from the McLeod Lake Indian Band and the Nak'azdli First Nation.

Chu Cho Environmental LLP is a First Nations culturally based environmental consulting company that is owned by the Tsay Keh Dene Nation and operates within the framework of the Tsay Keh Dene's Economic Development Corporation. The pilot program had three core objectives:

1. Provide summer employment for students from McLeod Lake Indian Band and Nak'azdli First Nation with Chu Cho Environmental LLP, an Indigenous-owned environmental services company
2. Provide summer students with one-on-one training and mentorship from Chu Cho Environmental LLP staff in land reclamation and environmental monitoring
3. Assist the summer students in achieving certifications related to the fields of reclamation, environmental monitoring, and environmental stewardship

SDG contribution:

Our economic contribution to Centerra's "Nothing About Us Without Us" program supports the Company's actions toward supporting local employment and building strong partnerships with Indigenous communities; in this sense, the program contributes to SDG 8, Decent Work and Economic Growth.

Nevada Gold Mines, Nevada, U.S.

Royal Gold has been invested in Cortez for many years, which NGM operates. In late 2022, Royal Gold donated $140,000 to the NGM-established I-80 Fund to help contribute to the region's small business community. NGM established the I-80 Fund in July 2020 with an initial $5 million investment. The Fund provides low-interest loans to small businesses negatively impacted by COVID-19, or new business start-ups and expansions. In 2022, 19 loans were approved, 57 jobs were created, and 57 jobs retained.

SDG contribution:

Royal Gold's economic contribution to the I-80 Fund supports small businesses and NGM's efforts help improve the socioeconomic well-being of its nearby communities; both contribute to SDG 8, Decent Work and Economic Growth.

SDG CONTRIBUTION:

Royal Gold Site Visit, Nevada Gold Mines, Nevada, U.S.

Chu Cho Environmental LLP, site work, Mount Milligan, Centerra Gold, British Columbia, Canada

Local office community contribution highlights

Our internal Donations Committee that administers our annual charitable giving and selects donation recipients in our local office communities, which include Denver, Lucerne, Toronto and Vancouver.

SDG CONTRIBUTION: 3 GOOD HEALTH AND WELL-BEING

Project C.U.R.E., Colorado, U.S.

In addition to our Operator-related donations, Royal Gold has played a supportive role over the years by providing financial support to Project C.U.R.E. for the distribution of medical supplies at the onset of the COVID-19 pandemic, and donating box trucks and a forklift. In 2022, Royal Gold funded the purchase of a second box truck to collect medical supplies in Colorado for distribution to other countries.

In 2022, Denver office employees volunteered at the Denver Project C.U.R.E. warehouse sorting, organizing and packaging medical equipment and supplies. Every year, over 30,000 volunteers sort donated supplies, repair equipment and load semi-truck-sized containers from seven distribution centers across the U.S. Each week, Project C.U.R.E. delivers approximately three to five semi-truck-sized ocean containers packed with medical equipment and supplies that are desperately needed to save lives in hospitals and clinics in resource-limited countries. Royal Gold was honored not only to provide financial contributions but also to physically help the organization.

SDG contribution:

Our long-standing partnership with Project C.U.R.E. has focused on improving access to medical equipment and services in our local Colorado community and in our Operators' local communities. Royal Gold has made several economic contributions to Project C.U.R.E., including support toward employee volunteering over the years, which contributes to SDG 3, Good Health and Well-Being.

Above: Royal Gold funded medical supply box truck, Project C.U.R.E., Colorado, U.S.

"Royal Gold has been a long-time supporter of Project C.U.R.E. and other various Denver-based charitable organizations. Our team had such a great time volunteering at the Project C.U.R.E. warehouse and it was truly inspiring to work alongside the devoted staff and volunteers. What a fantastic team-building event."

Yelena Ovanesyan,
Royal Gold Accounting Manager since 2010

Daily Bread Food Bank, Ontario, Canada

Our Toronto office employees volunteered at the Toronto Daily Bread Food Bank in 2022. Royal Gold has financially supported the organization since 2020. The Daily Bread Food Bank is a registered Canadian charity that provides equitable access to nutritious food. Royal Gold shares the Daily Bread Food Bank's belief that food is a human right, and that no one should go hungry or face barriers in accessing the food they need.

Royal Gold's 2022 financial contribution of $37,000 helped ensure that 5,490 people could access the food bank and take home nearly three days' worth of fresh produce, dairy, grains and pantry items each week. Our contribution also helped the food bank introduce a new community meal program to serve South Etobicoke, a community with limited access to drop-in meal programs and where 20% of its residents have low incomes.

SDG contribution:

Since 2020, Royal Gold has made financial contributions to the Daily Bread Food Bank and has also supported employee volunteering, both of which contribute to SDG 2, Zero Hunger.

Above: Royal Gold Daily Bread Food Bank Volunteer Day, Toronto, Canada

SDG CONTRIBUTION:

"Volunteering at the Daily Bread [Food Bank] was a rewarding experience, and it is great that Royal Gold supports its employees volunteering during business hours to any charitable organization of their choice."

Kevin Chiew, CFA,
Royal Gold Manager, Investor Relations and Business Development since 2020

Next generation of leadership

SDG CONTRIBUTION: 4 QUALITY EDUCATION, 10 REDUCED INEQUALITIES

We believe in educating the industry's next generation of leaders who will be tasked with continuing the evolution of responsible resource development and sustainability standards. Over the past ten years, we have contributed nearly $1 million to support educational initiatives.

In 2022, Royal Gold established scholarship funds totaling $70,000 with three U.S.-based universities that have a deep commitment to science, technology, engineering and math excellence and the mining industry. All three scholarships are aimed at attracting female and underrepresented minority students. These scholarships and our financial contributions to education-related initiatives support SDG 4, Quality Education and SDG 10, Reduced Inequalities.

Colorado School of Mines Foundation

The Colorado School of Mines, based in Golden, Colorado since 1874, has a mission to provide education and research in engineering, science and business to solve the world's most pressing challenges, particularly those related to the Earth, energy and the environment. The Royal Gold Scholarship Fund was established in 2022 for the purpose of providing financial aid to enrolled undergraduate students in pursuit of a degree in the area of mining engineering. Total funding for this scholarship is $20,000.

Montana Technological (Montana Tech) University Foundation

Founded in 1900 and located in Butte, Montana, Montana Tech is a university with a strong focus on resource engineering, science, mathematics, computation, health and business and is committed to research projects that will help transform tomorrow.

The Royal Gold Scholarship was established in 2022 and will provide $25,000 in support to students majoring in mining engineering or metallurgical and materials engineering and who are intending to focus on mineral processing and extractive metallurgy.

In addition to the scholarship, we provided funding for an academic research project in 2021 and 2022 for a total contribution of $47,420. The research project focused on assessing the effectiveness of machine learning domain modeling in understanding the uncertainty of early-stage mining projects.

South Dakota Mines Center for Alumni Relations and Advancement

South Dakota Mines was founded in 1885 to provide instruction in the region's primary industry, mining. The university, located in Rapid City, South Dakota, has evolved to become one of the leading science and engineering universities in the region. The recipient of the scholarship will be awarded $25,000.

In 2022, Royal Gold established scholarship funds totaling $70,000 with three U.S.-based universities that have a deep commitment to science, technology, engineering and math excellence and the mining industry. All three scholarships are aimed at attracting female and underrepresented minority students.

Left: Trinity Kelly, CSM Mining Engineering student, Class of 2025
Right: Jennifer Kinch, CSM Mining Engineering student, Class of 2026

Appendices

- ESG scorecards
- Operator production performance
- Operator energy consumption
- Operator GHG emissions
- Operator water consumption
- Water sensitivity assessment
- Operator ESG frameworks and standards
- GRI index
- TCFD index and scenario analysis
- SDG index
- Glossary

Golden Star Oil Palm Project, Ghana, West Africa (Royal Gold-supported community program)

ESG scorecards

Corporate performance scorecard

	2019	2020	2021	2022	3-Year Trend
Energy and Climate Change					
Total Scope 2 GHG Emissions (tCO_2e)		87.0	87.1	93.5	⏫
Total Scope 3 GHG Emissions (tCO_2e)		68.3	43.6	312.3	•
Total Scope 2 and 3 GHG Emissions (tCO_2e)		155.3	130.7	405.7	•
Energy Consumption (MWh)		247.1	250.2	257.9	⏫
Employees Statistics					
Number of Male Employees[1]			17	15	n/a
Number of Female Employees[1]			12	12	n/a
Total Number of Employees[2]	25	27	29	31	⏫
% of Female Employees[1]			41%	44%	n/a
% of Male Employees[1]			59%	56%	n/a
% of Female Senior Management	0%	12.5%	12.5%	20%	⏫
% of Male Senior Management	100%	87.5%	87.5%	80%	⏬
% of Employees that Identify as a Visible Minority[3]			4%	7%	n/a
% of Employee Survey Respondents			89%	97%	n/a
Diversity Statistics – Board of Directors					
% of Female Board Members	17%	17%	29%	29%	⏫
% of Board Members that Identify as an Under-Represented Minority	0%	14%	14%	14%	⏭

	2019	2020	2021	2022	3-Year Trend
Safe Operation					
Total Recordable Incident Frequency Rate (TRIFR)	0	0	0	0	⏭
Community Engagement					
Community Investments ($US)	n/a	1,016,087	1,013,619	1,104,844	•
Governance					
Political Contributions	0	0	0	0	⏭
Whistleblower Complaints	0	0	0	0	⏭
ESG External Ratings					
S&P Sustainability Score	7	22	22	34	⏫
Sustainalytics	23.4	22.8	18.7	9.1	⏫
MSCI	A	A	AA	AA	⏭
ISS ESG Corporate Rating		C-	C-	C-	⏭
ISS – Governance Score	2	2	1	1	⏭
ISS – Environment Score	9	10	10	8	⏫
ISS – Social Score	9	7	8	6	⏫
Bloomberg Gender-Equality			34.98	40.92	⏫

1 For 2022, 3 employees elected to not disclose their gender and, therefore, are not reflected in the totals.
2 Total employee headcount is not based on employee survey.
3 Percentages based on survey respondents and not total number of employees.

⏫ Increasing ⏫ Improving ⏭ Consistent ⏬ Decreasing • Inconclusive

Stream and royalty portfolio performance scorecard[1]

	2018	2019	2020	2021	3-Year Trend
Energy and Climate Change					
Net Revenue ($ million)	$352	$384	$472	$555	⌃⌃
Net Gold Equivalent Ounces (GEO) Sold[2]	260,000	267,000	264,000	283,000	⌃⌃
Energy and Climate Change					
GHG Emission (tCO_2e)	209,000	223,000	208,000	211,000	•
GHG Emissions Intensity (tCO_2e/GEO)	0.80	0.84	0.79	0.74	⌄
Total Energy Intensity (GJ/GEO)	11.4	11.3	13.0	13.8	⌃⌃
Energy Emissions Factor (tCO_2e/TJ)	67	68	59	53	⌄
% of Portfolio Net GEO Production with Absolute GHG Emissions Reduction Target(s) by 2030				65%	n/a
% of Portfolio Net GEO Production with Net Zero GHG Emission Target by 2050				58%	n/a

	2018	2019	2020	2021	3-Year Trend
Water Availability					
Water Consumption Intensity (m^3/Net Geo)	25.1	24.8	23.5	21.6	⌄
% of Net Revenue from High or Extremely High Water Stress Regions	37%	37%	38%	41%	⌃⌃
% of Net Revenue from Regions with High or Extremely High Interannual Precipitation Variability	33%	34%	32%	33%	•
Safe Operation					
Total Recordable Incident Frequency Rate (TRIFR)			3.1	3.8	n/a
# Fatal Accidents			1	2	n/a
Tailing Management Disclosure				90%	n/a
% of Applicable Net GEO Sales who are Signatories to the International Cyanide Code				76%	n/a

1 The Company changed its fiscal year end from June 30 to December 31, effective as of December 31, 2021. Accordingly, certain amounts in this table have been adjusted to reflect unaudited calendar year information.

2 Gold Equivalent Ounces ("GEO") production is estimated based using the following metal prices for each year using production units identified by Skarn Associates: $1,758/oz Au; $20.54/oz Ag; $6,185.82/lb Cu; $1,826.14/lb Pb; $2,268.85/lb Zn.

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Operator production performance

The following table presents a majority of our revenue-generating assets and production performance data for each asset, as available from Skarn Associates, an independent ESG data analytics firm, for calendar years 2018 through 2021. Entries labelled "NR" means the data were not reported in the Skarn Associates database and those labelled "–" are for periods when Royal Gold did not have royalty or stream revenue from the asset.

Asset/Operator	Year[1]	Royal Gold net revenue[2] (%)	Royal Gold attributable[4,6] (GEO)	Ore processed[5] (kt)	Reported production[5,6] (GEO)	RGLD % of site GEO production[7] (%)
Principal Properties						
Andacollo	2018	14.2%	39,594	21,549	291,271	13.6%
Teck Resources Limited	2019	16.7%	46,041	16,987	232,921	19.8%
	2020	13.4%	35,785	19,811	246,998	14.5%
	2021	**10.6%**	**32,453**	**18,621**	**190,160**	**17.1%**
Cortez[3]	2018	1.5%	3,862	17,002	1,201,779	0.3%
Nevada Gold Mines LLC	2019	4.2%	11,633	22,025	963,345	1.2%
	2020	6.0%	16,097	21,169	798,718	2.0%
	2021	**10.1%**	**30,892**	**29,793**	**826,366**	**3.7%**
Khoemacau[10]	2018	0.0%	–	–	–	0.0%
Khoemacau Copper	2019	0.0%	–	–	–	0.0%
	2020	0.0%	–	–	–	0.0%
	2021	**0.7%**	**2,042**	**1,800**	**120,756**	**1.7%**
Mount Milligan	2018	23.5%	58,573	13,556	286,571	20.4%
Centerra Gold Inc.	2019	23.6%	62,325	16,350	318,159	19.6%
	2020	24.6%	66,521	20,067	316,251	21.0%
	2021	**24.7%**	**66,779**	**20,900**	**334,214**	**20.0%**
Peñasquito	2018	5.7%	13,819	35,248	739,983	1.9%
Newmont Corporation	2019	4.6%	10,874	19,964	666,085	1.6%
	2020	7.8%	15,420	30,590	1,336,132	1.2%
	2021	**9.5%**	**23,306**	**35,720**	**1,532,832**	**1.5%**
Pueblo Viejo	2018	16.1%	43,578	8,347	1,027,603	4.2%
Barrick Gold Corporation	2019	16.6%	46,356	8,607	1,049,372	4.4%
	2020	16.7%	45,249	8,828	964,286	4.7%
	2021	**13.8%**	**40,194**	**9,110**	**869,421**	**4.6%**
Wassa[8]	2018	4.3%	11,949	1,601	149,697	8.0%
Chifeng Jilong Gold Mining Co., Ltd.	2019	4.3%	11,851	1,548	156,166	7.6%

Asset/Operator	Year[1]	Royal Gold net revenue[2] (%)	Royal Gold attributable[4,6] (GEO)	Ore processed[5] (kt)	Reported production[5,6] (GEO)	RGLD % of site GEO production[7] (%)
	2020	4.9%	13,429	2,011	167,648	8.0%
	2021	**4.6%**	**14,000**	**1,690**	**155,000**	**9.0%**
Non-principal Properties						
Allan & Borax	2018	0.4%	866	NR	NR	NR
Nutrien Ltd.	2019	0.3%	702	NR	NR	NR
	2020	0.3%	1,031	NR	NR	NR
	2021	**0.2%**	**910**	**NR**	**NR**	**NR**
Bald Mountain[3]	2018	0.5%	1,364	23,654	284,631	0.5%
Kinross Gold Corporation	2019	0.2%	589	16,475	187,963	0.3%
	2020	0.0%	83	18,303	191,285	0.0%
	2021	**0.2%**	**491**	**19,063**	**204,804**	**0.2%**
Canadian Malartic[3]	2018	2.3%	6,454	20,484	707,422	0.9%
Agnico Eagle Mines Ltd.	2019	1.8%	4,833	21,049	679,028	0.7%
	2020	1.6%	4,373	20,800	576,764	0.8%
	2021	**1.4%**	**4,178**	**22,261**	**721,552**	**0.6%**
Carlin Operations[3]						
Nevada Gold Mines LLC						
Goldstrike	2018	0.9%	2,584	8,365	1,018,754	0.3%
Carlin – Leeville	2018	0.7%	2,020	20,243	927,565	0.2%
Carlin – Leeville + Goldstrike	2019	1.2%	3,270	16,044	1,719,905	0.2%
Carlin – Leeville + Goldstrike	2020	1.1%	2,717	19,829	1,666,909	0.2%
Carlin – Leeville + Goldstrike	**2021**	**1.5%**	**4,629**	**23,223**	**1,502,411**	**0.3%**
Dolores	2018	1.9%	5,098	6,903	184,271	2.8%
Pan American Silver Corporation	2019	1.8%	5,037	6,777	177,432	2.8%
	2020	1.5%	4,048	6,430	142,144	2.8%
	2021	**1.9%**	**5,658**	**7,774**	**186,266**	**3.0%**
Don Mario	2018	0.5%	1,379	NR	NR	NR
Orvana Minerals Corporation	2019	0.2%	585	NR	NR	NR
	2020	0.0%	–	NR	NR	NR
	2021	**0.0%**	**–**	**NR**	**NR**	**NR**
Don Nicolas	2018	0.0%	127	286	25,473	0.5%
Cerrado Gold, Inc.	2019	0.0%	–	–	–	0.0%

Asset/Operator	Year[1]	Royal Gold net revenue[2] (%)	Royal Gold attributable[4,6] (GEO)	Ore processed[5] (kt)	Reported production[5,6] (GEO)	RGLD % of site GEO production[7] (%)
	2020	0.3%	1,141	333	16,975	6.7%
	2021	**0.2%**	**572**	**414**	**43,366**	**1.3%**
El Limon	2018	0.6%	1,556	448	50,169	3.1%
Calibre Mining Corporation	2019	0.6%	1,739	482	63,166	2.8%
	2020	0.9%	2,339	428	65,217	3.6%
	2021	**0.9%**	**2,705**	**496**	**67,493**	**4.0%**
Gold Hill[3]	2018	0.2%	661	24,770	385,470	0.2%
Kinross Gold Corporation	2019	0.2%	422	25,804	363,089	0.1%
	2020	0.2%	525	23,975	325,487	0.2%
	2021	**0.1%**	**427**	**16,623**	**257,917**	**0.2%**
Gwalia Deeps[3]	2018	1.4%	3,975	672	257,252	1.5%
St Barbara Ltd.	2019	1.0%	2,784	659	184,402	1.5%
	2020	0.9%	2,287	697	155,804	1.5%
	2021	**0.8%**	**2,587**	**998**	**188,267**	**1.4%**
Holt[3]	2018	2.9%	8,061	860	127,345	6.3%
Agnico Eagle Mines Ltd.	2019	2.6%	7,139	854	113,952	6.3%
	2020	1.2%	3,487	215	29,391	11.9%
	2021	**0.0%**	**–**	**–**	**–**	**0.0%**
King of the Hills[3]	2018	0.0%	–	NR	NR	NR
Red 5 Limited	2019	0.3%	976	NR	NR	NR
	2020	0.2%	486	NR	NR	NR
	2021	**0.0%**	**89**	**NR**	**NR**	**NR**
LaRonda Zone 5[3]	2018	0.1%	166	2,333	404,029	0.0%
Agnico Eagle Mines Ltd.	2019	0.5%	1,324	2,927	447,692	0.3%
	2020	0.4%	1,157	2,674	379,762	0.3%
	2021	**0.4%**	**1,207**	**2,961**	**413,971**	**0.3%**
Las Cruces	2018	2.0%	3,761	1,544	248,904	1.5%
First Quantum Minerals Ltd.	2019	1.1%	2,539	1,354	169,213	1.5%
	2020	1.1%	2,888	1,462	191,247	1.5%
	2021	**0.4%**	**755**	**683**	**48,037**	**1.6%**
Marigold[3]	2018	1.4%	4,064	27,526	205,161	2.0%
SSR Mining Inc.	2019	1.6%	4,041	25,676	220,227	1.8%

Asset/Operator	Year[1]	Royal Gold net revenue[2] (%)	Royal Gold attributable[4,6] (GEO)	Ore processed[5] (kt)	Reported production[5,6] (GEO)	RGLD % of site GEO production[7] (%)
	2020	1.7%	4,630	23,556	234,443	2.0%
	2021	**1.5%**	**4,662**	**19,999**	**235,282**	**2.0%**
Meekatharra[3]	2018	0.7%	1,888	2,264	134,212	1.4%
Westgold Resources Ltd.	2019	0.7%	1,227	2,319	173,486	0.7%
	2020	0.8%	1,395	2,794	182,757	0.8%
	2021	**0.6%**	**1,054**	**2,998**	**190,304**	**0.6%**
Mulatos	2018	2.9%	7,871	6,886	175,500	4.5%
Alamos Gold Inc.	2019	0.7%	2,082	7,290	142,000	1.5%
	2020	0.0%	–	–	–	0.0%
	2021	**0.0%**	**–**	**–**	**–**	**0.0%**
Prestea and Bogoso	2018	2.5%	6,803	1,302	75,087	9.1%
Future Global Resources Ltd.	2019	1.4%	3,881	719	47,603	8.2%
	2020	0.8%	2,299	305	29,157	7.9%
	2021	**0.4%**	**1,166**	**240**	**41,178**	**2.8%**
Rainy River	2018	3.8%	9,472	6,546	230,293	4.1%
New Gold Inc.	2019	5.3%	14,718	8,023	257,195	5.7%
	2020	4.7%	12,623	8,795	233,375	5.4%
	2021	**5.0%**	**14,723**	**9,250**	**239,023**	**6.2%**
Red October	2018	0.0%	–	–	–	0.0%
Matsa Resources Ltd.	2019	0.0%	28	15	2,035	1.4%
	2020	0.0%	110	78	7,299	1.5%
	2021	**0.0%**	**–**	**–**	**–**	**0.0%**
Robinson	2018	2.6%	5,194	14,200	218,418	2.4%
KGHM International Ltd.	2019	2.2%	5,088	14,200	231,523	2.2%
	2020	2.3%	5,986	14,000	195,464	3.1%
	2021	**2.4%**	**5,209**	**14,000**	**245,626**	**2.1%**
Skyline	2018	0.4%	743	NR	NR	NR
Wolverine Fuels, LLC	2019	0.4%	775	NR	NR	NR
	2020	0.3%	846	NR	NR	NR
	2021	**0.1%**	**212**	**NR**	**NR**	**NR**
South Laverton[3]	2018	1.2%	3,408	2,221	175,819	1.9%
Northern Star Resources Ltd.	2019	1.1%	3,060	2,378	198,371	1.5%

Asset/Operator	Year[1]	Royal Gold net revenue[2] (%)	Royal Gold attributable[4,6] (GEO)	Ore processed[5] (kt)	Reported production[5,6] (GEO)	RGLD % of site GEO production[7] (%)
	2020	2.2%	5,975	2,690	213,118	2.8%
	2021	**1.7%**	**5,484**	**3,728**	**253,720**	**2.2%**
Southern Cross	2018	0.4%	1,133	2,345	162,000	0.7%
Shandong Tianye Group	2019	0.4%	1,079	2,345	162,000	0.7%
	2020	0.3%	910	2,345	162,000	0.6%
	2021	0.3%	956	2,345	162,000	0.6%
Taparko[3]	2018	0.6%	2,016	1,974	100,518	2.0%
Nord Gold N.V.	2019	0.4%	1,033	1,920	69,196	1.5%
	2020	0.6%	1,671	1,797	92,419	1.8%
	2021	**0.4%**	**1,347**	**1,787**	**70,237**	**1.9%**
Twin Creeks[3]	2018	0.0%	19	NR	NR	NR
Nevada Gold Mines LLC	2019	0.1%	174	5,900	666,850	0.0%
	2020	0.1%	213	5,875	551,903	0.0%
	2021	**0.0%**	**2**	**6,167**	**563,166**	**0.0%**
Voisey's Bay	2018	2.5%	4,732	1,990	421,197	1.1%
Vale S.A.	2019	2.5%	5,327	2,158	388,722	1.4%
	2020	1.6%	3,902	1,747	366,300	1.1%
	2021	**3.4%**	**7,393**	**2,061**	**396,289**	**1.9%**
Wharf[3]	2018	0.5%	1,436	4,467	77,822	1.8%
Coeur Mining, Inc.	2019	0.6%	1,683	4,185	84,982	2.0%
	2020	0.7%	1,861	4,275	95,711	1.9%
	2021	**0.6%**	**1,801**	**4,268**	**92,188**	**2.0%**
Williams[3]	2018	0.5%	1,399	3,062	170,860	0.8%
Barrick Gold Corporation	2019	0.6%	1,619	2,914	213,156	0.8%
	2020	0.7%	1,775	2,002	223,054	0.8%
	2021	**0.4%**	**1,266**	**1,237**	**150,110**	**0.8%**
Xavantina[9]	2018	0.0%	–	–	–	0.0%
Ero Copper	2019	0.0%	–	–	–	0.0%

Asset/Operator	Year[1]	Royal Gold net revenue[2] (%)	Royal Gold attributable[4,6] (GEO)	Ore processed[5] (kt)	Reported production[5,6] (GEO)	RGLD % of site GEO production[7] (%)
	2020	0.0%	–	–	–	0.0%
	2021	**1.1%**	**3,482**	**172**	**38,091**	**9.1%**
Other Interests	2018	0.3%	465	NR	NR	0.0%
	2019	0.2%	498	NR	NR	0.0%
	2020	0.1%	269	NR	NR	0.0%
	2021	**0.2%**	**540**	**NR**	**NR**	**0.0%**
Total						
	2018	**100%**	**260,092**			
	2019	**100%**	**267,334**			
	2020	**100%**	**263,527**			
	2021	**100%**	**283,169**			

1 The Company changed its fiscal year end from June 30 to December 31, effective as of December 31, 2021. Accordingly, certain amounts in this table have been adjusted to reflect unaudited calendar year information.
2 Net Revenue is calculated by subtracting the contractual commodity Cash Price from the gross stream revenue we receive (see Glossary for complete definition).
3 Royal Gold's interest is either a portion of the asset production or a portion of production from an operating complex.
4 Gold equivalent ounces ("GEO") production is estimated by multiplying the number of net metal or commodity units of which we take delivery, multiplied by the following standard set of commodity prices and divided by the stated gold price, with the same metal prices used for each year for comparative purposes: $1,758/oz Au; $20.54/oz Ag; $6,185.82/t Cu; $1,826.14/lb Pb; $2,268.85/t Zn; $13,672/t Ni; $25,992/t Mo; $31,161/t Co, (see Glossary for complete definition).
5 Site production figures were compiled by Skarn Associates, and we have relied on their database for gold and copper mining operations.
6 GEO production is estimated based using the following metal prices for each year using production units identified by Skarn Associates: $1,758/oz Au; $20.54/oz Ag; $6,185.82/t Cu; $1,826.14/lb Pb; $2,268.85/t Zn; $13,672/t Ni; $25,992/t Mo; $31,161/t Co.
7 Royal Gold's percentage of site production is determined by dividing the Gold Equivalent Ounces we receive based on the methodology defined in footnote (3) by the Site Reported Production in Gold Equivalent Ounces, defined in footnote (5).
8 Beginning January 1, 2023 Wassa is no longer considered a Principal Property.
9 Stream interest was acquired in 2021.
10 Production was initiated in 2021.

Operator energy consumption

The following table presents a majority of our revenue-generating assets and estimates for direct and indirect energy usage for each asset, as available from Skarn Associates, an independent ESG data analytics firm, for calendar years 2018 through 2021. The table also details the energy that can be attributed to our streams and royalties and the average energy intensity for our portfolio. We have estimates of energy consumption associated with more than 98% of our net revenue in each of the four years presented. Entries labelled "NR" means the data were not reported in the Skarn Associates database and those labelled "–" are for periods when Royal Gold did not have a royalty or stream revenue from the asset.

			Royal Gold's attributed energy estimates[2,4]			Electrical power attributes[2]		
Asset/Operator	Year[1]	Royal Gold net revenue (%)	Direct (terajoule)	Indirect (terajoule)	Total (terajoule)	Electrical power (kW-hr/t processed)	Grid power (%)	Grid factor (tCO_2e/MWh)
Principal Properties								
Andacollo	2018	14.2%	74	225	299	21.3	100%	0.460
Teck Resources Limited	2019	16.7%	92	315	407	26.1	100%	0.411
	2020	13.4%	83	293	376	28.4	100%	0.256
	2021	**10.6%**	**96**	**342**	**438**	**29.9**	**100%**	**0.020**
Cortez[3]	2018	1.5%	10	4	13	18.4	100%	0.297
Nevada Gold Mines LLC	2019	4.2%	47	18	65	19.2	100%	0.293
	2020	6.0%	84	27	111	17.5	100%	0.292
	2021	**10.1%**	**157**	**48**	**205**	**11.9**	**100%**	**0.254**
Khoemacau	2018	0.0%	–	–	–	0.0	0%	0.000
Khoemacau Copper	2019	0.0%	–	–	–	0.0	0%	0.000
	2020	0.0%	–	–	–	0.0	0%	0.000
	2021	**0.7%**	**5**	**6**	**11**	**52.0**	**100%**	**0.931**
Mount Milligan	2018	23.5%	149	348	497	34.6	100%	0.011
Centerra Gold Inc.	2019	23.6%	179	205	384	17.6	100%	0.018
	2020	24.6%	203	458	661	29.7	100%	0.040
	2021	**24.7%**	**200**	**439**	**639**	**28.8**	**100%**	**0.010**
Peñasquito	2018	5.7%	87	82	169	34.7	100%	0.439
Newmont Corporation	2019	4.6%	66	60	126	51.3	100%	0.464
	2020	7.8%	50	53	102	41.4	100%	0.456
	2021	**9.5%**	**86**	**79**	**165**	**40.6**	**100%**	**0.398**
Pueblo Viejo	2018	16.1%	1,122	–	1,122	253.5	0%	0.000
Barrick Gold Corporation	2019	16.6%	1,247	–	1,247	266.0	0%	0.000

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Royal Gold's attributed energy estimates[2,4]			Electrical power attributes[2]		
			Direct (terajoule)	Indirect (terajoule)	Total (terajoule)	Electrical power (kW-hr/t processed)	Grid power (%)	Grid factor (tCO_2e/MWh)
	2020	16.7%	1,398	17	1,416	308.3	4%	0.562
	2021	**13.8%**	**1,639**	**24**	**1,663**	**355.5**	**4%**	**0.592**
Wassa[6]	2018	4.3%	20	20	41	43.7	100%	0.134
Chifeng Jilong Gold Mining Co., Ltd.	2019	4.3%	22	21	44	50.4	100%	0.128
	2020	4.9%	23	26	50	45.8	100%	0.133
	2021	**4.6%**	**26**	**30**	**57**	**54.9**	**100%**	**0.130**
Non-principal Properties								
Allan & Borax	2018	0.4%	NR	NR	NR	NR	NR	NR
Nutrien Ltd.	2019	0.3%	NR	NR	NR	NR	NR	NR
	2020	0.3%	NR	NR	NR	NR	NR	NR
	2021	**0.2%**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**
Bald Mountain[3]	2018	0.5%	8	1	9	1.5	100%	0.353
Kinross Gold Corporation	2019	0.2%	5	0	5	2.6	100%	0.707
	2020	0.0%	1	0	1	2.6	100%	0.707
	2021	**0.2%**	**4**	**0**	**5**	**2.5**	**100%**	**0.557**
Canadian Malartic[3]	2018	2.3%	29	22	51	32.8	100%	0.002
Agnico Eagle Mines Ltd.	2019	1.8%	23	15	38	27.7	100%	0.002
	2020	1.6%	23	16	38	27.8	100%	0.002
	2021	**1.4%**	**18**	**11**	**29**	**24.2**	**100%**	**0.002**
Carlin Operations[3]								
Nevada Gold Mines LLC								
Goldstrike	2018	0.9%	23	9	32	120.5	100%	0.298
Carlin – Leeville	2018	0.7%	52	20	73	179.9	70%	0.212
Carlin – Leeville + Goldstrike	2019	1.2%	56	24	80	287.7	76%	0.212
Carlin – Leeville + Goldstrike	2020	1.1%	36	11	47	143.1	64%	0.292
Carlin – Leeville + Goldstrike	**2021**	**1.5%**	**71**	**19**	**90**	**114.4**	**65%**	**0.276**
Dolores	2018	1.9%	33	9	43	13.3	100%	0.453
Pan American Silver Corporation	2019	1.8%	37	10	48	15.0	100%	0.461
	2020	1.5%	35	10	45	15.0	100%	0.456
	2021	**1.9%**	**27**	**12**	**39**	**14.1**	**100%**	**0.352**
Don Mario	2018	0.5%	NR	NR	NR	NR	NR	NR
Orvana Minerals Corporation	2019	0.2%	NR	NR	NR	NR	NR	NR

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Royal Gold's attributed energy estimates[2,4]			Electrical power attributes[2]		
			Direct (terajoule)	Indirect (terajoule)	Total (terajoule)	Electrical power (kW-hr/t processed)	Grid power (%)	Grid factor (tCO_2e/MWh)
	2020	0.0%	NR	NR	NR	NR	NR	NR
	2021	**0.0%**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**
Don Nicolas	2018	0.0%	2	–	2	75.9	0%	0.000
Cerrado Gold, Inc.	2019	0.0%	–	–	–	0.0	0%	0.000
	2020	0.3%	18	–	18	75.9	0%	0.000
	2021	**0.2%**	**6**	**–**	**6**	**75.9**	**0%**	**0.000**
El Limon	2018	0.6%	17	5	23	102.6	100%	0.298
Calibre Mining Corporation	2019	0.6%	17	5	22	102.6	100%	0.298
	2020	0.9%	19	6	25	102.6	100%	0.298
	2021	**0.9%**	**19**	**8**	**28**	**113.3**	**100%**	**0.298**
Gold Hill[3]	2018	0.2%	4	1	5	8.1	100%	0.339
Kinross Gold Corporation	2019	0.2%	3	1	4	8.5	100%	0.306
	2020	0.2%	4	1	5	9.1	100%	0.333
	2021	**0.1%**	**3**	**1**	**5**	**12.3**	**100%**	**0.573**
Gwalia Deeps[3]	2018	1.4%	16	–	16	108.6	0%	0.000
St Barbara Ltd.	2019	1.0%	18	–	18	133.5	0%	0.000
	2020	0.9%	21	–	21	163.6	0%	0.000
	2021	**0.8%**	**21**	**–**	**21**	**130.3**	**0%**	**0.000**
Holt[3]	2018	2.9%	13	37	50	187.2	100%	0.016
Agnico Eagle Mines Ltd.	2019	2.6%	13	36	49	187.2	100%	0.016
	2020	1.2%	8	19	27	206.4	100%	0.016
	2021	**0.0%**	**–**	**–**	**–**	**0.0**	**0%**	**0.000**
King of the Hills[3]	2018	0.0%	NR	NR	NR	NR	NR	NR
Red 5 Limited	2019	0.3%	NR	NR	NR	NR	NR	NR
	2020	0.2%	NR	NR	NR	NR	NR	NR
	2021	**0.0%**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**
LaRonda Zone 5[3]	2018	0.1%	0	1	1	182.5	100%	0.002
Agnico Eagle Mines Ltd.	2019	0.5%	2	5	6	147.0	100%	0.002
	2020	0.4%	2	4	6	152.4	100%	0.001
	2021	**0.4%**	**2**	**5**	**6**	**146.6**	**100%**	**0.000**
Las Cruces	2018	2.0%	6	15	21	183.8	100%	0.245
First Quantum Minerals Ltd.	2019	1.1%	4	12	16	164.9	100%	0.246

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Royal Gold's attributed energy estimates[2,4]			Electrical power attributes[2]		
			Direct (terajoule)	Indirect (terajoule)	Total (terajoule)	Electrical power (kW-hr/t processed)	Grid power (%)	Grid factor (tCO_2e/MWh)
	2020	1.1%	4	13	18	168.9	100%	0.154
	2021	**0.4%**	**2**	**8**	**10**	**214.9**	**100%**	**0.150**
Marigold[3]	2018	1.4%	30	3	32	1.3	100%	0.650
SSR Mining Inc.	2019	1.6%	27	2	29	1.4	100%	0.292
	2020	1.7%	39	3	42	1.6	96%	0.290
	2021	**1.5%**	**43**	**3**	**46**	**1.9**	**96%**	**0.350**
Meekatharra[3]	2018	0.7%	23	–	23	56.1	0%	0.000
Westgold Resources Ltd.	2019	0.7%	12	–	12	56.1	0%	0.000
	2020	0.8%	16	–	16	56.1	0%	0.000
	2021	**0.6%**	**12**	**–**	**12**	**52.5**	**0%**	**0.000**
Mulatos	2018	2.9%	60	–	60	6.5	0%	0.000
Alamos Gold Inc.	2019	0.7%	22	0	22	6.0	0%	0.506
	2020	0.0%	–	–	–	0.0	0%	0.000
	2021	**0.0%**	**–**	**–**	**–**	**0.0**	**0%**	**0.000**
Prestea and Bogoso	2018	2.5%	18	15	33	35.9	99%	0.134
Future Global Resources Ltd.	2019	1.4%	13	16	29	78.7	99%	0.128
	2020	0.8%	5	7	12	78.7	99%	0.128
	2021	**0.4%**	**1**	**2**	**3**	**78.7**	**99%**	**0.128**
Rainy River	2018	3.8%	82	32	114	32.8	100%	0.009
New Gold Inc.	2019	5.3%	109	54	163	32.4	100%	0.009
	2020	4.7%	96	53	149	30.8	100%	0.020
	2021	**5.0%**	**116**	**63**	**179**	**30.8**	**100%**	**0.020**
Red October	2018	0.0%	–	–	–	0.0	0%	0.000
Matsa Resources Ltd.	2019	0.0%	0	0	0	92.8	52%	0.505
	2020	0.0%	1	0	1	91.6	54%	0.505
	2021	**0.0%**	**–**	**–**	**–**	**0.0**	**0%**	**0.000**
Robinson	2018	2.6%	50	50	100	40.7	100%	0.570
KGHM International Ltd.	2019	2.2%	46	46	92	40.7	100%	0.570
	2020	2.3%	64	63	127	40.7	100%	0.570
	2021	**2.4%**	**44**	**44**	**88**	**40.7**	**100%**	**0.570**
Skyline	2018	0.4%	NR	NR	NR	NR	NR	NR
Wolverine Fuels, LLC	2019	0.4%	NR	NR	NR	NR	NR	NR

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Royal Gold's attributed energy estimates[2,4]			Electrical power attributes[2]		
			Direct (terajoule)	Indirect (terajoule)	Total (terajoule)	Electrical power (kW-hr/t processed)	Grid power (%)	Grid factor (tCO_2e/MWh)
	2020	0.3%	NR	NR	NR	NR	NR	NR
	2021	**0.1%**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**
South Laverton[3]	2018	1.2%	21	–	21	35.5	0%	0.000
Northern Star Resources Ltd.	2019	1.1%	18	–	18	36.0	0%	0.000
	2020	2.2%	36	–	36	36.3	0%	0.000
	2021	**1.7%**	**46**	**–**	**46**	**49.1**	**0%**	**0.000**
Southern Cross	2018	0.4%	4	2	6	26.0	100%	0.700
Shandong Tianye Group	2019	0.4%	4	1	6	26.0	100%	0.690
	2020	0.3%	4	1	5	26.0	100%	0.680
	2021	**0.3%**	**4**	**1**	**5**	**26.0**	**100%**	**0.672**
Taparko[3]	2018	0.6%	24	–	24	12.4	0%	0.000
Nord Gold N.V.	2019	0.4%	14	–	14	10.6	0%	0.000
	2020	0.6%	12	–	12	10.6	0%	0.000
	2021	**0.4%**	**13**	**–**	**13**	**10.6**	**0%**	**0.000**
Twin Creeks[3]	2018	0.0%	NR	NR	NR	54.9	NR	NR
Nevada Gold Mines LLC	2019	0.1%	2	1	2	205.6	51%	0.290
	2020	0.1%	2	1	3	182.8	51%	0.292
	2021	**0.0%**	**0**	**0**	**0**	**157.2**	**54%**	**0.256**
Voisey's Bay	2018	2.5%	12	–	12	53.1	0%	0.000
Vale S.A.	2019	2.5%	16	–	16	52.7	0%	0.000
	2020	1.6%	11	–	11	57.8	0%	0.000
	2021	**3.4%**	**30**	**–**	**30**	**73.8**	**0%**	**0.000**
Wharf	2018	0.5%	9	7	15	22.0	100%	0.334
Coeur Mining, Inc.	2019	0.6%	9	7	16	22.0	100%	0.409
	2020	0.7%	7	7	13	22.0	100%	0.346
	2021	**0.6%**	**14**	**7**	**21**	**22.0**	**100%**	**0.157**
Williams[3]	2018	0.5%	5	6	11	71.1	96%	0.043
Barrick Gold Corporation	2019	0.6%	4	6	10	76.9	96%	0.017
	2020	0.7%	4	5	9	100.5	95%	0.030
	2021	**0.4%**	**3**	**5**	**8**	**153.2**	**95%**	**0.028**
Xavantina	2018	0.0%	–	–	–	0.0	0%	0.000
Ero Copper	2019	0.0%	–	–	–	0.0	0%	0.000

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Royal Gold's attributed energy estimates[2,4] Direct (terajoule)	Indirect (terajoule)	Total (terajoule)	Electrical power attributes[2] Electrical power (kW-hr/t processed)	Grid power (%)	Grid factor (tCO_2e/MWh)
	2020	0.0%	–	–	–	0.0	0%	0.000
	2021	**1.1%**	**4**	**9**	**12**	**153.6**	**100%**	**0.063**
Other Interests	2018	0.3%	NR	NR	NR	NR	NR	NR
	2019	0.2%	NR	NR	NR	NR	NR	NR
	2020	0.1%	NR	NR	NR	NR	NR	NR
	2021	**0.2%**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**

Portfolio energy summary

Year[1]	Royal Gold revenue (%)	Royal Gold's attributed energy estimates[2,4] Direct (terajoule)	Indirect (terajoule)	Total (terajoule)	Royal Gold's attributed energy intensity[5] Direct (gigajoule/GEO)	Indirect (gigajoule/GEO)	Total (gigajoule/GEO)	Electrical power attributes[2] Electrical power (kW-hr/t processed)	Grid power (%)	Grid factor (tCO_2e/MWh)
Properties with energy estimates										
2018	98.5%	2,003	912	2,916	7.81	3.56	11.36	37.4	73%	0.219
2021	98.5%	2,127	861	2,988	8.06	3.26	11.33	35.2	76%	0.203
2020	99.1%	2,307	1,094	3,401	8.84	4.19	13.03	40.9	76%	0.184
2021	**99.5%**	**2,712**	**1,166**	**3,878**	**9.64**	**4.14**	**13.78**	**40.7**	**79%**	**0.151**
Properties, without energy data[5]										
2018	1.5%	27	12	39	7.81	3.56	11.36	37.4	73%	0.219
2019	1.5%	29	12	40	8.06	3.26	11.33	35.2	76%	0.203
2020	0.9%	23	11	34	8.84	4.19	13.03	40.9	76%	0.184
2021	**0.5%**	**17**	**7**	**24**	**9.64**	**4.14**	**13.78**	**40.7**	**79%**	**0.151**
Total										
2018	**100.0%**	**2,030**	**925**	**2,955**	**7.81**	**3.56**	**11.36**	**37.4**	**73%**	**0.219**
2019	**100.0%**	**2,155**	**872**	**3,028**	**8.06**	**3.26**	**11.33**	**35.2**	**76%**	**0.203**
2020	**100.0%**	**2,330**	**1,105**	**3,435**	**8.84**	**4.19**	**13.03**	**40.9**	**76%**	**0.184**
2021	**100.0%**	**2,729**	**1,173**	**3,902**	**9.64**	**4.14**	**13.78**	**40.7**	**79%**	**0.151**

1 The Company changed its fiscal year end from June 30 to December 31, effective as of December 31, 2021. Accordingly, certain amounts in this table have been adjusted to reflect unaudited calendar year information.
2 Mine site energy estimates were compiled by Skarn Associates and we have relied on their database for energy presented for gold and copper mining operations.
3 Royal Gold's interest is either a portion of the asset or part of a complex, and energy usage is assumed to be equally proportioned to all GEOs.
4 Royal Gold's attributed energy consumption = Site energy consumption x Royal Gold % of site production.
5 Energy intensity for assets that were not included in the Skarn Associates database have been assumed to be equal to the average of the portfolio.
6 Beginning January 1, 2023 Wassa is no longer considered a Principal Property.

Operator GHG emissions

The following table presents a majority of our revenue-generating assets and estimates of their Scopes 1 and 2 GHG emissions for each asset, as available from Skarn Associates, an independent ESG data analytics firm, for calendar years 2018 through 2021. The table also provides the emissions that can be attributed to our streams and royalties and the average emission intensity for our portfolio. We have estimates of GHG emissions associated with more than 98% of our net revenue in each of the four years presented. The process to calculate the GHG emission footprint for our portfolio is described in detail on page 132. Entries labelled "NR" means the data were not reported in the Skarn Associates database and those labelled "–" are for periods when Royal Gold did not have a royalty or stream revenue from the asset.

			Operator emission estimates[2]			Operator emission intensity[4]			RGLD attributed emissions		
Asset/Operator	Year[1]	Royal Gold net revenue (%)	Scope 1 (tCO_2e)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)	Scope 1 (tCO_2e/GEO)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)	Scope 1 (tCO_2e/GEO)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)
Principal Properties											
Andacollo	2018	14.2%	40,494	211,176	251,670	0.14	0.73	0.86	5,505	28,706	34,211
Teck Resources Limited	2019	16.7%	34,630	181,990	216,619	0.15	0.78	0.93	6,845	35,973	42,818
	2020	13.4%	42,404	143,626	186,030	0.17	0.58	0.75	6,143	20,808	26,952
	2021	**10.6%**	**41,750**	**11,124**	**52,875**	**0.22**	**0.06**	**0.28**	**7,125**	**1,899**	**9,024**
Cortez[3]	2018	1.5%	215,000	93,000	308,000	0.18	0.08	0.256	691	299	990
Nevada Gold Mines LLC	2019	4.2%	274,152	123,849	398,001	0.28	0.13	0.413	3,311	1,496	4,806
	2020	6.0%	292,832	108,216	401,047	0.37	0.14	0.502	5,902	2,181	8,083
	2021	**10.1%**	**297,000**	**90,000**	**387,000**	**0.36**	**0.11**	**0.468**	**11,103**	**3,364**	**14,467**
Khoemacau	2018	0.0%	–	–	–	0.00	0.00	0.00	–	–	–
Khoemacau Copper	2019	0.0%	–	–	–	0.00	0.00	0.00	–	–	–
	2020	0.0%	–	–	–	0.00	0.00	0.00	–	–	–
	2021	**0.7%**	**22,069**	**87,148**	**109,218**	**0.18**	**0.72**	**0.90**	**373**	**1,474**	**1,847**
Mount Milligan	2018	23.5%	51,010	5,157	56,167	0.18	0.02	0.20	10,525	1,064	11,589
Centerra Gold Inc.	2019	23.6%	66,653	5,196	71,849	0.21	0.02	0.23	13,233	1,032	14,264
	2020	24.6%	66,580	23,867	90,447	0.21	0.08	0.29	14,227	5,100	19,327
	2021	**24.7%**	**69,406**	**5,848**	**75,254**	**0.21**	**0.02**	**0.23**	**14,044**	**1,183**	**15,228**
Peñasquito	2018	5.7%	344,519	537,601	882,120	0.47	0.73	1.19	6,434	10,040	16,474
Newmont Corporation	2019	4.6%	300,254	475,382	775,635	0.45	0.71	1.16	4,902	7,761	12,663
	2020	7.8%	321,156	577,458	898,614	0.24	0.43	0.67	3,706	6,664	10,371
	2021	**9.5%**	**418,372**	**578,188**	**996,560**	**0.27**	**0.38**	**0.65**	**6,361**	**8,791**	**15,152**
Pueblo Viejo	2018	16.1%	2,029,000	–	2,029,000	1.97	0.00	1.97	86,044	–	86,044
Barrick Gold Corporation	2019	16.6%	2,165,898	–	2,165,898	2.06	0.00	2.06	95,679	–	95,679

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Operator emission estimates[2]			Operator emission intensity[4]			RGLD attributed emissions		
			Scope 1 (tCO_2e)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)	Scope 1 (tCO_2e/GEO)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)	Scope 1 (tCO_2e/GEO)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)
	2020	16.7%	1,860,150	57,914	1,918,064	1.93	0.06	1.99	87,287	2,718	90,005
	2021	**13.8%**	**2,129,000**	**85,000**	**2,214,000**	**2.45**	**0.10**	**2.55**	**98,425**	**3,930**	**102,354**
Wassa[5]	2018	4.3%	18,061	9,364	27,424	0.12	0.06	0.18	1,442	747	2,189
Chifeng Jilong Gold Mining Co., Ltd.	2019	4.3%	20,890	9,950	30,840	0.13	0.06	0.20	1,585	755	2,340
	2020	4.9%	20,409	12,200	32,608	0.12	0.07	0.19	1,635	977	2,612
	2021	**4.6%**	**20,690**	**12,050**	**32,739**	**0.13**	**0.08**	**0.21**	**1,869**	**1,088**	**2,957**
Non-principal Properties											
Allan & Borax	2018	0.4%	NR	NR	NR	NR	NR	NR	NR	NR	NR
Nutrien Ltd.	2019	0.3%	NR	NR	NR	NR	NR	NR	NR	NR	NR
	2020	0.3%	NR	NR	NR	NR	NR	NR	NR	NR	NR
	2021	**0.2%**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**
Bald Mountain[3]	2018	0.5%	120,513	12,165	132,678	0.42	0.04	0.47	578	58	636
Kinross Gold Corporation	2019	0.2%	115,195	30,245	145,440	0.61	0.16	0.77	361	95	456
	2020	0.0%	127,155	33,951	161,106	0.66	0.18	0.84	55	15	70
	2021	**0.2%**	**127,142**	**26,931**	**154,073**	**0.62**	**0.13**	**0.75**	**305**	**65**	**369**
Canadian Malartic[3]	2018	2.3%	217,225	1,143	218,368	0.31	0.00	0.31	1,982	10	1,992
Agnico Eagle Mines Ltd.	2019	1.8%	228,467	874	229,341	0.34	0.00	0.34	1,626	6	1,632
	2020	1.6%	210,457	1,100	211,557	0.36	0.00	0.37	1,596	8	1,604
	2021	**1.4%**	**219,283**	**1,025**	**220,308**	**0.30**	**0.00**	**0.31**	**1,270**	**6**	**1,276**
Carlin Operations[3]											
Nevada Gold Mines LLC											
Goldstrike	2018	0.9%	639,000	300,000	939,000	0.63	0.29	0.92	1,621	761	2,382
Carlin – Leeville	2018	0.7%	1,894,327	545,308	2,439,636	2.04	0.59	2.63	4,126	1,188	5,314
Carlin – Leeville + Goldstrike	2019	1.2%	2,277,984	742,215	3,020,199	1.32	0.43	1.76	4,331	1,411	5,743
Carlin – Leeville + Goldstrike	2020	1.1%	1,749,640	526,175	2,275,816	1.05	0.32	1.37	2,851	858	3,709
Carlin – Leeville + Goldstrike	**2021**	**1.5%**	**1,792,700**	**477,000**	**2,269,700**	**1.19**	**0.32**	**1.51**	**5,524**	**1,470**	**6,994**
Dolores	2018	1.9%	86,749	41,634	128,383	0.47	0.23	0.70	2,400	1,152	3,552
Pan American Silver Corporation	2019	1.8%	93,898	46,883	140,781	0.53	0.26	0.79	2,666	1,331	3,997
	2020	1.5%	87,521	43,884	131,405	0.62	0.31	0.92	2,492	1,250	3,742
	2021	**1.9%**	**64,650**	**38,516**	**103,166**	**0.35**	**0.21**	**0.55**	**1,964**	**1,170**	**3,134**
Don Mario	2018	0.5%	NR	NR	NR	NR	NR	NR	NR	NR	NR
Orvana Minerals Corporation	2019	0.2%	NR	NR	NR	NR	NR	NR	NR	NR	NR

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Operator emission estimates[2]			Operator emission intensity[4]			RGLD attributed emissions		
			Scope 1 (tCO_2e)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)	Scope 1 (tCO_2e/GEO)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)	Scope 1 (tCO_2e/GEO)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)
	2020	0.0%	NR	NR	NR	NR	NR	NR	NR	NR	NR
	2021	**0.0%**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**
Don Nicolas	2018	0.0%	19,768	–	19,768	0.78	0.00	0.78	99	–	99
Cerrado Gold, Inc.	2019	0.0%	–	–	–	0.00	0.00	0.00	–	–	–
	2020	0.3%	15,979	–	15,979	0.94	0.00	0.94	1,074	–	1,074
	2021	**0.2%**	**29,257**	**–**	**29,257**	**0.67**	**0.00**	**0.67**	**386**	**–**	**386**
El Limon	2018	0.6%	41,619	13,695	55,314	0.83	0.27	1.10	1,291	425	1,716
Calibre Mining Corporation	2019	0.6%	44,787	14,738	59,524	0.71	0.23	0.94	1,233	406	1,639
	2020	0.9%	39,772	13,088	52,860	0.61	0.20	0.81	1,426	469	1,896
	2021	**0.9%**	**35,912**	**16,735**	**52,646**	**0.53**	**0.25**	**0.78**	**1,440**	**671**	**2,110**
Gold Hill[3]	2018	0.2%	151,838	68,196	220,034	0.39	0.18	0.57	261	117	378
Kinross Gold Corporation	2019	0.2%	157,664	67,518	225,182	0.43	0.19	0.62	183	79	262
	2020	0.2%	162,248	73,114	235,362	0.50	0.22	0.72	262	118	380
	2021	**0.1%**	**150,293**	**117,245**	**267,538**	**0.58**	**0.45**	**1.04**	**249**	**194**	**443**
Gwalia Deeps[3]	2018	1.4%	65,558	–	65,558	0.25	0.00	0.25	1,013	–	1,013
St Barbara Ltd.	2019	1.0%	74,803	–	74,803	0.41	0.00	0.41	1,129	–	1,129
	2020	0.9%	86,500	–	86,500	0.56	0.00	0.56	1,270	–	1,270
	2021	**0.8%**	**93,000**	**–**	**93,000**	**0.49**	**0.00**	**0.49**	**1,278**	**–**	**1,278**
Holt[3]	2018	2.9%	15,787	2,510	18,297	0.12	0.02	0.14	999	159	1,158
Agnico Eagle Mines Ltd.	2019	2.6%	15,668	2,491	18,159	0.14	0.02	0.16	982	156	1,138
	2020	1.2%	4,832	693	5,525	0.16	0.02	0.19	573	82	656
	2021	**0.0%**	**–**	**–**	**–**	**0.00**	**0.00**	**0.00**	**–**	**–**	**–**
King of the Hills[3]	2018	0.0%	NR	NR	NR	NR	NR	NR	NR	NR	NR
Red 5 Limited	2019	0.3%	NR	NR	NR	NR	NR	NR	NR	NR	NR
	2020	0.2%	NR	NR	NR	NR	NR	NR	NR	NR	NR
	2021	**0.0%**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**
LaRonda Zone 5[3]	2018	0.1%	31,010	851	31,861	0.08	0.00	0.08	13	0	13
Agnico Eagle Mines Ltd.	2019	0.5%	38,306	861	39,167	0.09	0.00	0.09	113	3	116
	2020	0.4%	31,861	204	32,065	0.08	0.00	0.08	97	1	98
	2021	**0.4%**	**35,820**	**217**	**36,037**	**0.09**	**0.00**	**0.09**	**104**	**1**	**105**
Las Cruces	2018	2.0%	46,900	69,400	116,300	0.19	0.28	0.47	709	1,049	1,757
First Quantum Minerals Ltd.	2019	1.1%	36,100	54,900	91,000	0.21	0.32	0.54	542	824	1,365

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Operator emission estimates[2]			Operator emission intensity[4]			RGLD attributed emissions		
			Scope 1 (tCO_2e)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)	Scope 1 (tCO_2e/GEO)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)	Scope 1 (tCO_2e/GEO)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)
	2020	1.1%	41,253	38,000	79,253	0.22	0.20	0.41	623	574	1,197
	2021	**0.4%**	**25,400**	**22,000**	**47,400**	**0.53**	**0.46**	**0.99**	**399**	**346**	**745**
Marigold[3]	2018	1.4%	106,100	23,500	129,600	0.52	0.11	0.63	2,102	466	2,567
SSR Mining Inc.	2019	1.6%	101,861	10,284	112,145	0.46	0.05	0.51	1,869	189	2,058
	2020	1.7%	138,792	10,616	149,408	0.59	0.05	0.64	2,741	210	2,951
	2021	**1.5%**	**152,504**	**12,906**	**165,410**	**0.65**	**0.05**	**0.70**	**3,022**	**256**	**3,278**
Meekatharra[3]	2018	0.7%	116,966	–	116,966	0.87	0.00	0.87	1,645	–	1,645
Westgold Resources Ltd.	2019	0.7%	122,832	–	122,832	0.71	0.00	0.71	869	–	869
	2020	0.8%	145,905	–	145,905	0.80	0.00	0.80	1,114	–	1,114
	2021	**0.6%**	**148,550**	**–**	**148,550**	**0.78**	**0.00**	**0.78**	**823**	**–**	**823**
Mulatos	2018	2.9%	101,031	–	101,031	0.58	0.00	0.58	4,531	–	4,531
Alamos Gold Inc.	2019	0.7%	108,894	105	108,999	0.77	0.00	0.77	1,597	2	1,598
	2020	0.0%	–	–	–	0.00	0.00	0.00	–	–	–
	2021	**0.0%**	**–**	**–**	**–**	**0.00**	**0.00**	**0.00**	**–**	**–**	**–**
Prestea and Bogoso	2018	2.5%	14,153	6,215	20,368	0.19	0.08	0.27	1,282	563	1,845
Future Global Resources Ltd.	2019	1.4%	11,057	7,174	18,231	0.23	0.15	0.38	901	585	1,486
	2020	0.8%	4,685	3,040	7,725	0.16	0.10	0.26	369	240	609
	2021	**0.4%**	**1,931**	**2,393**	**4,325**	**0.05**	**0.06**	**0.11**	**55**	**68**	**122**
Rainy River	2018	3.8%	140,749	1,865	142,614	0.61	0.01	0.62	5,789	77	5,866
New Gold Inc.	2019	5.3%	134,219	2,254	136,473	0.52	0.01	0.53	7,681	129	7,810
	2020	4.7%	126,878	5,426	132,304	0.54	0.02	0.57	6,863	293	7,156
	2021	**5.0%**	**133,961**	**5,707**	**139,668**	**0.56**	**0.02**	**0.58**	**8,251**	**352**	**8,603**
Red October	2018	0.0%	–	–	–	0.00	0.00	0.00	–	–	–
Matsa Resources Ltd.	2019	0.0%	799	355	1,154	0.39	0.17	0.57	11	5	16
	2020	0.0%	3,933	1,971	5,904	0.54	0.27	0.81	59	30	89
	2021	**0.0%**	**–**	**–**	**–**	**0.00**	**0.00**	**0.00**	**–**	**–**	**–**
Robinson	2018	2.6%	149,061	329,614	478,675	0.68	1.51	2.19	3,544	7,838	11,382
KGHM International Ltd.	2019	2.2%	149,061	329,614	478,675	0.64	1.42	2.07	3,276	7,244	10,519
	2020	2.3%	146,962	324,972	471,933	0.75	1.66	2.41	4,500	9,952	14,452
	2021	**2.4%**	**146,962**	**324,972**	**471,933**	**0.60**	**1.32**	**1.92**	**3,117**	**6,891**	**10,008**
Skyline	2018	0.4%	NR	NR	NR	NR	NR	NR	NR	NR	NR
Wolverine Fuels, LLC	2019	0.4%	NR	NR	NR	NR	NR	NR	NR	NR	NR

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Operator emission estimates[2]			Operator emission intensity[4]			RGLD attributed emissions		
			Scope 1 (tCO_2e)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)	Scope 1 (tCO_2e/GEO)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)	Scope 1 (tCO_2e/GEO)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)
	2020	0.3%	NR	NR	NR	NR	NR	NR	NR	NR	NR
	2021	**0.1%**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**
South Laverton[3]	2018	1.2%	82,143	–	82,143	0.47	0.00	0.47	1,592	–	1,592
Northern Star Resources Ltd.	2019	1.1%	87,006	–	87,006	0.44	0.00	0.44	1,342	–	1,342
	2020	2.2%	96,570	–	96,570	0.45	0.00	0.45	2,708	–	2,708
	2021	**1.7%**	**150,238**	**–**	**150,238**	**0.59**	**0.00**	**0.59**	**3,247**	**–**	**3,247**
Southern Cross	2018	0.4%	46,794	42,675	89,468	0.29	0.26	0.55	327	298	626
Shandong Tianye Group	2019	0.4%	46,794	42,065	88,859	0.29	0.26	0.55	312	280	592
	2020	0.3%	46,794	41,455	88,249	0.29	0.26	0.54	263	233	496
	2021	**0.3%**	**46,794**	**40,954**	**87,748**	**0.29**	**0.25**	**0.54**	**276**	**242**	**518**
Taparko[3]	2018	0.6%	88,989	–	88,989	0.89	0.00	0.89	1,785	–	1,785
Nord Gold N.V.	2019	0.4%	69,000	–	69,000	1.00	0.00	1.00	1,030	–	1,030
	2020	0.6%	49,579	–	49,579	0.54	0.00	0.54	896	–	896
	2021	**0.4%**	**52,008**	**–**	**52,008**	**0.74**	**0.00**	**0.74**	**997**	**–**	**997**
Twin Creeks[3]	2018	0.0%	NR	NR	NR	NR	NR	NR	NR	NR	NR
Nevada Gold Mines LLC	2019	0.1%	591,994	180,684	772,678	0.89	0.27	1.16	154	47	202
	2020	0.1%	521,255	159,059	680,314	0.94	0.29	1.23	201	61	263
	2021	**0.0%**	**458,300**	**135,000**	**593,300**	**0.81**	**0.24**	**1.05**	**2**	**0**	**2**
Voisey's Bay	2018	2.5%	75,609	–	75,609	0.18	0.00	0.18	849	–	849
Vale S.A.	2019	2.5%	81,705	–	81,705	0.21	0.00	0.21	1,120	–	1,120
	2020	1.6%	73,397	–	73,397	0.20	0.00	0.20	782	–	782
	2021	**3.4%**	**112,795**	**–**	**112,795**	**0.28**	**0.00**	**0.28**	**2,104**	**–**	**2,104**
Wharf[3]	2018	0.5%	33,585	32,789	66,374	0.43	0.42	0.85	620	605	1,225
Coeur Mining, Inc.	2019	0.6%	33,715	37,674	71,389	0.40	0.44	0.84	668	746	1,414
	2020	0.7%	24,769	32,564	57,333	0.26	0.34	0.60	482	633	1,115
	2021	**0.6%**	**50,928**	**14,694**	**65,622**	**0.55**	**0.16**	**0.71**	**995**	**287**	**1,282**
Williams[3]	2018	0.5%	36,752	8,967	45,719	0.22	0.05	0.27	301	73	374
Barrick Gold Corporation	2019	0.6%	38,248	3,651	41,900	0.18	0.02	0.20	291	28	318
	2020	0.7%	31,281	5,665	36,946	0.14	0.03	0.17	249	45	294
	2021	**0.4%**	**21,000**	**5,000**	**26,000**	**0.14**	**0.03**	**0.17**	**177**	**42**	**219**
Xavantina	2018	0.0%	–	–	–	0.00	0.00	0.00	–	–	–
Ero Copper	2019	0.0%	–	–	–	0.00	0.00	0.00	–	–	–

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Operator emission estimates[2]			Operator emission intensity[4]			RGLD attributed emissions		
			Scope 1 (tCO_2e)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)	Scope 1 (tCO_2e/GEO)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)	Scope 1 (tCO_2e/GEO)	Scope 2 (tCO_2e)	Scope 1 & 2 (tCO_2e)
	2020	0.0%	–	–	–	0.00	0.00	0.00	–	–	–
	2021	**1.1%**	**3,052**	**1,653**	**4,705**	**0.08**	**0.04**	**0.12**	**279**	**151**	**430**
Other Interests	2018	0.3%	NR	NR	NR	NR	NR	NR	272	101	373
	2019	0.2%	NR	NR	NR	NR	NR	NR	302	114	416
	2020	0.1%	NR	NR	NR	NR	NR	NR	157	55	212
	2021	**0.2%**	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**	**337**	**65**	**402**

Portfolio emissions summary

Year[1]	Royal Gold revenue (%)	RGLD attributed emissions			Emission intensity[4]		
		Scope 1 (tCO_2e/GEO)	Scope 2 (tCO_2e/GEO)	Scope 1 & 2 (tCO_2e/GEO)	Scope 1 (tCO_2e/GEO)	Scope 2 (tCO_2e/GEO)	Scope 1 & 2 (tCO_2e/GEO)
Properties with emissions estimates							
2018	98.5%	150,099	55,696	205,795	0.58	0.22	0.80
2021	98.5%	159,841	60,580	220,421	0.61	0.23	0.84
2020	99.1%	152,448	53,519	205,967	0.58	0.21	0.79
2021	**99.5%**	**175,562**	**33,939**	**209,501**	**0.62**	**0.12**	**0.74**
Properties, without emissions data[4]							
2018	1.5%	2,030	753	2,784	0.58	0.22	0.80
2019	1.5%	2,143	812	2,955	0.61	0.23	0.84
2020	0.9%	1,538	540	2,077	0.58	0.21	0.79
2021	**0.5%**	**1,092**	**211**	**1,304**	**0.62**	**0.12**	**0.74**
Total							
2018	**100.0%**	**152,130**	**56,449**	**208,579**	**0.58**	**0.22**	**0.80**
2019	**100.0%**	**161,984**	**61,392**	**223,376**	**0.61**	**0.23**	**0.84**
2020	**100.0%**	**153,985**	**54,059**	**208,044**	**0.58**	**0.21**	**0.79**
2021	**100.0%**	**176,655**	**34,150**	**210,805**	**0.62**	**0.12**	**0.74**

1 The Company changed its fiscal year end from June 30 to December 31, effective as of December 31, 2021. Accordingly, certain amounts in this table have been adjusted to reflect unaudited calendar year information.
2 Emissions estimates have been compiled by Skarn Associates, and we have relied on their database for emissions presented for gold and copper mining operations.
3 Royal Gold's interest is either a portion of the asset or part of a complex, and emissions are assumed to be equally proportioned to all GEOs.
4 Emissions intensity for assets that were not included in the Skarn Associates database have been assumed to be equal to the average of the portfolio.
5 Beginning January 1, 2023 Wassa is no longer considered a Principal Property.

Operator water consumption

The following table presents a majority of our revenue-generating assets and estimated water consumption and water use intensity per GEO production for each asset, as available from Skarn Associates, an independent ESG data analytics firm, for calendar years 2018 through 2021. The table also provides the water consumption that can be attributed to our streams and royalties and the average water intensity for our portfolio. We have estimates of consumption and water use intensity associated with more than 95% of our net revenue in each of the four years presented. Entries labelled "NR" means the data were not reported in the Skarn Associates database and those labelled "–" are for periods when Royal Gold did not have a royalty or stream revenue from the asset.

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Validated consumption[2] (ML)	Royal Gold attributed consumption[4] (ML)	Consumption intensity (validated)[2] (kL/GEO)
Principal Properties					
Andacollo[8]	2018	14.2%	9,306	1,265	31.95
Teck Resources Limited	2019	16.7%	8,770	1,733	37.65
	2020	13.4%	9,032	1,309	36.57
	2021	**10.6%**	**8,896**	**1,518**	**46.78**
Cortez[3,7]	2018	1.5%	3,230	10	2.69
Nevada Gold Mines LLC	2019	4.2%	4,185	50	4.34
	2020	6.0%	4,022	81	5.04
	2021	**10.1%**	**5,065**	**189**	**6.13**
Khoemacau[8]	2018	0.0%	–	–	0.00
Khoemacau Copper	2019	0.0%	–	–	0.00
	2020	0.0%	–	–	0.00
	2021	**0.7%**	**1,440**	**24**	**11.92**
Mount Milligan[7]	2018	23.5%	6,252	1,290	22.02
Centerra Gold Inc.	2019	23.6%	6,697	1,330	21.33
	2020	24.6%	7,333	1,567	23.56
	2021	**24.7%**	**8,153**	**1,650**	**24.71**
Peñasquito[7]	2018	5.7%	65,914	1,231	89.07
Newmont Corporation	2019	4.6%	37,333	609	56.05
	2020	7.8%	44,662	515	33.43
	2021	**9.5%**	**39,649**	**603**	**25.87**
Pueblo Viejo[7]	2018	16.1%	14,439	612	14.05
Barrick Gold Corporation	2019	16.6%	14,890	658	14.19
	2020	16.7%	15,273	717	15.84
	2021	**13.8%**	**17,127**	**792**	**19.70**

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Validated consumption[2] (ML)	Royal Gold attributed consumption[4] (ML)	Consumption intensity (validated)[2] (kL/GEO)
Wassa[6,7]	2018	4.3%	1,718	137	11.48
Chifeng Jilong Gold Mining Co., Ltd.	2019	4.3%	1,985	151	12.71
	2020	4.9%	1,931	155	11.52
	2021	**4.6%**	**1,859**	**168**	**11.99**
Non-principal Properties					
Allan & Borax	2018	0.4%	NR	NR	NR
Nutrien Ltd.	2019	0.3%	NR	NR	NR
	2020	0.3%	NR	NR	NR
	2021	**0.2%**	**NR**	**NR**	**NR**
Bald Mountain[3,7]	2018	0.5%	1,419	7	4.99
Kinross Gold Corporation	2019	0.2%	824	3	4.38
	2020	0.0%	1,281	1	6.70
	2021	**0.2%**	**1,771**	**4**	**8.65**
Canadian Malartic[3,7]	2018	2.3%	11,882	108	16.80
Agnico Eagle Mines Ltd.	2019	1.8%	9,858	70	14.52
	2020	1.6%	8,039	61	13.94
	2021	**1.4%**	**11,795**	**68**	**16.35**
Carlin Operations[3,7]					
Nevada Gold Mines LLC					
Goldstrike	2018	0.9%	20,494	52	20.12
Carlin – Leeville	2018	0.7%	10,324	22	11.13
Carlin – Leeville + Goldstrike	2019	1.2%	8,985	17	5.22
Carlin – Leeville + Goldstrike	2020	1.1%	11,104	18	6.66
Carlin – Leeville + Goldstrike	**2021**	**1.5%**	**13,934**	**43**	**9.27**
Dolores[7]	2018	1.9%	924	26	5.02
Pan American Silver Corporation	2019	1.8%	1,328	38	7.48
	2020	1.5%	1,340	38	9.43
	2021	**1.9%**	**1,667**	**51**	**8.95**
Don Mario	2018	0.5%	NR	NR	NR
Orvana Minerals Corporation	2019	0.2%	NR	NR	NR
	2020	0.0%	NR	NR	NR
	2021	**0.0%**	**NR**	**NR**	**NR**

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Validated consumption[2] (ML)	Royal Gold attributed consumption[4] (ML)	Consumption intensity (validated)[2] (kL/GEO)
Don Nicolas[7]	2018	0.0%	NR	NR	NR
Cerrado Gold, Inc.	2019	0.0%	NR	NR	NR
	2020	0.3%	NR	NR	NR
	2021	**0.2%**	**145**	**2**	**3.34**
El Limon[7]	2018	0.6%	896	28	17.86
Calibre Mining Corporation	2019	0.6%	964	27	15.26
	2020	0.9%	1,012	36	15.52
	2021	**0.9%**	**1,076**	**43**	**15.94**
Gold Hill[3,7]	2018	0.2%	6,688	11	17.35
Kinross Gold Corporation	2019	0.2%	6,709	8	18.48
	2020	0.2%	5,994	10	18.42
	2021	**0.1%**	**4,322**	**7**	**16.76**
Gwalia Deeps[3,7]	2018	1.4%	1,120	17	4.36
St Barbara Ltd.	2019	1.0%	1,086	16	5.89
	2020	0.9%	1,027	15	6.59
	2021	**0.8%**	**1,062**	**15**	**5.64**
Holt[3,7]	2018	2.9%	370	23	2.90
Agnico Eagle Mines Ltd.	2019	2.6%	367	23	3.22
	2020	1.2%	93	11	3.15
	2021	**0.0%**	**–**	**–**	**0.00**
King of the Hills[3,7]	2018	0.0%	–	–	0.00
Red 5 Limited	2019	0.3%	319	3	2.99
	2020	0.2%	346	2	4.16
	2021	**0.0%**	**418**	**1**	**6.21**
LaRonda Zone 5[3,7]	2018	0.1%	1,633	1	4.04
Agnico Eagle Mines Ltd.	2019	0.5%	2,049	6	4.58
	2020	0.4%	1,872	6	4.93
	2021	**0.4%**	**2,072**	**6**	**5.01**
Las Cruces[8]	2018	2.0%	3,920	59	15.75
First Quantum Minerals Ltd.	2019	1.1%	4,076	61	24.09
	2020	1.1%	3,692	56	19.31
	2021	**0.4%**	**1,249**	**20**	**26.00**

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Validated consumption[2] (ML)	Royal Gold attributed consumption[4] (ML)	Consumption intensity (validated)[2] (kL/GEO)
Marigold[3,7]	2018	1.4%	1,628	32	7.94
SSR Mining Inc.	2019	1.6%	1,624	30	7.37
	2020	1.7%	1,189	23	5.07
	2021	**1.5%**	**1,223**	**24**	**5.20**
Meekatharra[3,7]	2018	0.7%	718	10	5.35
Westgold Resources Ltd.	2019	0.7%	961	7	5.54
	2020	0.8%	1,397	11	7.64
	2021	**0.6%**	**1,165**	**6**	**6.12**
Mulatos[7]	2018	2.9%	1,169	52	6.66
Alamos Gold Inc.	2019	0.7%	989	15	6.96
	2020	0.0%	–	–	0.00
	2021	**0.0%**	**–**	**–**	**0.00**
Prestea and Bogoso[7]	2018	2.5%	1,226	111	16.33
Future Global Resources Ltd.	2019	1.4%	1,700	139	35.71
	2020	0.8%	610	48	20.92
	2021	**0.4%**	**480**	**14**	**11.66**
Rainy River[7]	2018	3.8%	4,767	196	20.70
New Gold Inc.	2019	5.3%	5,354	306	20.82
	2020	4.7%	4,314	233	18.49
	2021	**5.0%**	**3,511**	**216**	**14.69**
Red October[7]	2018	0.0%	NR	NR	NR
Matsa Resources Ltd.	2019	0.0%	NR	NR	NR
	2020	0.0%	NR	NR	NR
	2021	**0.0%**	**–**	**–**	**0.00**
Robinson[8]	2018	2.6%	19,880	473	91.02
KGHM International Ltd.	2019	2.2%	19,870	437	85.82
	2020	2.3%	19,600	600	100.27
	2021	**2.4%**	**19,081**	**405**	**77.68**
Skyline	2018	0.4%	NR	NR	NR
Wolverine Fuels, LLC	2019	0.4%	NR	NR	NR
	2020	0.3%	NR	NR	NR
	2021	**0.1%**	**NR**	**NR**	**NR**

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Validated consumption[2] (ML)	Royal Gold attributed consumption[4] (ML)	Consumption intensity (validated)[2] (kL/GEO)
South Laverton[8,10]	2018	1.2%	1,776	34	10.10
Northern Star Resources Ltd.	2019	1.1%	1,751	27	8.82
	2020	2.2%	1,791	50	8.40
	2021	**1.7%**	**1,962**	**42**	**7.73**
Southern Cross[7]	2018	0.4%	1,172	8	7.23
Shandong Tianye Group	2019	0.4%	1,172	8	7.23
	2020	0.3%	1,172	7	7.23
	2021	**0.3%**	**1,172**	**7**	**7.23**
Taparko[3,7]	2018	0.6%	1,609	32	16.01
Nord Gold N.V.	2019	0.4%	1,488	22	21.50
	2020	0.6%	1,679	30	18.17
	2021	**0.4%**	**1,839**	**35**	**26.18**
Twin Creeks[3,7]	2018	0.0%	NR	NR	NR
Nevada Gold Mines LLC	2019	0.1%	2,864	1	4.29
	2020	0.1%	4,060	2	7.36
	2021	**0.0%**	**6,017**	**0**	**10.68**
Voisey's Bay[8]	2018	2.5%	NR	NR	NR
Vale S.A.	2019	2.5%	NR	NR	NR
	2020	1.6%	NR	NR	NR
	2021	**3.4%**	**5,280**	**98**	**13.32**
Wharf[3,7]	2018	0.5%	893	16	11.47
Coeur Mining, Inc.	2019	0.6%	837	17	9.85
	2020	0.7%	855	17	8.93
	2021	**0.6%**	**854**	**17**	**9.26**
Williams[3,7]	2018	0.5%	6,430	53	37.63
Barrick Gold Corporation	2019	0.6%	6,119	46	28.71
	2020	0.7%	4,204	33	18.85
	2021	**0.4%**	**2,115**	**18**	**14.09**

Asset/Operator	Year[1]	Royal Gold net revenue (%)	Validated consumption[2] (ML)	Royal Gold attributed consumption[4] (ML)	Consumption intensity (validated)[2] (kL/GEO)
Xavantina[7]	2018	0.0%	–	–	0.00
Ero Copper	2019	0.0%	–	–	0.00
	2020	0.0%	–	–	0.00
	2021	**1.1%**	**69**	**6**	**1.81**
Other Interests	2018	0.3%	NR	NR	NR
	2019	0.2%	NR	NR	NR
	2020	0.1%	NR	NR	NR
	2021	**0.2%**	**NR**	**NR**	**NR**

Portfolio water summary

Year[1]	Royal Gold revenue (%)	Royal Gold attributed consumption[4] (ML)	Consumption intensity (validated)[2] (kL/GEO)
Properties with water consumption estimates			
2018	95.9%	5,920	23.51
2021	96.0%	5,853	22.65
2020	97.1%	5,649	22.09
2021	**99.5%**	**6,092**	**21.65**
Properties, without water consumption data[5]			
2018	4.1%	196	23.51
2019	4.0%	201	22.65
2020	2.9%	172	22.09
2021	**0.5%**	**38**	**21.65**
Total			
2018	**100.0%**	**6,116**	**23.51**
2019	**100.0%**	**6,055**	**22.65**
2020	**100.0%**	**5,821**	**22.09**
2021	**100.0%**	**6,130**	**21.65**

1 The Company changed its fiscal year end from June 30 to December 31, effective as of December 31, 2021. Accordingly, certain amounts in this table have been adjusted to reflect unaudited calendar year information.
2 Water consumption values have been validated by Skarn Associates to be within the expected range. A three-year rolling average is applied to minimize year-to-year change in storage (typically unreported) and precipitation extremes.
3 Royal Gold's interest is either a portion of the asset or part of a complex, and water consumption is assumed to be equally proportioned to all GEOs.
4 Royal Gold attributed water consumption = Validated water consumption x Royal Gold % of site production (million liters).
5 Water consumption intensity for assets that were not included in the Skarn Associates database have been assumed to be equal to the average of the portfolio.
6 Beginning January 1, 2023 Wassa is no longer considered a Principal Property.
7 Validated water consumption estimates were provided by Skarn Associated as reported in their database, Skarn Water – Gold Q1 2023.xlxs
8 Skarn Water – Gold Q1 2022.xlxs and/or confidential communications.

Water sensitivity assessment

The following tables present details on the physical water quantity risk indicators, as defined by the World Resource Institute Aqueduct™ Water Risk Atlas, associated with our Principal Properties. Definitions of the water risks indicators are also provided.

			Climate		Physical risks quantity indicators[2]								
Principal Properties	**State/province country**	**Primary water supply[1]**	**Climate type[1]**	**Average precipitation 2001–2020 (mm)[1]**	**Tropical storm risk**	**Baseline water stress**	**Water depletion**	**Interannual variability**	**Seasonal variability**	**Groundwater table decline**	**Drought risk**	**Riverine flooding**	**500-year return period flood magnitude (minesite)[3]**
Mount Milligan	British Columbia Canada	Surface	Subarctic	602	No	Low	Low	Medium–high	Low–medium	Insignificant Trend	Low	Extremely high	No inundation
Pueblo Viejo	Sánchez Ramírez Dominican Republic	Surface	Tropical rainforest	1,489	Yes	Low–medium	Low–medium	Medium–high	Low	Insignificant Trend	Medium–high	Low–medium	No inundation
Andacollo	Coquimbo Region Chile	Groundwater	Cold desert	108	No	Extremely high	High	Extremely high	Medium–high	Insignificant Trend	Medium	Low–medium	No inundation
Khoemacau	Botswana	Groundwater	Hot arid steppe	454	No	High	High	Extremely high	Medium–high	Insignificant Trend	Low–medium	Extremely high	No inundation
Wassa[4]	Western Region Ghana	Groundwater /surface	Tropical monsoon	1,358	No	Low–medium	Low–medium	High	Low–medium	Insignificant Trend	Medium	Medium–high	No inundation
Cortez	Nevada United States	Groundwater	Cold semi-arid	279	No	High	Low–medium	High	Low–medium	Low–medium	Low–medium	Low–medium	No inundation
Peñasquito	Zacatecas Mexico	Groundwater	Hot semi-arid	369	Yes	High	Medium–high	Medium–high	High	Insignificant Trend	Medium	Low–medium	No inundation

1 Information Source: Skarn Associates Limited, as published in their Skarn Water – Gold Mines tool.
2 Derived from the World Resource Institute – Aqueduct Water Risk Atlas (2019) and the associated descriptors for baseline climate conditions.
3 Information Source: World Resource Institute – Aqueduct Floods (2019).
4 Beginning January 1, 2023 Wassa is no longer considered a Principal Property.

Aqueduct Water Risk Atlas – Physical risk indicators	Description
Baseline water stress	Baseline water stress measures the ratio of total water withdrawals to available renewable water supplies. Water withdrawals include domestic, industrial, irrigation and livestock consumptive and non-consumptive uses. Available renewable water supplies include surface and groundwater supplies and consider the impact of upstream consumptive water users and large dams on downstream water availability. Higher values indicate more competition among users.
Baseline water depletion	Baseline water depletion measures the ratio of total water consumption to available renewable water supplies. Total water consumption includes domestic, industrial, irrigation and livestock consumptive uses. Available renewable water supplies include the impact of upstream consumptive water users and large dams on downstream water availability. Higher values indicate larger impact on the local water supply and decreased water availability for downstream users. Baseline water depletion is similar to baseline water stress; however, instead of looking at total water withdrawal (consumptive plus non-consumptive), baseline water depletion is calculated using consumptive withdrawal only.
Interannual variability	Interannual variability measures the average between year variability of available water supply, including both renewable surface and groundwater supplies. Higher values indicate wider variations in available supply from year to year.
Seasonal variability	Seasonal variability measures the average within-year variability of available water supply, including both renewable surface and groundwater supplies. Higher values indicate wider variations of available supply within a year.
Groundwater table decline	Groundwater table decline measures the average decline of the groundwater table as the average change for the period of study (1990–2014). The result is expressed in centimeters per year (cm/yr). Higher values indicate higher levels of unsustainable groundwater withdrawals.
Drought risk	Drought risk measures where droughts are likely to occur, the population and assets exposed, and the vulnerability of the population and assets to adverse effects. Higher values indicate higher risk of drought.
Riverine flood risk	Riverine flood risk measures the percentage of population expected to be affected by riverine flooding in an average year, accounting for existing flood protection standards. Flood risk is assessed using hazard (inundation caused by river overflow), exposure (population in flood zone) and vulnerability. The existing level of flood protection is also incorporated into the risk calculation. It is important to note that this indicator represents flood risk not in terms of maximum possible impact but rather as average annual impact. The impacts from infrequent, extreme flood years are averaged with more common, less newsworthy flood years to produce the "expected annual affected population." Higher values indicate that a greater proportion of the population is expected to be impacted by riverine floods on average.
Coastal Flood Risk	Coastal flood risk measures the percentage of the population expected to be affected by coastal flooding in an average year, accounting for existing flood protection standards. Flood risk is assessed using hazard (inundation caused by storm surge), exposure (population in flood zone) and vulnerability. The existing level of flood protection is also incorporated into the risk calculation. It is important to note that this indicator represents flood risk not in terms of maximum possible impact but rather as average annual impact. The impacts from infrequent, extreme flood years are averaged with more common, less newsworthy flood years to produce the "expected annual affected population." Higher values indicate that a greater proportion of the population is expected to be impacted by coastal floods on average.
Aqueduct Floods	Aqueduct Floods is an online platform that measures riverine and coastal flood risks under both current baseline conditions and future projections in 2030, 2050 and 2080. In addition to providing hazard maps and assessing risks, Aqueduct Floods enables its users to conduct comprehensive cost–benefit analyses to evaluate the value of dike flood protection strategies.
Floods magnitude per return period	Measurements of the forecast water inundation depth from the selected return period.

Operator ESG frameworks and standards

The following table highlights significant ESG frameworks and standards to which our Operators adhere; 100% of RGLD revenue is represented in the table[1].

Operator	Project	Percentage of 2022 Royal Gold revenue	World Gold Council RGMPs	International Council on Mining and Metals ("ICMM")	International Finance Corporation ("IFC")	Mining Association of Canada Towards Sustainable Mining	United Nations Global Compact	United Nations Sustainable Development Goals ("SDGs")
Agnico Eagle	LaRonde Zone 5	0.50%	Yes (Member)	–	–	Yes (Member)	–	Yes
Yamana	Canadian Malartic (50% split ownership)	0.92%	Yes (Member)	–	–	Yes (Member)	–	Yes
Americas Gold and Silver Corporation	Relief Canyon	0.02%	–	–	–	–	Aligned	Yes
Aurora Metals	Balcooma	0.03%	–	–	–	–	–	–
Barrick	Pueblo Viejo	11.73%	Yes (Member)	Yes (Member)	Yes	Yes (Member)	Yes (Participant)	Yes
	Williams	0.17%						
Calibre Mining Corp.	El Limon	1.12%	Yes (Member)	Yes (Member)	Yes	–	–	Yes
Centerra Gold	Mount Milligan	27.94%	Yes (Member)	Aligned	Yes	–	–	Yes
Cerrado Gold, Inc.	Don Nicolas	0.23%	–	–	–	–	–	–
Chifeng Jilong Gold Mining Co., Ltd.	Wassa	4.90%	–	–	–	–	–	–
Coeur Mining, Inc.	Wharf	0.49%	–	Aligned	–	–	–	Yes
Ero Copper Corp.	Xavantina	2.90%	–	Aligned	–	Aligned	Yes (Participant)	Yes
Excelsior Mining Corp	Johnson Camp	0.02%	–	–	–	–	–	–
First Quantum Minerals Ltd.	Las Cruces	0.25%	–	Aligned	Aligned	Yes (Member)	–	Yes
Future Global Resources Ltd.	Bogoso and Prestea	0.53%	Aligned	Aligned	Yes	–	Aligned	Yes

Operator	Project	Percentage of 2022 Royal Gold revenue	World Gold Council RGMPs	International Council on Mining and Metals ("ICMM")	International Finance Corporation ("IFC")	Mining Association of Canada Towards Sustainable Mining	United Nations Global Compact	United Nations Sustainable Development Goals ("SDGs")
Hecla Mining	San Juan Silver (Bulldog)	0.03%	–	–	–	Yes (Member)	–	Yes
i-80 Gold Corp	Ruby Hill	0.10%	–	–	–	–	–	–
KGHM Polska Miedź S.A.	Robinson	2.29%	–	–	–	–	–	Yes
Khoemacau Copper	Khoemacau	2.95%	–	–	Yes	–	–	–
Kinross	Bald Mountain	0.37%	Yes (Member)	–	–	Yes (Member)	Yes (Participant)	Yes
	Gold Hill	0.15%						
Matsa Resources Ltd.	Red October	0.01%	–	–	–	–	–	–
Nevada Gold Mines LLC	Cortez	9.95%	Yes (Member)	Yes (Member)	–	Yes (Member)	Yes (Participant)	Yes
	Goldstrike	0.61%						
	Leeville North	0.79%						
	Twin Creeks	0.01%						
Newcrest	Red Chris	0.67%	Yes (Member)	Yes (Member)	Yes	–	–	Yes
New Gold Inc.	Rainy River	4.68%	–	–	–	Yes (Member)	Yes (Participant)	Yes
Newmont	Peñasquito	8.49%	Yes (Member)	Yes (Member)	Yes	Yes (Member)	Yes (Participant)	Yes
Nord Gold N.V.	Taparko	0.06%	–	Aligned	Yes	–	Pending	Yes
Northern Star Resources Limited	South Laverton	1.21%	–	Aligned	–	–	Yes (Participant)	Yes
Nutrien Ltd.	Allan Borax	0.03%	–	–	–	–	Yes (Participant)	Yes

Operator	Project	Percentage of 2022 Royal Gold revenue	World Gold Council RGMPs	International Council on Mining and Metals ("ICMM")	International Finance Corporation ("IFC")	Mining Association of Canada Towards Sustainable Mining	United Nations Global Compact	United Nations Sustainable Development Goals ("SDGs")
	Allan Potash	0.22%						
Pan American Silver	Dolores	1.81%	Aligned	Aligned	Aligned	Yes (Member)	Yes (Participant)	Yes
Red 5 Limited	King of the Hills	0.17%	–	–	–	–	–	–
Shandong Tianye Group	Southern Cross	0.28%	–	–	–	–	–	–
SSR Mining Inc.	Marigold	1.19%	–	Aligned	Yes	Aligned	–	Yes
St. Barbara Ltd.	Gwalia Deeps	0.80%	–	–	–	Yes (Member)	–	Yes
Teck	Andacollo	7.90%	–	Yes (Member)	Yes	Yes (Member)	Yes (Participant)	Yes
Vale	Voisey's Bay	2.84%	–	Yes (Member)	Yes	Yes (Member)	Yes (Participant)	Yes
Westgold Resources	Meekatharra	0.58%	Aligned	Aligned	–	–	–	Yes
Wolverine Fuels, LLC	Skyline	0.04%	–	–	–	–	–	–
Los Chancas	Southern Copper	0.01%	–	–	–	–	–	Yes
Rambler North	Rambler Metals	0.00%	–	–	–	–	–	–
	Total	**100.00%**						

1 "–" Indicates that the company has not publicly disclosed its support for a particular standard or the standard does not apply.

GRI index

Royal Gold has reported the information cited in this GRI content index with reference to the GRI Universal Standards.

GRI Disclosure	Description	Disclosure Response and Reporting Location
GRI 2	**General Disclosures 2021**	
2-1	Organizational Details	About Royal Gold, p. 6
2-2	Entities included in the organization's sustainability report	About Royal Gold, p. 6
2-3	Reporting period, frequency and contact point	About this report, p. 4
2-4	Restatements of information	There are no restatements of information in this report.
2-5	External assurance	We have not sought external assurance for this report. We will consider seeking limited assurance for our data in future reporting cycles.
2-6	Activities, value chain and other business relationships	How we manage our business, p. 7 Where we are, p. 7 Portfolio Manager vs. Mine Owner and Operator, p. 7
2-7	Employees	Who we are, p. 7 Turnover and talent retention, p. 66
2-8	Workers who are not employees	All our workers are employees.
2-9	Governance structure and composition	Board composition, p. 26
2-10	Nomination and selection of the highest governance body	Board of Directors' Governance Guidelines
2-11	Chair of the highest governance body	Board composition, p. 26
2-12	Role of the highest governance body in overseeing the management of impacts	ESG governance, p. 27
2-13	Delegation of responsibility for managing impacts	ESG governance, p. 27
2-14	Role of the highest governance body in sustainability reporting	Understanding our assets, p. 42
2-16	Communication of critical concerns	Whistleblower Policy, p. 31 Code of Business Conduct and Ethics
2-22	Statement on sustainable development strategy	Letter from our Chief Executive Officer, p. 15
2-23	Policy commitments	Key policies related to ESG, p. 30
2-29	Approach to stakeholder engagement	Stakeholder and investor engagement, p. 20
GRI 3	**Material Topics 2021**	
3-1	Process to determine material topics	Priority ESG topics, p. 22
3-2	List of material topics	Priority ESG topics, p. 22

GRI Disclosure	Description	Disclosure Response and Reporting Location
GRI 205	**Anti-corruption 2016**	
3-3	Management of Material Topics	Anti-corruption Policy Code of Business Conduct and Ethics
205-2	Communication and training about anti-corruption policies and procedures	Anti-corruption Policy The Anti-corruption Policy applies to all Royal Gold employees. This policy also applies, if documented in a written agreement, to any agent, consultant, representative, broker, distributor, joint venture partner, or other third party that is retained by Royal Gold to act on its behalf with regard to its business (together, "third-party contractors").
205-3	Confirmed incidents of corruption and actions taken	There were no incidents of corruption in 2022.
GRI 207	**Tax 2019**	
3-3	Management of Material Topics	Taxes we pay, p. 32 Tax Policy
207-1	Approach to tax	Taxes we pay, p. 32
207-2	Tax governance, control and risk management	Taxes we pay, p. 32 Tax Policy Whistleblower Policy
207-4	Country-by-country reporting	2021 Annual Report, pp. 103–123 Taxes we pay, p. 32
GRI 302	**Energy 2016**	
3-3	Management of Material Topics	Our commitment to carbon neutrality, p. 52
302-1	Energy consumption within the organization	Our commitment to carbon neutrality, p. 52
302-2	Energy consumption outside the organization	Our commitment to carbon neutrality, p. 52
GRI 305	**Emissions 2016**	
3-3	Management of Material Topics	Climate change and TCFD alignment, p. 46 TCFD achievements and future plans, p. 47 Our commitment to carbon neutrality, p. 52
305-1	Direct (Scope 1) GHG emissions	Our commitment to carbon neutrality, pp. 52
305-2	Energy indirect (Scope 2) GHG emissions	Our commitment to carbon neutrality, p. 52
305-3	Other indirect (Scope 3) GHG emissions	Our commitment to carbon neutrality, p. 52 Operator GHG emissions, p. 56 Operator GHG emissions, p. 89
305-5	Emissions of ozone-depleting substances (ODS)	We do not use ozone-depleting substances (ODS) in our corporate operations.
305-6	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Our corporate operations do not emit nitrogen oxides (NOx), sulfur oxides (SOx), or other significant air emissions

GRI Disclosure	Description	Disclosure Response and Reporting Location
GRI 401	**Employment 2016**	
3-3	Management of Material Topics	Human capital, p. 64 Turnover and talent retention, p. 66
401-1	New employee hires and employee turnover	Turnover and talent retention, p. 66
GRI 403	**Occupational Health and Safety 2018**	
3-3	Management of Material Topics	Human capital, p. 64 Health and safety, p. 66
403-5	Worker training on occupational health and safety	Health and safety, p. 66
403-9	Work-related injuries	Health and safety, p. 66
GRI 405	**Diversity and Equal Opportunity 2016**	
3-3	Management of Material Topics	Human capital, p. 64 Diversity and inclusion, p. 65
405-1	Diversity of governance bodies and employees	Board diversity, p. 26 Diversity and inclusion, p. 65
GRI 413	**Local Communities 2016**	
3-3	Management of Material Topics	Community contributions, p. 68
413-1	Operations with local community engagement, impact assessments and development programs	Mining community contribution highlights, p. 69 Local office community contribution highlights, p. 71 Next generation of leadership, p. 73
GRI 415	**Public Policy 2016**	
3-3	Management of Material Topics	Political contributions, p. 31
415-1	Political contributions	Political contributions, p. 31

TCFD index and scenario analysis

Introduction

We recognize that it is our responsibility to address the risks that materially affect our business, which increasingly include the impacts of a changing climate. In our 2021 ESG Report, we committed to improving our climate-related disclosure in line with the TCFD framework; in 2022 we worked with Millani, an ESG advisory firm, to support our efforts in conducting a climate scenario analysis to help us better understand the climate-related risks and opportunities that we face.

Structured around four core elements of how businesses operate – namely, governance, strategy, risk management, and metrics and targets – and 11 recommendations across these four core elements, this disclosure provides vital information about our business for decision-makers such as investors. It also provides information that informs our overall business strategy for sustainable value creation.

In the TCFD index on this page, we indicate where to find our responses to the 11 recommendations. The remainder of this appendix contains the background and results from our climate scenario analysis, which focuses on key jurisdictions that generated more than 80% of our net revenue in 2021; these include all of our Principal Properties, described on pages 9–14, and other important jurisdictions, which include Ontario, Canada; Mato Grosso State, Brazil; and Western Australia, Australia.

CLIMATE AND CLIMATE CHANGE SUPPORTING RESOURCES

Millani

NGFS Central Banks and Supervisors Network for Greening the Financial System

SKARN ASSOCIATES

WORLD RESOURCES INSTITUTE

WORLD BANK GROUP | Climate Change Knowledge Portal For Development Practitioners and Policy Makers

TCFD index

TCFD core element and recommended disclosures	Reference	Alignment status
Governance The organization's governance around climate-related risks and opportunities		
Describe the Board's oversight of climate-related risks and opportunities	Corporate governance, p. 25 The role of our Board in ESG, p. 27	⏫
Describe management's role in assessing and managing climate-related risks and opportunities	Our management team's role in ESG, p. 28 Senior management investment decision-making, p. 40	⏫
Strategy The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning, where such information is material		
Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term	Climate scenario analysis, p. 48 Comparing climate scenarios, p. 113 Risk assessment time frames, p. 117 Physical risk drivers, p. 118 Transition risk drivers, p. 118	⏫
Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning	Financial impacts, p. 114 Climate scenario analysis, p. 119 Scenario 1: Current Policies, p. 120 Scenario 2: Delayed Transition, p. 123 Scenario 3: Net Zero 2050, p. 126 Climate-related opportunities, p. 128	⏫
Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	Resilience to climate change impacts, p. 50 Resilience of gold, p. 51 Operator climate change commitments, p. 54	⏫
Risk management How the organization identifies, assesses and manages climate-related risks		
Describe the organization's processes for identifying and assessing climate-related risks	Due diligence, p. 34	⏫
Describe the organization's processes for managing climate-related risks	Understanding our assets, p. 42	⏫
Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management	Our management team's role in ESG, p. 28 Due diligence, p. 34 Understanding our assets, p. 42	⏫
Metrics and targets The metrics and targets used to assess and manage relevant climate-related risks and opportunities, where such information is material		
Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	Our commitment to carbon neutrality, p. 52 Operator ESG performance, p. 54 Operator energy consumption, p. 83 Operator GHG emissions, p. 89 Operator water consumption, p. 95 Water sensitivity assessment, p. 101	⏫
Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 GHG emissions and the related risks	Our commitment to carbon neutrality, p. 52 Operator GHG emissions, p. 56 Operator GHG emissions, p. 89	⏫
Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	TCFD achievements and future plans, p. 47 Our commitment to carbon neutrality, p. 52	^

⏫ High alignment with recommendation ⏫ Moderate alignment with recommendation ^ low alignment

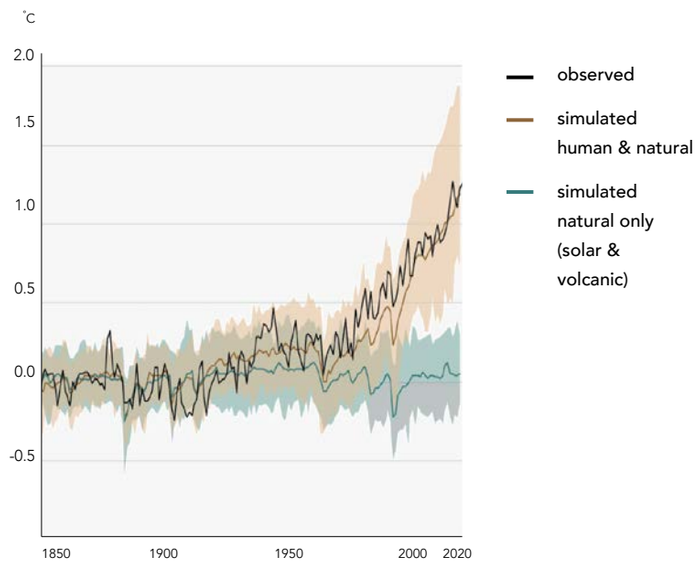
Climate change 101

Released in 2021, the Sixth Assessment Report (AR6) of the United Nations Intergovernmental Panel on Climate Change ("IPCC") includes the following findings related to the physical science basis of climate change:[1]

- The likely range of total human-caused global surface temperature increase from 1850–1900 to 2010–2019 is 0.8–1.3°C, with a best estimate of 1.07°C.
- It is virtually certain that hot extremes (including heatwaves) have become more frequent and more intense across most land regions since the 1950s. In contrast, cold extremes (including cold waves) have become less frequent and less severe, with high confidence that human-induced climate change is the main driver of these changes.
- There will be an increasing occurrence of some extreme events unprecedented in the observational record with additional global warming, even at 1.5°C of global warming.

The change in global surface temperature (annual average) as observed and simulated using human and natural, and only natural factors (both 1850–2020)[2] is represented in the following graph.

Source: https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf

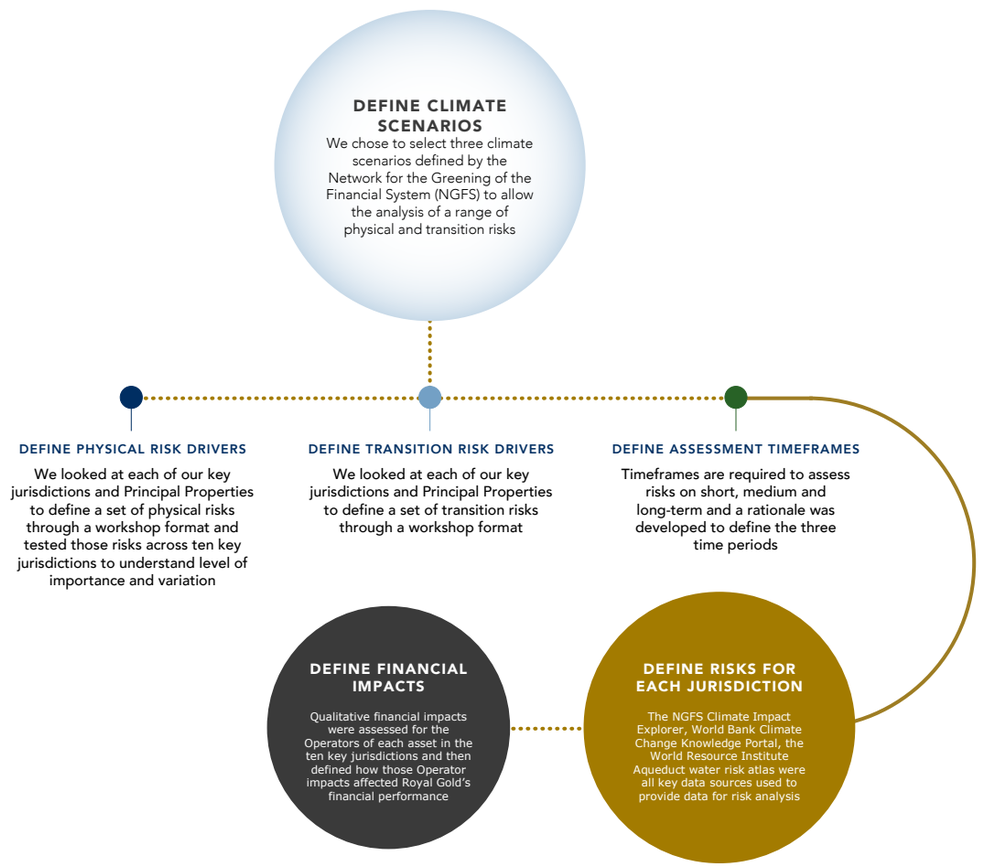


1 Climate Change 2021: The Physical Science Basis – Summary for Policymakers, IPCC 2021

Our approach

We systematically define climate-related risks within our portfolio of revenue-generating stream and royalty interests using the process defined in the flowchart.

We rely on publicly available information to complete our climate scenario analysis. We specifically relied on the Network for the Greening of the Financial System ("NGFS"), the World Bank's Climate Change Knowledge Portal and the Water Resource Institute's Aqueduct™ Water Risk Atlas tool. Our assessments are high level in nature and the granularity of our data is typically at a state, provincial or watershed level versus focused on a specific mining site. We also have limited knowledge concerning the physical systems the mine sites may have to address physical climate risks.

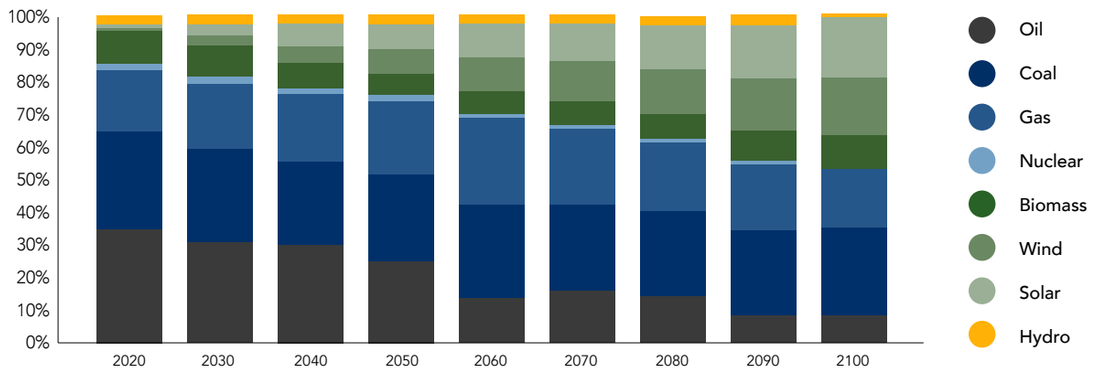


Our climate scenarios

We have chosen three climate scenarios to assess potential physical and transition impacts on the mining operations and jurisdictions that are important to us and how those impacts may affect our business.

SCENARIO 1: CURRENT POLICIES

CURRENT POLICIES – PRIMARY ENERGY MIX



The Current Policies scenario assumes that only currently implemented government policies are preserved, leading to high physical risks.

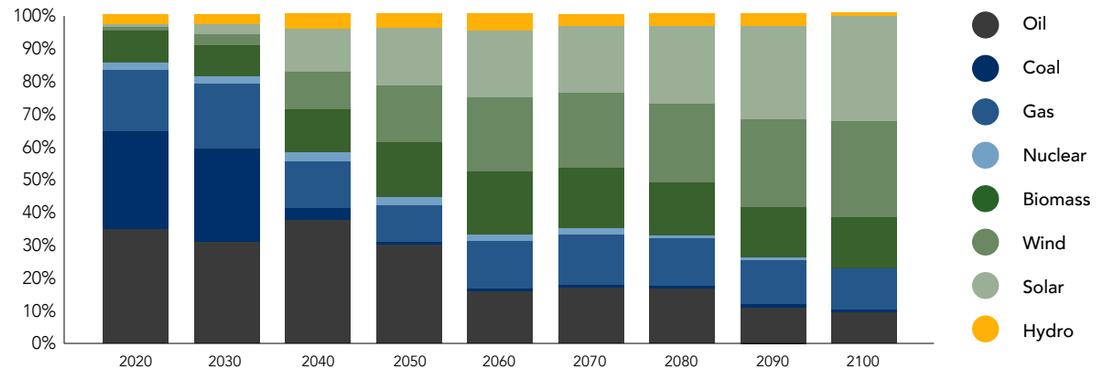
Under this scenario, emissions grow until 2080, leading to about 3°C of warming and severe physical risks. This includes irreversible changes like higher sea level increases.

In this scenario, coal remains a key energy source until 2100. Oil consumption is reduced and replaced with natural gas, while energy from wind and solar continues to grow. At the end of the century, renewable power represents only 48% of primary energy.

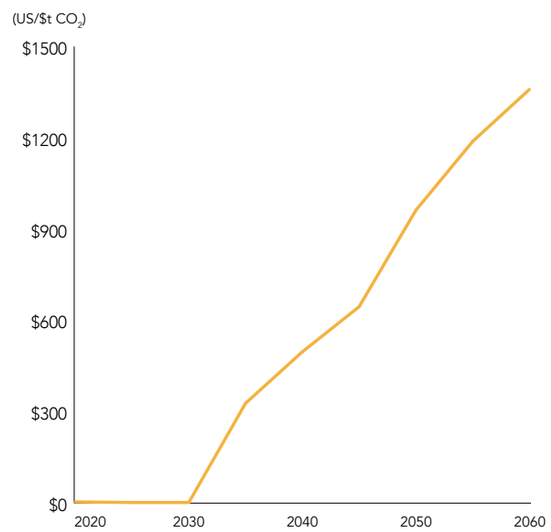
With respect to important jurisdictions containing our stream and royalty interests, Canada is the only jurisdiction with meaningful carbon taxation in place, and under this scenario it is expected to remain the same.

SCENARIO 2: DELAYED TRANSITION

DELAYED TRANSITION – PRIMARY ENERGY MIX



DELAYED TRANSITION – GLOBAL CARBON PRICING



Source: NGFS Climate Scenario Database, (average of REMIND, GVAM 5.3, MESSAGE ix models)

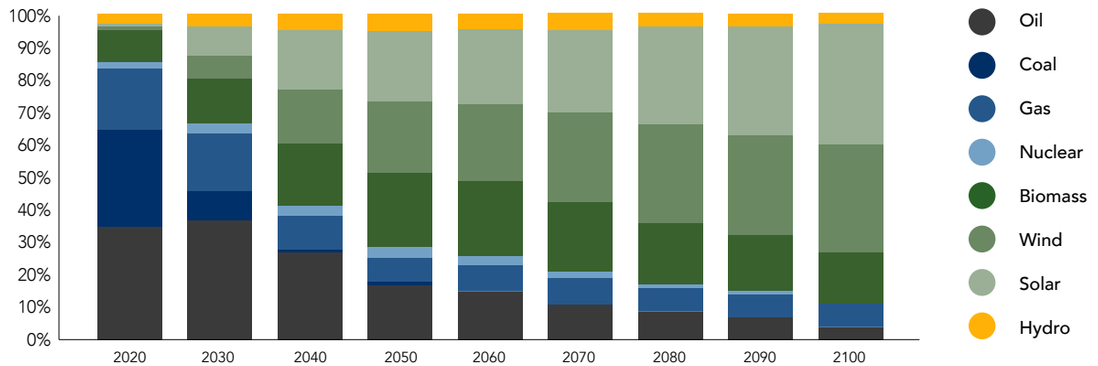
The Delayed Transition scenario assumes global annual emissions do not start decreasing until 2030. Strong policies will be needed to limit warming to below 2°C, and the level of action will differ across countries and regions based on currently implemented policies. As a result, emissions will exceed the carbon budget temporarily and decline rapidly after 2030 to ensure a 67% chance of limiting global warming to below 2°C. This will lead to higher transition and physical risks than those in the Net Zero 2050 scenario. The physical risks will be similar to those of the Current Policies scenario, up to the mid-2030s.

The use of coal dramatically declines after 2030, and primary renewable energy – namely, wind and solar – will increase quickly to achieve 78% of the energy mix by 2100.

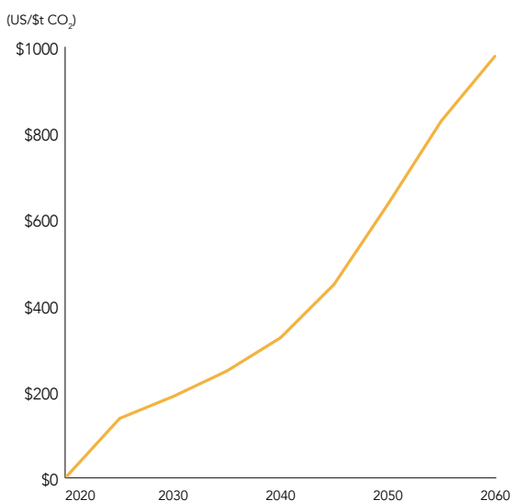
Carbon pricing shows an escalating profile starting in 2030, and increases past 2050 approaching $1,000/tCO$_2$e.

SCENARIO 3: NET ZERO 2050

NET ZERO 2050 – PRIMARY ENERGY MIX



NET ZERO 2050 – GLOBAL CARBON PRICING



Source: NGFS Climate Scenario Database,
(average of REMIND, GVAM 5.3, MESSAGE ix models)

Net Zero 2050 is an ambitious scenario that limits global warming to 1.5°C through stringent climate policies and innovation, to reach net zero CO_2 emissions around 2050, consistent with the Paris Agreement.

This scenario assumes that ambitious climate policies are introduced immediately. Carbon dioxide removal ("CDR") is used to accelerate decarbonization at the minimum possible rate, broadly in line with sustainable levels of bioenergy production. Physical risks are relatively low and transition risks are high, but not as high as those in the Delayed Transition scenario.

Carbon pricing shows an escalating profile starting immediately and increasing past 2050, with carbon pricing exceeding $600/tCO$_2$e.

As a primary energy source, coal will be reduced significantly by 2030 with a dramatic increase in renewable primary energy sources, wind and solar.

Comparing climate scenarios

	Current Policies	Delayed Transition	Net Zero 2050
NGFS Warming Level* 2035	1.6	1.6	1.5
2050	2.0	1.7	1.5
2100	3.2	1.6	1.3
Physical risk medium term 3–10 years	Physical risks increasing	Physical risks increasing	Physical risks increasing
Physical risk medium term 10+ years, 2035	High and increasing physical risks	Physical risks start declining after 2040	Physical risks start declining after 2030
Transition risk medium term 3–10 years	Low transition risks	Low transition risks	High transition risks
Transition risk long term 10+ years, 2035	Low transition risks	High transition risks	High transition risks
Policy ambition	+3°C	1.6°C	1.5°C
Policy reaction	None (2020 policies)	Delayed until 2030	Immediate and smooth
Technology change	Slow	Fast after 2030	Fast
Carbon dioxide removal	Low use	Medium use after 2030	Medium use
Policy variation	Low	High	Medium use

* Warming Level: Each scenario will have the same physical parameters and impacts at the same warming level. For instance, at the warming level of 1.5, all three scenarios would share the same physical risks.

Financial impacts

The financial impacts of climate-related issues on an organization are driven by the specific climate-related risks and opportunities to which the organization is exposed and its strategic and risk management decisions on managing those risks (i.e., mitigate, transfer, accept or control), and seizing those opportunities.

The TCFD identify four major categories through which climate-related risks and opportunities may affect an organization's current and future financial positions: revenues, expenditures, assets and liabilities, and capital and financing.

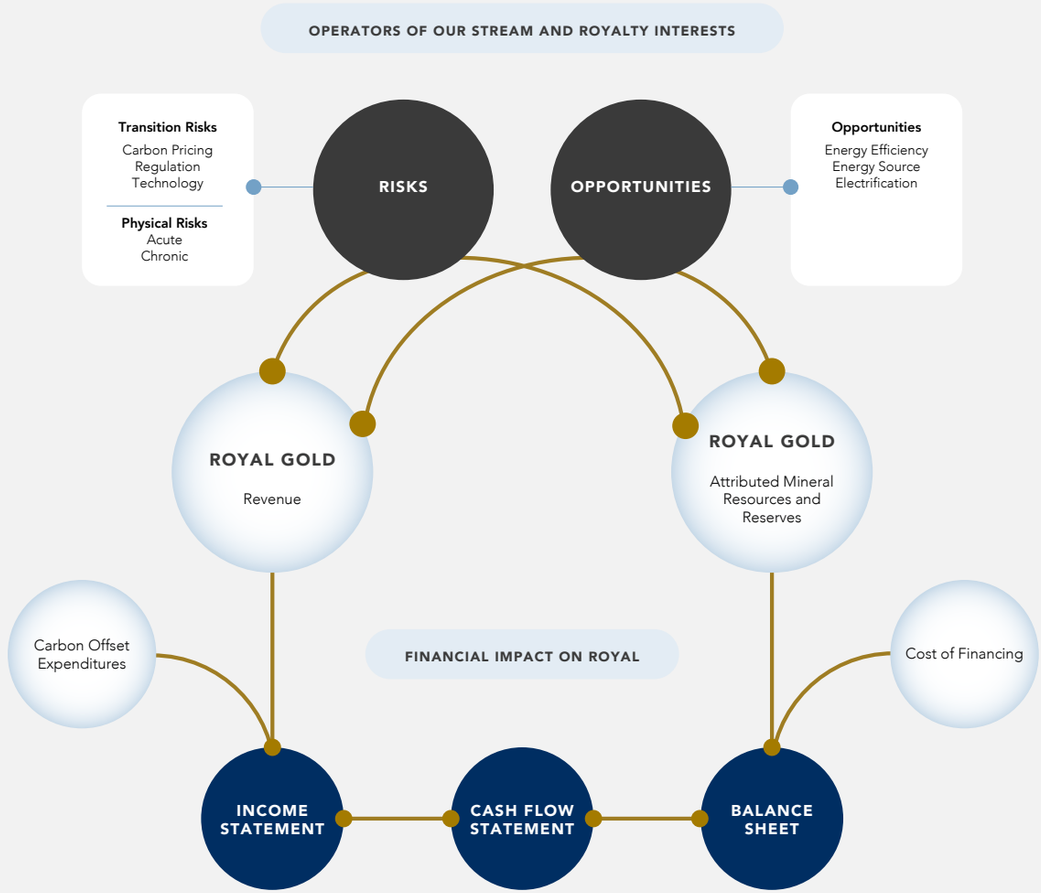
Expenditures (income statement): We are not the operator of the mining assets that make up our portfolio of mineral investments; therefore, we generally have no direct cost exposure to the operations. However, we may see an increase in our expenditures if we elect to or are required to purchase carbon offsets associated with our Scope 3 Investment Emissions.

Revenue (income statement): Our revenue comes from the production of metals and mineral commodities at the operations where we hold stream and royalty interests. Climate risk may impact the Operators' ability to produce as planned, thus impacting our revenue.

Assets and liabilities (balance sheet): We carry the undepleted value of our stream and royalty interest on our balance sheet with the values supported by mineral reserves and resources defined and reported by the asset Operators, based on certain commodity prices, operating costs, capital costs and operational parameters. We also carry the book value associated with exploration value. Transitional and physical risks could negatively impact the parameters underpinning the mineral reserve and resources, and this could reduce these mineral reserves and resources, restrict the ability of our Operators to identify new resources or convert resources into reserves or prevent the identification of economic mineralization in our earlier-stage properties. The result could be an increase in depletion or a write-down of the asset value.

Capital and financing (balance sheet): We rely on internally generated cash flow and the ability to raise capital through loans or the sale of equity to fund the growth of our business. If investors or financial institutions form a negative view regarding our management of climate-related risks, the cost to raise external capital could increase, reducing our competitive advantage in relation to our peers.

CLIMATE-RELATED RISKS, OPPORTUNITIES, AND FINANCIAL IMPACT



Jurisdictional climate descriptions

The ten jurisdictions selected as important to us are climatologically diverse (as described in the table following this section) with respect to historical average temperature and precipitation; precipitation amounts are estimated from the 100-year recurrence of 24-hour storm events and 100-year recurrence wet months. In several of the jurisdictions, a 100-year recurrent wet month can produce more precipitation than the mean historical precipitation for a year. Specifically, these jurisdictions include the Coquimbo Region in Chile, which hosts the Andacollo mine; the Ngamiland Region in Botswana, which hosts the Khoemacau mine; and Western Australia, which hosts a number of our royalties. In addition, each of the Northern Nevada region, Mato Grosso State in Brazil and the State of Zacatecas has an elevated 100-year recurrence of wet months. Two of the jurisdictions can also be impacted by hurricanes: the Dominican Republic, which hosts the Pueblo Viejo mine; and the State of Zacatecas, which is inland from the east coast of Mexico but has been shown to receive impacts from hurricanes in the Gulf of Mexico.

The table also provides a water risk assessment, as provided by the World Resource Institute's Aqueduct™ Water Risk Atlas tool, categorized by four water risk indicators. The water risk indicator descriptions are provided on page 102.

Two regions have water risk indicators categorized as extreme: the Coquimbo Region in Chile (with respect to interannual variability and water stress) and the Ngamiland Region of Botswana (with respect to interannual variability). Other jurisdictions have elevated water stress indicators.

		Current climate[1] (reference period 1985–2014)							Current water risk assessment[2]			
			Temperature	Precipitation		Extreme storms						
						100-year return period precipitation (mm)						
Jurisdiction	Percentage of 2021 net revenue	Köppen–Gieger climate classification	Mean annual temperature	Mean annual precipitation (mm)	Drought conditions	24-hour duration	Largest monthly	Ratio largest monthly/mean	Hurricane impacts	Water stress	Interannual variability	Seasonal variability	Drought risk
Principal Properties jurisdictions													
Central British Columbia **Canada**	24.7%	Subarctic	3.0°C	602		56	342	57%		Low	Medium–high	Low–medium	Low
Sánchez Ramírez Province **Dominican Republic**	13.8%	Tropical rainforest	24.4°C	1,489		71	428	29%	Yes	Low–medium	Medium–high	Low	Medium–high
Coquimbo Region **Chile**	10.6%	Cold desert	10.7°C	108	Yes	117	513	475%		Extreme	Extreme	Medium–high	Medium
Northern Nevada **U.S.**	10.1%	Cold semi-arid	8.7°C	279		45	254	91%		High	High	Low–medium	Low–medium
State of Zacatecas **Mexico**	9.5%	Hot semi-arid	17.5°C	369		76	454	123%	Yes	High	Medium–high	High	Medium
Ngamiland Region **Botswana**	0.7%	Hot semi-arid	23.2°C	454		93	904	199%		High	Extreme	Medium–high	Low–medium
	69.4%												
Other important jurisdictions													
Northwest Ontario **Canada**	5.0%	Hot summer humid continental	2.9°C	577		86	277	48%		Low	Medium–high	Low	Low–medium
Western Australia **Australia**	3.5%	Hot desert	22.4°C	360		121	586	163%		High	High	Low–medium	Low–medium
Mato Grosso State **Brazil**	1.1%	Tropical savanna	24.9°C	1,751		143	1,888	108%		Low	Low–medium	Medium–high	Low–medium
Western Region **Ghana**	4.6%	Tropical monsoon	26.8°C	1,358		87	841	62%		Low–medium	High	Low–medium	Medium
	14.2%												
Total	**83.6%**												

1 Climate Change Knowledge Portal, World Bank (accessed January 9, 2023), World Resource Institute.
2 Aqueduct™ Water Risk Atlas, Water Resource Institute 3.0.

Risk assessment time frames

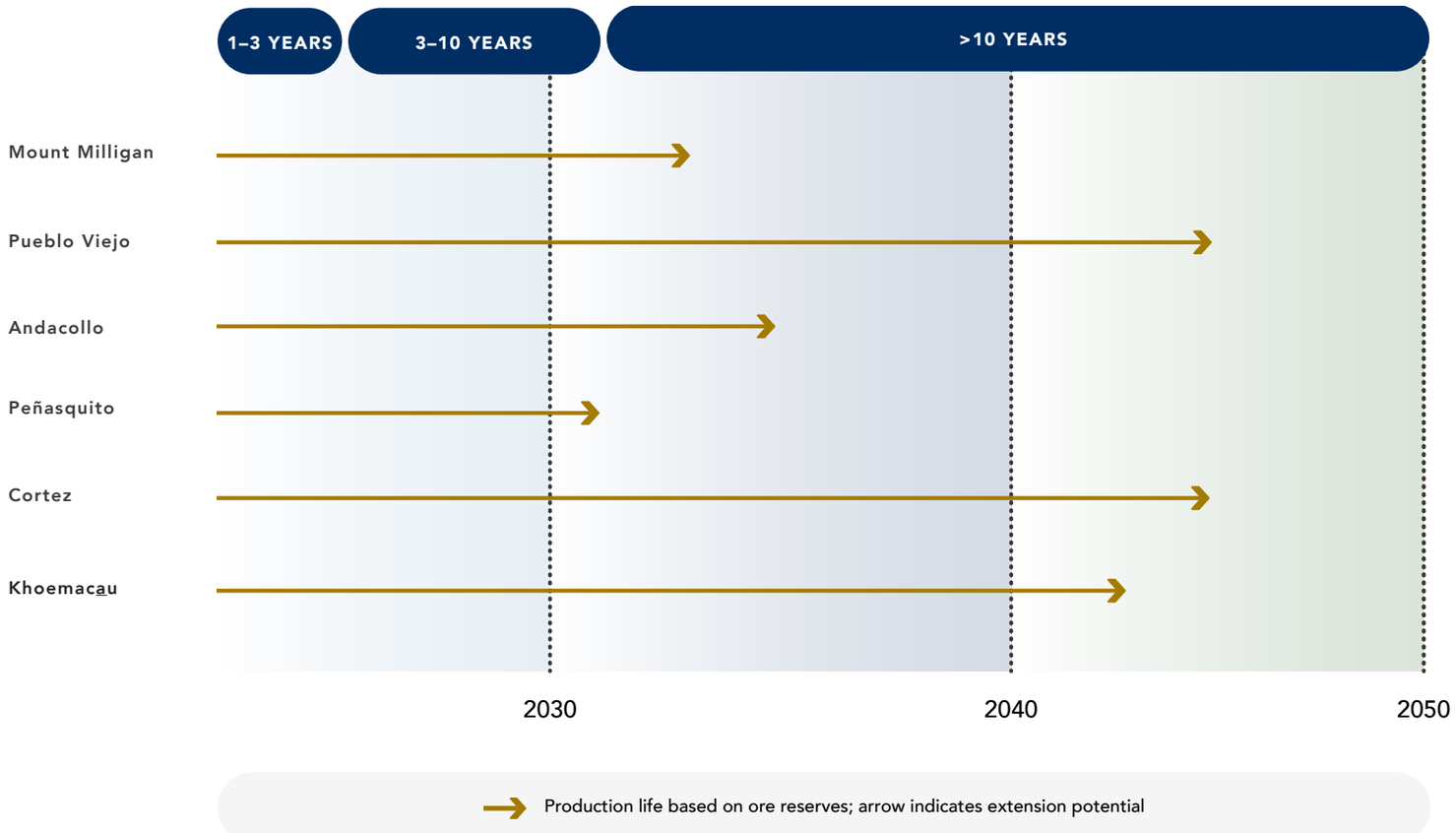
A changing climate requires us to assess the impact of physical climate risk over time horizons relevant to decision-makers today. Energy trapped by increasing atmospheric GHGs leads to rising temperatures, which in turn intensifies chronic climate hazards and increases the frequency and/or severity of acute events.

We tied our assessment time periods back to the production lives associated with our Principal Properties, all of which are expected to continue producing into the mid-2030s; three of six assets have current production lives past 2040. All of the Principal Properties can potentially extend their production lives through additional exploration or the conversion of existing mineral resources to reserves. Starting in 2023 and taking the asset production life into account, we looked at three time periods in our scenario analysis, as follows.

Short term: The next three years will be a useful time period for strategy development and early target setting.

Medium term: The next 3–10 years, represented by 2030.

Long term: Greater than 10 years, represented by 2032–2050, when a target time period is required for impact analysis. For our purposes, 2035 is the time period used to assess long-term physical risks, as it matches well with our Principal Properties' current production lives.



Physical risk drivers

We chose to evaluate five physical risk drivers against our portfolio, and these are defined below. A risk screening analysis against our selected physical risk drivers was completed for ten of the most important jurisdictions within our portfolio, which made up more than 80% of our net revenue in 2021. Results of the screening analysis are presented in the following sections, and support the selection of our physical risk drivers and provide background information in support of the climate scenario analysis.

Physical risk drivers	Description
	Acute risks
Extreme storms	As GHG concentrations increase, the intensity and frequency of storms (e.g., rain, wind or lightning strikes) are expected to increase in certain geographic regions, with the potential to damage assets, impact production and harm human life. In a warmer world, the potential for air to carry moisture increases exponentially, and thus the potential for heavier precipitation also increases. This means that intense events will likely recur more frequently, which can exacerbate the flooding risk.
Flooding	Climate change is expected to subject different geographic regions to increased damage from flooding, which may lead to the temporary closure of mines, the temporary closure of supporting regional infrastructure (e.g., roadways, rail links, bridges and powerlines) and/or damage to assets.
Wildfires	Climate change can increase the exposure of land areas to wildfires, depending on a range of factors (e.g., temperature, soil moisture, and the presence of trees, shrubs and other potential fuel). An increase in wildfires could affect our stream and royalty deliveries by interrupting normal operations at our Operators' sites.
	Chronic risks
Water stress – drought	Climate change is expected to subject different geographic regions to water stress in the form of droughts and floods, either of which has the potential to damage assets and halt mining operations.
Water stress – variability	Climate change is expected to subject different geographic regions to water stress in the form of precipitation variability (both seasonal and interannual), which can impact operational access to both renewable surface and groundwater supplies. This risk is more pronounced for operating sites that rely on surface run-off and collection their water supply.
Heat stress	Climate change is increasing temperatures and can increase the impact of heat stress on labor productivity (i.e., the percentage decrease in efficiency during regular working hours under hot and humid climate conditions, due to the reduced capacity of the human body to perform physical labor).

Transition risk drivers

Transition risk drivers are the societal changes arising from a transition to a low-carbon economy.

We have chosen to evaluate three transition risk drivers against our portfolio: carbon pricing, regulation and incentives, and technology.

Transition risk drivers	Description
Carbon pricing	National and sub-national governments are introducing policy instruments that are designed to place a fixed or market-based price on emitted carbon. The expected coverage and price of emitted carbon is expected to increase as policy-makers decide to align with more stringent global warming standards.
Regulation and incentives	In addition to carbon pricing, national and sub-national governments are introducing different policy instruments that regulate or incentivize the use of lower-carbon technologies. Such instruments can target building or industry energy efficiency, vehicle emissions intensity, the electrification of transportation and stationary fossil fuel technology, the renewable energy mix in grids or fuel emissions intensity.
Technology	Transitioning to a net zero economy would require investment flows to be geared towards the development and mass deployment of new technologies and infrastructure. This includes, but is not limited to, renewable energy technologies, carbon capture, low-carbon fuels and low-carbon industrial processes.

Climate scenario analysis

A snapshot of physical and transition risks

Risks identified through the climate scenario analysis largely relate to physical risks and risks associated with increases in the taxation and regulatory environment, where carbon pricing is used as the best representative of these transition risks. The map below provides an abbreviated summary of physical risks and a carbon pricing range defined for the Delayed Transition and Net Zero 2050 scenarios for 2035 by the NGFS. The following sections in this appendix will explore the three scenarios and the associated financial implications owing to physical and transition risks.

ACTUAL PHYSICAL RISKS

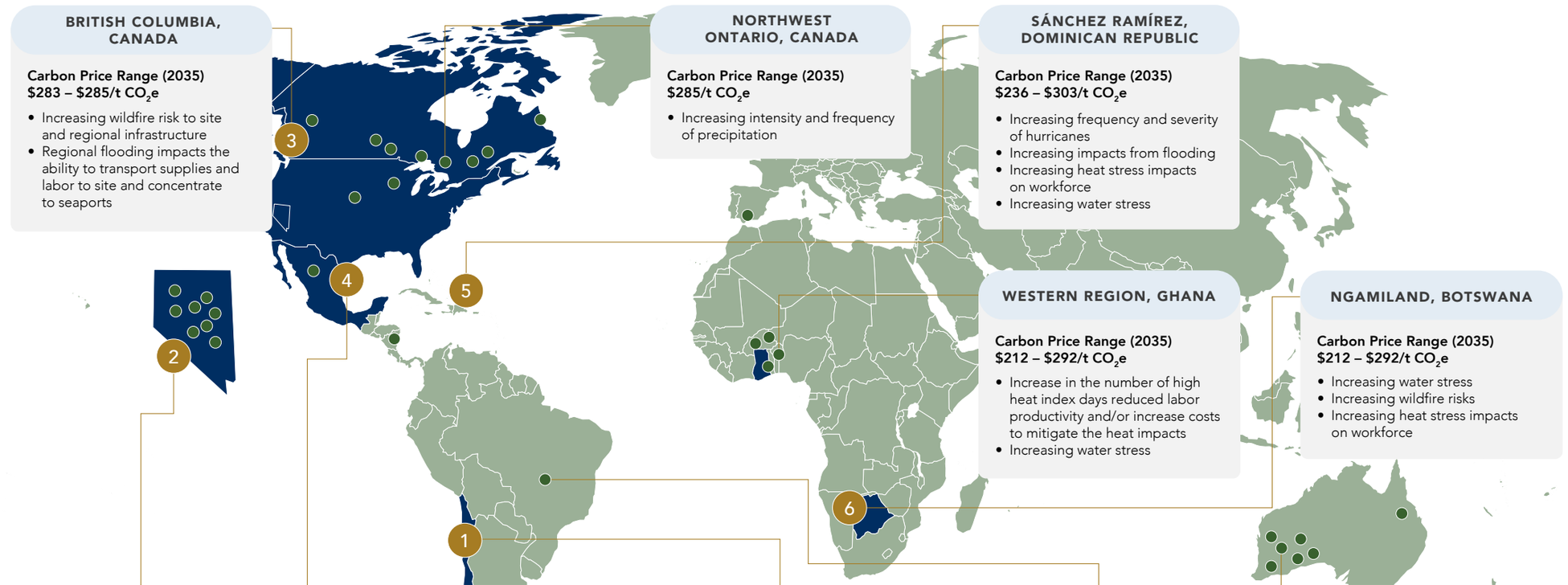
- Extreme storms, including hurricanes
- Flooding
- Wildfires

CHRONIC PHYSICAL RISKS

- Water stress – drought
- Water stress – variable precipitation
- Heat stress

TRANSITION RISKS

- Carbon pricing
- Regulation & incentives
- Technology



BRITISH COLUMBIA, CANADA

Carbon Price Range (2035)
$283 – $285/t CO_2e

- Increasing wildfire risk to site and regional infrastructure
- Regional flooding impacts the ability to transport supplies and labor to site and concentrate to seaports

NORTHWEST ONTARIO, CANADA

Carbon Price Range (2035)
$285/t CO_2e

- Increasing intensity and frequency of precipitation

SÁNCHEZ RAMÍREZ, DOMINICAN REPUBLIC

Carbon Price Range (2035)
$236 – $303/t CO_2e

- Increasing frequency and severity of hurricanes
- Increasing impacts from flooding
- Increasing heat stress impacts on workforce
- Increasing water stress

WESTERN REGION, GHANA

Carbon Price Range (2035)
$212 – $292/t CO_2e

- Increase in the number of high heat index days reduced labor productivity and/or increase costs to mitigate the heat impacts
- Increasing water stress

NGAMILAND, BOTSWANA

Carbon Price Range (2035)
$212 – $292/t CO_2e

- Increasing water stress
- Increasing wildfire risks
- Increasing heat stress impacts on workforce

NORTHERN NEVADA

Carbon Price Range (2035)
$263 – $292/t CO_2e

- Increasing wildfire risk to site and regional infrastructure
- Increasing water stress and drought risk

ZACATECAS, MEXICO

Carbon Price Range (2035)
$247 – $306/t CO_2e

- Use of freshwater increases water stress in the region among water users with the potential to cause conflict with local communities and drought risk
- Increasing heat stress impacts on workforce

COQUIMBO, CHILE

Carbon Price Range (2035)
$236 – $303/t CO_2e

- Use of freshwater increases water stress in the among regional water users
- Increasing extreme precipitation

MATO GROSS, BRAZIL

Carbon Price Range (2035)
$221 – $225/t CO_2e

- Increase in the number of high heat index days reduced labor productivity and/or increase costs to mitigate the heat impacts
- Increasing wildfire risk

WESTERN AUSTRALIA

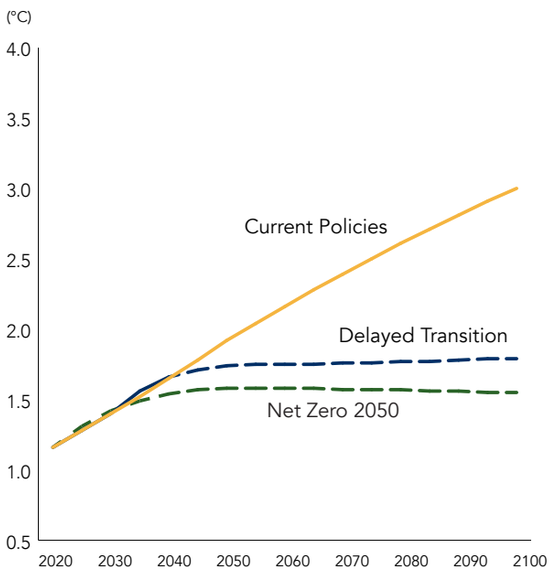
Carbon Price Range (2035)
$300 – $304/t CO_2e

- Wildfires threaten structures, regional infrastructure and movement of people and supplies

Scenario 1: Current Policies

In this scenario, only currently implemented policies (as of 2020) are preserved and emissions increase rapidly in the absence of ambitious action by governments and industries. Warming reaches 2°C by 2050; as a result, physical climate impacts will also increase in severity and frequency. The world is on track to see at least 3.3°C of warming by 2100. Despite this, investment in decarbonizing the global energy system remains slow, with limited investments in energy efficiency and continued exploitation of fossil fuels. **This scenario is used to define risks associated with physical climate impacts.**

GLOBAL MEAN TEMPERATURE RISE



Source: NGFS Climate Scenario Database,
(average of REMIND, GVAM 5.3, MESSAGE ix models)

Scenario attributes

- +3.0°C policy ambition
- Continuation of 2020 policies
- Slow technological change
- Low usage of CO_2 removal initiatives
- Low variation in regional policies
- High physical risk
- Low transition risk

Outcome: Minimal climate action today results in disastrous climate impacts and disruptions by 2050.

State of our planet in the 2030s[1]

- As climate damage increases, developed economies will shift their attention to *ad hoc*, **region-specific adaptation** measures, leading to the growth of the "adaptation economy." Low-income communities receive little investment and face worsening climate and economic shocks, exacerbating existing inequities and driving financial strain.
- **Corporate investment in natural capital focuses on continuity of supply**, with little regard to approaches that focus on creating co-benefits for communities and nature.
- In the absence of a carbon price or meaningful climate finance, **emerging markets will forge ahead with high-emitting projects**, fueling further warming.
- Technological approaches and human-engineered infrastructure are the primary means of adaptation. **Adaptation technologies become a key economic advantage** and are not openly shared.
- The **overreliance on technology for adaptation, without structural changes** such as the grid's greening, leads to increased emissions, exacerbating the challenge.
- Increasingly severe climate shocks and impacts on livelihoods drive the movement of **climate refugees**. Nations shun responsibility and nationalistic sentiments increase.
- Climate impacts on ports and trade routes, especially coastal commercial hubs in China and Southeast Asia, lead to **ongoing supply chain disruptions, loss due to redundancy, trade wars, and an increase in the cost of goods**.
- Biodiversity and topsoil loss, and the decline of watersheds contribute to a reduction in crop quality and yield, which in turn drive food insecurity. Agricultural innovation and automation increase rapidly, including **genome modification, lab-grown food, and controlled-environment agriculture**.
- By the end of the decade, heat stress begins to significantly impact worker productivity, especially outdoors. Automation is used to maintain productivity levels, leading to increased worker displacement.

1 BSR Climate Scenarios, Business for Social Responsibility (BSR), September 2022

Physical risks summary

The physical climate-related stressors and associated risks defined through our climate scenario analysis process for the ten jurisdictions evaluated are summarized in the table and figure below. Physical climate risks are most prominently associated with the Current Policies climate scenario.

We make assumptions regarding how these risks may manifest themselves in the defined jurisdictions and how they may impact the operations of our revenue-generating properties. Given the granularity of available data used to assess changes in climate parameters and associated operational impacts, the use of those data requires a high degree of site-specific knowledge, which we do not possess; therefore, our assessments are based on the jurisdictions and should be considered high level.

Our observations represent our long-term time horizon (i.e., 10+ years), and we have chosen 2035 as our measurement point for forecast impacts.

		Climate stressors					Physical risks				
		Temperature		Precipitation		Extreme storms					
Jurisdiction	Percentage of 2021 net revenue	Increase	Increase	No change	Decrease	Increase in intensity and/or frequency	Heat stress	Wildfire risk	Water Stress		Flooding from extreme storms
									Variability	Drought	
Principal Properties jurisdictions											
Central British Columbia **Canada**	24.7%	X	X					X			X
Sánchez Ramírez Province **Dominican Republic**	13.8%	X			X	X	X	X	X		X
Coquimbo Region **Chile**	10.6%	X			X	X			X	X	X
Northern Nevada **U.S.**	10.1%	X	X			X		X	X	X	X
State of Zacatecas **Mexico**	9.5%	X	X			X	X		X	X	X
Ngamiland Region **Botswana**	0.7%	X			X	X	X	X	X		X
	69.4%										
Other important jurisdictions											
Northwest Ontario **Canada**	5.0%	X	X			X					X
Western Australia **Australia**	3.5%	X			X	X	X	X	X		X
Mato Grosso State **Brazil**	1.1%	X			X	X	X	X			X
Western Region **Ghana**	4.6%	X			X	X	X				X
	14.2%										
Total	**83.6%**										

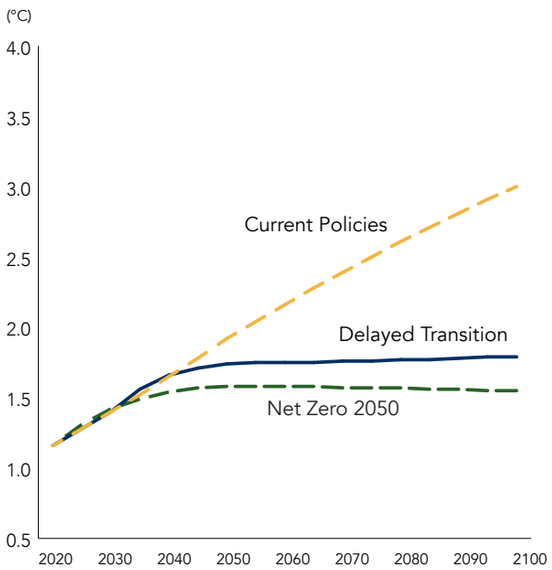
The tables below summarize how our selected physical risks may impact our financial performance and provide detailed commentary on the risks and which jurisdictions and properties carry each risk. Given that our measurement period for the analysis is 2035, we feel that the defined physical risks and subsequent financial impacts would apply to all three of the climate scenarios we assessed, while the magnitude of the impacts may be smaller in the Net Zero 2050 scenario.

Risks and impacts	Jurisdiction and sites	Potential financial impacts	
		Our Operators	Our Company
Acute physical risks			
Flooding – Site: Increased rainfall from extreme storms, high interannual precipitation variability or hurricanes can potentially result in the flooding of open pits and underground facilities, the capacity maximization of water management and storage facilities, and/or unpermitted discharges	**All jurisdictions/sites**	**Capital costs:** Increased costs associated with additional water management facilities **Revenue:** Possible reduced production and revenue due to the inability to access planned production areas	**Revenue:** Possible delays in receiving revenue
Flooding – Regional infrastructure: Increased rainfall from extreme storms can impact regional transportation infrastructure (road and railroad), delaying the transport of people and materials to the site and the transport of metal concentrates from the site to ports	**Central British Columbia, Canada:** Mount Milligan **Ngamiland, Botswana:** Khoemacau	**Revenue:** Delays in revenue due to production curtailments or production reductions associated with not having the required people and/or supplies at the site, or delays in shipping metal concentrates	**Revenue:** Possible delays in receiving revenue
Wildfires: Increasing temperatures with larger dry spells and reduced humidity may increase the risk of wildfires, which could curtail production operations due to impacted labor and supplies logistics; could also impact power distribution systems and/or create safety concerns for underground mine ventilation	**Ngamiland, Botswana:** Khoemacau **Northern Nevada, U.S.:** Cortez **Central British Columbia, Canada:** Mount Milligan **Sánchez Ramírez Province, Dominican Republic:** Pueblo Viejo **Western Australia, Australia:** Various sites **Mato Grosso State, Brazil:** Xavantina	**Capital costs:** Wildfire presents the potential for the loss of, or damage to, site buildings and power distribution infrastructure **Revenue:** Possible delays in revenue generation due to production curtailment	**Revenue:** Possible delays in receiving revenue
Chronic physical risks			
Drought/water scarcity: A combination of less precipitation, higher temperatures, longer dry spells and heat spells could impact both short and long term water availability or water stress for other stakeholders	**Coquimbo Region, Chile:** Andacollo **Zacatecas State, Mexico:** Peñasquito **Northern Nevada, U.S.:** Cortez **Ngamiland, Botswana:** Khoemacau **Sánchez Ramírez Province, Dominican Republic:** Pueblo Viejo	**Capital costs:** increased costs for additional water storage, water wells, water collection infrastructure or technology to reduce water usage are possible **Operating Costs:** increased operating costs associated with reducing water consumption; and costs to support other water users in an impacted area	
Drought/water Scarcity – Permitting: A combination of less precipitation, higher temperatures, longer dry spells and heat spells could, over the long term, impact water sources used by agriculture, or traditional or Indigenous peoples, increasing the difficult to obtain permits for production extension	**Northern Nevada, U.S.:** Cortez **Coquimbo Region, Chile:** Andacollo	**Revenue:** The inability to obtain permits to extend production life will result in lost revenue	**Revenue:** The inability for our Operators to obtain permits for mine life extension would reduce our revenue
Heat stress: Increased temperature in an already-hot and relatively humid environment will reduce the productivity of manual work and increase costs; it may also cause health and safety concerns for workers, and increase equipment cooling requirements and/or reduce electrical equipment service life	**Western Region, Ghana:** Wassa **Mato Grosso State, Brazil:** Xavantina **Sánchez Ramírez Province, Dominican Republic:** Pueblo Viejo **Zacatecas State, Mexico:** Peñasquito	**Capital costs:** increased costs to mitigate heat stress experienced by equipment and people **Operating Costs:** increased costs due to lower worker productivity or costs associated with mechanical cooling **Revenue:** Productivity decreases could result in reductions or delays in revenue	**Revenue:** Revenue could be impacted by lower mine site productivity
Dust: Increased warming can increase dust emissions associated with mining activities (e.g., road transport and tailing storage facilities), which could impact local residents	**Coquimbo Region, Chile:** Andacollo	**Revenue:** Production is currently impacted by requirements to manage dust that impacts local residents; meanwhile, increasingly hotter and dryer conditions could increase production disruptions and revenue	**Revenue:** Revenue could be impacted by lower productivity

Scenario 2: Delayed Transition

Due to a decade of inaction (i.e., the 2020s), climate action in the 2030s becomes an urgent imperative that looks to "make up for lost time"; it results in hasty and reactionary policies that try to rapidly halt GHG emissions. The disorderly approach comes with high social and economic costs, but ultimately succeeds in halving emissions by 2040 and limits peak warming to 0.8°C by 2050. By mid-century, the cost of the energy transition is less burdensome on economies, and governments can shift their focus and resources toward investment in social programs and in revitalizing those sectors affected by climate policies. **Risk analysis for this scenario focuses on transition activities, while also having the same physical risks as the Current Policies scenario through 2035.**

GLOBAL MEAN TEMPERATURE RISE



Source: NGFS Climate Scenario Database, (average of REMIND, GVAM 5.3, MESSAGE ix models)

Scenario attributes

- 1.6°C policy ambition
- Delayed policy reaction
- Slow, then fast, technological change
- Low usage of CO_2 removal initiatives
- High variation in regional policies
- Medium physical risk
- High transition risk

Outcome: A decade of delays leads to hasty climate policies that significantly disrupt business and society.

State of our planet in the 2030s[1]

- With growing physical impacts and increasing social unrest, **governments are under great pressure** to act. To maintain their operating license, **businesses respond to public expectations** to reduce emissions.
- In the early 2030s, **the climate crisis is declared an emergency** in many countries. Governments adopt abrupt and highly disruptive policies to reduce emissions, including stringent carbon taxes and bans.
- Where the action is still delayed, **civil society leads targeted disruptions** of industry and climate litigation against heavy emitters, those who finance fossil fuels and, increasingly, governments.
- **Disruptions lead to political instability**, reduced governance and adaptation capacity, increased stranded assets, large-scale socioeconomic disruption and rising inequality.
- Divergent climate policies between ambitious countries and laggards lead to strained relationships and **geopolitical instability**. This affects trade and drives shortages of fuel and other vital commodities.
- Fossil fuel consumption begins to decline significantly from the start of the decade. By 2035, the **development of new coal power plants will end** globally.
- Most sectors are impacted by **legal mandates to halve emissions** by 2040 and fully decarbonize by 2050. This leads to the rushed deployment of renewable energy by businesses and rapid emissions reduction programs at a higher cost. Hasty electrification brings reliability issues and is limited by a **lack of supply of critical minerals**.
- Regulatory action and demand from clients and customers mean businesses must **rapidly reduce Scope 3 emissions**. Supply chain disruptions lead to greater automation, and to the reshoring and nearshoring of operations.
- To offset emissions, companies invest heavily in **carbon removal programs**, focusing on land-based approaches (e.g., reforestation) because scaling technologies for carbon sequestration remain financially unfeasible.

1 BSR Climate Scenarios, Business for Social Responsibility (BSR), September 2022

Transition risks summary

The transition climate-related stressors and associated risks defined through our climate scenario analysis process for the ten jurisdictions evaluated are summarized in the table at the right.

The Delayed Transition climate scenario is dominated by dramatic regulatory changes starting in 2030 to reduce GHG emissions; these result in a significant increase in the price for emitted carbon, the principal transition risk stressor. We make assumptions regarding how this dramatic rise in carbon price between 2030 and 2035 may impact the operations in our defined jurisdictions of importance.

The presented observations represent our long-term time horizon (i.e., 10+ years), and we have chosen 2035 as our measurement point for forecast impacts.

Medium-term (three to ten years) impacts under this scenario would be consistent with the Current Policies scenario and dominated by physical risk.

Several important operations for us are forecast to come to the end of their currently defined mine lives in the mid-2030s, so the impact for shorter-lived assets tends to be mitigated given the delayed timing of high carbon pricing between 2030 and 2035. We note, however, that successful exploration has the potential to extend the production lives of all ten properties reviewed.

		Operational parameters				Carbon price and unit cost impact			Transition risk potential impacts: medium term (M) and long term (L)			
									Production		Mineral Resource / Reserve	
Jurisdiction	Percentage of 2021 net revenue	Stream or royalty metal	Production life[1] (years)	Total cost curve position (2022)	Electrical grid emission intensity description (Skarn Associates)	2035 Forecast carbon price US$/t CO_2e	Forecast GHG emission intensity (2022) t CO_2e/GEO t CO_2e/t Cu	Carbon price impact estimate US$/GEO US$/lb Cu	Loss due to increased operating costs	Loss/ delay due to social unrest	Mineral reserve or resource loss	Mine life extension at risk
Principal Properties jurisdictions												
Mount Milligan **British Columbia, Canada**		GEO		1st	Low carbon	$283	0.22	$62				
	24.7%	Copper	+2033	2nd		$283	3.30	$0.42	L		L	L
Pueblo Viejo **Dominican Republic**	13.8%	GEO	+2040	1st	Broad mix	$303	2.79	$845	L	L	L	L
Carmen del Andacollo **Chile**	10.6%	Copper	+2035	4th	Low carbon	$303	3.20	$0.44		L	L	L
Cortez Gold Mines **Nevada, U.S.**	10.1%	GEO	+2040	1st	Fossil light	$292	0.53	$155	L		L	L
Peñasquito Mine **Zacatecas, Mexico**	9.5%	GEO	+2031	1st	Broad mix	$247	0.63	$156	L	L	L	L
Ngamiland Region **Botswana**	0.7%	Copper	+2040	3rd	Coal dominant	$292	6.30	$0.83	L	L	L	L
	69.4%											
Other important jurisdictions												
Rainy River Mine **Ontario, Canada**	5.0%	GEO	+2031	3rd	Low carbon	$285	0.62	$176	L		L	L
Various Mines **Western Australia**	3.5%	GEO	+2030	2nd	Broad mix	$300	0.50	$150	L		L	L
Xavantina Mine **Mato Grosso, Brazil**	1.1%	GEO	+2028	1st	Fossil light	$225	0.09	$20		L	L	L
Wassa Mine **Ghana**	4.6%	GEO	+2037	2nd	Fossil light	$292	0.21	$62		L	L	L
	14.2%											
Total	**83.6%**											

Good — Poor

1 Production life is based on reported ore reserves and/or technical reports issues by the Operator, while "+" indicates extension due to the conversion of mineral resources to reserves or the potential for exploration success to add additional production life

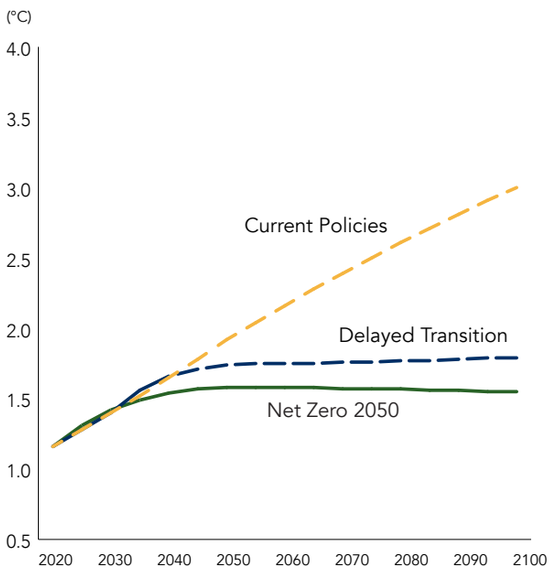
The table below summarizes how these transition risks may impact Net Zero 2050 financial performance; it also provides detailed commentary for each jurisdiction and property. These same transition risks also apply to the Net Zero 2050 scenario for the measurement year 2035.

Risks and impacts	Jurisdiction and sites	Potential financial impacts	
		Our Operators	Our Company
Transition risks			
Carbon pricing: In the absence of low-carbon alternatives, regulatory changes and high prices set for GHG emissions or carbon drive up the implied price for energy	**All jurisdictions/sites**	**Operating costs:** Increased costs due to the application of carbon taxation	**Revenue:** Reduced revenue could come from increased operating costs, driving an increase in the ore cut-off grade or lowering the amount of available ore; alternatively, increased costs could eliminate the potential for mine life extension associated with the conversion of mineral resources to reserves
Trade restrictions: Metal concentrates produced with a high emissions footprint could become subject to trade restrictions through border adjustment carbon taxation, in which a tax equal to the difference between carbon taxes applied in the exporting country compared to the importing country would be levied	**Zacatecas State, Mexico:** Peñasquito **Ngamiland, Botswana:** Khoemacau	**Operating costs:** Carbon border taxation could result in higher operating costs through the payment of a carbon border tax on metal concentrates or the existence of carbon border taxation in some jurisdictions, either of which could drive up shipping and treatment charges for concentrates that have elevated carbon footprints	**Revenue:** Increasing concentrate freight and treatment charges could impact our revenue through higher deductions, or through the potential for border carbon taxes to be considered a deduction for stream or royalty calculation purposes
Permitting approvals for production life extension: Sustained production is contingent on the ability to obtain federal and state regulatory approvals, while political pressure could change regulations for mine development approvals, making it more difficult to permit future developments	**Northern Nevada, U.S.:** Cortez **Coquimbo Region, Chile:** Andacollo	**Revenue:** the inability or delay in obtaining permits for mine life extension would result in production loss or delay	**Revenue:** The inability or delay in obtaining permits for mine life extension would result in the loss or delay in stream metal deliveries or royalty payments
Proximity to communities: Regulatory programs to quickly decarbonize cause social unrest and disproportionally impact the large, low-income portion of the population, resulting in impacts to supply chain logistics	**Western Region, Ghana:** Wassa **Coquimbo Region, Chile:** Andacollo **Sánchez Ramírez Province, Dominican Republic:** Pueblo Viejo **Zacatecas State, Mexico:** Peñasquito **Ngamiland, Botswana:** Khoemacau	**Revenue:** Social stress could potentially manifest as impacts to the road transport of operating supplies and people; this would restrict full operations, which has the potential to impact metal production and profitability – or, alternatively, delays in the transport of metal concentrates to off-takers	**Revenue:** Revenue could be delayed, but not likely lost
Royal Gold reputational risk: Operations with high emissions intensity and an inability to effectively reduce intensity could become the focus of pressure from investors, to understand how Royal Gold plans to mitigate the emissions	**Sánchez Ramírez Province, Dominican Republic:** Pueblo Viejo	**No risk**	**Revenue:** Investor pressure to improve our portfolio's emission performance prompts the divestiture of high-emission assets or offsetting emissions based on the social cost of carbon
Labor union unrest: Regulatory programs to quickly decarbonize cause social unrest, in response to inflationary cost pressures; this can result in labor unrest and work stoppages to solicit higher wages	**Coquimbo Region, Chile**: Andacollo **Zacatecas State, Mexico:** Peñasquito **Ngamiland, Botswana:** Khoemacau	**Revenue:** Work stoppages would delay revenue **Operating costs:** Labor unrest would likely result in higher operating costs	**Revenue:** Labor unrest would result in delayed production and revenue
Government taking: The host government forces an increase in its beneficial interest of the operation, due to economic pressures in other segments of the country's economy that had been generated by a global increase in carbon pricing	**Sánchez Ramírez Province, Dominican Republic:** Pueblo Viejo	**Revenue:** A reduction by the owner in their beneficial interest would reduce revenue	**Revenue:** Loss in beneficial interest could reduce stream deliveries or royalty revenue, depending on the mechanism used by the government to obtain the additional beneficial interest

Scenario 3: Net Zero 2050

To transition to a net zero economy by 2050, immediate action is required, characterized by rigorous and coordinated global action from government, business and civil society. The risks of inaction are apparent, with climate impacts already felt across the globe and expected to increase. Even at this point the cost of action is high because of the extent of disruption to the industry, including those related to shifts in the job market and worker displacement. **Risk analysis for this scenario focuses on transition activities, while physical risks are expected to continue to increase through 2030 and decrease thereafter.**

GLOBAL MEAN TEMPERATURE RISE



Source: NGFS Climate Scenario Database, (average of REMIND, GVAM 5.3, MESSAGE ix models)

Scenario attributes

- 1.5°C policy ambition
- Immediate and smooth policy reaction
- Fast technological change
- Medium usage of CO_2 removal initiatives
- Medium variation in regional policies
- After 2030, low physical risk
- Medium transition risk

Outcome: A cooperative global effort to act on climate change now drastically lowers climate risks by 2050.

State of our planet in the 2030s

Technologies, including artificial intelligence ("AI") and new means of data storage, drastically reduce the energy needed for data storage and processing, and encourage tech solutionism. AI and remote sensing underpin GHG efficiency, natural resource allocation and impact monitoring.

- National carbon budgets combined with new levels of carbon monitoring lead to **increased carbon surveillance** and is met by resistance from those who see it as a restriction of citizens' freedoms and privacy. Carbon-related cybercrimes that focus on manipulating emissions data also emerge.
- Carbon sequestration from land use and forest cover peaks in 2030 and begins to plateau, while carbon capture technology develops significantly. In 2030, carbon emissions from agriculture, forestry and other land uses cross into the negative.
- Following a decrease in the 2020s, **cement and steel production begin to increase again slowly**, but with much lower emissions.
- By the mid-2030s, **worker displacement and reskilling gain prominence as sustainability issues**.
- **Consumer preferences and awareness** continue to drive changes in the business environment, with many companies committing to net positive impacts.
- **Climate impacts continue escalating and unequal impacts on certain regions hamper economic development**. Attribution emerges as a key concern in addressing **reparations for loss and damages** to countries and vulnerable groups.

Physical and transition risk summary

We see the Net Zero 2050 scenario having physical risks similar to those in the Current Policies scenario through 2035, at the level of granularity when we completed our review. However, by 2035 physical risks are forecast to start a declining trend – compare this to the Current Policies scenario, where physical risks would be on an increasing trend.

Transition risks are driven by regulatory changes that manifest themselves in the price associated with carbon; these would have impacts in both the medium and long term, through increasing operating costs. Increasing costs can potentially impact the classification of ore and waste, if commodity prices do not rise to cover the carbon price increases. Operations that currently have a high-cost structure could have elevated risks associated with increasing carbon pricing – including mineral reserves and resource loss – as well as a reduction in the potential for mine life extension.

Jurisdiction	Percentage of 2021 net revenue	Stream or royalty metal	Production life (years)	Total cost curve position (2022)	Electrical grid emission intensity description (Skarn Associates)	Carbon price and unit cost impact: Short term 2022 US$/tCO$_2$e	Medium term 2025 US$/tCO$_2$e	Medium term 2025 US$/GEO US$/lb Cu	Long term 2035 US$/tCO$_2$e	Long term 2035 US$/GEO US$/lb Cu	Forecast GHG emission intensity (2022) tCO$_2$e/GEO tCO$_2$e/t Cu	Transition risk potential impacts: medium term (M) and long term (L) — Production: Loss due to increased operating costs	Production: Loss/ delay due to social unrest	Mineral Resource / Reserve: Mineral reserve or resource loss	Mineral Resource / Reserve: Mine life extension at risk
Principal Properties jurisdictions															
Mount Milligan **British Columbia, Canada**		GEO						$31		$63	0.22				
	24.7%	Copper	2033	1st	Low carbon	$40	$143	$0.21	$285	$0.43	3.30	M L		L	L
Pueblo Viejo **Dominican Republic**	13.8%	GEO	+2040	1st	Broad mix	$0	$133	$372	$236	$659	2.79	L		L	L
Carmen del Andacollo **Chile**	10.6%	Copper	2035	4th	Low carbon	$1-$2	$133	$0.19	$236	$0.34	3.20	M L		L	L
Cortez Gold Mines **Nevada, U.S.**	10.1%	GEO	+2040	1st	Fossil light	$0	$145	$77	$263	$140	0.53	M L		L	L
Peñasquito Mine **Zacatecas, Mexico**	9.5%	GEO	+2031	1st	Broad mix	$3-$4	$184	$116	$306	$193	0.63	M L		L	L
Ngamiland Region **Botswana**	0.7%	Copper	+2040	3rd	Coal dominant	$0	$115	$0.33	$212	$0.61	6.30	M L		L	L
	69.4%														
Other important jurisdictions															
Rainy River Mine **Ontario, Canada**	5.0%	GEO	2031	3rd	Low carbon	$40	$143	$89	$285	$177	0.62	M L		M	M
Various Mines **Western Australia**	3.5%	GEO	+2030	2nd	Fossil heavy	$0	$151	$76	$304	$152	0.50	M L		L	L
Xavantina Mine **Mato Grosso, Brazil**	1.1%	GEO	+2028	1st	Fossil heavy	$0	$119	$11	$221	$20	0.09			L	L
Wassa Mine **Ghana**	4.6%	GEO	+2037	2nd	Fossil light	$0	$115	$24	$212	$45	0.21		L	L	L
	14.2%														
Total	**83.6%**														

Good — Poor

Climate-related opportunities

Through our climate scenario analysis, we identified a number of opportunities relating to climate change. All identified opportunities could be beneficial, regardless of the scenario considered; however, an assessment was made to identify the scenarios with the most beneficial opportunities and in which of our three time periods these opportunities exist.

An assessment was also made while taking into consideration the positive attributes of each opportunity; these are detailed in the following chart.

Financial: It is likely that the project generates a financial rate of return.

Reputation: The execution of the project will likely be viewed positively by the market and our shareholders.

Scope 3 (Operator's Scope 1 and 2) Footprint Reduction: The project could directly or indirectly reduce the Scope 1 and Scope 2 emissions of our Operators that are attributable to our own emissions data.

Opportunities are presented at a conceptual level, and detailed analysis could change our view of the potential benefits and impacts.

	Potential impacts			Opportunity windows		
Opportunity	Financial	Reputational	Scope 3 (financed) footprint reduction	Short term (1–3 years)	Medium term (5–10 years)	Long term (>10 years)
Low-carbon technologies are expected to become increasingly viable and advantageous from a cost perspective. The opportunity may exist to finance technology solutions.	X	X	X		Net Zero 2050	Net Zero 2050 Delayed Transition
Obtain and apply high-quality carbon offsets against Scope 3 "financed" emissions	?	X	X	Net Zero 2050	Net Zero 2050	Net Zero 2050 Delayed Transition
Financially support renewable energy projects to directly benefit an operation in our portfolio						
Financially support Khoemacau Copper in their plan to develop a 50MW solar farm	X	X	X	All scenarios		
Financially support renewable energy projects that are current in the planning stage with our Operators	X	X	X	All scenarios	All scenarios	
Influence Operators						
Encourage our Operators who have not completed a climate risk assessment to advance on this subject		X		All scenarios		
Include in new stream agreements a requirement to disclose climate-related risk with reference to the TCFD		X		All scenarios		
Include in new stream agreements (where commercially practical) the provision of a financial incentive mechanism for reducing GHG emissions against a baseline	X	X	X	All scenarios	All scenarios	

? Reflects uncertainty of applicability of potential impact

SDG index

The table below highlights our direct and indirect contributions featured in this report. Direct contributions are those that we have influenced, whereas indirect contributions are those resulting from the carbon credits we purchased or Operator initiatives that we supported. The list also features SDGs that we believe link to key ESG achievements from our Principal Properties.

Topic	Operator/Agency/Institution	SDG contributions	Location in report
Principal Property achievements	Barrick Gold	SDG 7	Revenue from our Principal Properties > Pueblo Viejo, p. 13
	Teck Resources	SDG 8	Revenue from our Principal Properties > Andacollo, p. 9
	Nevada Gold Mines	SDG 11	Revenue from our Principal Properties > Cortez, p. 10
	Newmont Cupric Canyon Capital	SDG 12	Revenue from our Principal Properties > Peñasquito, p. 12 Revenue from our Principal Properties > Khoemacau, p. 14
	Centerra Gold	SDG 15	Revenue from our Principal Properties > Mount Milligan, p. 11
Carbon credits	Anew Climate	SDG 4, 6, 13, 15	Offsetting our corporate footprint, p. 53
Mining community contributions	Cupric Canyon Capital	SDG 3	Mining community contribution highlights > Khoemacau Copper Mine, p. 69
	Centerra Gold Nevada Gold Mines	SDG 8	Mining community contribution highlights > Centerra Gold, Inc., p. 70 Mining community contribution highlights > Nevada Gold Mines, p. 70
Local community contributions	Daily Bread Food Bank	SDG 2	Local office community contribution highlights > Daily Bread Food Bank, p. 72
	Project C.U.R.E.	SDG 3	Local office community contribution highlights > Project C.U.R.E., p. 71
Scholarships	Colorado School of Mines Foundation Montana Technological (Montana Tech) University Foundation South Dakota Mines Center for Alumni Relations and Advancement	SDG 4, 10	Next generation of leadership, p. 73

Glossary

Term/abbreviation	Definition
CNG Committee	Compensation, Nominating and Governance Committee
CSA	
Direct energy	The energy produced and consumed by the Operator within its operations, projects and facilities; it may include energy from fuels, sunlight, wind, water, etc. and is used to run the Operator's equipment and vehicles, and to produce power and heat on-site
DJSI World	Dow Jones Sustainability™ World Index
ERM	Enterprise Risk Management
ESG	Environment, social and governance
GEO	Gold equivalent ounce
GHG	Greenhouse gas
GRI	Global Reporting Initiative
Grid factor	CO_2 emission factor (tCO_2/MWh) which is associated with each unit of electricity provided by an electricity system
ICMC	International Cyanide Management Code
ICMM	International Council on Mining and Metals
IFC	International Finance Corporation
Indirect energy	Indirect energy: electricity, thermal or other energy sources provided by a retail provider or facility not owned or operated by the user of the energy
KPI	Key performance indicator
NGFS	Network of Central Banks and Supervisors for Greening the Financial System
Operators	Third parties that operate mining projects of our precious metal stream and royalty interests

Term/abbreviation	Definition
Principal Property	Properties deemed material to Royal Gold taking into account current revenue, future revenue, mine life, and typically make up at least 5% of our revenue.
RGMPs	World Gold Council's Responsible Gold Mining Principles
SEC	Securities and Exchange Commission
Scope 1 emissions	Emissions from sources that Royal Gold owns or controls directly
Scope 2 emissions	Emissions that Royal Gold causes indirectly from the energy we purchase and use
Scope 3 Investment Emissions	Royal Gold segments Scope 3 emissions into those arising from our direct corporate activities (which we refer to as our direct Scope 3 emissions) and those of our portfolio Operators (which we refer to as our Scope 3 Investment Emissions). We have done this because, as a passive investor, we do not have direct influence or control over the Operator's emissions, but we do manage and assert more control over our own direct footprint.
Scope 3 Corporate Emissions	Emissions that are not produced by Royal Gold, and not the result of activities from assets owned or controlled by us, but by those that we are indirectly responsible for, across our value chain (e.g., emissions linked to employee business travel, and employee commuting)
SDGs	United Nations Sustainable Development Goals
TCFD	Task Force on Climate-related Financial Disclosures
Total energy	A measure of both the Direct and Indirect energy consumed
Under-represented minority	An individual who self-identifies in one or more of the following groups: Black or African–American, Hispanic or Latinx, Asian, Native American or Alaska Native, Native Hawaiian or Pacific Islander, or two or more races or ethnicities (Nasdaq, 2020)
Visible minority	A visible minority is defined as persons who are non-Caucasian in race or non-white in color; the visible minority population consists mainly of the following groups: South Asian, Chinese, Black, Filipino, Arab, Southeast Asian, West Asian, Korean and Japanese.
WGC	World Gold Council
WRI	World Resources Institute

Operator ESG scorecard metrics

Term/abbreviation	Definition
Net revenue or net gold equivalent ounces ("net GEO")	See the comprehensive methodology on the next page.
GHG emission intensity	An average estimate of the CO_2e emissions generated for every Net GEO; a declining intensity could indicate that higher-grade ore is being processed, less energy is being used in ore processing, or energy with a lower energy emission factor is being employed
Total energy intensity	A measure of both the Direct and Indirect energy consumed for each Net GEO. An increasing Total Energy Intensity factor likely indicates the ore value being processed is reducing or an ore characteristic is requiring more energy for processing
Energy emissions factor	An estimate of the average amount of CO_2e generated (Scopes 1 and 2) for every terra joule of energy consumed in the mine site production process; a reduction in the factor can indicate switching from higher-emission fuels to lower-emission fuels, and/or an increase in the amount of electrical energy generated from renewable sources
Percentage of portfolio net GEO production with absolute GHG emissions reduction target(s) by 2030	This is a measure of the percentage of our net GEOs associated with companies who have made commitment(s) to reduce total GHG emissions by 2030; these commitments may not be directly applicable to the property where we have our stream or royalty interests but refers to corporate commitments
Percentage of portfolio net GEO production with net zero GHG emission target by 2050	A measure of the percentage of our net GEOs associated with companies that have made a commitment to achieving net zero GHG emissions by 2050; these commitments may not be directly applicable to the property where we have our stream or royalty interest, but rather refers to corporate commitments
Water consumption intensity	An estimate of the amount of water consumed by the operation for mining and ore process; intensity is tracked using two denominators: net GEOs and ore tonnage processed

Term/abbreviation	Definition
Percentage of net revenue from high or extremely high water stress regions	Baseline water stress measures the ratio of total water withdrawals to available renewable water supplies. Water withdrawals include domestic, industrial, irrigation and livestock consumptive and non-consumptive uses. Available renewable water supplies include surface and groundwater supplies, and this measure considers the impact of upstream consumptive water users and large dams on downstream water availability. Higher values indicate more competition among users. This metric is based on the region's classification estimated by the WRI's Aqueduct™ Water Risk Atlas tool.
Percentage of net revenue from regions with high or extremely high interannual precipitation variability	"Interannual variability" measures the average between-year variability of available water supply, including both renewable surface and groundwater supplies; higher values indicate wider variations in available supply from year to year
TRIFR	Total recordable injury frequency rate (or total recordable injury rate); the number of fatalities, lost-time injuries, substitute work and other injuries requiring treatment by a medical professional, per million hours worked
Number of fatal accidents	An accounting of fatal accidents that have occurred on sites where we have royalty or stream interests; in cases where our interest covers a select portion of the operation and the fatal accident is not directly associated with our beneficial interest, the incident is not counted
Tailing management disclosure	This metric is intended to confirm the portion of the portfolio net GEOs associated with companies that have publicly disclosed their tailing management practices
Percentage of applicable net GEO sales who are signatories to the ICMC	This metric is intended to confirm the portion of the portfolio net GEOs associated with mine sites that are certified under the ICMC, or have applied for certification with a review or have a determination pending

Royal Gold stream and royalty footprint methodology overview

Our objective is to define the beneficial interest we receive as a stream or royalty holder in comparison to the total production from a mining operation, and then aggregate our portfolio of assets using a unit of measure that normalizes commodity output and commodity price. In this manner, we can compare asset or portfolio performance over time while setting aside changes in the underlying commodity prices.

We use the GEO as the standard unit of measure. We start with the commodity units of which we take delivery (in the case of streams) or the commodity units associated with our royalty payments, and by using a standard set of metal prices, we multiply the commodity units by the standard commodity price for the commodity of interest; this is then divided by the standard gold price, with the result being a GEO value. In the case of metal streams, we pay to the Operator who delivers the metal a predetermined metal price per unit, which is typically a percentage of the metal's market price at the time of delivery; this is called the cash price. The gold stream for our Mount Milligan property uses a fixed cash price of $435 per ounce versus a percentage of the gold market price. Our beneficial interest is determined after we make our cash price payment to the Operator.

$$\text{Royal Gold's net GEOs} = \sum \frac{[\text{Metal units} \times (1 - \text{Fixed cash price percentage}) \times \text{Standard metal price}]}{\text{Standard gold price}}$$

We then want to determine the percentage interest we receive of the full operation where the stream or royalty applies. To normalize this calculation, we convert the production from the operation of interest into GEOs, again using the same set of standard metal prices referenced at the bottom of this description. In the case of a property that produces multiple commodities, all commodities are converted to GEOs.

$$\text{Operator's site production GEOs} = \sum \frac{[\text{Metal units} \times \text{Standard metal price}]}{\text{Standard gold price}}$$

Having determined both our net GEOs and the Operator's site production GEOs, we can then calculate Royal Gold's percentage of site production:

$$\text{Royal Gold's percentage of site production} = \frac{\text{Royal Gold's net GEOs}}{\text{Operator's site production GEOs}}$$

Assets that produce concentrates that require third-party processing can result in a period of two to six months between the time metals are reported as produced and the time Royal Gold would take delivery. Our calculations have not tried to match this timing.

With Royal Gold's percentage of site production determined, parameters such as energy consumption, GHG emissions and water consumption can then be assessed with respect to the quantity of the specified parameter attributable to us. This approach allows each stream and royalty to be systematically assessed: it allows for a determination of the energy consumption, GHG emissions or water consumption associated with beneficial interest for the portfolio over a set of years and allows us to assess intensity as measured by consumption attributed to Royal Gold divided by our net GEOs.

Standard metal prices

Gold:	$1,758/oz	Nickel:	$13,672/t
Silver:	$20.54/oz	Moly:	$25,992/t
Copper:	$6,186/t	Cobalt:	$31,161/t
Lead:	$1,826/t	Zinc:	$2,269/t

Although, the standard metal prices may change in the future, we would expect that all reported data would use the revised set of metal prices.

1144 15th Street
Suite 2500
Denver, Colorado 80202
+1 (303) 573-1660
royalgold.com

Concept and Design: worksdesign.com