



# Table of contents

1.	HIGHLIGHTS	
		05
2.	INTRODUCTION	
2.1.	About this report	07
2.2.	Message from the CEO	08
3.	GOVERNANCE	
3.1.	Board oversight	10
3.2.	Executive and corporate oversight	10
3.3.	Our health and safety, environment and community policy	1
3.4.	At the operational level	11

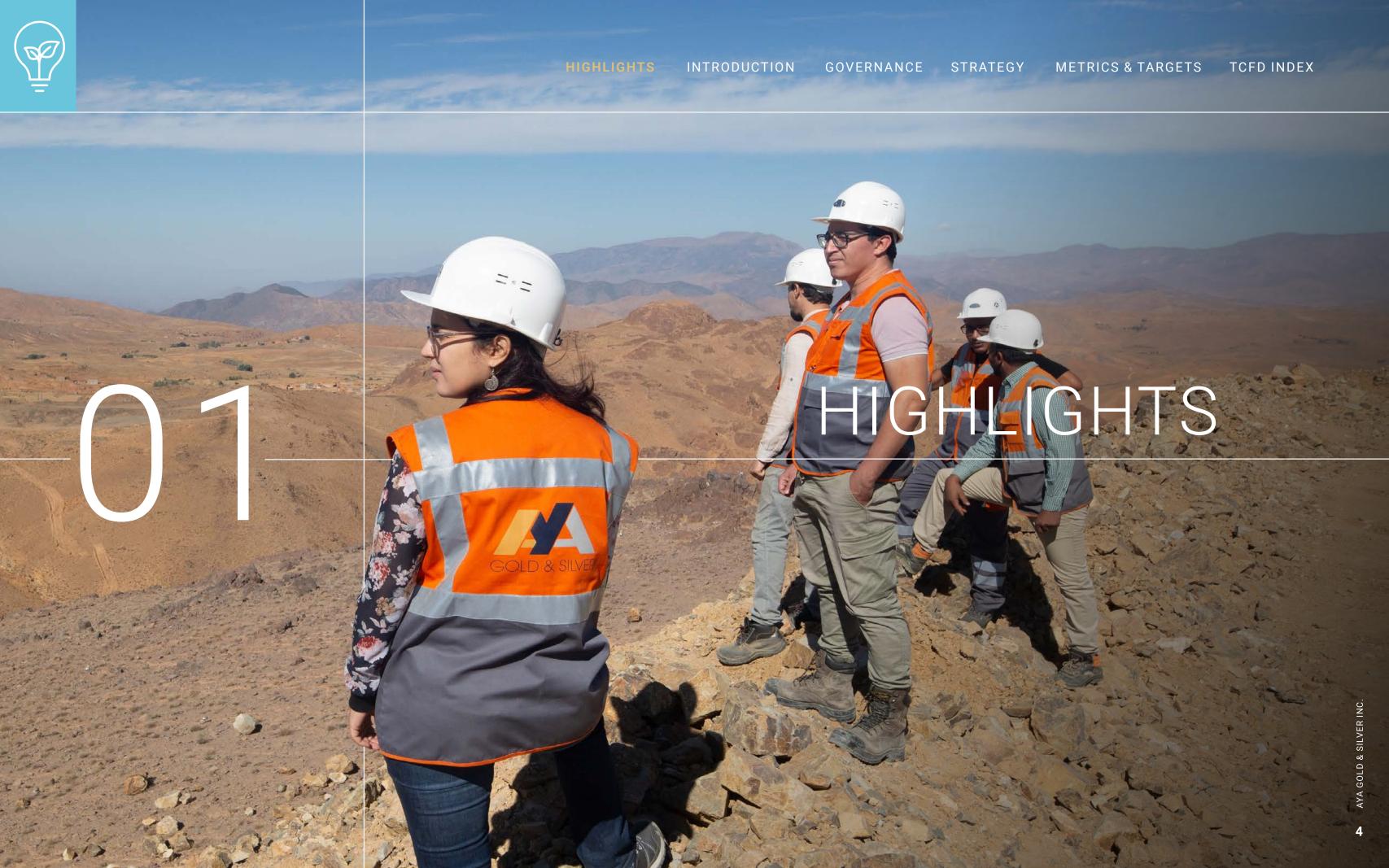
4.	STRATEGY	
4.1.	Climate-related risks and opportunities identified for our business	13
4.2.	Climate scenario analysis	19
<b>5</b> .	METRICS & TARGETS	
5.1.	Our approach to metrics	27
5.2.	GHG emissions	28
5.3.	Carbon reduction projects and how we will meet our targets	30
6.	TCFD INDEX	
		27



# Acronyms

HIGHLIGHTS

AIF	Annual Information Form	ISSB	International Sustainability Standards Board
CCG	Corporate Climate Governance	IPCC	Intergovernmental Panel on Climate Change
CDP	Carbon Disclosure Project	KPI	Key Performance Indicator
CO <sub>2</sub>	Carbon Dioxide	LoM	Life of Mine
СОР	Conference of the Parties	NDC	Nationally Determined Contribution
CSA	Corporate Sustainability Assessment	ONEE	Office National de l'Électricité et de l'Eau Potable
CSRD	Corporate Sustainability Reporting Directive	PPA	Power Purchase Agreement
CSSB	Canadian Sustainability Standards Board	Physical Risk	Risks, such as flooding or wildfires, that arise from the physical impacts of climate change
<b>EBITDA</b>	Earnings Before Interest, Taxes, Depreciation and Amortization	RCP	Representative Concentration Pathway(s), which
ESAP	Environmental and Social Action Plan		refers to climate scenarios of a given radiative forcing, e.g., RCP8.5 with a radiative forcing of
ESG	Environment, Social and Governance		8.5Wm-2. Each RCP implies differing levels of physical risk.
ESMS	Environmental and Social Management System	SASB	Sustainability Accounting Standards Board
FS	Feasibilty Study	SSP	Shared Socio-economic Pathway(s), five distinct
GHG	Greenhouse Gas		trajectories examining socio-economic changes projected to 2100.
GISTM	Global Industry Standard on Tailings Management	TCFD	Task Force on Climate-related Financial Disclosures
GST	Global Stocktake	Transition Risks	Risks that arise from the societal response to climate change with the transition toward
HSEC	Health & Safety, Environment & Community	KISKS	a low-carbon future.
IEA	International Energy Agency	UN	United Nations
IFC	International Finance Corporation	WRI	World Resource Institute
IFRS	International Financial Reporting Standards		





#### **CLIMATE CHANGE JOURNEY**



#### 2022/2023 CLIMATE CHANGE HIGHLIGHTS



Renewable energy PPA signed for the Zgounder Silver Mine



First time Scope 3 GHG emissions calculations



Of water recycled, a 6% improvement over 2021



Of executive short-term incentives linked with ESG performance

#### 2024/2025 OBJECTIVES<sup>1</sup>



Reduction in Scope 2 emissions compared to "BAU" in 2025



Reduction in overall emissions<sup>3</sup> by 2025 compared to 2021 base year

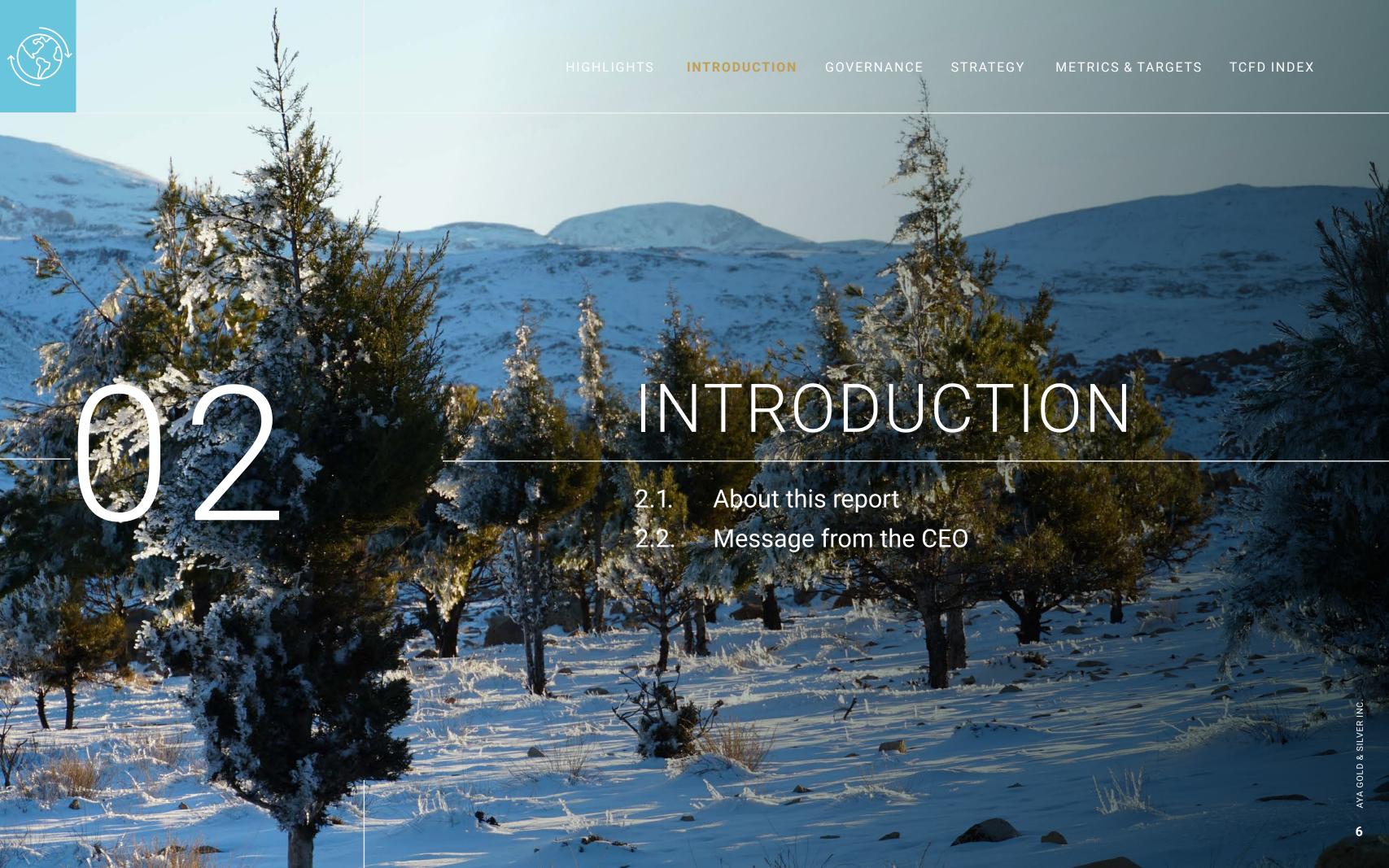


Tonnes of CO<sub>2</sub>e targeted per thousand of tonnes of ore processed



Million tonnes of CO2e emissions saved over life of mine by signing PPA

- 1. Scope 2 emissions data are calculated using the market-based method of accounting.
- 2. Although the Zgounder Silver Mine will be connected to the PPA's renewable power source during 2024 commissioning of the new processing plant, 2025 will represent its first full year of operating with 100% renewable energy.
- 3. Excludes Scope 3 emissions.





#### 2.1 ABOUT THIS REPORT

This report is a first of its kind and a milestone for Aya Gold & Silver ("Aya"). Compiled in line with the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD), it focuses specifically on how we are managing climate change within our business.

As a standalone report publication, it provides strategic, comparable and reliable disclosure of climate-related information with our commitments, governance and objectives. Covering the 2022 financial year, this report accompanies our 2022 ESG report, our 2022 Sustainability Report, as well as our first S&P Global CSA submitted in September 2023. This climate report is more investor-oriented than our typical Sustainability Report, which is aimed at a broader range of stakeholders.

In subsequent years, we will streamline our reporting efforts into one single publication, aligned with the ISSB and reflecting the everchanging regulatory requirements for sustainability reporting. Its content will also be updated to reflect new developments in the international policy context, as we align our commitments with the Paris Agreement.

The COP28, which concluded the first ever Global Stocktake, took place while this report was in the later stages of publication. The Global Stocktake can provide a basis to guide countries' and non-state actors' climate policy and investment decisions. It will bring changes in perception and policies on global governance of climate change, and all countries are expected to submit their 3rd NDC by 2025, which will be informed by the COP28.

We will revise our risk assessment annually as we are in the middle of a large large operational ramp-up.. The intrinsic uncertainty of climate-related risks and opportunities also means that continuous assessment and monitoring is required, with potential fine tuning of our response and mitigation measures. This continuous improvement will inform new targets and objectives that build on the basis of our climate action presented in this report.



For questions regarding this report, please email:

info@ayagoldsilver.com



GOVERNANCE





#### 2.2 Message from the CEO

We are delighted to present to our partners Aya's inaugural Climate Change Report as part of our commitment to accountability and transparency on our approach to climate change.

In the last three years, Aya has undergone a significant organizational and strategic

transformation in parallel to starting on its sustainability transition, a reflection of new management's value of stewardship. While we are proud to have commenced Aya's journey on this path and have, in a short time, made demonstrable progress in understanding and addressing climate-related risks and opportunities facing our business, as well as our own impacts, we are conscious that the social, physical and economic effects of climate change are becoming more pressing.

In 2020-2021, we rolled out our ESMS, which is based on best practice from the IFC Performance Standards and the EBRD. The ESMS supports our environmental and energy management efforts through a disciplined focus on operational efficiency and continuous improvement.

The year 2022, the warmest year recorded in Morocco's history, saw the culmination of the most significant ESG development in Aya's history – our ESG-linked financing loan from the EBRD for the Zgounder Silver Mine expansion. The loan, containing significant funding from the Clean Technology Fund, was contingent on completion of a project-based environmental and social review and provided an important guidance framework for developing our climate change strategy as well as ESG implementation strategy more broadly.

Later in 2022, we assessed our climate change-related risks and opportunities against the TCFD guidelines to project how climate change and the transition to a lower-carbon future could impact our business over the short-, mediumand long-term. Our analysis found that the most immediate material risks and opportunities for Zgounder relate to water scarcity and transition-related regulatory changes.

As Scope 2 emissions are the primary source of Zgounder's carbon footprint, we set ourselves the target to reduce our Scope 2 GHG materially and have taken the actions and steps required to reduce it by an impressive 88% in 2025, based on a 2021 baseline. To do so, we signed an interconnection agreement with the ONEE and entered into a renewable energy PPA with Nareva-EEM. The location of our Zgounder Mine in Morocco, which has set itself the goal of sourcing 52% of its electricity needs from renewables by

2030, and the penetration of in-country renewable energy provide us with a significant competitive advantage.

HIGHLIGHTS

In parallel, we have strengthened our governance, management framework and disclosure practices related to energy and greenhouse gases. To accelerate buy-in for ESG and climate change across Aya, we have integrated ESG performance indicators including climate change related targets into our executive compensation. We also promote accountability through our board-level and management-level ESG committees where climate-related issues are a key focus.

Global threats like climate change do not occur in silos but are inextricably linked to access to water and poverty. That means that alongside the important GHG reduction, we must tackle these issues concurrently. Recognizing this, we are also leveraging our Zgounder Mine expansion to enhance water storage capacity to steward water as a shared resource; to increase recycling of water; to improve community access to water; and to foster local wealth and resiliency through the launch of livelihood projects and enhanced employee health and safety.

In 2024, we will roll out a number of initiatives to improve our GHG emissions performance and to further enhance our disclosure as detailed in our "Next Steps" section. We will continue to be proactive and to be held accountable through augmented measurement and disclosure to independent, reputable reporting frameworks. This will include building on our ESG score from our 2023 voluntary participation in the S&P Global Corporate Sustainability Assessment and disclosing our climate and water impacts through CDP for the first time.

We are also proud that with the expansion of Zgounder, we will become an even bigger part of the solution when it comes to climate change. The expansion will quadruple production and turn us into the largest pure-play producer globally of a metal which is at the heart of a low-carbon economy.

I invite you to learn more about our climate-related progress in this, our first Climate Change Report. For broader information about our overall sustainability performance, please see our 2022 ESG or 2022 Sustainability Report.

Yours sincerely,

**BENOIT LA SALLE** CEO & President, Aya Gold & Silver

II As of 2024, the expanded **Zgounder Mine will be powered** exclusively by low-emission wind and renewable power, which will position it among the lowest GHG intensity silver mines in the world. As we grow our business, we will continue to look for opportunities to use energy efficiently and mitigate our climate-related impacts through process efficiencies, alternative technologies, and sourcing low-carbon energy.



## GOVERNANCE

- 3.1. Board oversight
- 3.2. Executive and corporate oversight
- 3.3. Our health and safety, environment & community policy
  - 3.4. At the operational level



- **AYA HSEC GOVERNANCE**
- **AYA 2023 HSEC POLICY**

#### 3.1. Board oversight

The ESG Committee of the Aya Board provides oversight of health, safety, environment, community, tailings, human rights, climate change, GHG emissions and water-related issues and risks, all of which align with our broader sustainability strategy. On behalf of the Board, this committee reviews quarterly updates on all ESG- and climate-related issues, risks, targets and strategy; approves annual targets, reviews global sustainability strategy progress and outcomes, reduction pathways and scenarios as well as investor inquiries related to climate and SASB/ TCFD climate approaches.

INTRODUCTION

#### 3.2. Executive and corporate oversight

Executive-level accountability is imperative to successfully develop and implement strategy, risk management processes, and improve performance at both the corporate and site levels. Using a TCFD-inspired process, Aya's Executive Committee established a climate risk radar to identify and assess climate-related risks to the Corporation. The risk register and climate risk radar will be updated annually. The Executive Committee applies risk and opportunity management guidelines that are based on industry standards, a semi-quantitative approach to assessing risk that incorporates the use of the two-dimensional evaluation of likelihood and consequence.

The Executive Committee consists of the following key positions with the following responsibilities:

#### The Chief Executive Officer:

The CEO of Aya Gold & Silver Inc. takes ultimate responsibility for overseeing all aspects regarding health, safety, environment, community, tailings, human rights, climate change, GHG emissions and water-related issues. This includes:

- Providing quarterly and ad hoc updates to the ESG Committee of the Board
- Establishing Aya's mission and values
- Defining ESG-related KPIs for senior management and their communication to the Corporate Governance, Nomination and Compensation Committee

The President-Managing Director, Morocco has primary executive leadership responsibility for health, safety, environment, community, tailings, human rights, climate change, GHG emissions and water-related issues, targets, strategies and performance, for all operations in Morocco. This includes:

**METRICS & TARGETS** 

- · Promoting dialogue on Aya's mission and values internally and with our stakeholders and ensuring the widest adoption and implementation
- Managing permits and a wide range of environmental aspects to ensure regulatory compliance

#### The Chief Financial Officer:

- Coordinates issues related to assessment of climate risks and opportunities
- Documents the financial impact of identified ESG risk

#### The Vice-President, Operations:

- · Promotes dialogue on Aya's mission and values and ensures their widest adoption and implementation
- Oversees new developments or modifications to corporate standards
- Coordinates the implementation of energy-efficient technologies at operations, the accounting and monitoring of operations' carbon footprint and environmental impact
- Sets targets and is responsible for HSEC performance together with HSEC departments on site
- Defines operational policies and strategies, including corporate tailings strategy and management systems incorporating the GISTM
- Provides corporate support to HSEC teams on an operational level
- Acts as the Accountable Executive for the GISTM

#### The Chief Legal & Sustainability Officer:

- Acts as liaison between the ESG Committee and the Executive Committee
- Engages with various internal stakeholders to ensure translation of corporate objectives and actions are in compliance with laws and standards
- Coordinates to ensure public disclosure of various ESG objectives, measures and actions are in compliance with the Corporation's disclosure obligations

#### The Vice-President, Investor Relations:

- Provides feedback from investors' perceptions on ESG risks and opportunities
- Relays the Corporation's strategy and ESG mission and values to investors





### 3.3. Our health and safety, environment and community policy

The health and safety, environment, and community policy establishes Aya's engagement to the health and safety of our workers, the environment, and local communities. It is applicable to all aspects of exploration, project development, mining, and closure and rehabilitation of mine sites as well as investor inquiries related to climate and SASB/TCFD climate approaches.

#### 3.4. At the operational level

Effective risk management starts at the operational level where climate-related risks are monitored on a continuous basis and managed collaboratively between departments and corporate teams. Operations identify significant risks, taking into account environmental impacts, hazards and health and safety risks, incident analyses and identified major risks. These considerations include both the physical risks associated with a changing climate and the risks created by the transition to a low-carbon future. Risks are identified and assessed to facilitate decision-making and prioritisation of actions.

TOP DOWN	THE ESG COMMITTEE OF THE BOARD	<ul> <li>Provides oversight of health, safety, environment, community, tailings, human rights, climate change, GHG emissions and water-related issues and risks, all of which align with our broader sustainability strategy</li> <li>Sets the tone on climate risk management culture, approves climate management policies, targets, and risk identification processes</li> <li>Reviews global sustainability strategy progress and outcomes, reduction pathways and scenarios as well as investor inquiries related to climate and SASB/TCFD climate approaches</li> </ul>
	EXECUTIVE COMMITTEE	<ul> <li>Establishes Aya's mission and values</li> <li>Reviews the effectiveness of the climate risk-management process</li> <li>Develops and oversees implementation of climate risk management strategies, and measures the impact of Aya's initiatives</li> <li>Assesses financial implications of identified climate-related risks</li> <li>Makes recommendations and quarterly updates to the Board</li> </ul>
) dn	CORPORATE ESG WORKING GROUP	<ul> <li>Implements targets and strategy to achieve targets set by senior management</li> <li>Defines and monitors the climate risk-management process and mitigation tools and actions</li> <li>Plans and executes assurance activities to ensure that there are policies and procedures in place to support the effectiveness of Aya's ESG strategy</li> <li>Prepares climate risk and internal control reports and maintains the Climate Risk Assurance Map</li> <li>Performs climate risk analysis on growth projects, detailing the specific conditions and risks faced by new projects</li> </ul>
воттом ир	OPERATING RISK MANAGEMENT	<ul> <li>Ensures climate risk awareness is embedded in day-to-day operations</li> <li>Performs climate risk identification and assessment across business operations on an everyday basis</li> <li>Implements climate risk-mitigation programs and operational monitoring of internal controls</li> </ul>

# Strategy

- 4.1. Climate-related risks and opportunities identified for our business
- 4.2. Climate scenario analysis



#### 4. Strategy

This section first presents Aya's assessment of climate-related risks and opportunities that could reasonably be expected to affect our cash flows, access to finance or cost of capital over the short, medium and long-term. In this context, time horizons refer to the horizons over which these risks and opportunities could be reasonably expected to occur.

HIGHLIGHTS

The TCFD divided climate-related risks into two major categories: (1) risks related to the transition to a low-carbon economy and (2) risks related to the physical impacts of climate change.

Transitional risks and opportunities are the financial, political and reputational risks to Aya associated with the evolving regulatory economic and societal changes related to the world's response to limiting global warming. These risks include carbon taxes, cross-border carbon pricing and other form of taxation, exposure to litigation, change in investors' mandate and shareholder activism. Physical risks can be event-driven (acute) or longer-term shifts (chronic) in climate patterns. These risks imply a high degree of uncertainty, in particular to the local context of the Zgounder Silver Mine and each site in general, and they may have an adverse impact on our operations.

We then present our scenario analysis, which is aimed at testing the resilience of our operations to plausible but uncertain outcomes that could have implications for Aya's business model, strategy and capacity to respond.

#### 4.1. Climate-related risks and opportunities identified for our business

#### 4.1.1. Relevant time horizons

An important practice when using climate scenarios is to adapt the analysis horizon to the system under study. This makes it possible to plan the response to climate change according to an agenda in line with climate projections. This is in fact a recommendation of the IFRS S2 – Climate-related Disclosures published by the International Sustainability Standards Board (ISSB) in 2023.

In the FS for the mine expansion, Zgounder Silver Mine's LoM represents the 10 years following the 2024 commissioning of the new processing plant, which takes us to 2034. While geological discoveries are likely to extend Zgounder's LoM, for the purpose of assessing climate related risks we use this period as our long-term horizon. Working backward, a medium-term horizon would cover the next 5 years, and a short-term would cover the next year ahead.

Risks assessed in distinct time horizons affect each other. The risks assessed in the medium and long-term are critical to decision making today and have implications for capital expenditure in short-term planning. On the other hand, CAPEX decisions made in the short-term will only see a return on investment and an assessment of effectiveness in the medium-term.

#### **SHORT-TERM HORIZON**



The short-term horizon refers to the 12-month period ahead and covers operational and budget planning, as well as management review and setting annual KPIs. We monitor our most material physical and transition risks as well as the effectiveness of control measures, while reviewing our resilience to critical risks. New data is consistently added to our models and forecasting, which also provides context to update control measures and risk ratings if needed.

Over the short-term, the main risks are acute physical events. Extreme precipitation or extreme periods of drought are likely in the short- and medium-term. While the Global Stocktake for the Paris Agreement is planned for late 2023, no visible shifts are expected in transition risks in our countries of operations.

#### **MEDIUM-TERM HORIZON**



The medium-term horizon looks beyond the coming year and up to approximately 5 years ahead. This horizon represents the period when most risks would be likely to happen, according to our models. At the time of writing this first issue of our climate report, this also represents the period where the global "ratcheting" will take place when all countries signatory of the Paris Agreement are expected to submit 3rd NDCs by 2025. This is expected to bring new policies, market, and social pressure on climate-related issues.

#### **LONG-TERM HORIZON**



The long-term horizon allows us to plan for the entirety of the LoM. This enables us to establish long-term strategy, assess the feasibility of net zero achievement, and incorporate technical solutions and design elements to achieve our long-term goals.



#### 4.1.2. Our approach to climate risk

Climate risk management is embedded within our broader HSEC governance and risk management. At Aya, ensuring the wellbeing of our people, continually working towards environmental stewardship and a low-carbon future, and fostering wealth opportunities for host communities are integral elements of our operations. We recognize the importance of striving to meet and exceed our responsibility objectives, and the role these efforts have in delivering on our overall objective of creating value for all stakeholders.

In 2022, we deepened our efforts by adding climate-related risks and opportunities to our risk management framework. We identified and assessed these emerging risks and integrated the process within our overall framework. We shall continue to monitor and update our risk management strategy in face of an ever-changing business and sustainability landscape.

Since climate risk assessment falls within the broader risk management framework, we adopt the traditional "likelihood and severity" approach already used in gauging the impact or materiality of risks in other areas of the Zgounder

Silver Mine. As we only have one site in operation, we have also built in both the likelihood and severity aspects of vulnerability and speed of onset.

Vulnerability refers to the susceptibility of a company to a risk event in terms of the company's preparedness, agility, and adaptability, while speed of onset refers to the time that elapses between the occurrence of an event and the point at which the company first feels its effects.

Severity and likelihood criteria for climate-related risks and opportunities follow the guidelines for our global risk-management framework, so the result of the assessment and prioritization can be integrated into the global risk register. Likelihood and severity ratings range from 1 to 5, and the resulting rating is separated into four risk categories: **Low, Medium, High** and **Extreme**. Overall, our Risk Management Program allows for climate-related risks to be evaluated and managed in a similar manner to other operational risks.

#### 4.1.3. Likelihood rating criteria

Rare	Unlikely	Possible	Likely	Almost certain
Never occurred or is highly unlikely to occur in the next 20 years	Occurred several times or could happen within 20 years	Occurred at some point in past 10 years and may re-occur within 10 years	Occurs infrequently: less than once a year and is likely to re-occur within 5 years	Occurs frequently: one or more times per year and is likely to re-occur within one year

INTRODUCTION



#### 4.1.4. Severity level rating criteria

Rating criteria	▲△△△△ Insignificant (1)	<b>▲▲</b> △△△ Minor (2)	<b>▲▲</b> ▲ △ △ Moderate (3)	<b>▲▲▲</b> △ Major (4)	Catastrophic (5)
POLITICO-ECONOMIC IMPACT	<usd 100k<="" th=""><th>&gt;USD 100K and <usd 1m<="" th=""><th>&gt;USD 1M and <usd 3m<="" th=""><th>&gt;USD 3M and <usd 10m<="" th=""><th>&gt;USD 10M</th></usd></th></usd></th></usd></th></usd>	>USD 100K and <usd 1m<="" th=""><th>&gt;USD 1M and <usd 3m<="" th=""><th>&gt;USD 3M and <usd 10m<="" th=""><th>&gt;USD 10M</th></usd></th></usd></th></usd>	>USD 1M and <usd 3m<="" th=""><th>&gt;USD 3M and <usd 10m<="" th=""><th>&gt;USD 10M</th></usd></th></usd>	>USD 3M and <usd 10m<="" th=""><th>&gt;USD 10M</th></usd>	>USD 10M
BUSINESS DISRUPTION, DAMAGES AND LOSSES	Less than 1% Adjusted EBITDA	1-5% Adjusted EBITDA	5-10% Adjusted EBITDA	10-20% Adjusted EBITDA	More than 20% Adjusted EBITDA
TECHNOLOGY IMPACT	No need to change existing technologies	Modest technology update required	Serious technology update required	The best available technology needs to be implemented in the medium-term	The best available technology is urgently required
SOCIAL IMPACT	Public awareness may exist but no public concern	Local social issue or public concern	Regional social issue or public concern	National social issue or public concern	International social issue or public concern
PHYSICAL IMPACT OF CLIMATE CHANGE	Minimal impact	Material impact	Serious impact	Major impact	Extreme impact



#### 4.1.5. Severity level rating criteria

The following table presents the preliminary assessment for climate-related risks and opportunities, which all potentially occur at our direct operations. It was first reported in our 2022 ESG Report in July 2023. Severity and likelihood nomenclature has been updated for better integration with our overall enterprise risk management framework. These risks are later detailed with the impact of climate scenarios.

INTRODUCTION

HIGHLIGHTS

	Risk type	Time horizon of risk	Likelihood of impact	Severity of impact	Potential financial impact figure and explanation	Primary potential financial impact	Cost of response to risk and description
Changes in precipitation patterns and extreme variability in weather patterns	Chronic physical	From short-term to long-term	Almost certain	Catastrophic	Stoppage of operations due to changes in the weather pattern and less precipitation. The loss of quarterly revenue would be catastrophic and would exceed USD 10M.	Increased indirect (operating) costs.  The primary potential financial impact of a reduced water supply would be lower production output and higher operating costs.	In 2021, Aya's primary response to water scarcity was to invest more capital in water retention infrastructure in order to capitalize on the excess water in rainy seasons.  In 2022, Aya invested USD 376.1K in response to the risk of change in precipitation (2021 expense was USD 601K).
Acute risk of a dry year	Acute physical	Short-term	Likely	Catastrophic	Stoppage of operations due to insufficient water. The loss of quarterly revenue would be catastrophic and would exceed USD 10M.	Increased indirect (operating) costs.	The mitigation measure identified above applies also the acute risk of a dry year.  Further investment could involve the installation of anti-evaporation devices, with CAPEX of approx. USD 1M.
Increased severity and frequency of extreme weather events such as cyclones and floods	Acute physical	Short-term	Almost certain	Major	Stoppage or slowing of operations due to acute physical events (extreme rain or extreme drought), and physical damage to infrastructure.	Increased indirect (operating) costs	The first response to acute physical events is to build infrastructure (roads, retaining walls, TSF, water basins, stormwater pounds, etc) with precautionary principles in mind and to apply available best practice (such as GISTM for tailings) and technology.
Emerging regulation: Carbon pricing mechanisms	Policy	Medium-term	Likely	Minor	In 2022, the carbon pricing applicable in Canada would be : CAD 50 /tonne CO2e 22,193 tonnes CO2e Total: CAD 1.1M or USD 853.1K.	Increased indirect (operating) costs	In 2022, Aya's response to the risk of carbon pricing was to sign a PPA with a renewable energy producer in Morocco, to effectively reduce to zero our Scope 2 emissions. There is no cost associated with this measure as it provides cost saving in the long term.
Emerging regulation: taxes such as "Solidarity tax"	Policy	Medium-term	Possible	Minor	During the COVID-19 pandemic, the state of Morocco issued a similar "solidarity tax", at low cost to the Corporation (between USD 100K and USD 1M.)	Increased indirect (operating) costs	There is no response to the risk identified, except government awareness and possible lobbying through the Chamber of Mines in Morocco.
Change in reporting requirements	Policy	Short-term	Virtually certain	Insignificant	The potential impact ranges from very insignificant to no financial impact as Aya already allocates resources to comply with current reporting obligations and best practices.	Increased indirect (operating) costs	The Corporation already endeavors to follow best international practice with regard to reporting obligations, so it expects to be ahead of any further requirements.

AYA GOLD & SILVER INC.



	Risk type	Time horizon of risk	Likelihood of impact	Severity of impact	Potential financial impact figure and explanation	Primary potential financial impact	Cost of response to risk and description
Exposure to litigation	Policy	Medium-term	Likely	Moderate	The Corporation could be exposed to litigation if it fails to comply with reporting obligations.  Potential financial impact could range from USD 1M to USD 3M.	Increased indirect (operating) costs	The Corporation strives to follow best international practice when it comes to reporting obligations, and expects to be ahead of any further requirements.
Stigmatization of sector / change in investors' mandates	Markets	Medium-term	Possible	Major	Potential financial impact could range from USD 3M to USD 10M, as the stigmatization of the mining sector could affect the Corporation's ability to raise money.	Other: Difficulty to raise capital.	Few direct responses can be identified, however Aya is developing its environmental and social governance to acquire a competitive advantage compared to peers within the sector.
Loss of social licence to operate	Social	Short-term	Rare	Major	Increased periods of drought induced by climate change could cause instability in Morocco and force the government to take drastic action to appease social tensions such as revoking of mining permits. The potential financial impact has not been calculated, but would be catastrophic.	Other: The financial impact would be the reduction or total cancellation of revenues for the Corporation.	Beyond localized community engagement, no direct response can be identified as this course of events would lie beyond the reach of the Corporation's management.  Such an impact is, however, extremely unlikely.
Local community uprising	Social	Short-term	Likely	Insignificant	Increased periods of drought induced by climate change could cause instability in Morocco and create tension within local communities as mining production is dependent on freshwater sources.  Rising tensions could eventually lead to local uprisings, strikes or short-term road blockages.	Increased indirect (operating) costs	In 2020, Aya developed a Corporate Social Responsibility strategy (CSR) to establish and maintain its social license to operate.  The Corporation has been expanding the scope and bandwidth of its CSR programs every year.  In 2022, it began implementing a Stakeholder Engagement Plan and Grievance Resolution Mechanism in line with IFC and EBRD guidance.
Substitution of existing products and services with lower emissions options	Technology	Medium-term	Likely	Medium	Local regulations could require the Zgounder Silver Mine to source its energy from renewable sources or to invest in a new infrastructure to produce renewable energy.	Increased indirect (operating) costs	In February 2023, Aya announced that its subsidiary, ZMSM, had entered into a 20-year PPA with Energie Éolienne du Maroc ("EEM"), a subsidiary of Nareva, for the procurement of renewable energy for the expanded Zgounder Mine.
Unsuccessful investment in new technologies	Technology	Long-term	Rare	Minor	According to its carbon footprint reduction plan, Aya has committed to evaluating the feasibility of electrifying its mining fleet when the technology becomes available.  The potential financial impact of failing technology could range from USD 100K to USD 1M.	Increased capital expenditure	Aya's management will conduct careful due diligence when evaluating new technologies for the electrification of its mining fleet.

HIGHLIGHTS





While mining companies often excel in corporate risk management, their ability to seize opportunities is generally less well-recognized. This is due to the inherent nature of the mining business and the sector's perceived riskiness.

The below table presents opportunities that could impact our business decisions. We identified the opportunities using the examples provided in the TCFD's implementation guidance, assessed their relevance to our operations, and carried out internal workshops to further develop the topics and analysis.

Category	Opportunity	Potential impacts
Resource efficiency	Transition to more efficient production processes and operations	<ul> <li>Lower operating costs through efficiency gains and cost reductions</li> <li>Lower water consumption</li> <li>Enhanced reputation within Morocco as a resource efficient mining company could improve ability to attract and maintain talent in addition to improving trust with host communities</li> <li>Increased operational resilience to climate-related physical risks</li> </ul>
Energy sources	Use of lower-emission sources of energy	<ul> <li>Lower operating costs</li> <li>Increased resilience to power or fuel price fluctuations due to renewable energy</li> <li>Reduced exposure to GHG emissions and therefore less sensitivity to changes in carbon taxation</li> </ul>
Markets	Strong ESG and climate governance can help attract responsible investment and meet shifting investors' mandates	<ul> <li>Increased capital availability and at lower cost for lower carbon emitters</li> <li>More attractive to risk-averse investors</li> <li>Protection of valuation due to positive action and transparency on ESG matters</li> <li>Maintained shareholder satisfaction with board leadership</li> </ul>
	Increased demand for silver and other industrial battery/clean-tech metals driven by renewable energy push worldwide	Increased revenues due to higher silver prices
Policies	Strong ESG and climate governance reporting procedures and practices	<ul> <li>More attractive to risk-averse investors</li> <li>Reduced exposure to litigation and engagement with regulators over weak ESG governance</li> </ul>







#### 4.2. Climate scenario analysis

opportunities identified and how they impact our business. Scenario analysis companies to understand the risks and uncertainties they face under different thus contributing to the development of greater strategy resilience and flexibility.

We will explore climate scenarios before detailing the climate-related risks and The scenarios should be plausible, distinctive, consistent, relevant, and challenging. In fact, the aim of scenario analysis is to explore different plausible helps companies make strategic and risk-management decisions under complex outcomes. While scenarios should be plausible, the central purpose of scenario and uncertain conditions such as climate change. Furthermore, it allows analysis is to test different assumptions and futures in order to increase business resilience and success in a range of different future states. Scenario hypothetical futures and how those conditions may affect their performance, analysis is specific to the organisation and to the local context where it operates.

#### 4.2.1. Approach to scenario analysis

To better understand Zgounder Silver Mine's resilience to climate change risks, the Agueduct 4.0 (WRI) and data from Morocco's NDC publication, we have of 3 scenarios integrating both transition and physical climate risks. Based the Corporation: on the IPCC and IEA scenario models, as well as on modelling tools such as

we completed a benchmarking analysis in 2023 that included development conceived three climate scenarios that tackle the impact of climate change on

#### THE "OPTIMISTIC" SCENARIO:

The Paris Agreement scenario: limiting the rise in the global average temperature to below 2°C above pre-industrial levels. Scenarios SSP1-1.9 and SSP1-2.6 correspond to socio-economic trajectories that assume a peak in emissions around 2020, followed by a significant reduction in emissions after 2020. Both are interesting to consider for policy and transitional risks, and there could be a shift in policy after the upcoming GST and new NDCs in 2025.

The optimistic scenario is also aligned with the IEA's Net Zero Emissions (NZE) by 2050 and Announced Pledges Scenario (APS). NZE is a normative IEA scenario that shows a pathway for the global energy sector to achieve net-zero CO2 emissions by 2050, with advanced economies reaching net-zero emissions in advance of others. APS includes all recent major national announcements as of August 2023 for 2030 targets and longer-term net zero and other pledges, regardless of whether these have been anchored in implementing legislation or in updated NDCs.

#### BUSINESS AS USUAL" SCENARIO:

The SSP2-4.5 scenario is a "business as usual" trend scenario, where the level of emissions corresponds to that of the NDCs, and where the rate of emissions is not subject to major sudden variations.

This scenario is also aligned with the IEA's Stated Policies Scenario (STEPS), which is designed to provide a sense of the prevailing direction of energy system progression, based on a detailed review of the current policy landscape. It provides a more conservative benchmark for the future than the APS, by not presuming that governments will reach all announced goals.

#### THE "PESSIMISTIC" SCENARIO:

The SSP5-8.5 scenario reflects the failure of mitigation policies and the continuity of primary energy consumption and energy mix trends. Although it does not emissions) and is "limitless" in terms of resources, it is worth considering for coastal cities), or highly critical to human activities (e.g., nuclear power plants), or long-lived (e.g., infrastructures).



We used TCFD recommendations to identify risks and opportunities, and available guidance on scenario analysis to review potential impacts. The result of this identification process has been compiled in a risk register, which is integrated within our global risk register.

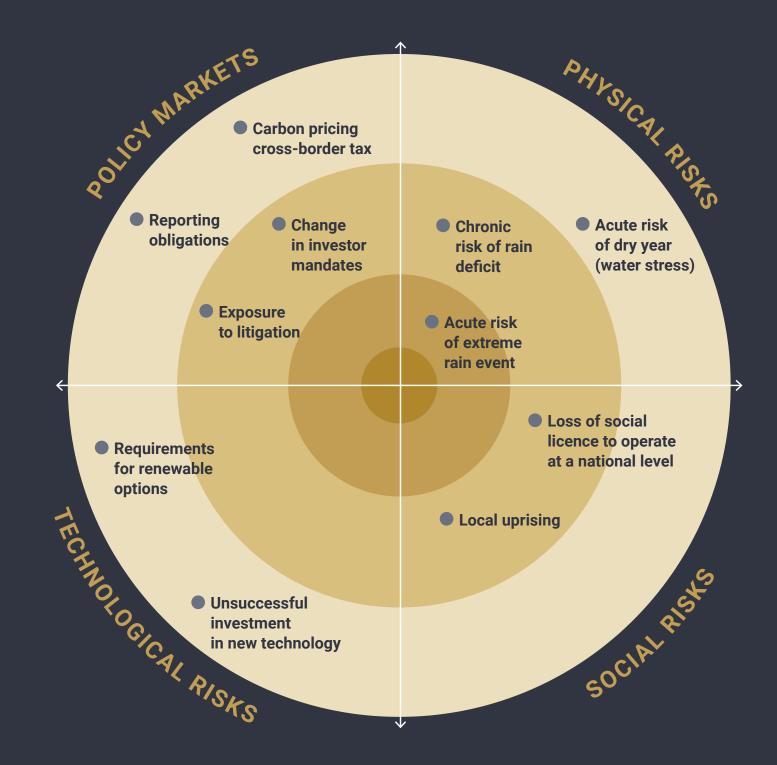
This facilitates interpretation and informs the decisions to establish control and mitigation measures for each risk.

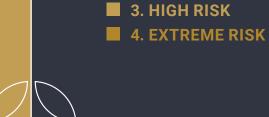
Because Aya's operations are concentrated at the Zgounder Silver Mine, we did not need to separate the company-level and operation-level risks. This approach will be modified when we have a significant second operation to manage.

To identify risks and scenarios, we began by analysing the existing literature in Morocco. This ranged from NDC reports to literature found on the country's SIREDD (Systèmes d'Information Régionaux de l'Environnement et du Développement Durable), a regional planning body that manages and shares information on climate change.

#### 4.2.2. Climate risk matrix

Risks and opportunities for Aya

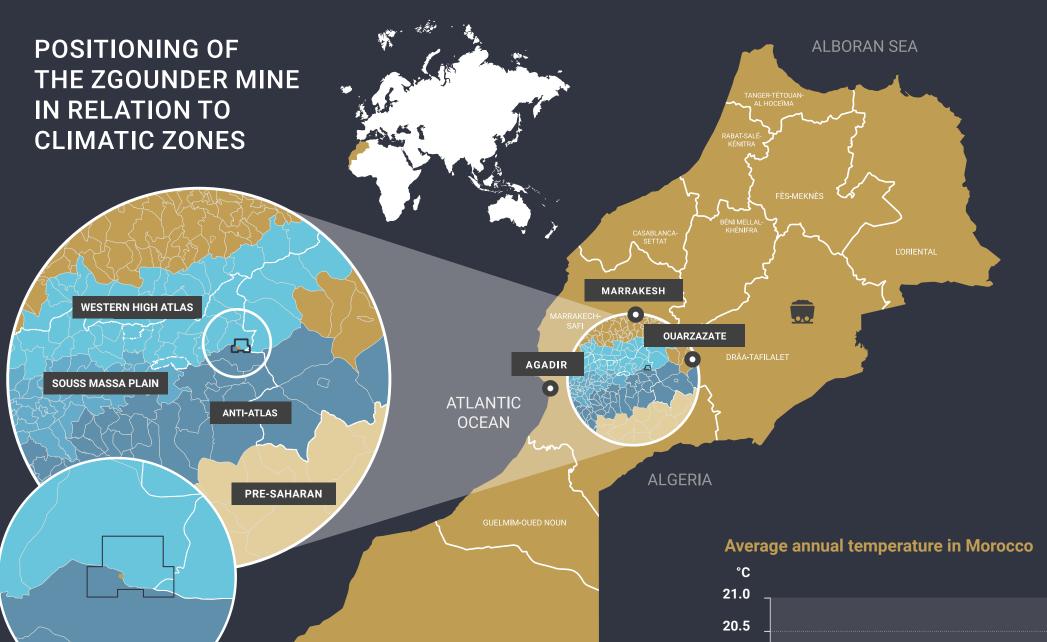




1. LOW RISK

■ 2. MEDIUM RISK





**MAURITANIA** 

LAÂYOUNE-SAKI EL HAMRA

Zgounder Silver Mine

Western High Atlas

Souss Massa plain

Anti-Atlas

Pre-Saharan

Other

☐ Zgounder Silver Mine permit

#### 4.2.3. Acute and chronic physical risks

The Zgounder Silver Mine is situated right at the border between two different "hydrological units" identified in Moroccan literature: the Anti-Atlas and the High-Atlas units.

#### High-Atlas unit:

An increase in temperature is forecast for this unit, which is fairly sensitive to forest fires. Reduced rainfall is likely to affect spring flows. Flood frequencies are likely to increase, given that they are often torrential in nature. This unit has been assigned a high level of exposure, is a natural continuation of the great High-Atlas range, with a climate softened by altitude and a steep topography.

#### **Anti-Atlas unit:**

Due to its high sensitivity, the Anti-Atlas area's exposure to climate change is worryingly high. Decreasing rainfall, combined with recurring periods of drought and often torrential flooding, justify this assessment. Hydrologically, the tributaries are not as large compared with the southern flank of the High Atlas.





Morocco received 73% of normal precipitation in 2022, marking four consecutive years with precipitation deficits.

During the four-year period (2019-2022), the precipitation deficit averaged 32%, which is the highest since 1981. In addition, the 2021-2022 agricultural season, which overlaps with the rainy season, was the driest year for at least the last 40 years. The period was characterized by extreme drought, accompanied by exceptionally warm temperatures.

Projections based on the BAU scenario estimate that some regions of Morocco could see precipitation fall by 25% by 2050, compared with the 1961-1990 rainfall series. This rainfall deficit translates into a runoff deficit. Similarly, the deficit in runoff is twice as great as the deficit in rainfall. On the basis of this relationship, the 2050 surface water potential could see an estimated reduction of around 3.5 billion m³ for the optimistic scenario, and an overall reduction of 5 billion m³ for the pessimistic scenario.

Locally, the climate where the Zgounder Silver Mine is located is characterized by two seasons. The winter months are cold and bring snow precipitation, while the summer months (May to October) are mostly dry, with the exception of the occasional storm that can bring extreme precipitation events and runoff accompanied by landslides.

Projections are the same as for the rest of the country, with a 20% to 30% reduction in annual precipitation by 2030 to 2050, while acute events will increase in strength and intensity.

	Impact on our business	Exposure to risks according to scenarios Risk rating when registered  "optimistic" "BAU" "pessimistic"	Adaptation and mitigation measures Risk rating after mitigation measures
SHORT-TERM	Disruption of traditional weather patterns are already observed. Acute physical risks are extreme rain events (flash floods, landslides, infrastructure damage) or the opposite, extreme drought (a "dry year", which could temporarily halt production).  Chronic change in weather patterns (reduction of annual precipitation) is also present in the short-term as an average rain deficit of 32% has been recorded for past four years.	Climate scenarios do not affect acute physical risks as our horizons are limited by our 10-year LoM. Climate scenarios only reflect changes beyond our definition of long-term, starting in 2030 and taking effect in the years 2050 and beyond.  All acute and chronic physical risks: EXTREME.	Adaptation to the increased uncertainty in weather patterns prompted our engineering team to over-design certain infrastructures.  In parallel, water storage facilities were added to the project CAPEX to increase resilience to dry years.  Acute risk of extreme rain event:  HIGH  Acute risk of dry year: LOW
MEDIUM-TERM	Similar to short term. We do not anticipate a significant change in weather patterns in the medium- or long-term.		Chronic risk of rain deficit: <b>MEDIUM</b>
LONG-TERM			



#### 4.2.4. Transitional (social, technological, policy and market) risks

#### Social

Social risks refer to the loss of our social licence to operate in Morocco and local uprisings by host communities residing close to the Zgounder Silver Mine. In Morocco, water scarcity is becoming a national crisis that has already caused

nationwide social instability. As mentioned above, the highest continuous average rain deficit (-32%) was recorded during the 2019-2022 period, with the increasingly dry conditions bringing considerable challenges to communities.

	Impact on our business	Exposure to risks according to scenarios Risk rating when registered  "optimistic" "BAU" "pessimistic"	Adaptation and mitigation measures Risk rating after mitigation measures
SHORT-TERM	At the local level, social instability could result in community protests and uprising in the short- and medium-term. This risk exists already and is managed on a daily basis.	As social risks would be triggered by physical weather changes, climate scenarios do not affect social risks as we do not anticipate a change of weather patterns within our time	At the local level, we have implemented a stakeholder engagement plan and community grievance mechanism, as well as a robust community investment
MEDIUM-TERM	Dasis.	horizons. Social risks: <b>MEDIUM</b>	program that is aligned with local administration and national strategic development plans.
LONG-TERM	Rain deficit could create social instability at the national level and result in the loss of our social licence to operate. This is a long-term risk as it would require a significant deterioration of the current social landscape.		On a national level, we did not identify concrete mitigation measures beyond being a good corporate citizen.  Residual risk after mitigation measures: MEDIUM



#### Technological

Technological risks refer to requirements for the industrial sector to transition to renewable energy. Morocco's National Energy Strategy aims to grow the country's renewable share of the grid to 52% by 2030 and reduce the industrial sector's energy consumption by 20% by 2030.

	Impact on our business	<b>Exposure to ri</b> Risk rating wher	Adaptation and Mitigation measures Risk rating after		
		"optimistic"	"BAU"	"pessimistic"	mitigation measures
SHORT-TERM	We do not anticipate any significant changes over the short-term.	N/A			In 2023. Aya signed a PPA with a green energy producer to power the Zgounder Silver Mine with 100% renewable energy.
MEDIUM-TERM  LONG-TERM	In the medium- and long-term, we expect to see requirements for the industrial sectors to transition to renewable energy sources (water, heating and electricity).  We have also identified the risks of failed investments in new technology such as the electrification of our mining fleet or antievaporation devices.	Requirement for renewable option: HIGH Unsuccessful investment in new technology: LOW	Requirement for renewable option: MEDIUM Unsuccessful investment in new technology: LOW	Requirement for renewable option: LOW Unsuccessful investment in new technology: LOW	For new technology, our approach is to apply proven concepts and use reliable performance data.  Requirement for renewable sources: LOW  Unsuccessful investment in new technology: LOW



#### **Policy and markets**

In the short-term, we are already witnessing a change in reporting requirements. Under our groundbreaking ESG-linked financing with the EBRD, we are already required to file this TCFD report by year-end 2023. Furthermore, the European Union is implementing its CSRD, while the ISSB is in the final drafting stages. On June 26, 2023, the ISSB issued its first two IFRS Sustainability Disclosure Standards:

- IFRS S1: General Requirements for Disclosure of Sustainability-Related Financial Information (IFRS S1)
- IFRS S2: Climate-related Disclosures (IFRS S2)

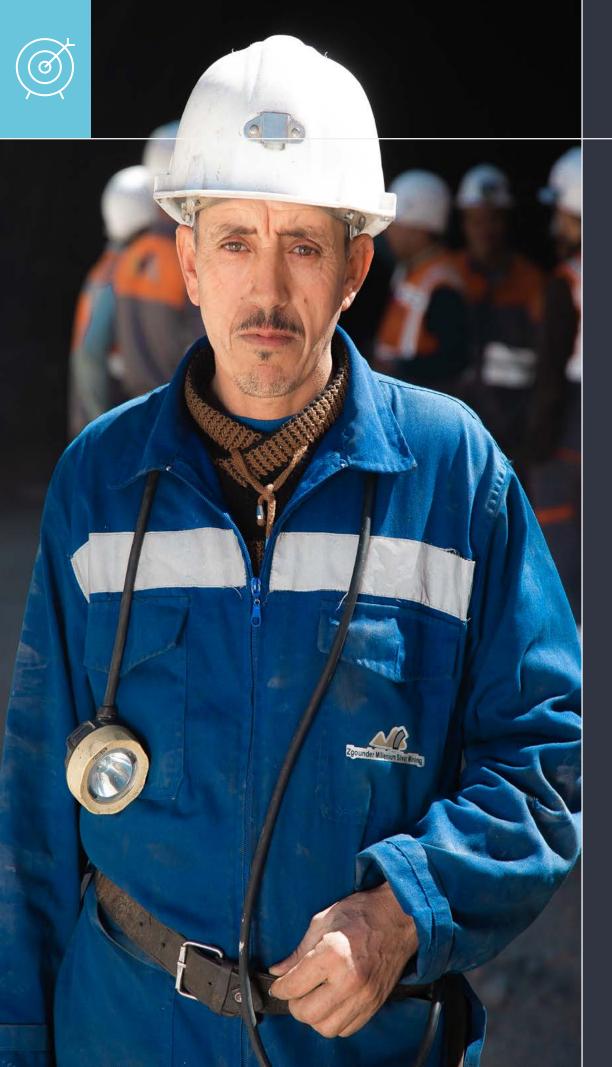
Through the CSSB, Canada will work with the ISSB to support the uptake of ISSB standards in Canada, highlight key issues for the Canadian context, and facilitate interoperability between ISSB standards and any forthcoming CSSB standards.

We anticipate that in the medium-term, with the GST currently underway, Morocco will release a new NDC for 2025 that could include a more aggressive stance on carbon taxing and expectations for the mining industry. The combination of a changing social landscape and internationally dramatic weather events could heighten public awareness and induce the government to impose a "special tax" in the same manner as during the global pandemic COVID-19.

In the meantime, the risk of litigation on ESG disclosures has seen a noticeable uptick in the last few years, and it is expected that the trend seen mostly in the US until now, will come to Canada. Since the 2015 Paris Agreement, more than 1,500 climate litigation cases have been filed worldwide. Of the 2,341 cases registered in the Sabin Centre's climate change litigation databases, 190 were filed between June 2022 and May 2023, an increase of almost 100% compared to the average annual number of cases filed between 2008 and 2015.

	Impact on our business	<b>Exposure to ri</b> Risk rating wher	isks according to registered	Adaptation and Mitigation measures Risk rating after		
		"optimistic"	"BAU"	"pessimistic"	mitigation measures	
SHORT-TERM	Reporting obligation and exposure to litigation are both already material risks	Reporting requirements and exposure to litigation are existing and short-term risks, so they are not affected by scenarios. <b>HIGH</b>		We conduct a yearly review of the regulatory landscape in which we operate and strive to follow best practice in ESG governance and reporting.		
MEDIUM-TERM	We expect a form of carbon pricing to be introduced in the medium- to long-term, and a potential change in investor mandates for companies with weak ESG performance	Carbon pricing: HIGH Change in investor mandates: HIGH	Carbon pricing: MEDIUM Change in investor mandates: HIGH	Carbon pricing: LOW Change in investor mandates: LOW	This is also an opportunity to stand out in a changing investor's mandate landscape.	
LONG-TERM					Carbon pricing: <b>LOW</b> Reporting requirement: <b>MEDIUM</b> Exposure to litigation: <b>LOW</b> Change in investor mandate: <b>MEDIUM</b>	





#### 5.1. Our approach to metrics

One of the ways we have accelerated shared responsibility for ESG and climate change across Aya is by tying executive compensation, specifically short-term incentives, to ESG and climate change performance indicators. The alignment instills and ensures a sense of ownership and accountability for ESG targets across the organization and incentivizes management to embed ESG into their day-to-day activities.

At Aya, operational ESG goals typically involve minimizing social and environmental impacts as well as implementation of site-specific action plans to improve our health and safety, environment, and community relations performance. Executive ESG goals include the achievement of the EBRD's CCG action plan milestones, the implementation of the ESAP in line with our obligations to the EBRD and other financial partners and are generally aligned with Zgounder Silver Mine's key material issues.

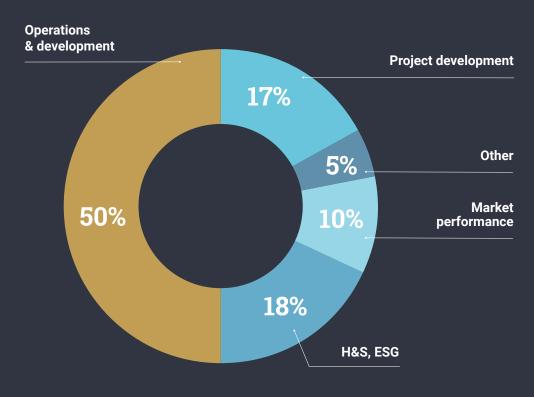
The CCG action plan spans the four core TCFD pillars: governance, strategy, risk management, and metrics and targets.

In 2023, the CCG milestones primarily involved

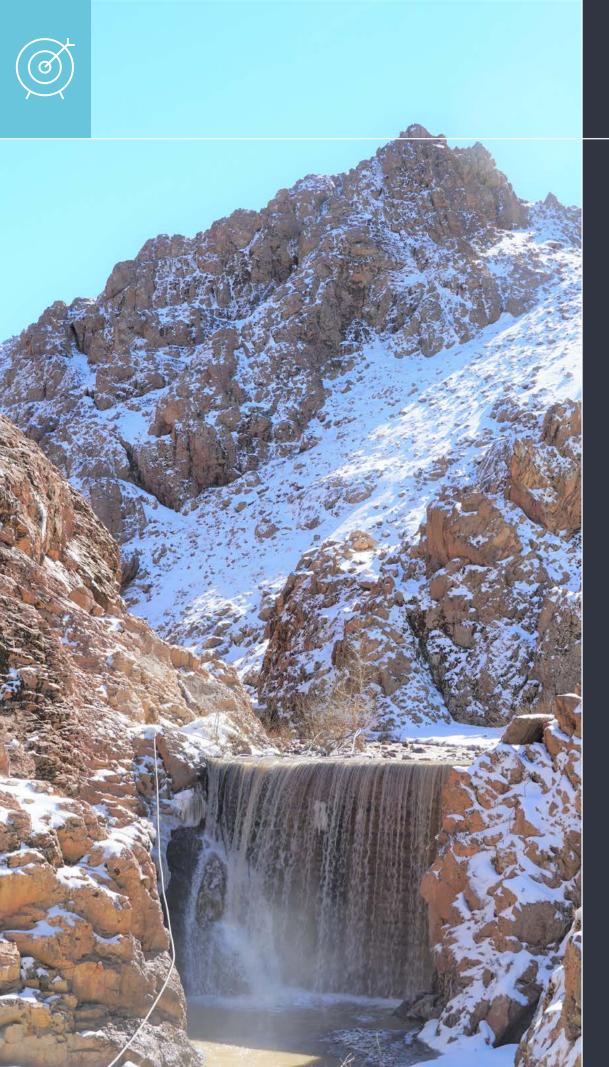
- documenting and disclosing climate change governance and building capacity
- carrying out a climate risk analysis in the short, medium, and long term
- documenting calculation methodologies for climate-related indicators
- defining reporting processes and scope in addition to disclosing governance oversight and responsibilities

Aya's executive KPIs allocate up to 20% to ESG performance. ESG performance is one factor in the executive short-term compensation structure, and includes safety metrics, execution of the EBRD's ESAP, execution of the CCG plan, and other ESG initiatives.

#### **Executive Short-Term Compensation**



We include both HSEC and climate change targets in executive compensation in order to enhance our overall ESG culture by incorporating the measures into all aspects of the business, and by appropriately defining, managing and measuring targets. Additionally, to reflect our belief that achievement of ESG goals requires the collective action of a wider employee base, Aya has expanded the scope of ESG-linked compensation beyond the senior management team. This expansion of reach ensures that employees are compensated for meeting the mine's unique challenges and promotes Aya's focus on solidifying management processes that improve performance. The factoring of HSEC and climate change into compensation also signals to stakeholders that their performance and excellence is a priority.



#### 5.2. GHG emissions

Greenhouse gas emissions are generated through the process of mining metals. At our Zgounder Silver Mine, we rely on diesel to power our fleet of jumbos, scoops, dumpers, and other mining machinery such as trucks, civil works heavy equipment and light vehicles. The emissions from these represent our direct GHG emissions (Scope 1).

Indirect GHG emissions come from the electricity that Zgounder Silver Mine purchased from the Moroccan grid in 2022 (Scope 2).

Scope 3 emissions result from activities and assets not owned or controlled by us but indirectly impacting our value chain (e.g., transportation and distribution, purchased goods and services). For Scope 3 estimates, we contracted a team of specialists in the national context to help calculate and obtain official factors.

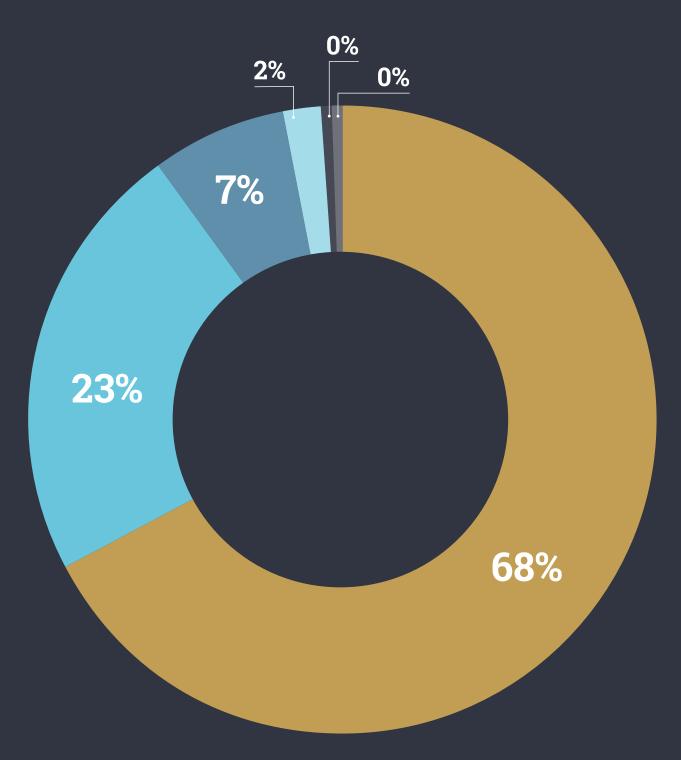
	Emissions (tonnes of CO <sub>2</sub> -e)
SCOPE 1 GHG EMISSIONS	4,881
SCOPE 2 GHG EMISSIONS  Emission factor: 0.721  Total energy purchased from external suppliers for the reporting year in Megawatt-Hours (MWh): 14,371.187	10,362 <sup>1</sup>
SCOPE 3 GHG EMISSIONS	27,793 <sup>2</sup>
TOTAL (SCOPE 1+ 2+ 3)	43,036

<sup>1.</sup> Scope 2 emissions data are calculated on market-based method of accounting. In 2022, all energy purchased was sourced in Morocco. For our Scope 2 emissions, Aya only discloses the emissions generated by Zgounder Silver Mine in Morocco. For the purpose of this report, we utilized the emission factors from Outil Bilan Carbone Maroc, the official list of factors in Morocco, where our operations are based. The Mohammed VI Foundation for the Environment, with the support of the Association pour la Transition Bas Carbone (ABC), and its Moroccan institutional partners, has adapted the Bilan Carbone® method to the Moroccan context, with in particular the update of 350 emission factors of which 60% are adapted to

<sup>2.</sup> Scope 3 emissions have an uncertainty factor of 49.2% and were calculated by a constracted consultant.



### 2022 SCOPE 3 EMISSIONS



#### **2022 SCOPE 3 EMISSIONS**

INTRODUCTION

Category	Туре	Tonnes CO <sub>2</sub>	%
Category 1	Purchased services	18,982	68%
Category 2	Purchased goods	6,324	23%
Category 3	Capital goods	1,945	7%
Category 4	Employee commuting	421	2%
Category 5	Business travel	91	0%
Category 6	Upstream transportation	30	0%
TOTAL		27,793	

- Purchased services
- Purchased goods
- Capital goods

HIGHLIGHTS

- Employee commuting
- Business travel
- Upstream transportation





### 2025 **TARGET**

is to reduce our overall **GHG** emissions by 88%

(absolute target)

#### 5.3. Carbon reduction projects and how we will meet our targets

INTRODUCTION

#### 5.3.1.Transition plan

As per our HSEC Policy, Aya strives to promote the efficient use of natural resources in order to reduce consumption and waste, reduce our carbon footprint, and protect the environment. We have developed a Transition Plan as follows.

HIGHLIGHTS

In 2022, we assessed our climate change-related risks and opportunities against the TCFD guidelines. Refer to our 2022 ESG Report for more information on climate risk assessment and to this present report for a climate-risk scenario analysis. In evaluating the principal sources of our Scope 1 and 2 GHG emissions, we determined that we are unable to significantly reduce Scope 1 emissions at this time as the technology to electrify our mining fleet is not currently available. We are committed to reviewing emerging new technology and to assessing the feasibility of electrifying our mining fleet on its replacement in approximately 5 years (2027-2028).

Scope 2 emissions, however, form the bulk of the Zgounder Silver Mine's carbon footprint. In 2022, our first initiative to lower Scope 2 emissions was to find a partner and sign a renewable energy PPA. Subsequently, Aya signed a Interconnection Agreement with the ONEE in order to secure a clean energy supply for Zgounder. In February 2023, we signed a renewable PPA with Energie Éolienne du Maroc (EEM).

The PPA will allow the Zgounder Silver Mine to operate predominantly with renewable electricity supplied through the grid and supports our objective of implementing responsible mining and climate change initiatives in the Kingdom of Morocco. Specifically, by faciliting a 200MW expansion in EEM's overall wind power capacity, the wind PPA allows us to achieve up to near-zero Scope 2 emissions (calculated using market-based method of accounting for CO2 emissions). By 2025, we will have reduced Scope 2 emissions at our Zgounder Silver Mine by approximatively 88% compared to 2021, the base year for calculation. In 2025, we expect our Zgounder Silver Mine operations to emit approx. 1,148 tCO2e. This represents a 98% reduction compared to Scope 2 emissions of 56,000 tCO2e if operations had continued to be powered with a regular grid connection ("BAU" or Business As Usual).

In turn, this contributes directly to Morocco's NDC of a global (conditional and unconditional) reduction of GHG by 45.5%, which is compatible with the Paris Agreement's goal of limiting to 1.5°C the rise of global temperatures by 2100. Over the life of mine, it is expected that the Zgounder PPA will help save almost half a million tonnes of Scope 2 emissions. Additionally, our PPA with a green Moroccobased producer supports the renewable energy sector in Morocco as well as the Kingdom's goal of 80% renewable energy by 2050.





#### 5.3.2. Water management

Our water management strategy is fully described in our 2022 Sustainability Report. Please consult the report for more details. Water stress is the most pressing issue for the Zgounder Silver Mine and its host communities. We are committed to minimize our impact by harvesting runoff water and minimizing the use of shared resources (underground water or spring water).

To this end, we are expanding the Zgounder Mine in line with our water stewardship strategy. The need for careful water management was factored into the design of the new processing plant. In 2023, with the onset of construction of our mine expansion, we implemented systems and built capacity to monitor water use and hunt down sources of water loss in order to combat water wastage.

Our processing and tailings infrastructure are in a closed loop where the only losses are from evaporation. We have built water storage facilities that harvest excess runoff water and can hold approximately one year of water consumption for the mine's increased needs. This should provide

the resiliency needed to operate without interruption in changing climatic conditions.

In the 2022 financial year, we invested USD 977K in water storage and management to mitigate the risk of an acute shortfall in precipitation. In 2023 and 2024, USD 2.48M were allocated to water storage and management have been as part of our expansion project, which addresses the risk of chronic climate change.

As we empower ourselves to use and monitor water more efficiently, we strive to continuously improve our performance and risk management. In 2024, we will obtain a precise picture of our site water balance. This will allow us to set realistic targets that will be based on real numbers, as well as evaluate the effectiveness of our climate mitigation measures. Furthermore, to increase the scope of our mitigation measures, we can assess the return on investment of anti-evaporation floating devices on our water storage ponds.





#### Next steps

Aya is still in the early stages of its climate change journey, with significant progress made over the past three years by launching and improving our reporting as well as by developing and implementing our climate change roadmap. We will seek to regularly update this disclosure as we further diversify our decarbonization pathway, continue to evaluate climate-related risks, and report continued progress against our targets.

Our **2024** focus is in the following key areas:

- Ongoing annual climate action disclosure and enhanced disclosure capacity:
  - Integrate climate action into one streamlined annual ESG report
  - Meet TCFD recommendations
  - Continue to improve metrics to assess climate-related risks and opportunities
  - Integrate feedback from our first S&P Global CSA into our overall ESG roadmap
  - Disclose climate and water impacts through the CDP for the first time
- Implementation of mine-level initiatives to:
  - Connect Zgounder to the renewable energy power line, a seminal step towards implementing the PPA and achieving our 2025 88% GHG reduction target
  - Build one year of water storage capacity to improve our resiliency to physical risks
  - Strengthen water tracking capacity to empower us to assess our global site water balance and to set realistic future water targets
  - Collaborate with local authorities to enhance local water access, strengthen livelihood projects and build community
  - Finish mine site infrastructure development to improve resiliency to seasonal variability
  - Identify opportunities to measure and reduce GHG and water consumption at the mine camp
  - Continue to build climate change awareness among site leadership, management and our board as our climate change strategy matures
- Improvement on our understanding of Scope 3 emissions and eventual reduction target:
  - Strengthen our approach to estimating Scope 3 emissions by moving away from spend-based methodologies and towards more accurate, supplier-provided data and estimates. This is expected to be an area of medium-term continuous improvement.
  - Set a Scope 3 GHG reduction target
  - Implement a roadmap for this reduction
  - Raise awareness among our supply chain regarding Scope 1 and 2 reduction targets
- Reduce our overall GHG emissions by 88% (absolute target) in 2025
- Continue to track technologies that could enable us to electrify the mine fleet in 2030 and explore a potential path towards Net-Zero.

#### **TCFD Index**

TCFD RECOMMENDATION		
GOVERNANCE	Board Oversight	10
	Management's Role	10-11
STRATEGY	Risks and Opportunities	16-18
	Impact on Organizations	16-18
	Resilience of Strategy	21-25
RISK MANAGEMENT	Risk identification and Assessment Process	11-13
	Risk Management Processes	13-15
	Integration into Overall Risk Management	14
METRICS &	Climate-related Metrics	27
TARGETS	Scope 1, 2, 3 GHG Emissions	28-29
The state of the s	Climate-related Targets	30

Certain information contained or incorporated by reference in the Corporation's ESG and sustainability reports, including any information as to our ESG goals, efforts, achievements, strategies, vision, and plans or, future financial or operating performance, constitutes "forward-looking statements" within the meaning of securities legislation in Canada. Forward-looking statements can be identified by the use of words such as "opportunities", "improvement", "contingent", "guidance", "to reduce", "accelerate", "leveraging", "include", "become", "grow", "continue", "improve", "achieve", "align", "vision", "believe", "expect", "target", "plan", "commitment", "objective", "aim", "intend", "goal", "on track", "budget", "likely", "potential", "may", "might" "will", "can", "should", "would", and similar expressions. Forward-looking statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable by Aya as at the date of ESG reporting in light of management's experience and perception of current conditions and expected developments, may prove to be incorrect. Known and unknown factors could cause Aya's actual results, performance, developments, timetables or achievements to differ materially from those expressed or implied in the forward-looking statements. Such factors include, but are not limited to: anticipated ESG goals and plans not being attained or followed; the uncertainties inherent in Aya's production, exploratory and developmental activities, including risks relating to permitting and regulatory delays, ground conditions, grade and recovery variability, uncertainties related to estimations of mineral reserves, any future labor disputes or work stoppages (involving Aya, its subsidiaries or third parties); operating or technical difficulties including geotechnical challenges, tailings dam and storage facilities failures, and disruptions in the access to required utilities or infrastructures; industrial accidents; fluctuations in the spot and forward prices of silver, gold, or certain other commodities (such as diesel fuel, heavy fuel, water and electricity); changes in national and local government legislation, taxation, controls or regulations and/or changes in the administration of laws, policies, and practices in Canada, the Kingdom of Morocco, the Islamic Republic of Mauritania or in other jurisdictions wherein Aya or its subsidiaries carries or may carry on business in the future; legal and administrative proceedings; risks associated with diseases, epidemic and pandemics, including the actual or possible effects of the Covid-19 pandemic; risk of loss due to acts of war, terrorism, sabotage and civil disturbances; risks associated with working with partners in jointly controlled assets; increased costs and risks of loss related to climate change and natural disasters; risks associated with artisanal and illegal mining; damage to the Aya's reputation due to the actual or perceived occurrence of any number of events, including negative publicity with respect to the Aya's handling of environmental matters or dealings with community groups, whether true or not; Aya's ability to raise additional financing necessary to conduct its business, make payments or refinance its debt, as well as other uncertainties and risk factors set out in filings made from time to time with the Canadian securities regulators, including, without limitation, Aya's most recent Annual Information Form. Readers are cautioned that forward-looking statements are not guarantees of future performance and are cautioned not to put undue reliance on forward-looking statements. Aya disclaims any intent or obligation to update publicly such forward-looking statements, whether as a result of new information, future events or otherwise. Additionally, Aya undertakes no obligation to comment on analyses, expectations or statements made by third parties in respect of Aya, its financial or operating results or its securities. This does not constitute an offer of any securities for sale.



