

Northern Star Resources - Climate Change 2022

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Northern Star Resources is a global Australian gold producer with projects located in Western Australia and Alaska, both highly prospective and low sovereign risk regions.

Since 2010 the Company has significantly grown production, earnings and cash flows, and Resources and Reserves through operational excellence and active investment in exploration.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	July 1 2021	June 30 2022	Yes	3 years

C0.3

(C0.3) Select the countries/areas in which you operate.

Australia

United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

AUD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Financial control

C-MMO.7

(C-MMO.7) Which part of the metals and mining value chain does your organization operate in?

Row 1

Mining

Gold

Processing metals

Gold

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
--	--------------------------------

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board-level committee	The key responsibilities of the Environmental, Social & Safety (ESS) Committee (Committee) are to assist the Board in implementing ESS strategies and ensuring responsible and sustainable business practices, and oversight of workplace health & safety, environmental management including climate change, community & social responsibility, business ethics and long term ESS strategic goals. The Committee comprises at least three Directors of which two must be independent non-executive Directors. The Chair of the Committee is an independent non-executive Director with sufficient related experience, appointed by the Board from the Committee's members and will not be the Chair of the Board. At 30 June 2022, the Committee comprised Mary Hackett (Chair), Sally Langer and Sharon Warburton.
Board Chair	Independent Chair

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding risk management policies Setting performance objectives Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<Not Applicable>	The ESS Committee is responsible for reviewing the climate change risk register twice yearly, reviewing the ESS risk register annually and reviewing the ESS strategy annually. The Remuneration Committee reviews and makes recommendations to the Board in relation to Key Management Personnel and other executives in respect of remuneration policy and its link to performance. In FY22, the remuneration framework included a policy objective to focus on positive ESG outcomes, which included a focus on achieving an absolute reduction in greenhouse gas emissions, as follows: Reduce absolute carbon equivalent Scope 1 and Scope 2 Emissions from existing fixed asset levels: - FY22 LTI-1 (to be measured 30 June 2025) – by 100,000t (CO2 equivalent) by end of FY25 on a sustaining annualised basis; and - FY22 LTI-2 (to be measured 30 June 2024) – by 50,000t (CO2 equivalent) by end of FY24 on a sustaining annualised basis.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1 Yes	Northern Star reviewed its Board skills matrix in FY22. The Company engaged external governance specialists to formulate and update the skills matrix in conjunction with the Chairman and Company Secretary. An in-depth analysis of the Board's skills, experience and diversity factors was then undertaken. Each Non-Executive Director was asked to self-assess their own levels of skill, capability and experience in 69 different areas, grouped into 9 categories, against a four-tier scale (from 'Limited' to 'Expert'). The Sustainability skill category included the area of climate change, with the collective Board self-assessment score being in the second quartile for this category, being a score of 62 out of 100.	<Not Applicable>	<Not Applicable>

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Other C-Suite Officer, please specify (Managing Director and Chief Executive Officer)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Other C-Suite Officer, please specify (Chief Legal Officer and Company Secretary)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities <i>The corporate ESG, Environmental and Governance teams report to this position.</i>	<Not Applicable>	Quarterly
Other C-Suite Officer, please specify (Chief Technical Officer)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	As important matters arise

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

- The Managing Director and Chief Executive Officer is responsible for running the affairs of the Company under delegated authority from the Board and to implement the policies and strategy set by the Board.
- Senior management supports the Managing Director and Chief Executive Officer with the Company's business operations, finances and ESG performance, in accordance with the delegated authority of the Board.
- The Chief Legal Officer & Company Secretary's portfolio includes climate-related reporting and disclosure responsibilities.
- The Chief Technical Officer's portfolio includes the execution of decarbonisation actions.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Our FY22 remuneration framework reflected our commitment to reducing our absolute Scope 1 and Scope 2 carbon Emissions by focusing on the introduction of projects which will have the effect of sustained annualised absolute Emissions Reductions year on year.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Management group	Non-monetary reward	Emissions reduction target	Reductions in absolute carbon emissions, and water usage, are included in some Long Term Incentive Performance Rights KPIs for the Group senior management team. Targets of 50,000 tonnes CO2-e reduction by the end of FY24 and 100,000 tonnes CO2-e reduction by the end of FY25. FY22 LTI-1: Water conservation projects to reduce potable water usage at KCGM by 10% by end of FY25

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	1	3	Horizons as defined in our TCFD recommendations phased alignment.
Medium-term	3	5	Horizons as defined in our TCFD recommendations phased alignment.
Long-term	5		Horizons as defined in our TCFD recommendations phased alignment.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Northern Star has in place a Risk Management Standard (NSR-COR-019A-STA) containing Risk Assessment Criteria relevant to the consequence and likelihood of occurrence of events.

- An event with a major financial consequence to the company is defined as a financial loss of \$20M - \$100M.
- An event with a catastrophic financial consequence to the company is defined as a financial loss of >\$100M.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations

Risk management process

A specific climate-related risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term

Medium-term

Long-term

Description of process

Northern Star commenced a strategic alignment with the recommendations of the Taskforce on Climate-Related Financial Disclosure (TCFD) in CY2019, and completed a comprehensive disclosure of its climate risk management processes with the assistance of external consultants. Key achievements completed to date include:

- Undertook qualitative scenario analysis
- Comprehensive disclosure of climate risk management roles, responsibilities and processes
- Comprehensive risk and opportunities identification and disclosure
- Identified next steps for strengthening risk mitigation
- Adoption of a Climate Change Policy, Hired Chief Technical Officer to increase Executive capacity for growth projects and execution of decarbonisation actions
- Appointment of General Manager responsible for renewables projects
- Net Zero Ambition (released July 2021)
- Target 35% Reduction in Scope 1 and Scope 2 GHG Emissions from FY20 baseline by 2030 (released February 2022)

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Regulation risks are regularly reviewed and reassessed in the company risk registers.
Emerging regulation	Relevant, always included	Emerging regulation risks are reviewed and assessed as information comes available for inclusion.
Technology	Relevant, always included	Technology is included in the controls in addition to technological risks and integration.
Legal	Relevant, always included	Legal risks are regularly reviewed and reassessed in the company risk registers.
Market	Relevant, always included	Market risks are regularly reviewed and reassessed in the company risk registers.
Reputation	Relevant, always included	Reputation risks are regularly reviewed and reassessed in the company risk registers.
Acute physical	Relevant, always included	Acute physical risks are regularly reviewed and reassessed in the company risk registers.
Chronic physical	Relevant, always included	Longer term (chronic) risks are assessed and considered in the company risk register, but intensive and detailed reviews are undertaken on a reduced frequency due to the time frame of change.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical	Precipitation and/or hydrological variability
------------------	---

Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Climate change could result in decreased average total annual rainfall causing drier surface conditions and underground aquifers to be replenished slowly. This would impact on operations that source drinking and operational water from aquifers.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation

Comment

Key control measures include: • Third party reviews of usage and aquifer health • Recycled water use with underground and processing • Decant water from tailings facilities for reuse in all our operating process plants • Completed thickener installation at our Junee Operations • Setting water intensity reduction targets

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical	Changing precipitation patterns and types (rain, hail, snow/ice)
------------------	--

Primary potential financial impact

Decreased revenues due to reduced production capacity

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

In Western Australia, rainfall is becoming more concentrated and cyclones more severe; in Alaska, total rainfall is increasing and permafrost melting off-site, both pointing to an increase in the frequency and severity of floods

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Cost of response to risk

Description of response and explanation of cost calculation**Comment**

Key control measures include: • Flood management included in site based management plans • Surface water management infrastructure installed at all sites (e.g. diversion ditches, bunds) • Water level monitoring at surface water structures • Severe Weather and Cyclone Management Plans and Procedures in place • Scenario analysis completed as per TCFD recommendations • Flood mitigation infrastructure review • Update and review current risk profile of storm events

C2.4**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

C2.4a**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.****Identifier**

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Returns on investment in low-emission technology

Company-specific description

Climate related opportunities identified by Northern Star in relation to "Energy Sources", as disclosed in our CY2021 Sustainability Report included: • Carbon trading • Trade off excess renewable energy • Renewable Energy & Energy Efficiency Certificates • Energy price volatility resilience • Diversification of energy sources • Renewable backup generation

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure**Cost to realize opportunity****Strategy to realize opportunity and explanation of cost calculation****Comment**

For more information on Northern Star key climate change related opportunities, please refer to page 59 of our CY2021 Sustainability Report (<https://www.nsrltd.com/investor-and-media/asx-announcements/2022/february/2021-sustainability-report>)

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Primary potential financial impact

Returns on investment in low-emission technology

Company-specific description

Climate related opportunities identified by Northern Star in relation to "Products & Services", as disclosed in our CY2021 Sustainability Report included: • Increase in gold

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Comment

For more information on Northern Star key climate change related opportunities, please refer to page 59 of our CY2021 Sustainability Report (<https://www.nsrltd.com/investor-and-media/asx-announcements/2022/february/2021-sustainability-report>)

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

Climate related opportunities identified by Northern Star in relation to "Resource Efficiency", as disclosed in our CY2021 Sustainability Report included: • Lower input tailings treatment • Reducing water consumption • Increased operating efficiency • Electrification of operations • Track climate performance • Daily hydration testing undertaken at Australian operations.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Comment

For more information on Northern Star key climate change related opportunities, please refer to page 59 of our CY2021 Sustainability Report (<https://www.nsrltd.com/investor-and-media/asx-announcements/2022/february/2021-sustainability-report>)

Identifier

Opp4

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resilience

Primary climate-related opportunity driver

Participation in renewable energy programs and adoption of energy-efficiency measures

Primary potential financial impact

Other, please specify

Company-specific description

Climate related opportunities identified by Northern Star in relation to "Resilience", as disclosed in our CY2021 Sustainability Report included: • Improve social licence to operate • Improved employee safety and satisfaction • Community resilience initiatives • Joint venture partnership collaborations • Reinforce assets to increase resilience to physical impacts • Renewable energy to maintain power quality • Diversify operation locations • Diversify supply chain • Monitor and communicate weather conditions • Consider climate change in environmental management • Determine retreat thresholds • Emerging gold processing techniques

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Comment

For more information on Northern Star key climate change related opportunities, please refer to page 59 of our CY2021 Sustainability Report (<https://www.nsrltd.com/investor-and-media/asx-announcements/2022/february/2021-sustainability-report>)

Identifier

Opp5

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Markets

Primary climate-related opportunity driver

Other, please specify

Primary potential financial impact

Other, please specify

Company-specific description

Climate related opportunities identified by Northern Star in relation to "Markets", as disclosed in our CY2021 Sustainability Report included: • Action and disclosure to increase stakeholder confidence • Action and disclosure to access to capital for adaptation • Incorporate climate change criteria in decision making • Favourable financing for green assets

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Unknown

Are you able to provide a potential financial impact figure?

Please select

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Comment

For more information on Northern Star key climate change related opportunities, please refer to page 59 of our CY2021 Sustainability Report (<https://www.nsrltd.com/investor-and-media/asx-announcements/2022/february/2021-sustainability-report>)

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?**Row 1****Transition plan**

No, our strategy has been influenced by climate-related risks and opportunities, but we do not plan to develop a transition plan within two years

Publicly available transition plan

<Not Applicable>

Mechanism by which feedback is collected from shareholders on your transition plan

<Not Applicable>

Description of feedback mechanism

<Not Applicable>

Frequency of feedback collection

<Not Applicable>

Attach any relevant documents which detail your transition plan (optional)

<Not Applicable>

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future

Northern Star remains committed to the Paris Agreement and a Net Zero carbon future, on a 1.5°C pathway. Since announcing our Net Zero Ambition on 22 July 2021, in February 2022 we outlined our decarbonisation strategy and pathway for achieving our 2030 Emissions Reduction Targets of 35% reduction in Scope 1 and Scope 2 Emissions on the way to achieving Net Zero operational Emissions by 2050. As we implement our decarbonisation strategy and pathway, we will continually assess the need to further develop a transition plan. We have formulated and engaged with investors on our decarbonisation strategy.

Explain why climate-related risks and opportunities have not influenced your strategy

<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative, but we plan to add quantitative in the next two years	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios	RCP 8.5	Company-wide	<Not Applicable>
			Northern Star Resources Scenario 3 'Regressive action' Basis for use was to investigate a pathway consistent with worst-case climate change outcomes. RCP 8.5 is commonly used by peers, which increases the comparability of results for external stakeholders. SSP5 used as a reference point. Key parameters: - Global temperature range (2100) = >4 degrees Celsius - Australian temperature range (2050) = -2 degrees Celsius - Projected GDP (2050) = ~8.8 trillion - Global population (2050) = 8.6 billion - Australian population (2050) 44.2 million Connections across a greater portion of the population in developed and emerging economies through the digital revolution increasingly facilitate access to education and enable discourse and collaboration. In this highly globalised society, investments in health and education are favoured to support human capital and drive innovation and economic growth. With equality and comfort pursued at all costs and no environmental focus, there is a global exploitation of fossil fuel resources and a widespread adoption of resource and energy intensive lifestyles. Regulation is minimised so as not to shackle progress. The retail market and technology applications become increasing sources of gold demand, particularly as the global population and economic growth thrive. With increases in wealth and with inflationary pressures present in the economy, there may be an increase in demand for gold as a store of value. While the gold price may be relatively lower in this scenario, it may be more stable due to global integration and focus on growth. In this free-for-all world, large companies take over and maximise new developments. The burden of adaptation and safety measures is increasing, with implications for existing mining companies' reputation, while also presenting barriers to entry for new market entrants. A focus is placed on automation and digitisation to enhance safety and convenience and compete with peers. Please refer to our CY2020 Sustainability Report for further information on our Climate Change Scenario Analysis work (https://www.nsrltd.com/investor-and-media/asx-announcements/2021/february/2020-sustainability-report)
Physical climate scenarios	RCP 4.5	Company-wide	<Not Applicable>
			Northern Star Resources Scenario 2 'Passive response' Basis for use was to explore mid-range emissions and warming which is broadly aligned with countries' current emission pledges. RCP 4.5 is commonly used by peers, which increases the comparability of results for external stakeholders. SSP3 used as a reference point. Key parameters: - Global temperature range (2100) = 2 - 3 degrees Celsius - Australian temperature range (2050) = ~1.5 degrees Celsius - Projected GDP (2050) = ~2.8 trillion - Global population (2050) = 9.9 billion - Australian population (2050) 28.5 million Financial crises in major economies reinforce and spread distrust in globalisation. Protectionist and national security issues slowly take priority over environmental protection. Demand for local goods increases, putting upward pressure on inflation. In the longer term, more stringent regulation comes into play, including climate policy, to safeguard national resources. The mining sector becomes affected by decreased globalisation and policy which aims to protect upstream supply chains and retain a greater share of returns in Australia. In this anaemic economic environment, there may be greater turnover of existing gold assets as holders liquidate their investment to cash as economic conditions become more challenging. Stunted per capita wealth may reduce retail demand for newly produced gold and, as technology investment is reduced, the potential and breadth of gold applications may be lower in this scenario. However, global population growth is high (particularly in Asia), becoming the main driver of jewellery and technology demand. Additionally, in an environment of greater uncertainty and with inflationary pressures, gold is likely to be increasingly sought for hedging purposes. Central banks may diversify their monetary reserves, accumulating gold. Overall, these diverging pressures may contribute to a larger range of gold prices as volatility increases. In addition to growing regulatory red tape and climate impacts, there is a widespread push for producers to lower costs and hedge output. Lower tendency to extend life of mine to minimise the risk exposure due to gold price volatility. Increased geopolitical tensions may increase international shipping costs. Companies are evaluated on their contribution to local GDP and their compliance with regulation.
Physical climate scenarios	RCP 2.6	Company-wide	<Not Applicable>
			Northern Star Resources Scenario 1 'Proactive effort' Basis for use was to investigate a 2 degrees celsius pathway aligned with the Paris Agreement goal and TCFD requirements. RCP 2.6 is commonly used by peers, meets the TCFD requirements for a low emissions scenario and has greater data availability. SSP1 used as a reference point. Key parameters: - Global temperature range (2100) = <2 degrees Celsius - Australian temperature range (2050) = ~1 degree Celsius - Projected GDP (2050) = ~5 trillion - Global population (2050) = 8.5 billion - Australian population (2050) 36.6 million Environmental degradation and accumulating impacts from climate-related events lead to increased environmental awareness and concern. An increased focus on managing climate change risk and capturing opportunity influences investors, business, governments, and public opinion. This drives more sustainable policy, practices, and investments, both in terms of environmental and social outcomes. As the world embraces the scale of the transformation required, large investments are made into research and development, facilitating innovation, and helping to commercialise low emissions technology more rapidly. Consumption patterns shift as the population becomes less materialistic and may impact the retail demand for gold. Gold's role as a portfolio diversifier and hedge in times of uncertainty remains, with limited potential for growth. However, there would be increased opportunities for sustainable gold for environmental and medical technologies. There is a strong focus on reducing emissions, minimising environmental footprints, and improving rehabilitation practices in the mining sector. Investors become increasingly selective, backing companies with clear and transparent pathways towards decarbonisation and increasing engagement with the outliers. There may be consolidation of mining sector companies in these conditions, as newer and smaller entrants find it more difficult to compete in the face of relatively stable gold demand and high public and investor expectations.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

Northern Star used the climate-related scenario analysis as a strategic planning and risk management tool to explore the following three questions: (1) What is the potential financial effect of climate-related change on Northern Star's operations? (2) Is Northern Star's business strategy flexible and does it adequately accommodate the identified climate-related risks and opportunities? (3) How resilient is Northern Star's business strategy, and where necessary, what options are there for increasing Northern Star's strategic and business resiliency to plausible climate-related risks and opportunities, by making adjustments to strategic and financial plans?

Results of the climate-related scenario analysis with respect to the focal questions

Based on Northern Star's current operations and business strategy performance, each of the three scenarios identified advantages and reputational benefits to Northern Star as well as vulnerabilities that Northern Star would be exposed to and gaps that Northern Star would need to address. The three scenarios also provided insights to strategy adjustments Northern Star would need to make relevant to the scenario impacts on the mining sector and on gold by 2030 and by 2050.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Evaluation in progress	Northern Star's decarbonisation pathway is focussed on measures to reduce reliance on fossil fuels used for electricity generation and increase control over the use of renewables, including wind and solar.
Supply chain and/or value chain	Evaluation in progress	There is a significant reliance on the supply of goods and services to enable the delivery of operations and development projects. Disruption in supply chain from natural events and other causes is recognised as a medium risk requiring control effectiveness improvements.
Investment in R&D	Yes	While multiple decarbonisation studies are underway targeting the electricity generation that underpins our 2030 goals, mobility related emissions are our next key focus area. Northern Star is investing in enabling development projects, such as the BluVein initiative to develop solutions that deliver reductions in mobility emissions. Northern Star are also undertaking studies on potential offset projects, including but not limited to, studies to confirm the eligibility of selected pastoral leases for Human Induced Regeneration (HIR). This fits with our preferred approach to generate offsets, such as carbon sequestration projects, from within local communities and with stakeholder involvement, to benefit our stakeholders.
Operations	Yes	Northern Star's annual operational risk assessments now include the consideration of climate-related risks and opportunities relevant to each site. Northern Star's decarbonisation pathway is focussed on measures to reduce reliance on fossil fuels used for electricity generation and increase control over the use of renewables, including wind and solar.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Direct costs Indirect costs	The influence of climate -related risks and opportunities on Northern Star's financial planning includes planning for direct and indirect costs to align with the TCFD recommendations and to implement Northern Star's decarbonisation strategy and pathway for achieving our 2030 Emissions Reduction Target of 35% reduction in Scope 1 and Scope 2 Emissions on the way to achieving Net Zero operational Emissions by 2050. Indirect costs include salaries and external consultancy costs while direct cost considerations include integrating current and future renewables and storage technology to maintain momentum in reduction of Scope 1 and Scope 2 Emissions. Northern Star has also developed in-house capabilities to model our sites' power and energy demand, wind efficiency and timing, and solar efficiency and timing. Through this work, we are developing a financial model for each of our five operations where we anticipate commissioning renewables.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

No target

C4.1c

(C4.1c) Explain why you did not have an emissions target, and forecast how your emissions will change over the next five years.

	Primary reason	Five-year forecast	Please explain
Row 1	We are planning to introduce a target in the next two years	Reductions in absolute carbon emissions are included in the long-term performance rights Key Performance Indicators (KPIs) for the Northern Star Group senior management team, as shown below. Northern Star's FY22 Long Term Incentives (LTI) Key Performance Indicators (KPIs) (4-year and 3-year performance period) include the following targets for reducing absolute carbon equivalent emissions from existing fixed asset levels: LTI-1 – reduce absolute carbon emissions by 100,000t (CO2 equivalent) by end of FY25 on a sustaining annualised basis LTI-2 – reduce absolute carbon emissions by 50,000t (CO2 equivalent) by end of FY24 on a sustaining annualised basis Northern Star's FY23 LTI KPIs (4 year performance period from 1 July 2022 to 30 June 2026) includes the following target for reducing absolute carbon emissions: Demonstrate tangible, sustainable Scope 1 and 2 carbon Emissions Reductions of 150,000 tonnes CO2 equivalent between 1 July 2021 and 30 June 2026 below business as usual levels.	Northern Star's FY22 remuneration framework reflected our commitment to reducing our absolute Scope 1 and Scope 2 carbon Emissions by focusing on the introduction of projects which will have the effect of sustained annualised absolute Emissions Reductions year on year. This objective has continued to be reflected in our FY23 remuneration framework. These targets form part of Northern Star's decarbonisation strategy and pathway for achieving our 2030 Emissions Reduction Targets of 35% reduction in Scope 1 and Scope 2 Emissions on the way to achieving Net Zero operational Emissions by 2050.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Net-zero target(s)

Other climate-related target(s)

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2022

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Other, please specify	Other, please specify (Scope 1 & 2 Emissions Reduction)
-----------------------	---

Target denominator (intensity targets only)

<Not Applicable>

Base year

2020

Figure or percentage in base year

931362

Target year

2030

Figure or percentage in target year

Figure or percentage in reporting year

% of target achieved relative to base year [auto-calculated]

<Calculated field>

Target status in reporting year

New

Is this target part of an emissions target?

Northern Star is pursuing the planned strategic pathway shown below to reduce Scope 1 and Scope 2 Emissions by 35% by 2030. This would achieve a reduction in greenhouse gas emissions from our baseline (1 July 2020) of 931ktCO2-e down to approximately 590 kt CO2-e.

Is this target part of an overarching initiative?

Please select

Please explain target coverage and identify any exclusions

Please refer to Northern Star's CY2021 (page 46-48) Sustainability Report for details of our proposed strategic pathway and associated emissions reductions prior to 2030, to achieve a proposed reduction in greenhouse gas emissions from our baseline (FY20) of 931kt CO2-e down to approximately 590kt CO2-e.

Plan for achieving target, and progress made to the end of the reporting year

List the actions which contributed most to achieving this target

<Not Applicable>

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Company-wide

Absolute/intensity emission target(s) linked to this net-zero target

Abs1

Target year for achieving net zero

2050

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

Please explain target coverage and identify any exclusions

Since announcing our Net Zero Ambition on 22 July 2021, in February 2022 we outlined our decarbonisation pathway for achieving our 2030 Emissions Reduction Targets of 35% reduction in Scope 1 and Scope 2 Emissions on the way to achieving Net Zero operational Emissions by 2050.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Unsure

Planned milestones and/or near-term investments for neutralization at target year

<Not Applicable>

Planned actions to mitigate emissions beyond your value chain (optional)

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO₂e savings.

	Number of initiatives	Total estimated annual CO ₂ e savings in metric tonnes CO ₂ e (only for rows marked *)
Under investigation	2	75511
To be implemented*		
Implementation commenced*	1	6700
Implemented*		
Not to be implemented		

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Low-carbon energy generation	Solar PV
------------------------------	----------

Estimated annual CO2e savings (metric tonnes CO2e)

6700

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

Please select

Estimated lifetime of the initiative

Please select

Comment

Refer to Page 32 of Northern Star's FY22 Sustainability Report for further details on the installation and energisation of an additional 1.94 MW solar farm expansion at Carosue Dam, resulting in a total solar farm installed capacity of 6.3 MW and a maximum potential Emissions Reduction capacity of 6.7 kt CO2-e per annum. No reduction in emissions was achieved from this installation in FY22 as the solar farm and the Carosue Dam power station were not yet integrated to enable Northern Star to realise the 6.7 kt CO2-e emission reduction opportunity.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Financial optimization calculations	We have developed inhouse capabilities to model our sites' power and energy demand, wind efficiency and timing, and solar efficiency and timing. Through this work, we are developing a financial model for each of our five operations where we anticipate commissioning renewables, as shown in our 2030 Emissions Reduction pathway, in Figure 10 on page 34 of our FY22 Sustainability Report.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

No

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

- Yes, a divestment
- Yes, a merger

Name of organization(s) acquired, divested from, or merged with

Northern Star Resources Limited merged with Saracen Mineral Holdings. Northern Star divested its Kundana Assets comprising Kundana Operations (51% interest in the East Kundana Production JV and the East Kundana Exploration JV; 75% interest in West Kundana Farm-in JV and the Carbine / Carnage gold project. Northern Star completed the sale of two wholly owned assets located in Western Australia, the Paulsens Gold Operation (Paulsens) and Western Tanami Gold Project (Western Tanami).

Details of structural change(s), including completion dates

Northern Star and Saracen completed the merger on 12 February 2021. Inclusion of historical legacy data from Saracen assets prior to the merger has resulted in a restatement of data prior to 12 February 2021, with more details available in our FY22 Sustainability Report and FY22 Performance Data Tables. Northern Star completed the Kundana Asset divestment on 18 August 2021. For details, see Northern Star's website ASX Announcement 'Kundana Asset Sale Completes' dated 18/08/2021. Northern Star completed the Paulsens and Western Tanami Asset divestment on 15 June 2022. For details, see Northern Star's website ASX Announcement 'Northern Star Completes Paulsens and Western Tanami Sale' dated 15/06/2022.

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in reporting year definition	In financial year (FY) 2022, Northern Star changed from publicly reporting its emissions in its annual sustainability reports by calendar year (CY) to FY. Northern Star's FY22 Sustainability Report presents comparative emissions data for FY20, FY21 and FY22.

C5.1c

(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	No, because the impact does not meet our significance threshold	

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start
July 1 2019

Base year end
June 30 2020

Base year emissions (metric tons CO2e)
467619

Comment

Northern Star is committed to reducing its Scope 1 and 2 Emissions by 35% (from a 1 July 2020 baseline of 931kt CO2-e) by 2030, on the way to Net Zero operational emissions by 2050.

Scope 2 (location-based)

Base year start
July 1 2019

Base year end
June 30 2020

Base year emissions (metric tons CO2e)
463743

Comment

Northern Star is committed to reducing its Scope 1 and 2 Emissions by 35% (from a 1 July 2020 baseline of 931kt CO2-e) by 2030, on the way to Net Zero operational emissions by 2050.

Scope 2 (market-based)

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 1: Purchased goods and services

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO₂e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Australia - National Greenhouse and Energy Reporting Act

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

710273

Start date

July 1 2021

End date

June 30 2022

Comment

These values reflect the equity share of a given facility. 100% Pogo emissions included from FY2019 until present (from acquisition in October 2018) 100% Saracen emissions included from FY2019 until present (legacy data incorporated from pre-merger) 100% KCGM emissions included from FY2020 until present (from acquisition in January 2020) Kundana and East Kundana assets were divested in August 2021 Paulsens and Western Tanami assets were divested in June 2022

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)

642225

Start date

July 1 2020

End date

June 30 2021

Comment

These values reflect the equity share of a given facility. 100% Pogo emissions included from FY2019 until present (from acquisition in October 2018) 100% Saracen emissions included from FY2019 until present (legacy data incorporated from pre-merger) 100% KCGM emissions included from FY2020 until present (from acquisition in January 2020) Kundana and East Kundana assets were divested in August 2021 Paulsens and Western Tanami assets were divested in June 2022

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)

476161

Start date

July 1 2019

End date

June 30 2020

Comment

These values reflect the equity share of a given facility. 100% Pogo emissions included from FY2019 until present (from acquisition in October 2018) 100% Saracen emissions included from FY2019 until present (legacy data incorporated from pre-merger) 100% KCGM emissions included from FY2020 until present (from acquisition in January 2020) Kundana and East Kundana assets were divested in August 2021 Paulsens and Western Tanami assets were divested in June 2022

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)

402339

Start date

July 1 2018

End date

June 30 2019

Comment

These values reflect the equity share of a given facility. 100% Pogo emissions included from FY2019 until present (from acquisition in October 2018) 100% Saracen emissions included from FY2019 until present (legacy data incorporated from pre-merger) 100% KCGM emissions included from FY2020 until present (from acquisition in January 2020) Kundana and East Kundana assets were divested in August 2021 Paulsens and Western Tanami assets were divested in June 2022

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

Please select

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

479780

Scope 2, market-based (if applicable)

<Not Applicable>

Start date

July 1 2021

End date

June 30 2022

Comment

These values reflect the equity share of a given facility. 100% Pogo emissions included from FY2019 until present (from acquisition in October 2018) 100% Saracen emissions included from FY2019 until present (legacy data incorporated from pre-merger) 100% KCGM emissions included from FY2020 until present (from acquisition in January 2020) Kundana and East Kundana assets were divested in August 2021 Paulsens and Western Tanami assets were divested in June 2022

Past year 1

Scope 2, location-based

491681

Scope 2, market-based (if applicable)

<Not Applicable>

Start date

July 1 2020

End date

June 30 2021

Comment

These values reflect the equity share of a given facility. 100% Pogo emissions included from FY2019 until present (from acquisition in October 2018) 100% Saracen emissions included from FY2019 until present (legacy data incorporated from pre-merger) 100% KCGM emissions included from FY2020 until present (from acquisition in January 2020) Kundana and East Kundana assets were divested in August 2021 Paulsens and Western Tanami assets were divested in June 2022

Past year 2

Scope 2, location-based

375581

Scope 2, market-based (if applicable)

<Not Applicable>

Start date

July 1 2019

End date

June 30 2020

Comment

These values reflect the equity share of a given facility. 100% Pogo emissions included from FY2019 until present (from acquisition in October 2018) 100% Saracen emissions included from FY2019 until present (legacy data incorporated from pre-merger) 100% KCGM emissions included from FY2020 until present (from acquisition in January 2020) Kundana and East Kundana assets were divested in August 2021 Paulsens and Western Tanami assets were divested in June 2022

Past year 3

Scope 2, location-based

209438

Scope 2, market-based (if applicable)

<Not Applicable>

Start date

July 1 2018

End date

June 30 2019

Comment

These values reflect the equity share of a given facility. 100% Pogo emissions included from FY2019 until present (from acquisition in October 2018) 100% Saracen emissions included from FY2019 until present (legacy data incorporated from pre-merger) 100% KCGM emissions included from FY2020 until present (from acquisition in January 2020) Kundana and East Kundana assets were divested in August 2021 Paulsens and Western Tanami assets were divested in June 2022

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

232952

Emissions calculation methodology

Supplier-specific method

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

39

Please explain

39% of invited suppliers in the category of "goods and services" provided the required information to assist Northern Star to build our understanding of the scale and nature of our Scope 3 Emissions. Standard emission factors were used to calculate the contribution of the remaining suppliers on an accepted spend based method to complete our FY22 Scope 3 Emissions data.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

27896

Emissions calculation methodology

Supplier-specific method

Spend-based method

Asset-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

38

Please explain

38% of invited suppliers in the category of "capital goods" provided the required information to assist Northern Star to build our understanding of the scale and nature of our Scope 3 Emissions. Standard emission factors were used to calculate the contribution of the remaining suppliers on an accepted spend based method to complete our FY22 Scope 3 Emissions data.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

55254

Emissions calculation methodology

Supplier-specific method

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

67

Please explain

67% of invited suppliers in the category of "Fuel-and-energy-related activities (not included in Scope 1 or 2)" provided the required information to assist Northern Star to build our understanding of the scale and nature of our Scope 3 Emissions. Standard emission factors were used to calculate the contribution of the remaining suppliers on an accepted spend based method to complete our FY22 Scope 3 Emissions data.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

35521

Emissions calculation methodology

Spend-based method

Fuel-based method

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

13

Please explain

13% of invited suppliers in the category of "Upstream transportation and distribution" provided the required information to assist Northern Star to build our understanding of the scale and nature of our Scope 3 Emissions. Standard emission factors were used to calculate the contribution of the remaining suppliers using a combination of spend based, fuel based and distance based methods to complete our FY22 Scope 3 Emissions data.

Waste generated in operations**Evaluation status**

Relevant, not yet calculated

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain**Business travel****Evaluation status**

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

840

Emissions calculation methodology

Supplier-specific method

Hybrid method

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

All business travel data was supplied by our travel partner in the form of a combined travel report with calculated emissions, as well as data to enable distance-method calculations. Data incorporated emissions variations for cabin class for air travel.

Employee commuting**Evaluation status**

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

25529

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Data for workforce commuting was calculated using a distance methodology, and use of detailed manifest/flight information for all FIFO and chartered flights, and detailed manifest/driving distances for all DIDO/bus charters. All flight and bus trip information was calculated from our internal "InFlight" software system which records all workforce commute travel (business travel excepted).

Upstream leased assets**Evaluation status**

Not relevant, explanation provided

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Northern Star does not have upstream leased assets

Downstream transportation and distribution**Evaluation status**

Relevant, not yet calculated

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Processing of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

210

Emissions calculation methodology

Supplier-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

All gold sold is processed through the Perth Mint who provided detailed information on emissions factors and total emissions attributable to Northern Star.,

Use of sold products

Evaluation status

Relevant, not yet calculated

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

End of life treatment of sold products

Evaluation status

Not evaluated

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Downstream leased assets

Evaluation status

Not evaluated

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Franchises

Evaluation status

Not evaluated

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Investments

Evaluation status

Not evaluated

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Other (upstream)

Evaluation status

Not evaluated

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Other (downstream)

Evaluation status

Not evaluated

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

C6.5a

(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

Start date

January 1 2021

End date

December 31 2021

Scope 3: Purchased goods and services (metric tons CO₂e)

126822

Scope 3: Capital goods (metric tons CO₂e)

61

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO₂e)

53573

Scope 3: Upstream transportation and distribution (metric tons CO₂e)

7377

Scope 3: Waste generated in operations (metric tons CO₂e)

Scope 3: Business travel (metric tons CO₂e)

Scope 3: Employee commuting (metric tons CO₂e)

15872

Scope 3: Upstream leased assets (metric tons CO₂e)

Scope 3: Downstream transportation and distribution (metric tons CO₂e)

Scope 3: Processing of sold products (metric tons CO₂e)

408

Scope 3: Use of sold products (metric tons CO₂e)

Scope 3: End of life treatment of sold products (metric tons CO₂e)

Scope 3: Downstream leased assets (metric tons CO₂e)

Scope 3: Franchises (metric tons CO₂e)

Scope 3: Investments (metric tons CO₂e)

Scope 3: Other (upstream) (metric tons CO₂e)

Scope 3: Other (downstream) (metric tons CO₂e)

Comment

Past year 2

Start date

End date

Scope 3: Purchased goods and services (metric tons CO₂e)

Scope 3: Capital goods (metric tons CO₂e)

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO₂e)

Scope 3: Upstream transportation and distribution (metric tons CO₂e)

Scope 3: Waste generated in operations (metric tons CO₂e)

Scope 3: Business travel (metric tons CO₂e)

Scope 3: Employee commuting (metric tons CO₂e)

Scope 3: Upstream leased assets (metric tons CO₂e)

Scope 3: Downstream transportation and distribution (metric tons CO₂e)

Scope 3: Processing of sold products (metric tons CO₂e)

Scope 3: Use of sold products (metric tons CO₂e)

Scope 3: End of life treatment of sold products (metric tons CO₂e)

Scope 3: Downstream leased assets (metric tons CO₂e)

Scope 3: Franchises (metric tons CO₂e)

Scope 3: Investments (metric tons CO₂e)

Scope 3: Other (upstream) (metric tons CO₂e)

Scope 3: Other (downstream) (metric tons CO₂e)

Comment

Past year 3

Start date

End date

Scope 3: Purchased goods and services (metric tons CO2e)

Scope 3: Capital goods (metric tons CO2e)

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

Scope 3: Business travel (metric tons CO2e)

Scope 3: Employee commuting (metric tons CO2e)

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.8

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

1190053

Metric denominator

Other, please specify (Troy ounce of gold sold)

Metric denominator: Unit total

1560958

Scope 2 figure used

Location-based

% change from previous year

7

Direction of change

Increased

Reason for change

Emissions intensity (total emissions generated per ounce of gold sold) has increased from 0.7 t CO2-e/oz to 0.8 t CO2-e/oz due to the increased depth at which we are recovering material.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	665576	Other, please specify (Global Warming Potential as per Australian National Greenhouse and Energy Reporting Regulations ,and Australian National Greenhouse and Energy Reporting (Measurement) Determination.)
CH4	1032	Other, please specify (Global Warming Potential as per Australian National Greenhouse and Energy Reporting Regulations ,and Australian National Greenhouse and Energy Reporting (Measurement) Determination.)
N2O	1591	Other, please specify (Global Warming Potential as per Australian National Greenhouse and Energy Reporting Regulations ,and Australian National Greenhouse and Energy Reporting (Measurement) Determination.)
SF6	38.4	Other, please specify (Global Warming Potential as per Australian National Greenhouse and Energy Reporting Regulations ,and Australian National Greenhouse and Energy Reporting (Measurement) Determination.)
HFCs	0	Other, please specify (Global Warming Potential as per Australian National Greenhouse and Energy Reporting Regulations ,and Australian National Greenhouse and Energy Reporting (Measurement) Determination.)
PFCs	0	Other, please specify (Global Warming Potential as per Australian National Greenhouse and Energy Reporting Regulations ,and Australian National Greenhouse and Energy Reporting (Measurement) Determination.)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Australia Western Australia	672408
United States of America Alaska	37865

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By facility

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Carosue Dam	115518	-30.153608	122.351022
Porphyry	21058	-29.780281	122.312688
Deep South	14943	-29.544365	122.545397
Black Flag, Mungari & Mount Burgess Station Operations	17		
Kanowna Belle	14330	-30.604106	121.578512
Kundana	1265	-30.706303	121.225981
Millenium	849		
South Kalgoorlie (Jubilee)	23839	-31.038928	121.61585
Fimiston	225577	-30.776995	121.506895
Gidji	42	-30.588948	121.456867
Jundee	141048	-26.358019	120.621251
Bronzewing	2784	-27.36792	121.009647
Thunderbox	108459	-28.154752	121.002718
Pogo	37865	64.453575	-144.903995
Paulsens	1363	-22.579743	116.243836
Central Tanami	621	-19.89005	128.83656
Western Tanami	694	-19.89005	128.83656

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	710273	<Not Applicable>	
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Australia Western Australia	349706	
United States of America Alaska	130074	

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By facility

C7.6b

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Black Flag, Mungari & Mount Burges Station Operations	2	
Kanowna Belle	75791	
Kundana	17	
South Kalgoorlie (Jubilee)	19233	
Fimiston	231596	
Gidji	22945	
Pogo	130074	
Northern Star Corporate Office	121	

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	479780		
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO ₂ e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption		<Not Applicable >		
Other emissions reduction activities		<Not Applicable >		
Divestment	56188	Decreased	5	The change in emissions represents the difference between the contribution of the divested assets to the FY21 and FY22 Scope 1 and Scope 2 combined totals. The percentage value represents the percentage contribution of the divested assets to the FY21 Scope 1 and Scope 2 combined total.
Acquisitions		<Not Applicable >		
Mergers		<Not Applicable >		
Change in output		<Not Applicable >		
Change in methodology		<Not Applicable >		
Change in boundary		<Not Applicable >		
Change in physical operating conditions	56147	Increased	4.955	The change in emissions represents the net increase in Scope 1 and Scope 2 emissions from FY21 to FY22. This increase due to an increase in Scope 1 Emissions. These were mostly attributed to an increase in diesel consumption associated with increased production, often from deeper sources, and a smaller portion to on-site electricity production. The percentage value represents the percentage increase in Scope 1 and Scope 2 emissions from FY21 to FY22.
Unidentified		<Not Applicable >		
Other		<Not Applicable >		

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	Unable to confirm heating value		3134953.33	3134953.33
Consumption of purchased or acquired electricity	<Not Applicable>		691568.88	691568.88
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	8184.16	<Not Applicable>	8184.16
Total energy consumption	<Not Applicable>	8184.16	3826522.21	3834706.37

C-MM8.2a

(C-MM8.2a) Report your organization's energy consumption totals (excluding feedstocks) for metals and mining production activities in MWh.

	Heating value	Total MWh
Consumption of fuel (excluding feedstocks)	Unable to confirm heating value	3134953.33
Consumption of purchased or acquired electricity	<Not Applicable>	691568.88
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	8184.16
Total energy consumption	<Not Applicable>	3834706.37

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Other biomass

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Coal

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Oil

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

45302.77

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Includes fuel oils, lubricating oils and non-lubricant fluid oils that are combusted as part of operations.

Gas

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

1063911.94

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Includes liquefied natural gas (LNG), liquefied petroleum gas (LPG) and pipeline natural gas (PNG) combusted directly on our sites. These gases are used for a combination of self-generation of electricity, mine heating and other purposes.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

2025738.61

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Includes diesel combusted in mobile and stationery plant (including power generation), diesel used in explosives, greases used in lubricants, jet kerosene, sulphur and unleaded gasoline combustion.

Total fuel**Heating value**

Unable to confirm heating value

Total fuel MWh consumed by the organization

3134953.33

MWh fuel consumed for self-generation of electricity**MWh fuel consumed for self-generation of heat****MWh fuel consumed for self-generation of steam**

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Includes fuel oils, lubricating oils and non-lubricant fluid oils that are combusted as part of operations. Includes liquefied natural gas (LNG), liquefied petroleum gas (LPG) and pipeline natural gas (PNG) combusted directly on our sites. These gases are used for a combination of self-generation of electricity, mine heating and other purposes. Includes diesel combusted in mobile and stationery plant (including power generation), diesel used in explosives, greases used in lubricants, jet kerosene, sulphur and unleaded gasoline combustion.

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	496802.5	496802.5		
Heat				
Steam				
Cooling				

C-MM8.2d

(C-MM8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed for metals and mining production activities.

	Total gross generation (MWh) inside metals and mining sector boundary	Generation that is consumed (MWh) inside metals and mining sector boundary
Electricity	496802.5	496802.5
Heat		
Steam		
Cooling		

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

C9. Additional metrics**C9.1**

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Energy usage

Metric value

8.8

Metric numerator

Net energy consumed 13,804,848 GJ

Metric denominator (intensity metric only)

Troy ounce of gold sold 1,560,958

% change from previous year

10

Direction of change

Increased

Please explain

Energy intensity (net energy consumed per ounce of gold sold) has increased from 8 GJ/Troy oz to 8.8 GJ/Troy oz due to the increase in production. Net energy consumed on our operations comprises all energy consumed by our facilities, including site produced electricity, grid purchased electricity and fuels burnt, less any power generated onsite.

Description

Other, please specify (Total water consumed)

Metric value

0.01

Metric numerator

Total Water Consumption 19,039 ML

Metric denominator (intensity metric only)

Gold sold 1,560,958 Troy Oz

% change from previous year

9

Direction of change

Increased

Please explain

Water consumption intensity (total water consumed per ounce of gold sold) has increased from 0.011 ML/Troy Oz to 0.012 ML/Troy Oz due to the increase in production.

C-MM9.3a

(C-MM9.3a) Provide details on the commodities relevant to the mining production activities of your organization.

C-MM9.3b

(C-MM9.3b) Provide details on the commodities relevant to the metals production activities of your organization.

Output product

Gold

Capacity (metric tons)

Production (metric tons)

48.55

Annual production in copper-equivalent units (thousand tons)

Scope 1 emissions (metric tons CO2e)

710273

Scope 2 emissions (metric tons CO2e)

479780

Scope 2 emissions approach

Location-based

Pricing methodology for-copper equivalent figure

Comment

Production figure stated above is Gold Sold (1,560,958 Troy Ounces = 48.55 Tonnes)

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

Investment in low-carbon R&D	Comment
Row 1 Yes	In August 2021, Northern Star joined a consortium of six other mining companies to collectively accelerate BluVein's dynamic charging technology for heavy duty battery electric mining vehicles in underground and surface mining applications. The BluVein project allows grid power to be supplied directly to a vehicle's traction drive motors and simultaneously charging of onboard batteries. This feature eliminates all battery swapping and static vehicle charging requirements, enables smaller and lower cost batteries and increased haulage speeds.

C-MM9.6a

(C-MM9.6a) Provide details of your organization's investments in low-carbon R&D for metals and mining production activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Other, please specify (Dynamic charging technology for heavy duty battery electric mining vehicles in underground and surface mining applications.)	Applied research and development	≤20%		The BluVein project has made significant progress with proof-of-concept experimentation completed and system integration and testing underway. Northern Star has since invested in the next phase of the project through to FY23.
Other, please specify	Please select	Please select		

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	No third-party verification or assurance

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

FY22 - GRI SDG SASB Index.pdf

NSR_Assurance_Statement_Bureau Veritas_280822.pdf

Page/ section reference

See attached GRI Index page 6 of 10 for details of limited assurance of scope 1 emissions against the GRI 305: Emissions 2016 disclosure 305-1 Direct (Scope 1) GHG Emissions

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

FY22 - GRI SDG SASB Index.pdf

NSR_Assurance_Statement_Bureau Veritas_280822.pdf

Page/ section reference

See attached GRI Index page 6 of 10 for details of limited assurance of scope 2 emissions against the GRI 305: Emissions 2016 disclosure 305-2 Energy Indirect (Scope 2) GHG Emissions

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C5. Emissions performance	Other, please specify (Gold Sold)	Perth Mint Outturn Statements	The Outturn Statements show the final Perth Mint assay results from their refining process to take our dore bar to London Bullion Market Association standard gold bars, which is the amount of gold we can then sell into the gold market.

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

No, and we do not currently anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Other, please specify (Assessing our Scope 3 Emissions Sources)

Details of engagement

Please select

% of suppliers by number

% total procurement spend (direct and indirect)

% of supplier-related Scope 3 emissions as reported in C6.5

100

Rationale for the coverage of your engagement

While Northern Star does not have a Scope 3 Emissions Reduction target, we are focused on being able to fully assess and understand our Scope 3 Emissions Sources. In FY22 we surveyed our supply chain categories of: lime and cement; corporate infrastructure; general freight; processing materials; underground mining services; tyres; light vehicles; and heavy mining equipment to ascertain: • Updated data related to material suppliers' contribution to our emissions, including existing data providers, new suppliers and suppliers who previously were non-responsive. • Data related to commercial travel across Australia, USA and throughout the industry with the assistance of our travel partners.

Impact of engagement, including measures of success

Approximately 30% of invited suppliers provided the required information to assist Northern Star build our understanding of the scale and nature of our Scope 3 Emissions.

Comment

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, but we plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage indirectly through trade associations

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

Northern Star's Climate Change Policy and ESS Committee Charter are attached

nsr-cor-029-cha-ess-committee-charter.pdf

NSR-COR-034-POL - Climate Change Policy.pdf

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

Please refer to our C1. Governance responses for supporting information on Northern Star's Board and Senior Management approval processes in place. At Board level, Northern Star's ESS Committee assists the Board in implementing the Company's environmental, social and safety strategies and ensuring responsible and sustainable business practices. This includes the ESS Committee assisting the Board in its oversight, monitoring and review of the Company's practices in the key area of physical and transitional climate change. Northern Star's Chief Legal Officer & Company Secretary's portfolio includes climate-related reporting, disclosure and engagement responsibilities which are carried out by Northern Star's ESG Engagement function.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Other, please specify (The Chamber of Minerals and Energy of Western Australia)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

The CME will advocate for a sustainable development approach to climate change policy including the transition to net zero emissions, a framework that balances the social, economic and environmental aspects associated with emissions reduction, and ensures a just transition for those affected by change. Australia must fulfil its aspirations in all three areas rather than viewing them as at odds with each other. In the Australian context, CME will advocate for this best to be achieved through government-coordinated approaches that ensure: - a national framework to achieve national objectives in a co-ordinated and efficient manner, providing policy stability and investment certainty for industry; - a single, national emissions account that is up to date, transparent and publicly available; - a transparent price signal across the whole economy and promotion of lowest cost abatement, leveraging existing mechanisms where possible, and appropriately considering the international competitiveness of trade exposed industries; - investment in a broad range of affordable technologies including for energy efficiency, emissions reduction, carbon sequestration, and adaptation measures; - Australia's competitive advantages in a future low emissions economy are leveraged through the development and supply of in-demand new energy and mineral commodities; - a mature, liquid and affordable market for domestic offsets and allowing for international trade of credible offsets; - related climate adaptation, land use and planning matters are progressed including: - the Western Australian Government ensuring appropriate carbon-related opportunities on Crown (state) lands can be realised; and - State-managed utilities and assets are managed to support decarbonisation and energy transition and provide for water, energy and infrastructure security.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In voluntary sustainability report

Status

Complete

Attach the document

CY2021-Northern-Star-Sustainability-Report.pdf
Sustainability Report 2022.pdf
Annual Report 2022.pdf

Page/Section reference

FY22 Sustainability Report: Sustainability Snapshot (pg 6-7) Our Sustainability Journey (pg 18-19) Sustainability Performance Metrics (pg 26-27) Climate Change (pg 30-43) Additional information is also available in our CY2021 Sustainability Report that partially overlaps with this reporting year: Sustainability Snapshot (pg 4-5) Sustainability Performance Metrics (pg 18-19) Northern Star's Journey (pg 26-27) Climate Change (pg 44-59)

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1 Yes, both board-level oversight and executive management-level responsibility	At Board level, Northern Star's ESS Committee assists the Board in implementing the Company's environmental, social and safety strategies and ensuring responsible and sustainable business practices. This includes the ESS Committee assisting the Board in its oversight, monitoring and review of the Company's practices in the key area of environmental management, which includes biodiversity-related issues. Northern Star's Chief Legal Officer & Company Secretary's portfolio includes environmental management responsibilities which are carried out by Northern Star's Environmental function. Northern Star has an Environmental Policy that addresses biodiversity and is publicly available on our website. In addition, we have an internal Biodiversity Global Standard, which sets the standards on biodiversity management for all our sites.	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1 Yes, we have made public commitments only	Adoption of the mitigation hierarchy approach Commitment to respect legally designated protected areas Commitment to secure Free, Prior and Informed Consent (FPIC) of Indigenous Peoples	<Not Applicable>

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1 No, and we do not plan to assess biodiversity-related impacts within the next two years	<Not Applicable>

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity-related commitments
Row 1 Yes, we are taking actions to progress our biodiversity-related commitments	Land/water management Species management Education & awareness

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1 No	Please select

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Governance Impacts on biodiversity Other, please specify (details of taxa, communities and species locations relative to our operations and projects)	Refer to the FY22 Sustainability Report's Biodiversity section on pages 47 - 52, and to Northern Star's FY22 - Biodiversity Values table at: https://www.nsltd.com/getattachment/sustainability/fy22-biodiversity-values.pdf?lang=en-AU Sustainability Report 2022.pdf

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chief Legal Officer and Company Secretary	Other C-Suite Officer

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms